

"Apollo"®

Piping Systems

TOTAL PIPING SYSTEMS INTEGRATION



"Apollo" PRESS



"Apollo" POWERPRESS



TECTITE[™]
by "Apollo"



EPC COPPERLOC



EPC WROTCOPPER



EPC CASTBRASS



EPC KLEENFIT



LASCO FITTINGS, INC



ON
OFF

"Apollo"

CONBRACO
IND., INC.
U.S.A. 17:

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6-65

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68-111

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114-131

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134-137

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218-286

LASCO® FITTINGS, INC

PRODUCT CATALOG

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CONBRACO INDUSTRIES, INC.
1003 B.356
UPC
MODEL PIRE
APOLLO VALVES

ON
OFF
"Apollo"
CONBRACO
IND., INC.
U.S.A. 17:

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"Apollo" PRESS

ApolloPRESS fittings are a proven heat-free method for joining copper tube and provide a clean, easy joining technique that saves time and money on installations.

The ApolloPRESS line of fittings and valves feature pre-lubricated seals and Leak Before Press® technology to ensure quick and confident connections. ApolloPRESS valves are available in both standard and Lead Free configurations, while all ApolloPRESS fittings are Lead Free.

Made in America in our American plants and foundries, our broad range of Press Technology products brings you the quality you have come to know and expect, all from one source.

ApolloPRESS is your single source solution for Press Technology.

American Made Quality You Can Depend On.

- Mechanical Leak Before Press® on small diameter, within a 120 degree turn.
- VISUAL and Mechanical Leak Before Press® feature on our large diameter fittings.
- Patented stainless steel grab ring on large diameter 2-1/2" - 4"
- Unique Floating flanges can be put back in place during installation.

Reliable Connections

for every application.

Heat & Flame Free

Clean, Fast & Simple

Single Source



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Building More Efficiency.



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OFF

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Ball Valves

Contractor quality press ball valves in sizes ½" - 4" feature full port design, forged brass or cast bronze bodies and numerous handle and trim options. Standard construction for HVAC or certified Lead Free for potable water, all feature press connections incorporating **Leak Before Press**® technology.





77V SERIES PRESS END FORGED BALL VALVE

DESCRIPTION:

The APOLLOPRESS 77V Series two-piece press ball valve is ideal for installation in heating, cooling and non-potable plumbing. Features Leak Before Press® technology and 250 psig maximum working pressure. Proudly Made in the USA.

FEATURES:

- Full-Port Flow
- Superior RPTFE Seats and Packing
- Adjustable Stem Packing
- Ridgid® XL Press Tool Compatible (1/2" - 2")
- Ridgid® XLC Press Tool Compatible (2-1/2" - 4")
- Leak Before Press™ Technology
- Blow-Out Proof Stem
- Corrosion Resistant Materials
- Silicone Free Assembly
- 100% Factory Tested
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Temperature Range: 0°F - 250°F

APPROVALS:

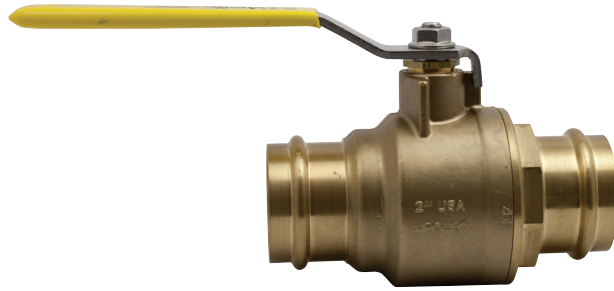
- MSS SP-110 Ball Valves
- IAPMO IGC-157 Ball Valves
- Directive 2011/65/CE (RoHS) Compliant

material specifications:

Part Name	Material
Body	Forged Brass, C37700
Seat	RPTFE
Ball	Brass, ASTM B16, C36000 Chrome Plated
Stem Packing	RPTFE
Nut	Corrosion Resistant Plated Steel
Stem	Forged Brass, C37700
Retainer	Forged Brass, C37700
Handle	Plated Steel / Insulated Polyvinyl
Gland	Brass, ASTM B16, C36000
O-Ring Seals	EPDM

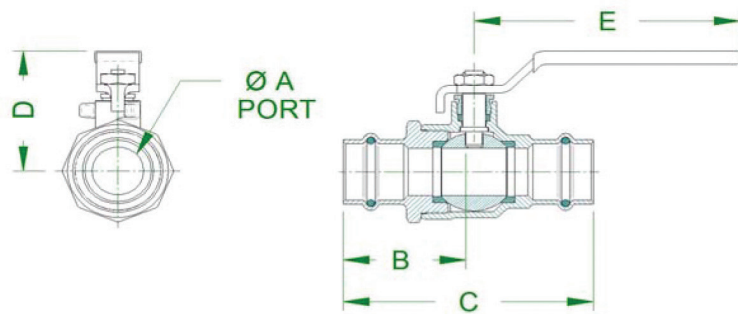
APPROVED APPLICATIONS:

- Water, chilled and hot: 33° - 250°F
- Hydronic Heating (90% glycol max)
- Low Pressure Steam, 15 psi max
- Not suitable for flammable gas service
- Designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition.
- Not compatible with soft annealed copper tubing.
- Not intended for potable water



Dimensions (in)

Part Number	Size	A	B	C	D	E	Wt (lbs.)
77V-103-01	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77V-104-01	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77V-105-01	1"	1.00	2.20	3.88	2.11	3.86	1.2
77V-106-01	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77V-107-01	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77V-108-01	2"	2.00	3.40	6.57	3.69	7.77	6.0
77V-109-01	2-1/2"	2.50	4.26	8.04	4.13	7.77	12.0
77V-100-01	3"	3.00	5.10	9.45	5.03	9.92	19.5
77V-10A-01	4"	4.00	5.20	10.35	5.70	14.78	26.0



OPTIONS

- (-01) Standard Lever Handle
- (-04) 2 1/4" Stem Extension
- (-07) Tee Handle
- (-11) Therma-Seal™ Insulating Tee Handle
- (-27) Locking Handle
- 77V140 Series - SS Ball & Stem



77VLF SERIES LEAD FREE PRESS END FORGED BALL VALVE



"Apollo" PRESS

DESCRIPTION:

The **Lead Free*** APOLLOPRESS 77VLF Series press ball valve is ideal for installation in most plumbing and heating systems, including potable water. Features Leak Before Press® technology and 250 psig maximum working pressure.

FEATURES:

- ANSI 3rd party Certified Lead-Free*
- Full-Port Flow
- Easily Identifiable Blue Lead Free Hang Tag & White Lever
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible (1/2" - 2")
- Ridgid® XLC Press Tool Compatible (2-1/2" - 4")
- Leak Before Press® Technology
- Blow-Out Proof Stem
- Dezincification Resistant Materials
- Silicone Free Assembly
- 100% Factory Tested
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Temperature Range: 0°F - 250°F

APPROVALS:

- MSS SP-110 Ball Valves
- NSF/ANSI 61
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)
- IAPMO IGC-157 Ball Valves
- Directive 2011/65/CE (RoHS) Compliant

material specifications:

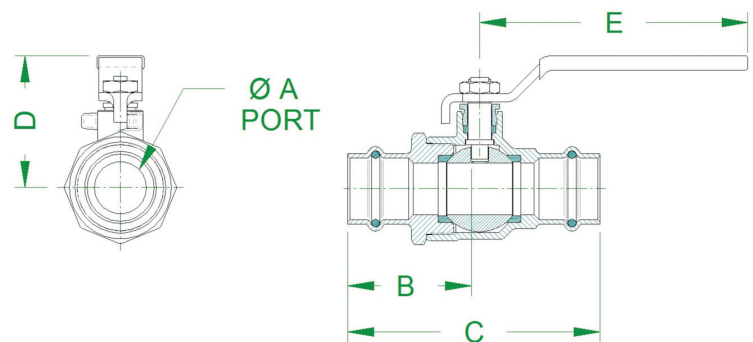
Part Name	Material
Body	Lead Free Brass, C27451
Seat	RPTFE
Ball	Lead Free Brass, C27451 (Plated) (4" - 316 Stainless Steel)
Stem Packing	RPTFE
Nut	Corrosion Resistant Plated Steel
Stem	Lead Free Brass, C27451 (4" - 316 Stainless Steel)
Retainer	Lead Free Brass, C27451
Handle	Plated Steel / Insulated Polyvinyl
Gland	Brass, ASTM B16, C36000
O-Ring Seals	EPDM

* **LEAD FREE:** The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law III-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

LF Part Number	Size	A	B	C	D	E	Wt (lbs.)
77VLF-103-01	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77VLF-104-01	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77VLF-105-01	1"	1.00	2.20	3.88	2.11	3.86	1.2
77VLF-106-01	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77VLF-107-01	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77VLF-108-01	2"	2.00	3.40	6.57	3.69	7.77	6.0
77VLF-109-01	2-1/2"	2.50	4.26	8.04	4.13	7.77	12.0
77VLF-100-01	3"	3.00	5.10	9.45	5.03	9.92	19.5
77VLF-14A-01	4"	4.00	5.20	10.35	5.70	14.78	26.0



OPTIONS

- (-01) Standard Lever Handle
- (-04) 2 1/4" Stem Extension
- (-07) Tee Handle
- (-11) Therma-Seal™ Insulating Tee Handle
- (-27) Locking Handle
- 77VLF140 Series - SS Ball & Stem





77W SERIES PRESS END BRONZE BALL VALVE

DESCRIPTION:

The APOLLOPRESS 77W Series Ball valve is ideal for installation in heating, cooling and non-potable plumbing. Features Leak Before Press[®] technology and 250 psig maximum working pressure.

FEATURES:

- Heavy pattern cast bronze body
- Full-Port Flow
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Ridgid[®] XL Press Tool Compatible
- Leak Before Press[®] Technology
- Blow-Out Proof Stem
- Corrosion Resistant Materials
- 100% Factory Tested
- Silicone Free Assembly
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Temperature Range: 0°F - 250°F

APPROVALS:

- MSS SP-110 Ball Valves
- Directive 2011/65/CE (RoHS) Compliant

material specifications:

Part Name	Material
Body	Cast Bronze C89836
Seat	Multi-Fill PTFE
Ball	ASTM B16 Brass, plated
Stem Packing	Multi-Fill PTFE
Nut	Corrosion Resistant Plated Steel
Stem	Brass, ASTM B16, UNS# C36000
Retainer	Brass, ASTM B16, UNS# C36000
Handle	Plated Steel/Insulated Polyvinyl
Gland	Brass, ASTM B16, UNS# C36000
O-Ring Seals	EPDM

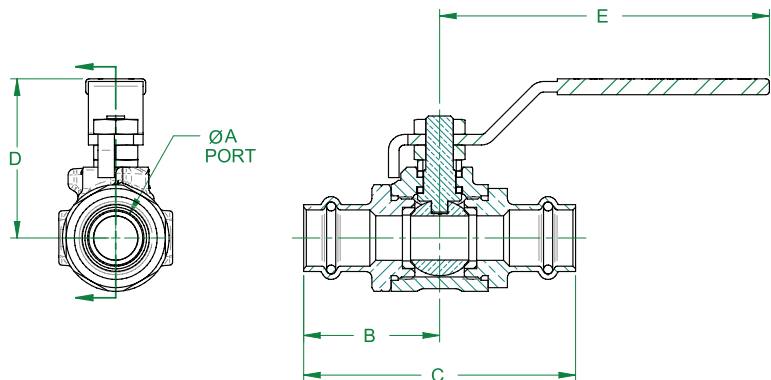
APPROVED APPLICATIONS:

- Water, chilled and hot: 33° - 250°F
- Hydronic Heating (90% glycol max)
- Low Pressure Steam, 15 psi max
- Not suitable for flammable gas service
- Designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition.
- Not compatible with soft annealed copper tubing.
- Not intended for potable water



Dimensions (in)

Part Number	Size	A	B	C	D	E	Wt (lbs.)
77W-103-01	1/2"	0.50	1.54	3.08	1.50	3.74	0.6
77W-104-01	3/4"	0.75	1.78	3.55	2.01	4.78	1.1
77W-105-01	1"	1.00	1.93	3.86	2.20	4.78	1.8
77W-106-01	1-1/4"	1.25	2.44	4.87	3.13	7.04	4.3
77W-107-01	1-1/2"	1.50	2.91	5.81	3.10	7.04	4.6
77W-108-01	2"	2.00	3.74	7.47	3.48	7.04	8.2



OPTIONS

- (-04) 2 1/4" Stem Extension
- (-07) Tee-Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Therma-Seal™ Insulating Tee Handle
- (-92) Standard Lever with Balancing Stop
- (-94) 2 1/4" Stem Extension and Balancing Stop
- (-HC) Press x 3/8" Hose w./ Cap & Chain (1/2 & 3/8")
- (77W-140 Series) S.S. Ball and Stem
- (77WLF Series) Lead Free (0.25% Lead Max)



77WLF SERIES LEAD FREE PRESS END BRONZE BALL VALVE



"Apollo" PRESS

DESCRIPTION:

The **Lead Free*** APOLLOPRESS 77WLF ball valve is ideal for installation in most plumbing and heating systems, including potable water systems requiring NSF 61 or **Lead Free*** approval. Features Leak Before Press® technology and 250 psig maximum working pressure.

FEATURES:

- Lead Free* Brass & Bronze Materials
- ANSI 3rd party Certified Lead-Free*
- Easily Identifiable Blue Lead Free Hang Tag & White Lever
- Full-Port Flow
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Leak Before Press® Technology
- Dezincification Resistant Materials
- 100% Factory Tested
- Ridgid® XL Press Tool Compatible
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Temperature Range: 0°F - 250°F

APPROVALS:

- MSS SP-110 Ball Valves
- NSF/ANSI 61-8 2010, Annex F & G Lead Free*
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

material specifications:

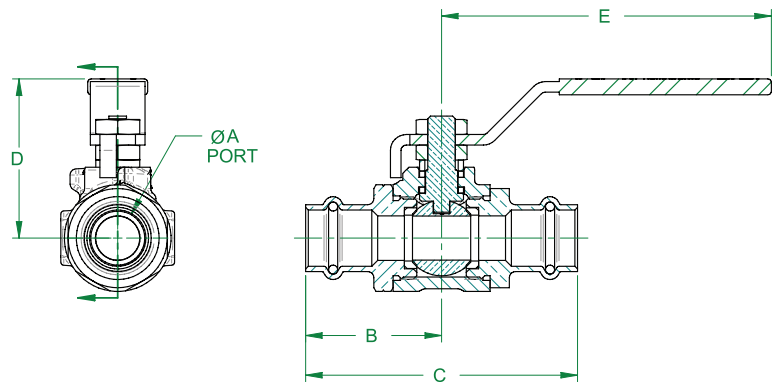
Part Name	Material
Body	ASTM B584 C89836
Seat	Multi-Fill PTFE
Ball	C27451 Brass, Chr. Plated
Stem Packing	Multi-Fill PTFE
Nut	Zinc Plated Steel
Stem	C27451 Brass
Retainer	C27451 Brass
Handle	Plated Steel / Insulated Polyvinyl
Gland	Brass, ASTM B16, C36000
O-Ring	EPDM

* **LEAD FREE:** The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law III-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

LF Part Number	Size	A	B	C	D	E	Wt (lbs.)
77WLF-103-01	1/2"	0.50	1.54	3.08	1.50	3.74	0.61
77WLF-104-01	3/4"	0.75	1.78	3.55	2.01	4.78	1.09
77WLF-105-01	1"	1.00	1.93	3.86	2.20	4.78	1.77
77WLF-106-01	1-1/4"	1.25	2.44	4.87	3.13	7.04	4.27
77WLF-107-01	1-1/2"	1.50	2.91	5.81	3.10	7.04	4.63
77WLF-108-01	2"	2.00	3.74	7.47	3.48	7.04	8.21



OPTIONS

- (-04) 2 1/4" Stem Extension
- (-07) Tee-Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Therma-Seal™ Insulating Tee Handle
- (-92) Standard Lever with Balancing Stop
- (-94) 2 1/4" Stem Extension and Balancing Stop
- (77WLF-140 SERIES) S.S. Ball and Stem





77W-HC SERIES BALL VALVE W/PRESS X HOSE CONNECTION

DESCRIPTION:

The APOLLOPRESS 77W-HC Press x Hose bronze ball valve is ideal for installation in heating, cooling and non-potable plumbing. Features a 3/4" hose thread connection with heavy brass cap to protect the threads. Features Leak Before Press® technology and 250 psig maximum working pressure.

FEATURES:

- Full-Port
- Ridgid® "XL" Press Tool Compatible
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Leak Before Press® Technology
- Dezincification Resistant Bronze Body
- Heavy duty brass cap is full pressure rated
- 100% Factory Tested
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Maximum Temperature 250°F

APPROVALS:

- MSS SP-110 Ball Valves
- Directive 2011/65/CE (RoHS) Compliant

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Bronze
Seat	Multi-Fill PTFE
Ball	ASTM B16 Brass, plated
Stem Packing	Multi-Fill PTFE
Nut	Corrosion Resistant Plated Steel
Stem	Brass, ASTM B16, UNS# C36000
Retainer	Brass, ASTM B16, UNS# C36000
Cap	Brass, ASTM B16, UNS# C36000
Handle	Plated Steel/Insulated Polyvinyl
Gland	Brass, ASTM B16, UNS# C36000
O-Ring Seals	EPDM

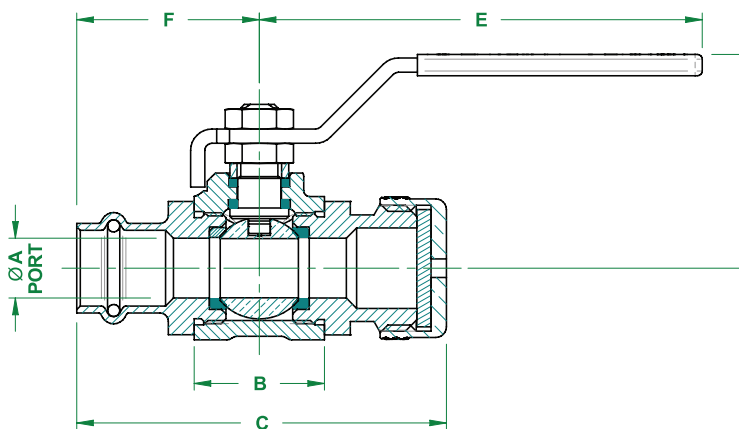
APPROVED APPLICATIONS:

- Water, chilled and hot: 33° - 250°F
- Hydronic Heating (90% glycol max)
- Not suitable for flammable gas service
- Designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition.
- Not compatible with soft annealed copper tubing.
- Not intended for potable water



Dimensions (in)

Part Number	Size	A	B	C	D	E	F	Wt (lbs.)
77W-103-HC	1/2"	0.50	1.54	3.12	1.80	3.74	1.54	0.61
77W-104-HC	3/4"	0.75	1.72	3.45	2.01	4.78	1.78	1.16



OPTIONS

- (-04) 2 1/4" Stem Extension
- (-07) Tee-Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Thermo-Seal™ Insulating Tee Handle
- (-92) Balancing Stop
- (-94) 2 1/4" Stem Extension and Balancing Stop
- (77WLF-140-HC SERIES) S.S. Ball and Stem
- (77WLF-HC SERIES) Lead Free 0.25% Lead Max



77WLF-HC SERIES LEAD FREE VALVE W/PRESS X HOSE CONNECTION



"Apollo" PRESS

DESCRIPTION:

The APOLLOPRESS Lead Free* Press x Hose Cap & Chain bronze ball valves feature a 3/8" hose connection with heavy brass cap to protect the threads. The 77WLF-HC is ideal for most plumbing and heating systems, including potable water. Features Leak Before Press® technology and 250 psig maximum working pressure.

FEATURES:

- Full-Port
- ANSI 3rd party Certified Lead-Free*
- Adjustable Stem Packing
- Easily Identifiable Blue Lead Free Hang Tag & White Lever
- Fast, Reliable, Economical Press Installation
- Leak Before Press® Technology
- Dezincification Resistant Lead Free* Brass & Bronze Materials

- Heavy brass cap is full pressure rated
- Easily Identifiable Blue "Lead Free" Hang Tag
- Ridgid® "XL" Press Tool Compatible
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Operating Pressure 250 psi
- Temperature Range 0°F - 250°F

APPROVALS:

- MSS SP-110 Ball Valves
- NSF/ANSI 61-8
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

material specifications:

Part Name	Material
Body	C89836 Lead Free* Bronze
Seat	Multi-Fill PTFE
Ball	C27451 Lead Free* Brass Cr. Plated
Stem Packing	Multi-Fill PTFE
Nut	Corrosion Resistant Plated Steel
Stem	C27451 Lead Free* Brass
Retainer	C27451 Lead Free* Brass
Cap	C27451 Lead Free* Brass
Handle	Plated Steel/Insulated Polyvinyl
Gland	Brass, ASTM B16, UNS# C36000
O-Ring	EPDM

APPROVED APPLICATIONS:

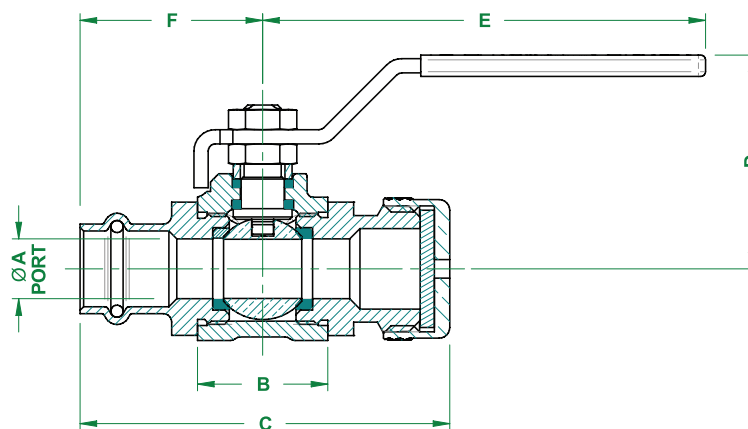
- Water, including Potable Water
- Hydronic Heating (90% glycol max)
- Not compatible with soft annealed copper tubing

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

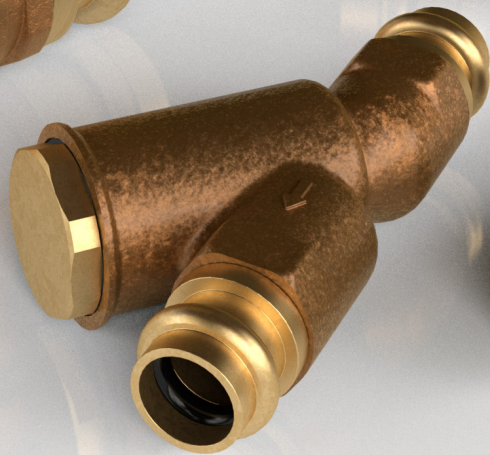
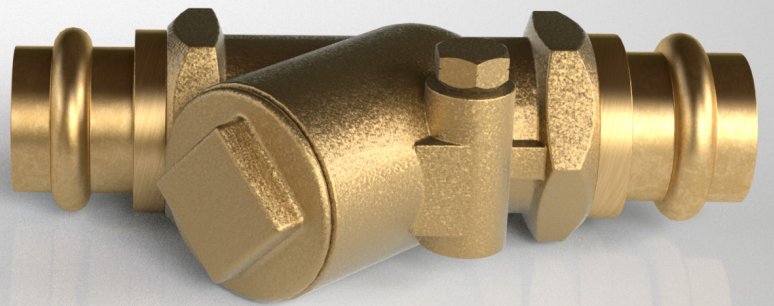
LF Part Number	Size	A	B	C	D	E	F	Wt (lbs.)
77WLF-103-HC	1/2"	0.50	1.54	3.12	1.80	3.74	1.54	0.61
77WLF-104-HC	3/4"	0.75	1.72	3.45	2.01	4.78	1.78	1.16



OPTIONS

- (-04) 2 1/4" Stem Extension
- (-07) Tee-Handle
- (-10) Stainless Steel Handle and Nut
- (-11) Therma-Seal™ Insulating Tee Handle
- (-92) Balancing Stop
- (-94) 2 1/4" Stem Extension and Balancing Stop (77WLF-14x-HC Series) S.S. Ball and Stem







Gate, Globe, Checks & Strainers

Cast bronze 200 CWP gate, globe, and swing check valves, in press sizes ½” to 2”, feature materials and workmanship that conform to MSS-SP80. Rising and non-rising stem models feature solid bronze wedge disc gates, and bronze or PTFE seated globes and checks. Also available are bronze wye strainers and in-line check valves with RPTFE Ball Cone® seating. Press connections incorporate **Leak Before Press®** technology. 100% factory tested.





10IT-PR 200 CWP BRONZE RS GATE VALVE

DESCRIPTION:

The APOLLOPRESS Model 10IT-PR (30 Series) Gate valve with Press connections is a proven combination that provides economical installation and reliable service. The valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials. The Apollo rising stem Gate valve can reliably be installed in most heating, cooling and non-potable plumbing systems including building service piping and OEM applications.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Full Port Flow
- Guided Solid Bronze Disc
- Adjustable Graphite Stem Packing
- Rising Stem
- Screw-in Bonnet
- Rugged Coated Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

STANDARDS

- MSS SP-80, "Bronze Gate, Globe, Angle & Check Valves",
- Canadian Registration Number OC14667.5

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B62 -C83600 Bronze
Bonnet	ASTM B62 -C83600 Bronze
Connector Housing	ASTM B16 -C36000 Brass
Connector O-Ring	NSF grade EPDM
Stem	ASTM B371 C69400 Bronze
Disc	ASTM B62 -C83600 Bronze
Packing	Grafoil
Hand Wheel	Malleable Iron
Nameplate	Aluminum

Not intended for potable water



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length		
1/2"	4.85	3.9	1.3	12.5
3/4"	5.71	4.3	1.8	24.0
1"	6.71	4.7	2.6	72.3
1-1/4"	8.1	5.13	3.8	80.0
1-1/2"	9.08	6.12	5.4	119.0
2"	11.28	6.70	8.5	338.0

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in2).

ordering information

Size	Model Number	Part Number
1/2"	10IT12-PR	30-003-01PR
3/4"	10IT34-PR	30-004-01PR
1"	10IT1-PR	30-005-01PR
1-1/4"	10IT114-PR	30-006-01PR
1-1/2"	10IT112-PR	30-007-01PR
2"	10IT2-PR	30-008-01PR



10IT-PRLF LEAD FREE 200 CWP BRONZE RS GATE VALVE



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS Model 10IT-PRLF (30LF Series) Gate valve with press connectors is a proven combination that provides economical installation and reliable service for plumbing and heating applications including potable water. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials.

FEATURES:

- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Full Port Flow
- Guided Solid Lead Free* Bronze Disc
- Adjustable Graphite Stem Packing
- Rising Stem
- Screw-in Bonnet
- Rugged Coated Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

STANDARDS

- MSS SP-139, "Copper Alloy Gate, Globe, & Check Valves"
- ANSI/NSF 61-8 2010
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)
- Canadian Registration Number 0C14667.5

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584-C89836 Bronze
Bonnet	ASTM B584-C89836 Bronze
Connector Housing	C27451 Brass
Connector O-Ring	NSF grade EPDM
Stem	ASTM B371 C69400 Bronze
Disc	ASTM B584-C89836 Bronze
Packing	Grafoil
Hand Wheel	Malleable Iron
Nameplate	Aluminum

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length		
1/2"	4.85	3.9	1.3	12.5
3/4"	5.71	4.3	1.8	24.0
1"	6.71	4.7	2.6	72.3
1-1/4"	8.1	5.13	3.8	80.0
1-1/2"	9.08	6.12	5.4	119.0
2"	11.28	6.70	8.5	338.0

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

ordering information

Size	Model Number	LF Part Number
1/2"	10IT12-PRLF	30LF-003-01PR
3/4"	10IT34-PRLF	30LF-004-01PR
1"	10IT1-PRLF	30LF-005-01PR
1-1/4"	10IT114-PRLF	30LF-006-01PR
1-1/2"	10IT112-PRLF	30LF-007-01PR
2"	10IT2-PRLF	30LF-008-01PR





102T-PR 200 CWP BRONZE NRS GATE VALVE

DESCRIPTION:

The APOLLOPRESS Model 102T-PR (30 Series) Gate valve with press connections is a proven combination that provides economical installation and reliable service. The valves are cast, machined, assembled, and tested in South Carolina with proven ASTM quality material. The Apollo Gate valve can reliably be installed in most heating, cooling and non-potable plumbing systems including building service piping and OEM applications.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Guided Solid Bronze Disc
- Adjustable Graphite Stem Packing
- Non-Rising Stem
- Dezincification Resistant
- All Bronze Body, Disc and Bonnet
- 100% Factory tested per MSS standard
- Screw-in Bonnet
- Rugged Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-80, "Bronze Gate, Globe, Angle & Check Valves"
- Canadian Registration Number OC14667.5

PERFORMANCE RATING†:

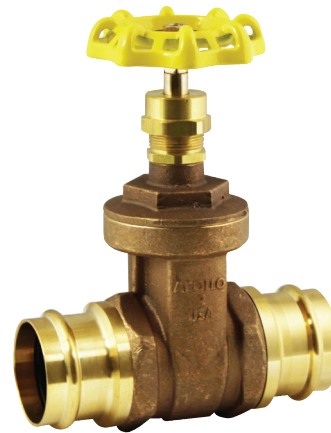
- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B62 -C83600 Bronze
Bonnet	ASTM B62 -C83600 Bronze
Stem	ASTM B371 Bronze
Disc	ASTM B62 -C83600 Bronze
Connector Housing	ASTM B16 -C36000 Brass
Connector O-Ring	NSF grade EPDM
Packing	Grafoil®
Packing Nut	ASTM B16 Brass
Hand Wheel	Malleable Iron
Nameplate	Aluminum

Not intended for potable water



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length		
1/2"	4.85	3.9	1.3	12.5
3/4"	5.71	4.3	1.8	24.0
1"	6.71	4.7	2.6	72.3
1-1/4"	8.1	5.13	3.8	80.0
1-1/2"	9.08	6.12	5.4	119.0
2"	11.28	6.70	8.5	338.0

ordering information

Size	Model Number	Part Number
1/2"	102T12-PR	30-033-01PR
3/4"	102T34-PR	30-034-01PR
1"	102T1-PR	30-035-01PR
1-1/4"	102T114-PR	30-036-01PR
1-1/2"	102T112-PR	30-037-01PR
2"	102T2-PR	30-038-01PR

Valves should be in the open position to allow complete drainage during freezing conditions.



102T-PRLF LEAD FREE 200 CWP BRONZE NRS GATE VALVE



"Apollo" PRESS

DESCRIPTION:

The **Lead Free*** APOLLOPRESS Model 102T-PRLF (30LF Series) Bronze Gate valve with Press connectors is a proven combination that provides economical installation and reliable service for plumbing and heating applications including potable water. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials.

FEATURES:

- Fast, Easy, Economical Press Installation
- ANSI 3rd party Certified Lead-Free*
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Full Port
- Guided Solid Bronze Disc
- Adjustable Graphite Stem Packing
- Non-Rising Stem
- 100% Factory tested per MSS
- Screw-in Bonnet
- Rugged Coated Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-139, "Copper Alloy Bronze Gate, Globe, Angle & Check Valves"
- NSF/ANSI 61-8
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

PERFORMANCE RATING†:

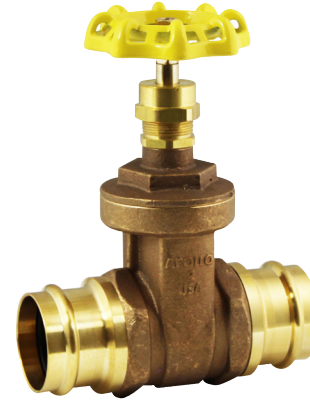
- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584-C89836 Bronze
Bonnet	ASTM B584-C89836 Bronze
Stem	ASTM B371 Bronze
Disc	ASTM B584-C89836 Bronze
Packing	Grafoil®
Packing Nut	ASTM B16 Brass
Hand Wheel	Malleable Iron
Nameplate	Aluminum

* **LEAD FREE:** The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length		
1/2"	4.85	3.9	1.3	12.5
3/4"	5.71	4.3	1.8	24.0
1"	6.71	4.7	2.6	72.3
1-1/4"	8.1	5.13	3.8	80.0
1-1/2"	9.08	6.12	5.4	119.0
2"	11.28	6.70	8.5	338.0

** Cv = flowrate at 1.0 psid.

ordering information

Size	Model Number	LF Part Number
1/2"	102T12-PRLF	30LF-033-01PR
3/4"	102T34-PRLF	30LF-034-01PR
1"	102T1-PRLF	30LF-035-01PR
1-1/4"	102T114-PRLF	30LF-036-01PR
1-1/2"	102T112-PRLF	30LF-037-01PR
2"	102T2-PRLF	30LF-038-01PR

Valves should be in the open position to allow complete drainage during freezing conditions.





120T-PR 200 CWP BRONZE GLOBE VALVE

DESCRIPTION:

The APOLLOPRESS Model 120T-PR (33 Series) Globe valve with press connections is a proven combination that provides economical installation and reliable service. The valves are cast, machined, assembled, and tested in South Carolina with proven ASTM quality material. The Apollo Globe valve can reliably be installed in most heating, cooling and non-potable plumbing systems including building service piping and OEM application.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Optimum Flow Capacity
- PTFE Soft Seat
- Adjustable Graphite Stem Packing
- Dezincification Resistant
- 100% Factory tested per MSS standard
- Screw-in Bonnet
- Rugged Coated Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-80, "Bronze Gate, Globe, Angle & Check Valves",
- Canadian Registration Number OC14667.5

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B62 Bronze
Bonnet	ASTM B62 Bronze
Stem	ASTM B371 Bronze
Disc	PTFE
Packing	Grafoil®
Hand Wheel	Malleable Iron
Nameplate	Aluminum
Connector Housing	ASTM B16 Brass
Connector O-Ring	NSF grade EPDM

Not intended for potable water



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length (in.)		
1/2"	3.47	4.5	1.1	4.4
3/4"	4.75	5.9	1.9	7.4
1"	5.40	7.0	3.0	12.1
1-1/4"	7.80	8.5	7.8	29.0
1-1/2"	7.80	9.2	7.8	30.0
2"	8.43	10.8	11.3	49.0

ordering information

Size	Model Number	Part Number
1/2"	120T12-PR	33-133-01PR
3/4"	120T34-PR	33-134-01PR
1"	120T1-PR	33-135-01PR
1-1/4"	120T114-PR	33-136-01PR
1-1/2"	120T112-PR	33-137-01PR
2"	120T2-PR	33-138-01PR

Valves should be in the open position to allow complete drainage during freezing conditions.



120T-PRLF LEAD FREE 200 CWP BRONZE GLOBE VALVE



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS Model 120T-PRLF (33LF Series) Globe valve with press connections is a proven combination that provides economical installation and reliable service for plumbing and heating applications including potable water. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials.

FEATURES:

- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Optimum Flow Capacity
- PTFE Soft Seat
- Adjustable Graphite Stem Packing
- Dezincification Resistant
- 100% Factory tested per MSS standards
- Screw-in Bonnet
- Rugged Malleable Iron Hand Wheel
- Back seat protection
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-139, "Copper Alloy Gate, Globe, & Check Valves"
- NSF/ANSI 61-8 2010
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)
- Canadian Registration Number OC14667.5

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Bronze
Bonnet	ASTM B584 C89836 Bronze
Stem	ASTM B371 C69400 Bronze
Connector Housing	C27451 Brass
Connector O-Ring	NSF grade EPDM
Disc	PTFE
Packing	Grafoil®
Hand Wheel	Malleable Iron
Nameplate	Aluminum

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (open)	Length (in.)		
1/2"	3.47	2.70	1.1	4.4
3/4"	4.75	3.20	1.9	7.4
1"	5.40	3.75	3.0	12.1
1-1/4"	7.78	4.74	7.3	29.0
1-1/2"	7.78	4.74	7.0	30.0
2"	8.43	5.72	10.7	49.0

ordering information

Size	Model Number	LF Part Number
1/2"	120T12-PRLF	33LF-133-01PR
3/4"	120T34-PRLF	33LF-134-01PR
1"	120T1-PRLF	33LF-135-01PR
1-1/4"	120T114-PRLF	33LF-136-01PR
1-1/2"	120T112-PRLF	33LF-137-01PR
2"	120T2-PRLF	33LF-138-01PR

Valves should be in the open position to allow complete drainage during freezing conditions.





163T-PR 200 CWP BRONZE SWING CHECK

DESCRIPTION:

The APOLLOPRESS Model 163T-PR (61Y Series) Swing Check valve with press connectors is a proven combination that provides economical installation and reliable service in most heating, cooling and non-potable plumbing systems. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Renewable PTFE Seat Disc
- Dezincification Resistant
- Factory tested per MSS SP-80
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-80, "Bronze Gate, Globe & Check Valves"
- Canadian Registration Number OC146675

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B62 Bronze
Cap	ASTM B62 Bronze
Connector Housing	ASTM B16 Brass
Connector O-Ring	FDA grade EPDM
Hanger	304 Stainless Steel or ASTM B62 Bronze
Pin	Stainless Steel
Seat	PTFE
Plug	ASTM B16 Brass

Precautionary Note: Not recommended for use with reciprocating pumps and similar applications, which may induce repetitious vibrations. Low flow rates which do not fully open the valve may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc. See Installation Manual for details.



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (in.)	Length (in.)		
1/2"	1.65	4.3	.78	7.0
3/4"	1.9	5.1	1.8	12.0
1"	2.26	5.9	2.5	28.6
1-1/4"	2.99	7.0	4.4	39.0
1-1/2"	2.99	7.75	4.5	56.0
2"	3.74	8.9	7.0	152.0

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

ordering information

Size	Model Number	Part Number
1/2"	163T12-PR	61Y-203-TIPR
3/4"	163T34-PR	61Y-204-TIPR
1"	163T1-PR	61Y-205-TIPR
1-1/4"	163T114-PR	61Y-206-TIPR
1-1/2"	163T112-PR	61Y-207-TIPR
2"	163T2-PR	61Y-208-TIPR

Not intended for potable water

163T-PRLF LEAD FREE 200 CWP BRONZE SWING CHECK



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS Model 163T-PRLF (Series 61YLF) Swing Check with press connections is a proven combination that provides economical installation and reliable service for plumbing and heating applications including potable water. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials.

FEATURES:

- Fast, Reliable, Economical Press Installation
- ANSI 3rd party Certified Lead-Free*
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Quick Press End Connection
- Renewable PTFE Seat Disc
- Dezincification Resistant Materials
- Made in USA, ARRA Compliant

STANDARDS:

- MSS SP-139, "Copper Alloy Gate, Globe, & Check Valves"
- NSF/ANSI 61-8
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)
- Canadian Registration Number OC14667.5

PERFORMANCE RATING†:

- Maximum Pressure: 200 psi (13.8 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Bronze
Cap	ASTM B584 C89836 Bronze
Connector Housing	C27451 Brass
Connector O-Ring	NSF grade EPDM
Hanger	304 Stainless Steel or ASTM B584 C89836 Bronze
Pin	Stainless Steel
Seat	PTFE
Plug	C27451 Brass

Precautionary Note: Not recommended for use with reciprocating pumps and similar applications, which may induce repetitious vibrations. Low flow rates which do not fully open the valve may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc. See Installation Manual for details.



Dimensions (in)

Pipe Size	Dimensions (in.)		Wt (lbs)	Cv (gpm)
	Height (in.)	Length (in.)		
1/2"	1.65	4.3	.78	7.0
3/4"	1.9	5.1	1.8	12.0
1"	2.26	5.9	2.5	28.6
1-1/4"	2.99	7.0	4.4	39.0
1-1/2"	2.99	7.75	4.5	56.0
2"	3.74	8.9	7.0	152.0

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

ordering information

Size	Model Number	LF Part Number
1/2"	163T12-PRLF	61YLF-203-TIPR
3/4"	163T34-PRLF	61YLF-204-TIPR
1"	163T1-PRLF	61YLF-205-TIPR
1-1/4"	163T114-PRLF	61YLF-206-TIPR
1-1/2"	163T112-PRLF	61YLF-207-TIPR
2"	163T2-PRLF	61YLF-208-TIPR

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.





DESCRIPTION:

The APOLLOPRESS Model CVB-PR (61 Series) BALL-CONE® check valves with Press connections offer reliable service in most heating, cooling and non-potable plumbing systems. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials. May be installed in both horizontal and vertical flow with upward flow.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- 1/2 psi spring cracking pressure is standard
- Tight Shut-off With Liquid Media
- Straight-through Flow Design Efficiency
- RPTFE Ball-Cone® for Chemical Resistance
- Made in USA, ARRA Compliant

APPROVALS

- Canadian Registration Number OC11218.5C

PERFORMANCE RATING†:

- Maximum Pressure: 250 psi (17.2 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584 Bronze C84400
Retainer	ASTM B16 Brass
Spring	AISI 316 Stainless Steel
Connector Housing	ASTM B16 Brass
Connector Retainer	316 Stainless Steel
Ball Cone Check	RPTFE, 15% Glass Filled
Stem	ASTM B16 Brass

Precautionary Note: Not recommended for use with reciprocating pumps and similar applications, which may induce repetitious vibrations. Low flow rates which do not fully open the valve may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc. See Installation Manual for details.



Dimensions (in)

Model Number	Part Number	Size	Length	Wt (lbs)	Flow (Cv)
CVB12-PR	61-103-01PR	1/2"	4.2"	.42	1.4
CVB34-PR	61-104-01PR	3/4"	5.0"	1.0	3.5
CVB1-PR	61-105-01PR	1"	5.8"	1.9	6.0
CVB114-PR	61-106-01PR	1-1/4"	6.7"	3.35	44
CVB112-PR	61-107-01PR	1-1/2"	8.2"	4.6	65
CVB2-PR	61-108-01PR	2"	9.7"	7.3	81

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

OPTIONS**

- Soft Seat (61-500 Series)
- 0 psig Cracking Pressure (No Spring)
- 5 psig Cracking Pressure (1/2" - 1")
- 10 psig Cracking Pressure (1/2" - 1")
- Lead Free 0.25% Lead Max.(61LF-PR Series)

Not intended for potable water

61LF SERIES LEAD FREE BRONZE IN-LINE CHECK VALVE



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS Model CVB- PRLF (61LF Series) BALL-CONE® check valves with Press connections offer reliable protection against reverse flow in plumbing and heating applications including potable water. These valves are cast, machined, assembled, and tested in South Carolina using proven ASTM quality materials. Valves may be installed in both horizontal and vertical flow with upward flow.

FEATURES:

- Fast, Reliable, Economical Press Installation
- ANSI 3rd party Certified Lead-Free*
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- 1/2 psi spring cracking pressure
- Tight Shut-off With Liquid Media
- Straight-through Flow Design Efficiency
- RPTFE Ball-Cone® for Chemical Resistance
- Made in USA, ARRA Compliant

APPROVALS

- NSF/ANSI 61-8
- Canadian Registration Number 0C11218.5C
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

PERFORMANCE RATING†:

- Maximum Pressure: 250 psi (17.2 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Lead Free* Bronze
Retainer	C27451 Lead Free* Brass
Connector Housing	C27451 Lead Free* Brass
Connector O-Ring	NSF grade EPDM
Spring	AISI 316 Stainless Steel
Ball Cone Check	RPTFE, 15% Glass Filled
Stem	C27451 Lead Free* Brass

Precautionary Note: Not recommended for use with reciprocating pumps and similar applications, which may induce repetitious vibrations. Low flow rates which do not fully open the valve may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc. See Installation Manual for details.



Dimensions (in)

Model Number	LF Part Number	Size	Length	Wt (lbs)	Flow (Cv)
CVB12-PRLF	61LF-103-01PR	1/2"	4.2"	.42	1.4
CVB34-PRLF	61LF-104-01PR	3/4"	5.0"	1.0	3.5
CVB1-PRLF	61LF-105-01PR	1"	5.8"	1.9	6.0
CVB114-PRLF	61LF-106-01PR	1-1/4"	6.7"	3.35	44
CVB112-PRLF	61LF-107-01PR	1-1/2"	8.2"	4.6	65
CVB2-PRLF	61LF-108-01PR	2"	9.7"	7.3	81

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

OPTIONS**

- Soft Seat (61LF-500 Series)
- 0 psig Cracking Pressure (No Spring)
- 5 psig Cracking Pressure (1/2" - 1")
- 10 psig Cracking Pressure (1/2" - 1")

OTHER

** Consult factory for availability of LF Model options



* **LEAD FREE:** The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



59 SERIES BRONZE WYE STRAINER

DESCRIPTION:

The APOLLOPRESS Model YB-PR (59 Series) Strainers with quick Press connections are designed to protect heating, cooling and non-potable plumbing systems and process equipment from unwanted foreign particles with minimal pressure loss. The valves are built for long reliable service with proven ASTM grade materials and stainless steel strainer. Features Leak Before Press® technology and 250 psig maximum working pressure.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Self-Aligning Screen Design
- Blowout Ball Valve Option
- CRN 0E8959.5C
- Made in USA, ARRA Compliant

PERFORMANCE RATING†:

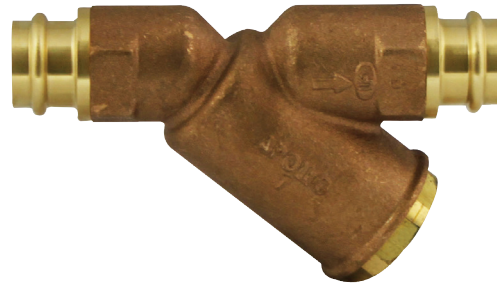
- Maximum Pressure: 250 psi (17.2 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	Cast Bronze, ASTM B584
Cap	Brass, ASTM B16
Connector Housing	ASTM B16 Brass
Connector O-Ring	NSF grade EPDM
Screen	304 Stainless Steel
Cap Seal (1/2")	Teflon® O-Ring
Cap Seal (3/4" - 2")	PTFE Gasket

Not intended for potable water



Dimensions (in)

Model Number	Part Number	Size	Length	Cv	Wt (lbs)
YB12-PR	59-003-01PR	1/2"	4.75"	5	1.0
YB34-PR	59-004-01PR	3/4"	6.1"	15	2.0
YB1-PR	59-005-01PR	1"	7.25"	28	3.0
YB114-PR	59-006-01PR	1-1/4"	7.62"	55	3.8
YB112-PR	59-007-01PR	1-1/2"	8.25"	70	5.7
YB2-PR	59-008-01PR	2"	10.3"	9 99	7.7

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

OPTIONS (SUFFIX)

- (01) - 50 Mesh (Standard 1/2" models)
- (01) - 20 Mesh (Standard 3/4" - 2" models)
- (02) - Tapped Cap
- (P2) - Tapped Cap with Plug
- (06) - Tapped cap with Ball Valve

Consult factory for availability of alternate screen sizes.

59LF SERIES LEAD FREE BRONZE WYE STRAINER



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS YB-PRLF Strainers with quick Press connections are designed to protect plumbing and heating systems including potable water from unwanted foreign particles with minimum pressure loss. The valves are built for long reliable service with proven ASTM grade materials including a Lead Free* bronze body and stainless steel strainer.

FEATURES:

- Lead Free* Bronze and Brass Construction
- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Self-Aligning SS Screen Design
- Blowout Ball Valve Option
- CRN OE8959.5C
- Made in USA, ARRA Compliant

APPROVALS

- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

PERFORMANCE RATING†:

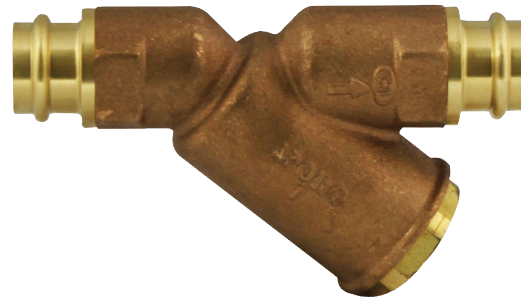
- Maximum Pressure: 250 psi (17.2 bar) non-shock
- Temperature Range: 0°F - 250°F (-18°C - 121°C)
- Low Pressure Steam - Max. working pressure: 15 psi

† APOLLOPRESS connectors are designed for direct mechanical connection to ASTM B88-Type K, L, and M copper tubing in the hard drawn condition. Press connectors are not suitable for flammable gas service.

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Bronze
Cap	C27451 Brass
Connector Housing	C27451 Brass
Connector O-Ring	NSF grade EPDM
Screen	304 Stainless Steel
Cap Seal (1/2")	Teflon® O-Ring
Cap Seal (3/4" - 2")	PTFE Gasket

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

Model Number	LF Part Number	Size	Length	Cv	Wt (lbs)
YB12-PRLF	59LF-003-01PR	1/2"	4.75"	5	1.0
YB34-PRLF	59LF-004-01PR	3/4"	6.1"	15	2.0
YB1-PRLF	59LF-005-01PR	1"	7.25"	28	3.0
YB114-PRLF	59LF-006-01PR	1-1/4"	7.62"	55	3.8
YB112-PRLF	59LF-007-01PR	1-1/2"	8.25"	70	5.7
YB2-PRLF	59LF-008-01PR	2"	10.39"	99	7.7

For liquids, the flow coefficient - Cv - expresses the flow capacity in gallons per minute (GPM) of 60°F water with a pressure drop of 1 psi (lb/in²).

OPTIONS (SUFFIX)

- (01) - 50 Mesh (Standard 1/2" models)
- (01) - 20 Mesh (Standard 3/4" - 2" models)
- (02) - Tapped Cap
- (P2) - Tapped Cap with Plug
- (06) - Tapped cap with Ball Valve



Consult factory for availability of alternate screen sizes.



APOLLO USA
RANGE 15-75 PSI
SIZE 1
MAX INLET 400 PSI
180°F MAX
1531

APOLLO
USA





Water Pressure Reducing Valves

Available in Press sizes ½" - 2", two models cover residential, commercial and institutional applications. Featuring sturdy bronze bodies and high flow rates, valves are 100% factory tested and preset at 50 psi. Press connections incorporate **Leak Before Press®** technology.





36LF SERIES LEAD FREE PRESSURE REDUCING VALVE

DESCRIPTION:

The Lead Free* APOLLOPRESS Model PR-PRLF (36LF Series) Heavy Duty Bronze Pressure Reducing Valves with Press connections are designed to protect residential and commercial potable water distribution systems by controlling excessive pressures. The valves are built for long reliable service with proven ASTM grade Lead Free* materials.

FEATURES:

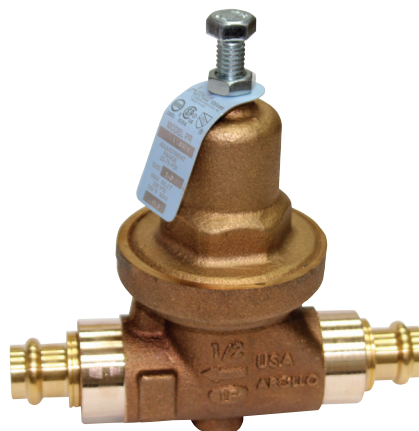
- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Corrosion Resistant Bronze Body and Cover
- Integral SS Strainer
- Balanced Piston Design
- Internal Thermal Expansion By-pass
- High and Low Pressure Range Options
- Pressure Gauge Connection Option
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Press Fitting Pressure: 250 psi (17.2 bar)
- Maximum Temperature: 180°F (82°C)

APPROVALS

- ASSE 1003-2009; "Water Pressure Reducing Valves"
- CSA B356 "Water pressure reducing valves..."
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)



Dimensions (in)

Model Number	LF Part Number	Size	Length	Height from CL	Wt (lbs)
PR12-PRLF	36LF-203-01PR	1/2"	5.78"	4.75"	3.1
PR34-PRLF	36LF-204-01PR	3/4"	6.09"	4.75"	3.1
PR1-PRLF	36LF-205-01PR	1"	6.65"	5.9"	4.1
PR114-PRLF	36LF-206-01PR	1-1/4"	7.88"	7.49"	9.0
PR112-PRLF	36LF-207-01PR	1-1/2"	8.62"	7.49"	9.0
PR2-PRLF	36LF-208-01PR	2"	10.76"	9.76"	21.0

Also available: 36 Series for non-potable applications.

material specifications:

Part Name	Material
Body	ASTM B584 C89836 Bronze
Cover	ASTM B584 C84400 Bronze
Diaphragm	FDA Grade Buna W/ Polyester
Seat disc	FDA Grade EPDM
Stem	C27451 Brass
Spring	Stainless Steel
O-Rings	FDA Grade EPDM
Connector Housing	C27451 Brass
Connector O-Ring	FDA Grade EPDM

Model Numbering System

PR	Size	Pressure Gauge	Pressure Range	PRLF

Example: PR-12H-PRLF is model number for 1/2" High Pressure set at 100 psi

SIZE

- 12 - 1/2"
- 34 - 3/4"
- 1 - 1"
- 114 - 1-1/4"
- 112 - 1-1/2"
- 2 - 2"

PRESSURE GAUGE

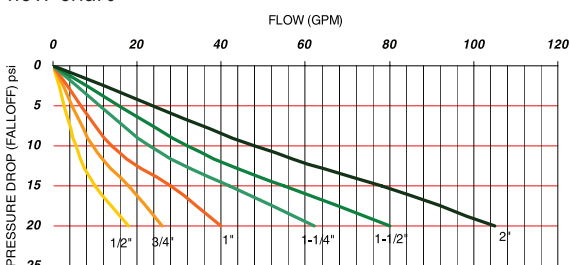
- Blank - No Gauge Port
- P - W/ Gauge Port Plugged
- G - W/ Pressure Gauge

PRESSURE RANGE

- Blank - 25-75 PSIG
- L - 10-35 PSIG
- H - 75-125 PSIG



flow chart



* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.

36ELF SERIES LEAD FREE PRESSURE REDUCING VALVE



"Apollo" PRESS

DESCRIPTION:

The Lead Free* APOLLOPRESS Model PRE-PRLF (36ELF Series) Pressure Reducing Valves with Press connections are easily installed to protect residential and commercial potable water distribution systems by automatically reducing excessive supply pressures. The dezincification resistant bronze body, stainless steel adjusting screw and dielectric polymer cage provide maximum corrosion resistance. Designed for easy in-line servicing with simple cartridge removal.

FEATURES:

- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Balanced Piston Design
- Sealed Cage for vault installations
- Built-in Thermal Expansion By-Pass
- Large Area Integral Stainless Steel Strainer
- Modular Seat Disc and Strainer Cartridge
- Control Pressure Ranges: 15-75 psi and 75-150 psi
- Factory Tested and Preset at 50 or 100 psi
- High flow / high efficiency design
- Made in USA, ARRA Compliant

APPROVALS

- NSF/ANSI 61-8
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)
- ASSE 1003-2009; "Water Pressure Reducing Valves"
- CSA B356 Water pressure reducing valves for domestic water supply systems

PERFORMANCE RATING:

- Maximum Press Fitting Pressure: 250 psi (17.2 bar)
- Maximum Temperature: 180°F (82°C)

material specifications:

Part Name	Material
Body	UNS 89836 Lead Free Bronze
Connector Housing	C27451 Lead Free Brass
Connector O-Ring	NSF grade EPDM
Screen	Stainless Steel
Spring Housing	Glass Filled Celcon®
Diaphragm	NSF grade EPDM
Seat disc	FDA grade EPDM
Adjusting Screw & Nut	Stainless Steel
Cage Seal	Nitrile
Stem	C27451 Lead Free Brass
Spring	Music Wire ASTM A228
Cartridge O-rings	NSF grade EPDM

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law III-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



Dimensions (in)

Model Number	LF Part Number	Size	Length	Height from CL	Wt (lbs)
PRE12-PRLF	36ELF-103-01PR	1/2"	5.46"	4.75"	1.5
PRE34-PRLF	36ELF-104-01PR	3/4"	5.79"	4.75"	1.7
PRE1-PRLF	36ELF-105-01PR	1"	5.91"	4.75"	2.3

Also available: 36E Series for non-potable applications.

NEW Larger sizes 1-1/4" - 2" COMING SOON!

Model Numbering System

PRE			PRLF
	Size	Pressure Range	

Example: PRE-12H-PRLF is model number for a 1/2" High Pressure set at 100 psi

SIZE

12 - 1/2"
34 - 3/4"
1 - 1"

PRESSURE RANGE

BLANK-15 - 75 PSIG (-01 suffix)
H - 75 -150 PSIG (-03 suffix)

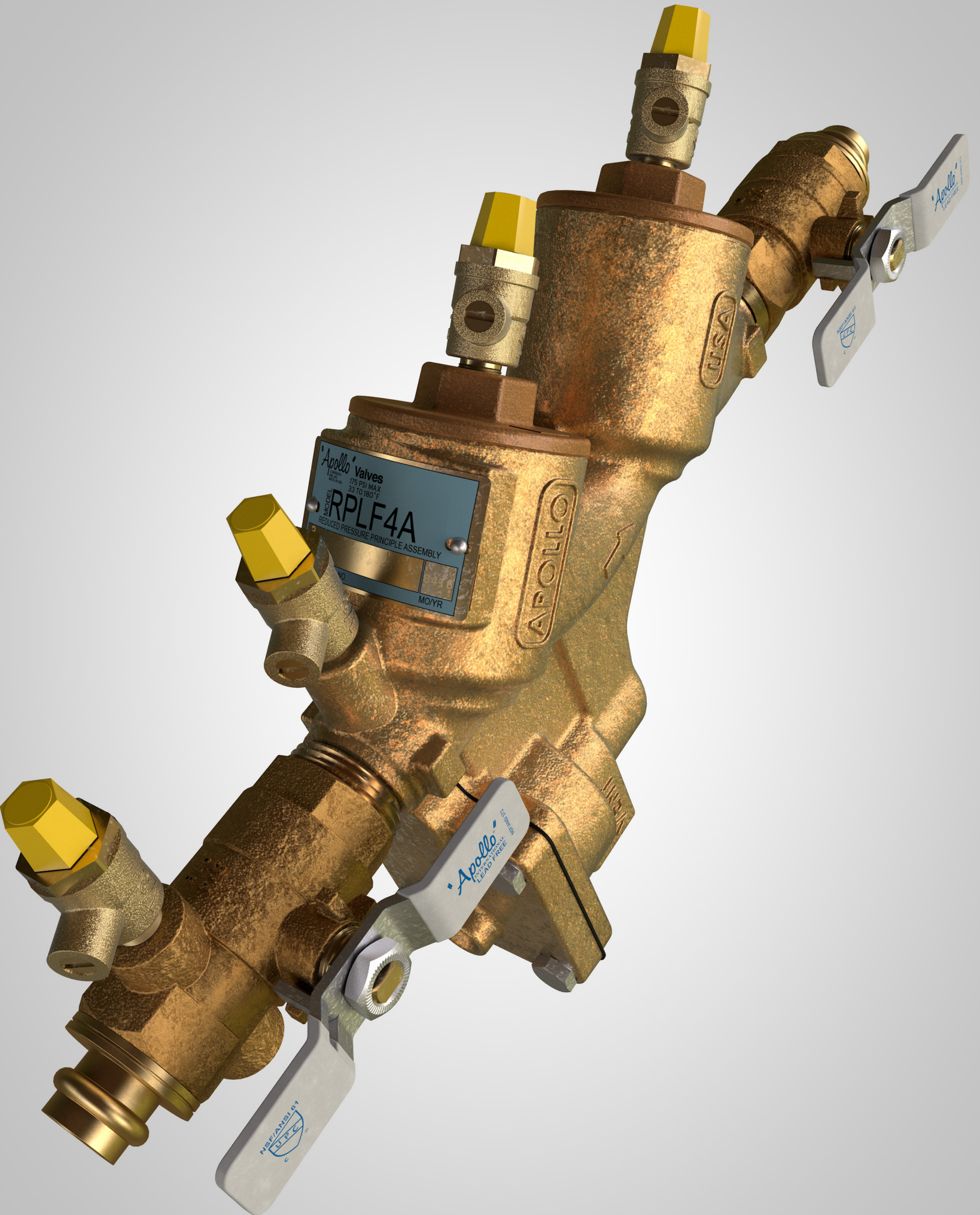


flow capacity

Pipe Size	Fall-Off (PSI)	Pressure Differential (PSI)		
		25	50	75
1/2"	10	10	13	16
	15	13	18	22
	20	17	23	29
	30	22	29	36
3/4"	10	16	21	26
	15	20	27	32
	20	24	32	40
	30	29	38	48
1"	10	25	33	41
	15	30	42	52
	20	34	45	56
	30	35	47	59

Pressure differential is the difference between the supply pressure and adjusted outlet pressure measured in the static (closed) condition. Fall-off is the decrease in downstream regulated pressure as the flow increases.





Apollo Valves
175 PSI MAX
33 TO 180°F
MODEL RPLF4A
REDUCED PRESSURE PRINCIPLE ASSEMBLY
MOYR

APOLLO

USA

Apollo
LEAD FREE

NSF/ANSI 61
DWP



Backflow Prevention

The 4A Series of Reduced Pressure Principle Backflow Preventers are available in **APOLLOPRESS** sizes from ½" to 2", with **Leak Before Press**® technology. Featuring bronze bodies and innovative cartridge check design, these assemblies provide protection of potable water against health hazard conditions. Assemblies are 100% factory tested. Available with optional Apollo bronze strainers.





RPLF4A SERIES LEAD FREE REDUCED PRESSURE VALVES

DESCRIPTION:

The ApolloPress Model RPLF4A Series Lead Free* Reduced Pressure Backflow Preventers with Press end connections provide maximum protection against back-siphonage or backpressure from substances that are hazardous to the potable water supply. The top accessed modular check valve cartridge provides captured springs, replaceable seats and reversible silicone seat discs. This Made in America / 5 year factory warranty assembly features APOLLOPRESS ball valves with stainless steel handles and trim and Leak Before Press® technology.

FEATURES:

- Fast, Reliable, Economical Press Installation
- ANSI 3rd party Certified Lead-Free*
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Low pressure loss
- Easily removable modular check valve cartridge
- Captured stainless steel springs
- Top-mounted test cocks for easy testing
- Modular Relief Valve
- ApolloPress ball valves w/ SS handles & nuts standard
- No special tools required for servicing
- Made in USA, ARRA Compliant

PERFORMANCE RATING:

- Maximum Working Pressure 175 psi
- Temperature Range 33 ° F - 180 ° F

APPROVALS:

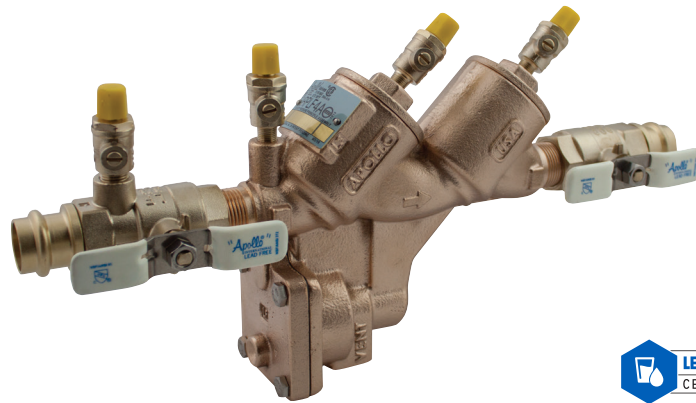
- ASSE 1013 - Horizontal (1/2"-2")
- CSA B.64.4 - Horizontal (1/2"-2")
- Backflow assembly is approved by the Foundation for Cross-Connection Control and Hydraulic Research at the University of Southern California. APOLLOPRESS connections are optional factory installed connectors on each end of the approved assembly. - Horizontal (3/4" & 1")
- NSF/ANSI 372 Certified Lead Free (0.25% Lead Max.)

material specifications:

Part Name	Material
Body, Caps, Ball Valve Shutoffs, Test cocks	Bronze C89836 Lead Free*
Check Valve Cartridges	Glass-Filled PPO
Springs	300 Series Stainless Steel
Seat Discs	Chloramine-resistant Silicone
O-rings	Chloramine-resistant EPDM

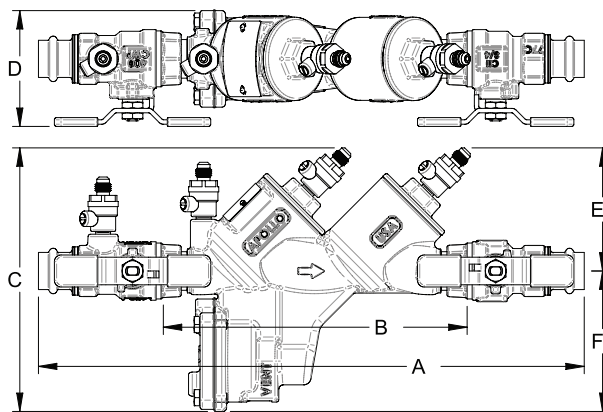
AIR GAP DEVICES

- AGD4A1 (1/2" - 1")
- AGD4A112 (1-1/4" - 1-1/2")
- AGD4A2 (2")



Dimensions (in)

LF Part Number	Size	A	B	C	D	E	F	Wt (lbs)
4ALF-203-T2FPR	1/2"	13	7 - 3/8	7-1/8	2-7/8	3-1/4	3-7/8	7.4
4ALF-204-T2FPR	3/4"	14-7/8	8-1/2	7-3/8	3-1/8	3-1/2	3-7/8	9.0
4ALF-205-T2FPR	1"	16 - 7/8	9-1/2	8	3-1/4	4	4	13.0
4ALF-206-T2PR	1-1/4"	21-1/8	11-3/4	9-7/8	5-1/8	4-1/2	5-3/8	19.1
4ALF-207-T2PR	1-1/2"	22	11-5/8	9-7/8	5-1/8	4-1/2	5-3/8	22.5
4ALF-208-T2PR	2"	24-3/4	12-3/4	11	5-7/8	5	6	34.6



Model Numbering System

4A XX - 2	0 X - T2	F	XX	OPTIONS
Material	Size			
Blank -Standard	3 - 1/2"	Blank -	PR - APOLLOXPRESS	
LF -Lead Free	4 - 3/4"	NPT Testcock		
	5 - 1"	(1-1/4" x 2")		
	6 - 1-1/4"	F -		
	7 - 1-1/2"	SAE Testcock		
	8 - 2"	(1/2" - 1")		

* LEAD FREE: The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



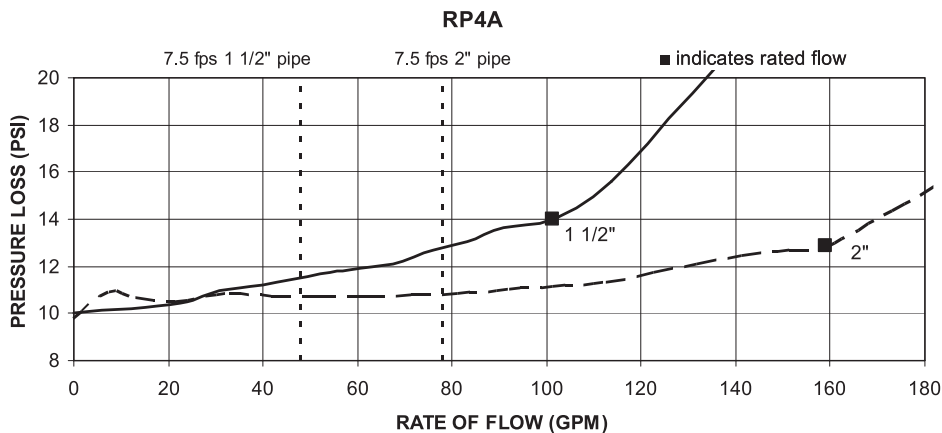
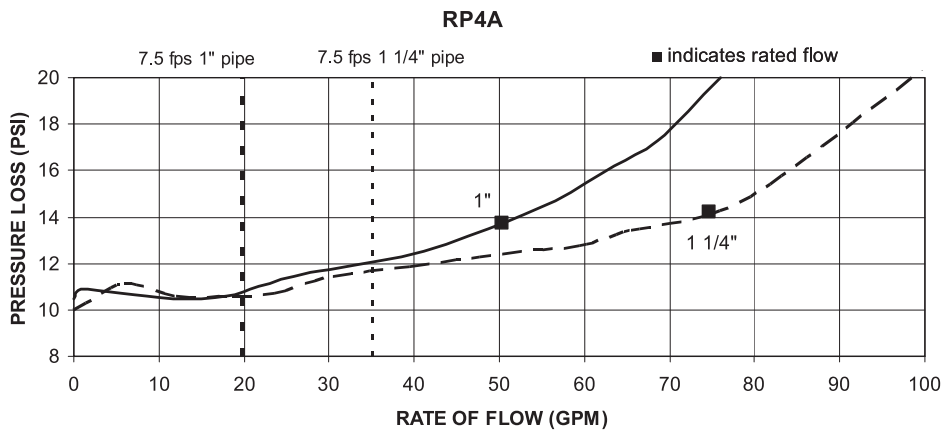
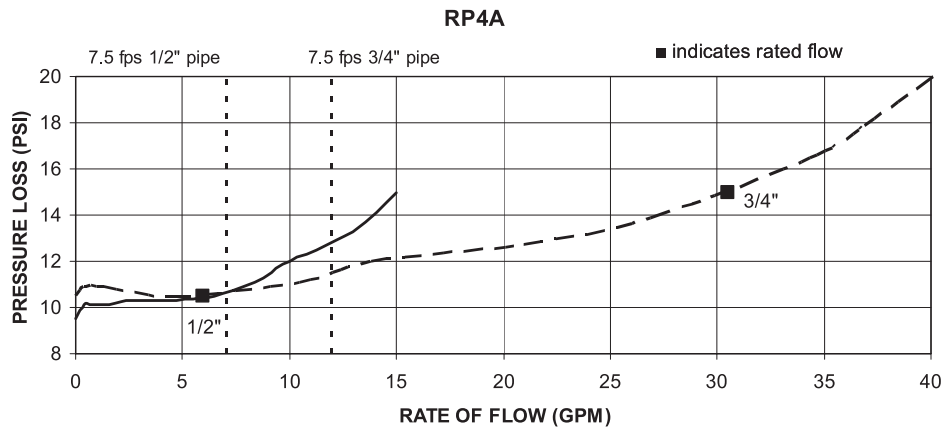
RPLF4A SERIES LEAD FREE REDUCED PRESSURE VALVES



Apollo PRESS

FLOW CURVES:

Curves developed from independent approval agencies actual tests - Consult factory for details. ■ indicates rated flow as determined by approval agencies, 7.5 ft/sec is the typical maximum Plumbing system flow rate.





PRESS 3" "CENTER PRESS JAWS HERE"

...ER PRESS JAWS HERE



Small & Large Diameter Fittings

The **APOLLOPRESS** large diameter copper fittings (available in sizes 2 ½" - 4") feature a patented solid cross-section grab ring, creating significant contact with the tube after pressing. The **Leak Before Press**® feature allows water to flow past the sealing element during pressure testing if the fitting has not been pressed. Last, but certainly not least, we've added a visual element: if the break-away band is still on the fitting, it needs to be checked.

The **APOLLOPRESS** small diameter fittings (available in sizes ½" - 2") feature copper-body construction for most configurations. The lead-free design offers a **Leak Before Press**® feature. The forward lip aids in the alignment of the copper tube during insertion, reducing the risk of o-ring damage. These fittings are approved for underground applications and are ideal for service and repair. Pre-lubricated, they are fast and simple to install.





Small Diameter



Large Diameter Close Turn



Large Diameter Long Turn



807 APOLLOPRESS COPPER 90° ELBOW

ApolloPress Part No.	Description	Height	Width	Depth
10075554	90° Elbow, Copper, SD, 807, 1/2 CxC	1.97	1.97	0.95
10075556	90° Elbow, Copper, SD, 807, 3/4 CxC	2.58	2.58	1.24
10075052	90° Elbow, Copper, SD, 807, 1 CxC	2.97	2.97	1.49
10075078	90° Elbow, Copper, SD, 807, 1 1/4 CxC	3.83	3.83	1.75
10075080	90° Elbow, Copper, SD, 807, 1 1/2 CxC	4.37	4.37	2.11
10075082	90° Elbow, Copper, SD, 807, 2 CxC	5.35	5.35	2.58

807 APOLLOPRESS COPPER 90° REDUCING ELBOW

ApolloPress Part No.	Description	Height	Width	Depth
10066101	90° Reducing Elbow, Copper, SD, 807 3/4 x 1/2 CxC	3.67	2.58	1.24
10066083	90° Reducing Elbow, Copper, SD, 807 1 x 3/4 CxC	4.27	2.97	1.49

807-C APOLLOPRESS COPPER CLOSE TURN 90° ELBOW

LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062021	Close Turn 90° Elbow, Copper, LD, 807-C, 2 1/2 CxC	5.23	5.23	3.16
10062027	Close Turn 90° Elbow, Copper, LD, 807-C, 3 CxC	5.95	5.95	3.68
10062032	Close Turn 90° Elbow, Copper, LD, 807-C, 4 CxC	7.44	7.44	4.70

807-L APOLLOPRESS COPPER LONG TURN 90° ELBOW

LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062066	Long Turn 90° Elbow, Copper, LD, 807-L, 2 1/2 CxC	6.67	6.67	3.16
10062067	Long Turn 90° Elbow, Copper, LD, 807-L, 3 CxC	8.56	8.56	3.68
10062069	Long Turn 90° Elbow, Copper, LD, 807-L, 4 CxC	9.75	9.75	4.70

Small Diameter



Large Diameter Close Turn



Large Diameter Long Turn



807-2 APOLLOPRESS COPPER 90° STREET ELBOW

ApolloPress Part No.	Description	Height	Width	Depth
10075566	90° Street Elbow, Copper, SD, 807-2, 1/2 FTGxC	2.38	1.80	0.95
10075568	90° Street Elbow, Copper, SD, 807-2, 3/4 FTGxC	2.82	2.37	1.24
10075046	90° Street Elbow, Copper, SD, 807-2, 1 FTGxC	3.56	2.87	1.49
10075072	90° Street Elbow, Copper, SD, 807-2, 1 1/4 FTGxC	3.85	3.64	1.75
10075074	90° Street Elbow, Copper, SD, 807-2, 1 1/2 FTGxC	4.40	4.14	2.11
10075076	90° Street Elbow, Copper, SD, 807-2, 2 FTGxC	5.56	5.12	2.58

807-C-2 APOLLOPRESS COPPER CLOSE TURN 90° STREET ELBOW

LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062007	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, 2 1/2 FTGxC	5.54	4.96	3.16
10062012	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, 3 FTGxC	6.25	5.66	3.68
10062017	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, 4 FTGxC	7.89	7.15	4.70

807-L-2 APOLLOPRESS COPPER LONG TURN 90° STREET ELBOW

LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062071	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, 2 1/2 FTGxC	6.92	6.40	3.16
10062073	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, 3 FTGxC	8.71	8.28	3.68
10062074	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, 4 FTGxC	10.98	10.44	4.70



8707-3 APOLLOPRESS COPPER & LOW LEAD BRASS FEMALE 90° ELBOW				
ApolloPress Part No.	Description	Height	Width	Depth
10066560	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, ½ CxF	3.00	2.10	1.02
10066561	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, ¾ CxF	3.54	2.58	1.25
10066562	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, 1 CxF	4.07	2.99	1.53
10066563	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, 1¼ CxF	4.91	3.92	1.93
10066564	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, 1½ CxF	5.63	4.43	2.20
10066565	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, 2 CxF	6.60	5.43	2.74
8707-3 APOLLOPRESS COPPER & LOW LEAD BRASS FEMALE 90° REDUCING ELBOW				
ApolloPress Part No.	Description	Height	Width	Depth
10066566	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, ½ x 3/8 CxF	2.76	1.97	0.94
10066567	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, ½ x ¼ CxF	2.99	2.13	1.26
10066568	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, ¾ x ½ CxF	3.47	2.58	1.24
10066569	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, 1 x ½ CxF	3.68	2.97	1.49
8707-3-5 APOLLOPRESS COPPER & LOW LEAD BRASS DROP EAR 90° ELBOW				
ApolloPress Part No.	Description	Height	Width	Depth
10075366	Drop Ear 90° Elbow, Copper & Low Lead Brass, SD, 8707-3-5, ½ CxF	1.35	2.71	2.12
10075368	Drop Ear 90° Elbow, Copper & Low Lead Brass, SD, 8707-3-5, ¾ CxF	1.62	3.28	2.34
8707-3-5 APOLLOPRESS COPPER & LOW LEAD BRASS REDUCING DROP EAR 90° ELBOW				
ApolloPress Part No.	Description	Height	Width	Depth
10075367	Reducing Drop Ear 90° Elbow, Low Lead Brass, SD, 8707-3-5, ½ x 3/8 CxF	1.09	2.56	1.59

Small Diameter



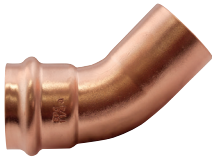
Large Diameter



806 APOLLOPRESS COPPER 45° ELBOW				
ApolloPress Part No.	Description	Height	Width	Depth
10075060	45° Elbow, Copper, SD, 806, ½ CxC	1.52	2.01	1.52
10075062	45° Elbow, Copper, SD, 806, ¾ CxC	1.91	2.62	1.91
10075064	45° Elbow, Copper, SD, 806, 1 CxC	2.28	3.10	2.28
10075090	45° Elbow, Copper, SD, 806, 1¼ CxC	2.69	3.62	2.69
10075092	45° Elbow, Copper, SD, 806, 1½ CxC	3.16	4.20	3.16
10075094	45° Elbow, Copper, SD, 806, 2 CxC	3.88	5.12	3.88
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062052	45° Elbow, Copper, LD, 806, 2½ CxC	4.67	5.89	4.67
10062057	45° Elbow, Copper, LD, 806, 3 CxC	5.33	6.58	5.33
10062062	45° Elbow, Copper, LD, 806, 4 CxC	6.67	8.10	6.67



Small Diameter



Large Diameter



806-2 APOLLOPRESS COPPER 45° STREET ELBOW

ApolloPress Part No.	Description	Height	Width	Depth
10075054	45° Street Elbow, Copper, SD, 806-2, ½ FTGxC	1.89	2.60	0.95
10075056	45° Street Elbow, Copper, SD, 806-2, ¾ FTGxC	2.25	2.96	1.24
10075058	45° Street Elbow, Copper, SD, 806-2, 1 FTGxC	2.33	3.23	1.49
10075084	45° Street Elbow, Copper, SD, 806-2, 1¼ FTGxC	2.73	3.67	1.75
10075086	45° Street Elbow, Copper, SD, 806-2, 1½ FTGxC	3.06	4.09	2.11
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10075088	45° Street Elbow, Copper, LD, 806-2, 2 FTGxC	3.95	5.29	2.55
10062037	45° Street Elbow, Copper, LD, 806-2, 2½ FTGxC	4.74	5.97	3.16
10062042	45° Street Elbow, Copper, LD, 806-2, 3 FTGxC	5.36	6.62	3.68
10062047	45° Street Elbow, Copper, LD, 806-2, 4 FTGxC	6.74	8.18	4.70

TEES

Small Diameter



Large Diameter



811 APOLLOPRESS COPPER TEE

ApolloPress Part No.	Description	Height	Width	Depth
10077739	Tee, Copper, SD, 811, ½ CxCxC	1.72	3.00	0.95
10077740	Tee, Copper, SD, 811, ¾ CxCxC	2.11	2.50	1.24
10077741	Tee, Copper, SD, 811, 1 CxCxC	2.43	3.74	1.49
10077742	Tee, Copper, SD, 811, 1¼ CxCxC	2.76	4.10	1.74
10077743	Tee, Copper, SD, 811, 1½ CxCxC	3.61	5.12	2.11
10077744	Tee, Copper, SD, 811, 2 CxCxC	4.24	5.90	2.58
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10057518	Tee, Copper, LD, 811, 2½ CxCxC	5.33	7.15	3.16
10062072	Tee, Copper, LD, 811, 3 CxCxC	6.39	7.95	3.68
10062077	Tee, Copper, LD, 811, 4 CxCxC	7.66	9.84	4.70



Small Diameter



Large Diameter



Single Piece

811/811R APOLLOPRESS COPPER REDUCING OUTLET TEE

ApolloPress Part No.	Description	Height	Width	Depth
10077745	Reducing Outlet Tee, Copper, SD, 811, 3/4x3/4x1/2 CU CxCxC	2.00	3.18	1.24
10077746	Reducing Outlet Tee, Copper, SD, 811, 1x1x1/2 CU CxCxC	2.28	3.18	1.49
10077747	Reducing Outlet Tee, Copper, SD, 811, 1x1x3/4 CU CxCxC	2.39	3.50	1.49
10077748	Reducing Outlet Tee, Copper, SD, 811, 1/4x1/4x1/2 CxCxC	2.55	3.36	1.74
10077749	Reducing Outlet Tee, Copper, SD, 811, 1/4x1/4x3/4 CxCxC	2.66	3.60	1.74
10077750	Reducing Outlet Tee, Copper, SD, 811, 1/4x1/4x1 CxCxC	2.67	3.82	1.74
10077751	Reducing Outlet Tee, Copper, SD, 811, 1/2x1/2x1/2 CxCxC	2.90	3.80	2.11
10077752	Reducing Outlet Tee, Copper, SD, 811, 1/2x1/2x3/4 CxCxC	3.09	4.18	2.11
10077753	Reducing Outlet Tee, Copper, SD, 811, 1/2x1/2x1 CxCxC	3.13	4.34	2.11
10077754	Reducing Outlet Tee, Copper, SD, 811, 1/2x1/2x1/4 CxCxC	3.21	4.58	2.11
10077755	Reducing Outlet Tee, Copper, SD, 811, 2x2x1/2 CxCxC	3.34	4.26	2.58
10077756	Reducing Outlet Tee, Copper, SD, 811, 2x2x3/4 CxCxC	3.45	4.74	2.58
10077757	Reducing Outlet Tee, Copper, SD, 811, 2x2x1 CxCxC	3.49	4.98	2.58
10077758	Reducing Outlet Tee, Copper, SD, 811, 2x2x1/4 CxCxC	3.69	5.24	2.58
10077759	Reducing Outlet Tee, Copper, SD, 811, 2x2x1/2 CxCxC	4.09	5.44	2.58

LARGE DIAMETER

ApolloPress Part No.	Description	Height	Width	Depth
10062079	Reducing Outlet Tee, Copper, LD, 811R, 3 x 3 x 2 1/2 CxCxC	5.90	7.95	3.68
10068078	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 1/2 CxCxC	7.33	9.84	4.70
10068081	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 3/4 CxCxC	7.17	9.84	4.70
10068084	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 1 CxCxC	6.96	9.84	4.70
10068087	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 1 1/4 CxCxC	6.10	9.84	4.70
10068090	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 1 1/2 CxCxC	6.35	9.84	4.70
10068093	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 2 CxCxC	6.60	9.84	4.70
10062078	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 2 1/2 CxCxC	6.91	9.84	4.70
10062076	Reducing Outlet Tee, Copper, LD, 811R, 4 x 4 x 3 CxCxC	7.28	9.84	4.70

LARGE DIAMETER W/ SMALL DIAMETER OUTLET

ApolloPress Part No.	Description	Height	Width	Depth
10068042	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 1/2 CxCxC	5.58	7.15	3.16
10068045	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 3/4 CxCxC	5.42	7.15	3.16
10068048	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 1 CxCxC	5.21	7.15	3.16
10068051	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 1 1/4 CxCxC	4.58	7.15	3.16
10068054	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 1 1/2 CxCxC	4.83	7.15	3.16
10068057	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 2 1/2 x 2 1/2 x 2 CxCxC	5.08	7.15	3.16
10068060	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 1/2 CxCxC	6.21	7.95	3.68
10068063	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 3/4 CxCxC	6.05	7.95	3.68
10068066	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 1 CxCxC	5.84	7.95	3.68
10068069	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 1 1/4 CxCxC	5.09	7.95	3.68
10068072	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 1 1/2 CxCxC	5.34	7.95	3.68
10068075	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, 3 x 3 x 2 CxCxC	5.59	7.95	3.68



811/811R APOLLOPRESS COPPER REDUCING RUN/OUTLET TEE					
ApolloPress Part No.	Description	Height	Width	Depth	
10077784	Reducing Run/Outlet Tee, Copper, SD, 811, 3/4x1/2x1/2 CxCxC	2.00	3.32	1.24	
10077785	Reducing Run/Outlet Tee, Copper, SD, 811, 3/4x1/2x3/4 CxCxC	2.11	3.64	1.24	
10077786	Reducing Run/Outlet Tee, Copper, SD, 811, 1x1/2x3/4 CxCxC	2.39	3.74	1.49	
10077787	Reducing Run/Outlet Tee, Copper, SD, 811, 1x1/2x1 CxCxC	2.43	4.14	1.49	
10077788	Reducing Run/Outlet Tee, Copper, SD, 811, 1x3/4x1/2 CxCxC	2.28	3.44	1.49	
10077789	Reducing Run/Outlet Tee, Copper, SD, 811, 1x3/4x3/4 CxCxC	2.39	3.75	1.49	
10077790	Reducing Run/Outlet Tee, Copper, SD, 811, 1x3/4x1 CxCxC	2.42	3.95	1.49	
10077791	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x1x11/4 CxCxC	2.77	4.57	1.74	
10077792	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x3/4x3/4 CxCxC	2.64	3.99	1.74	
10077793	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x3/4x1 CxCxC	2.68	4.21	1.74	
10077794	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x3/4x11/4 CxCxC	2.76	4.49	1.74	
10077795	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x1x1/2 CxCxC	2.55	3.48	1.74	
10077796	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x1x3/4 CxCxC	2.66	3.83	1.74	
10077797	Reducing Run/Outlet Tee, Copper, SD, 811, 11/4x1x1 CxCxC	2.68	4.09	1.74	
10066397	Reducing Run/Outlet Tee, Copper, SD, 811R, 11/2 x 3/4 x 1 CxCxC	3.16	6.16	2.11	
10077798	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x1x1/2 CxCxC	3.11	4.39	2.11	
10077799	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x1x1 CxCxC	3.01	4.61	2.11	
10066081	Reducing Run/Outlet Tee, Copper, SD, 811R, 11/2 x 1 x 11/4 CxCxC	3.28	6.12	2.11	
10077800	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x1x11/2 CxCxC	3.61	5.29	2.11	
10077801	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x11/4x3/4 CxCxC	3.10	4.21	2.11	
10077802	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x11/4x1 CxCxC	3.13	4.49	2.11	
10077803	Reducing Run/Outlet Tee, Copper, SD, 811, 11/2x11/4x11/4 CxCxC	3.21	4.65	2.11	
10066197	Reducing Run/Outlet Tee, Copper, SD, 811R, 2 x 1 x 11/2 CxCxC	4.35	7.9	2.58	
10066018	Reducing Run/Outlet Tee, Copper, SD, 811R, 2 x 1 x 2 CxCxC	4.17	7.9	2.58	
10077804	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/4x11/4 CxCxC	3.65	5.39	2.58	
10066125	Reducing Run/Outlet Tee, Copper, SD, 811R, 2 x 11/4 x 11/2 CxCxC	4.35	7.59	2.58	
10066064	Reducing Run/Outlet Tee, Copper, SD, 811R, 2 x 11/4 x 2 CxCxC	4.17	7.59	2.58	
10077805	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/2x3/4 CxCxC	3.57	5.05	2.58	
10077806	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/2x1 CxCxC	3.57	5.36	2.58	
10077807	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/2x11/4 CxCxC	3.81	5.50	2.58	
10077808	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/2x11/2 CxCxC	4.09	5.86	2.58	
10077809	Reducing Run/Outlet Tee, Copper, SD, 811, 2x11/2x2 CxCxC	4.25	6.40	2.58	
LARGE DIAMETER					
ApolloPress Part No.	Description	Height	Width	Depth	
10066515	Reducing Run/Outlet Tee, Copper, LD, 811R, 21/2 x 2 x 3 CxCxC	6.18	13.41	3.68	
10066604	Reducing Run/Outlet Tee, Copper, LD, 811R, 3 x 2 x 2 CxCxC	5.59	10.42	3.68	
10066136	Reducing Run/Outlet Tee, Copper, LD, 811R, 3 x 21/2 x 21/2 CxCxC	5.9	10.93	3.68	

**7712 C APOLLOPRESS COPPER & LOW LEAD BRASS FEMALE OUTLET TEE**

ApolloPress Part No.	Description	Height	Width	Depth
10066579	Female Outlet Tee, Copper & Low Lead Brass, SD, 8712, 1/2 CxCxF	2.65	3.04	1.01
10066580	Female Outlet Tee, Copper & Low Lead Brass, SD, 8712, 3/4 CxCxF	3.14	3.47	1.25

7712 APOLLOPRESS COPPER & LOW LEAD BRASS FEMALE OUTLET REDUCING TEE

ApolloPress Part No.	Description	Height	Width	Depth
10066581	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 3/4 x 3/4 x 1/2 CxCxF	3.01	3.13	1.24
10066582	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 x 1 x 1/2 CxCxF	3.35	3.67	1.50
10066583	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 x 1 x 3/4 CxCxF	3.42	3.67	1.50
10066584	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 1/4 x 1 1/4 x 1/2 CxCxF	4.04	4.12	1.75
10066585	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 1/4 x 1 1/4 x 3/4 CxCxF	4.10	4.12	1.75
10066586	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 1/2 x 1 1/2 x 1/2 CxCxF	4.01	4.00	2.11
10066587	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 1 1/2 x 1 1/2 x 3/4 CxCxF	4.08	4.00	2.11
10066588	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 2 x 2 x 1/2 CxCxF	4.57	4.39	2.58
10066589	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, 2 x 2 x 3/4 CxCxF	4.64	4.39	2.58

**811BH APOLLOPRESS COPPER BULLHEAD TEE**

ApolloPress Part No.	Description	Height	Width	Depth
10077810	Bullhead Tee, Copper, SD, 811, 1/2x1/2	1.99	3.41	1.23
10066071	Bullhead Tee, Copper, SD, 811BH, 3/4 x 3/4 x 1 CxCxC	2.51	6.38	1.48
10066090	Bullhead Tee, Copper, SD, 811BH, 1 1/2 x 1 1/2 x 2 CxCxC	4.16	9.75	2.58



Female Adapter



Female Reducing Adapter



803 APOLLOPRESS LEAD FREE BRASS FEMALE ADAPTER				
ApolloPress Part No.	Description	Height	Width	Depth
10075750	Female Adapter, Lead Free Brass, SD, 803, 1/2 CxF	1.01	1.52	1.01
10075752	Female Adapter, Lead Free Brass, SD, 803, 3/4 CxF	1.25	1.73	1.25
10075754	Female Adapter, Lead Free Brass, SD, 803, 1 CxF	1.53	1.76	1.53
10075756	Female Adapter, Lead Free Brass, SD, 803, 1 1/4 CxF	1.93	1.90	1.93
10075758	Female Adapter, Lead Free Brass, SD, 803, 1 1/2 CxF	2.20	2.43	2.20
10075760	Female Adapter, Lead Free Brass, SD, 803, 2 CxF	2.73	2.44	2.73
803 APOLLOPRESS LEAD FREE BRASS FEMALE REDUCING ADAPTER				
ApolloPress Part No.	Description	Height	Width	Depth
10075780	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1/2 x 3/8 CxF	0.87	1.34	0.87
10075782	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1/2 x 1/4 CxF	1.25	1.62	1.25
10075784	Female Reducing Adapter, Lead Free Brass, SD, 803R, 3/4 x 1/2 CxF	1.01	1.50	1.01
10075796	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 x 1/2 CxF	1.49	1.55	1.49
10075798	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 x 3/4 CxF	1.49	1.56	1.49
10075800	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 x 1 1/4 CxF	1.93	1.96	1.93
10075786	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 1/4 x 1/2 CxF	1.75	1.79	1.75
10075788	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 1/4 x 1 CxF	1.75	1.80	1.75
10075790	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 1/4 x 1 1/2 CxF	2.20	1.98	2.20
10075792	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 1/2 x 3/4 CxF	2.09	2.03	2.09
10075794	Female Reducing Adapter, Lead Free Brass, SD, 803R, 1 1/2 x 1 1/4 CxF	2.09	2.19	2.09

Female Street Adapter



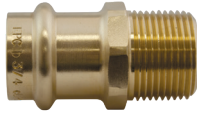
Female Reducing Street Adapter



803-2 APOLLOPRESS LEAD FREE BRASS FEMALE STREET ADAPTER				
ApolloPress Part No.	Description	Height	Width	Depth
10075762	Female Street Adapter, Lead Free Brass, SD, 803-2, 1/2 FTGxF		1.71	1.02
10075768	Female Street Adapter, Lead Free Brass, SD, 803-2, 3/4 FTGxF		1.91	1.25
10075772	Female Street Adapter, Lead Free Brass, SD, 803-2, 1 FTGxF		2.03	1.53
10075774	Female Street Adapter, Lead Free Brass, SD, 803-2, 1 1/4 FTGxF		2.19	1.93
10075776	Female Street Adapter, Lead Free Brass, SD, 803-2, 1 1/2 FTGxF		2.57	2.20
10075778	Female Street Adapter, Lead Free Brass, SD, 803-2, 2 FTGxF		2.78	2.74
803-2 APOLLOPRESS LEAD FREE BRASS FEMALE REDUCING STREET ADAPTER				
ApolloPress Part No.	Description	Height	Width	Depth
10075764	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, 1/2 x 3/8 FTGxF	0.87	1.56	0.87
10075766	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, 1/2 x 1/4 FTGxF	1.26	1.79	1.26
10075770	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, 3/4 x 1/2 FTGxF	1.20	1.84	1.20
10075804	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, 1 x 1/2 FTGxF	1.13	1.65	1.13
10075802	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, 1 1/4 x 1/2 FTGxF	1.38	1.90	1.38



Small Diameter



Large Diameter



Reducing Adapter



Small Diameter



Reducing Adapter



804 APOLLOPRESS LEAD FREE BRASS MALE ADAPTER

ApolloPress Part No.	Description	Height	Width	Depth
10075806	Male Adapter, Lead Free Brass, SD, 804, 1/2 CxM	0.93	1.92	0.93
10075808	Male Adapter, Lead Free Brass, SD, 804, 3/4 CxM	1.26	2.15	1.26
10075844	Male Adapter, Lead Free Brass, SD, 804, 1 CxM	1.50	2.39	1.50
10075810	Male Adapter, Lead Free Brass, SD, 804, 1 1/4 CxM	1.71	2.39	1.71
10075812	Male Adapter, Lead Free Brass, SD, 804, 1 1/2 CxM	2.13	2.86	2.13
10075814	Male Adapter, Lead Free Brass, SD, 804, 2 CxM	2.60	2.97	2.60

LARGE DIAMETER - INTERNATIONAL

ApolloPress Part No.	Description	Height	Width	Depth
10061982	Male Adapter - International, Low Lead Brass, LD, 804, 2 1/2 CxM	3.16	4.11	3.16
10061987	Male Adapter - International, Low Lead Brass, LD, 804, 3 CxM	3.68	4.35	3.68
10061992	Male Adapter - International, Low Lead Brass, LD, 804, 4 CxM	4.70	5.43	4.70

804R APOLLOPRESS LEAD FREE BRASS MALE REDUCING ADAPTER

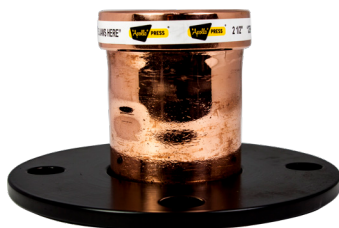
ApolloPress Part No.	Description	Height	Width	Depth
10075836	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1/2 x 3/8 CxM	0.93	1.79	0.93
10075838	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1/2 x 3/4 CxM	1.05	1.86	1.05
10075840	Male Reducing Adapter, Lead Free Brass, SD, 804R, 3/4 x 1/2 CxM	1.26	2.21	1.26
10075842	Male Reducing Adapter, Lead Free Brass, SD, 804R, 3/4 x 1 CxM	1.50	2.60	1.50
10075854	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 x 3/4 CxM	1.50	2.24	1.50
10075856	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 x 1 1/4 CxM	1.71	2.44	1.71
10075846	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 1/4 x 1 CxM	1.71	2.42	1.71
10075848	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 1/4 x 1 1/2 CxM	1.90	2.62	1.90
10075850	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 1/2 x 1 1/4 CxM	2.12	2.73	2.12
10075852	Male Reducing Adapter, Lead Free Brass, SD, 804R, 1 1/2 x 2 CxM	2.59	2.82	2.59
10075858	Male Reducing Adapter, Lead Free Brass, SD, 804R, 2 x 1 1/2 CxM	2.57	3.10	2.57

804R APOLLOPRESS LEAD FREE BRASS MALE STREET ADAPTER

ApolloPress Part No.	Description	Height	Width	Depth
10075816	Male Street Adapter, Lead Free Brass, SD, 804-2, 1/2 FTGxM	0.84	2.23	0.84
10075822	Male Street Adapter, Lead Free Brass, SD, 804-2, 3/4 FTGxM	1.05	2.40	1.05
10075826	Male Street Adapter, Lead Free Brass, SD, 804-2, 1 FTGxM	1.31	2.72	1.31
10075828	Male Street Adapter, Lead Free Brass, SD, 804-2, 1 1/4 FTGxM	1.66	2.82	1.66
10075830	Male Street Adapter, Lead Free Brass, SD, 804-2, 1 1/2 FTGxM	1.90	3.27	1.90
10075834	Male Street Adapter, Lead Free Brass, SD, 804-2, 2 FTGxM	2.37	3.46	2.37

804R APOLLOPRESS LEAD FREE BRASS MALE REDUCING STREET ADAPTER

ApolloPress Part No.	Description	Height	Width	Depth
10075818	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, 1/2 x 3/8 FTGxM	0.68	1.99	0.68
10075820	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, 1/2 x 3/4 FTGxM	1.05	2.42	1.05
10075824	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, 3/4 x 1/2 FTGxM	0.98	2.31	0.98
10075832	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, 1 x 3/4 FTGxM	1.32	2.55	1.32



8741 APOLLOPRESS COPPER FLANGE				
ApolloPress Part No.	Description	Height	Width	Depth
125 LB.				
10075702	125 lb. Flange, Copper, SD, 8741, 2	3.67	6.00	6.00
10061761	125 lb. Flange, Copper, LD, 8741, 2½	3.62	7.00	7.00
10061767	125 lb. Flange, Copper, LD, 8741, 3	3.61	7.50	7.50
10061736	125 lb. Flange, Copper, LD, 8741, 4	3.82	9.00	9.00
150 LB.				
10061763	150 lb. Flange, Copper, LD, 8771, 2½	3.62	7.00	7.00
10061769	150 lb. Flange, Copper, LD, 8771, 3	3.61	7.50	7.50
10061738	150 lb. Flange, Copper, LD, 8771, 4	3.82	9.00	9.00

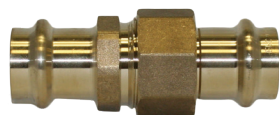
Small Diameter



Large Diameter



817 APOLLOPRESS COPPER TUBE CAP				
ApolloPress Part No.	Description	Height	Width	Depth
10077850	Tube Cap, Copper, SD, 817, ½	0.95	0.91	0.95
10077851	Tube Cap, Copper, SD, 817, ¾	1.24	1.14	1.24
10077852	Tube Cap, Copper, SD, 817, 1	1.48	1.19	1.48
10075172	Tube Cap, Copper, SD, 817, 1¼	1.75	1.53	1.75
10075174	Tube Cap, Copper, SD, 817, 1½	2.11	1.80	2.11
10075176	Tube Cap, Copper, SD, 817, 2	2.58	2.15	2.58
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10062142	Tube Cap, Copper, LD, 817, 2½	3.16	3.64	3.16
10062147	Tube Cap, Copper, LD, 817, 3	3.68	4.07	3.68
10062152	Tube Cap, Copper, LD, 817, 4	4.70	4.96	4.70



8733 APOLLOPRESS LOW LEAD BRASS UNION				
ApolloPress Part No.	Description	Height	Width	Depth
10075860	Union, Low Lead Brass, SD, 8733, ½ CxC	1.26	2.99	1.26
10075862	Union, Low Lead Brass, SD, 8733, ¾ CxC	1.52	3.69	1.52
10075864	Union, Low Lead Brass, SD, 8733, 1 CxC	1.94	3.83	1.94
10075866	Union, Low Lead Brass, SD, 8733, 1¼ CxC	2.19	3.83	2.19
10075868	Union, Low Lead Brass, SD, 8733, 1½ CxC	2.45	3.95	2.45
10075870	Union, Low Lead Brass, SD, 8733, 2 CxC	3.12	4.65	3.12



8733-3 APOLLOPRESS LOW LEAD BRASS FEMALE UNION				
ApolloPress Part No.	Description	Height	Width	Depth
10075872	Female Union, Low Lead Brass, SD, 8733-3, ½ CxF	1.25	2.14	1.25
10075874	Female Union, Low Lead Brass, SD, 8733-3, ¾ CxF	1.52	2.88	1.52
10075876	Female Union, Low Lead Brass, SD, 8733-3, 1 CxF	1.94	2.88	1.94
10075878	Female Union, Low Lead Brass, SD, 8733-3, 1¼ CxF	2.19	3.16	2.19
10075880	Female Union, Low Lead Brass, SD, 8733-3, 1½ CxF	2.45	3.09	2.45
10075882	Female Union, Low Lead Brass, SD, 8733-3, 2 CxF	3.12	3.33	3.12



8733-4 APOLLOPRESS LOW LEAD BRASS MALE UNION				
ApolloPress Part No.	Description	Height	Width	Depth
10075884	Male Union, Low Lead Brass, SD, 8733-4, ½ CxM	1.26	2.9	1.26
10075886	Male Union, Low Lead Brass, SD, 8733-4, ¾ CxM	1.52	3.42	1.52
10075888	Male Union, Low Lead Brass, SD, 8733-4, 1 CxM	1.94	3.74	1.94
10075890	Male Union, Low Lead Brass, SD, 8733-4, 1¼ CxM	2.19	3.78	2.19
10075892	Male Union, Low Lead Brass, SD, 8733-4, 1½ CxM	2.45	3.73	2.45
10075894	Male Union, Low Lead Brass, SD, 8733-4, 2 CxM	3.12	4.24	3.12



818 APOLLOPRESS COPPER FITTING REDUCER

ApolloPress Part No.	Description	Height	Width	Depth
10075146	Fitting Reducer, Copper, SD, 818, ¼ x ½ FTGxC	0.95	2.03	0.95
10075150	Fitting Reducer, Copper, SD, 818, 1 x ½ FTGxC	1.25	2.37	1.25
10075148	Fitting Reducer, Copper, SD, 818, 1 x ¾ FTGxC	1.25	2.22	1.25
10075336	Fitting Reducer, Copper, SD, 818, 1¼ x ½ FTGxC	1.38	2.83	1.38
10075154	Fitting Reducer, Copper, SD, 818, 1¼ x ¾ FTGxC	1.38	2.69	1.38
10075156	Fitting Reducer, Copper, SD, 818, 1¼ x 1 FTGxC	1.50	2.40	1.50
10075334	Fitting Reducer, Copper, SD, 818, 1½ x ¾ FTGxC	1.63	3.22	1.63
10075158	Fitting Reducer, Copper, SD, 818, 1½ x 1 FTGxC	1.63	2.93	1.63
10075160	Fitting Reducer, Copper, SD, 818, 1½ x 1¼ FTGxC	1.75	2.69	1.75
10075338	Fitting Reducer, Copper, SD, 818, 2 x ½ FTGxC	2.13	4.04	2.13
10075340	Fitting Reducer, Copper, SD, 818, 2 x ¾ FTGxC	2.13	3.87	2.13
10075162	Fitting Reducer, Copper, SD, 818, 2 x 1 FTGxC	2.13	3.66	2.13
10075152	Fitting Reducer, Copper, SD, 818, 2 x 1¼ FTGxC	2.13	3.34	2.13
10075164	Fitting Reducer, Copper, SD, 818, 2 x 1½ FTGxC	2.13	3.51	2.13

Small Diameter



Large Diameter



LARGE DIAMETER

ApolloPress Part No.	Description	Height	Width	Depth
10068001	Fitting Reducer, Copper, LD, 818, 2½ x ¾ FTGxC	2.63	4.50	2.63
10068002	Fitting Reducer, Copper, LD, 818, 2½ x 1 FTGxC	2.63	4.31	2.63
10068017	Fitting Reducer, Copper, LD, 818, 2½ x 1¼ FTGxC	2.63	4.18	2.63
10068004	Fitting Reducer, Copper, LD, 818, 2½ x 1½ FTGxC	2.63	4.25	2.63
10075165	Fitting Reducer, Copper, LD, 818, 2½ x 2 FTGxC	2.63	4.36	2.63
10068019	Fitting Reducer, Copper, LD, 818, 3 x ¾ FTGxC	3.13	4.92	3.13
10068008	Fitting Reducer, Copper, LD, 818, 3 x 1 FTGxC	3.13	4.60	3.13
10068020	Fitting Reducer, Copper, LD, 818, 3 x 1¼ FTGxC	3.13	4.70	3.13
10068010	Fitting Reducer, Copper, LD, 818, 3 x 2 FTGxC	3.13	4.57	3.13
10057500	Fitting Reducer, Copper, LD, 818, 3 x 2½ FTGxC	3.16	5.09	3.16
10068022	Fitting Reducer, Copper, LD, 818, 4 x ¾ FTGxC	4.13	5.93	4.13
10068016	Fitting Reducer, Copper, LD, 818, 4 x 2 FTGxC	4.13	5.60	4.13
10057503	Fitting Reducer, Copper, LD, 818, 4 x 2½ FTGxC	4.13	6.02	4.13
10057506	Fitting Reducer, Copper, LD, 818, 4 x 3 FTGxC	4.13	5.90	4.13



836 APOLLOPRESS COPPER CROSS-OVER

ApolloPress Part No.	Description	Height	Width	Depth
10075370	Cross-Over, Copper, SD, 836, ½ CxC	1.54	4.50	1.54
10075372	Cross-Over, Copper, SD, 836, ¾ CxC	2.06	5.50	2.06



Small Diameter



Large Diameter



800 APOLLOPRESS COPPER COUPLING W/ STOP				
ApolloPress Part No.	Description	Height	Width	Depth
10075500	Coupling w/ Stop, Copper, SD, 800, 1/2 CxC	0.95	1.72	0.95
10075502	Coupling w/ Stop, Copper, SD, 800, 3/4 CxC	1.24	1.89	1.24
10075504	Coupling w/ Stop, Copper, SD, 800, 1 CxC	1.49	2.06	1.49
10075506	Coupling w/ Stop, Copper, SD, 800, 1 1/4 CxC	1.75	2.34	1.75
10075508	Coupling w/ Stop, Copper, SD, 800, 1 1/2 CxC	2.09	3.10	2.09
10075510	Coupling w/ Stop, Copper, SD, 800, 2 CxC	2.56	3.42	2.56
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10061947	Coupling w/ Stop, Copper, LD, 800, 2 1/2 CxC	3.16	4.33	3.16
10061952	Coupling w/ Stop, Copper, LD, 800, 3 CxC	3.68	4.65	3.68
10061957	Coupling w/ Stop, Copper, LD, 800, 4 CxC	4.70	5.53	4.70

Small Diameter



Large Diameter



800 APOLLOPRESS COPPER COUPLING W/O STOP				
ApolloPress Part No.	Description	Height	Width	Depth
10075513	Coupling w/o Stop, Copper, SD, 801, 1/2 CXC	0.95	1.72	0.95
10075515	Coupling w/o Stop, Copper, SD, 801, 3/4 CXC	1.24	1.89	1.42
10075517	Coupling w/o Stop, Copper, SD, 801, 1 CXC	1.49	2.06	1.49
10075521	Coupling w/o Stop, Copper, SD, 801, 1 1/4 CXC	1.75	2.33	1.75
10075523	Coupling w/o Stop, Copper, SD, 801, 1 1/2 CXC	2.09	3.10	2.09
10075527	Coupling w/o Stop, Copper, SD, 801, 2 CXC	2.56	3.42	2.56
10075030	Coupling w/o Stop - Extended, Copper, SD, 801, 1/2 CXC	0.95	3.30	0.95
10075032	Coupling w/o Stop - Extended, Copper, SD, 801, 3/4 CXC	1.24	3.00	1.24
10075034	Coupling w/o Stop - Extended, Copper, SD, 801, 1 CXC	1.49	3.58	1.49
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10061932	Coupling w/o Stop - Extended, Copper, LD, 801, 2 1/2 CxC	3.16	4.33	3.16
10061937	Coupling w/o Stop - Extended, Copper, LD, 801, 3 CxC	3.68	4.65	3.68
10061942	Coupling w/o Stop - Extended, Copper, LD, 801, 4 CxC	4.70	5.53	4.70

Small Diameter



Large Diameter



801R APOLLOPRESS COPPER REDUCER COUPLING				
ApolloPress Part No.	Description	Height	Width	Depth
10075900	Reducer Coupling, Copper, SD, 801R, 3/4 x 1/2 CxC	1.24	2.14	1.24
10075144	Reducer Coupling, Copper, SD, 801R, 1 x 1/2 CxC	1.49	2.37	1.49
10075898	Reducer Coupling, Copper, SD, 801R, 1 x 3/4 CxC	1.49	2.30	1.49
10066001	Reducer Coupling, Copper, SD, 801R, 1 1/4 x 3/4 Cx	1.75	3.98	1.75
10075896	Reducer Coupling, Copper, SD, 801R, 1 1/4 x 1 CxC	1.75	2.40	1.75
10066380	Reducer Coupling, Copper, SD, 801R, 1 1/2 x 1/2 CxC	2.09	4.87	2.09
10066381	Reducer Coupling, Copper, SD, 801R, 1 1/2 x 3/4 CxC	2.09	4.89	2.09
10066003	Reducer Coupling, Copper, SD, 801R, 1 1/2 x 1 CxC	2.09	4.60	2.09
10075128	Reducer Coupling, Copper, SD, 801R, 1 1/2 x 1 1/4 CxC	2.11	2.87	2.11
10066398	Reducer Coupling, Copper, SD, 801R, 2 x 3/4 CxC	2.56	5.70	2.56
10066005	Reducer Coupling, Copper, SD, 801R, 2 x 1 CxC	2.56	5.49	2.56
10066072	Reducer Coupling, Copper, SD, 801R, 2 x 1 1/4 CxC	2.56	5.18	2.56
10075130	Reducer Coupling, Copper, SD, 801R, 2 x 1 1/2 CxC	2.56	3.50	2.56
LARGE DIAMETER				
ApolloPress Part No.	Description	Height	Width	Depth
10066440	Reducer Coupling, Copper, LD, 801R, 2 1/2 x 1 CxC	3.16	6.75	3.16
10066074	Reducer Coupling, Copper, LD, 801R, 2 1/2 x 2 CxC	3.16	6.68	3.16
10066446	Reducer Coupling, Copper, LD, 801R, 3 x 2 CxC	3.68	7.11	3.68
10066076	Reducer Coupling, Copper, LD, 801R, 3 x 2 1/2 CxC	3.68	7.63	3.68
10066447	Reducer Coupling, Copper, LD, 801R, 4 x 2 CxC	4.70	8.62	4.70
10066152	Reducer Coupling, Copper, LD, 801R, 4 x 3 CxC	4.70	6.04	4.70



Installation Guide & Pressing Instructions

Note - This installation guide covers the general installation practices for **APOLLOPRESS** fittings and valves in applications listed within. It is the sole responsibility of the installing professional to insure installation meets local code requirement. Failure to observe installation instructions may result in substandard performance.

"Apollo" **PRESS**



System Description

Small Diameter Fittings ½" -2"

APOLLOPRESS small diameter fittings are made from naturally lead free copper or lead free brass in the USA. EPDM O-rings are pre-installed and lubricated with ANSI/NSF 61 listed silicone oil.

Large Diameter Fittings

APOLLOPRESS large diameter fittings are made from naturally lead free copper in the USA. They also contain a one-piece 360 degree solid stainless steel grip ring and EPDM O-rings pre-installed and lubricated with ANSI/NSF 61 listed silicone oil.

Valves

APOLLOPRESS valves are offered in lead free and non-lead free brass and bronze materials. They contain pre-installed EPDM O-rings treated with a silicone-free NSF 61 listed lubricant.

EPDM Sealing Element

Ethylene-Propylene Diene Monomer or EPDM is black and shiny in appearance and has an operating temperature range of 0°F-250°F. When properly installed the EPDM seal will last as long as the copper pipe with which it is joined.

System Benefits

APOLLOPRESS connections are heat and flame free, contain Leak Before Press® functionality and offer a clean and professional look.

Applications

APOLLOPRESS fittings are ideal for commercial and residential applications and feature an EPDM sealing element making APOLLOPRESS the ideal solution for;

- Hot and cold potable water – 200psi at 250°F pressure rating
- Hydronic heating – a water mixture of ethylene, propylene, butylene and glycol up to 100% concentration
- Chilled water
- Compressed air – Clean, dry and oil free filtered air
- Low pressure steam, 15 psi maximum
- Vacuum
- Gray water
- Other chemicals compatible with EPDM. Please contact Elkhart Products product engineering for evaluation and approval.

Listings, Approvals & Codes

Fittings

- IAPMO listed to NSF 61, NSF 372, IAPMO PS-117 and CSA TIL-MSE-13 standards
- Compliant with the following plumbing codes
 - ICC International Plumbing Code
 - UPC Uniform Plumbing Code
 - National Standard Plumbing Code
- Compliant with the following State and local requirements
 - Massachusetts Commonwealth of Massachusetts Product Approval Number PI-1205-57
 - Illinois Department of Public Health, Plumbing Code Advisory Council
 - Kentucky Commonwealth of Kentucky, Office of Housing, Buildings and Construction
 - Minnesota Plumbing Code Advisory Council
 - Wisconsin Safety and Buildings Division
 - State of Michigan
 - Miami/Dade County Public School District
 - City of Los Angeles, California – General Approval RR# 5630
 - Ford Motor Company
- For the most up-to-date listing certificate please visit the IAPMO and NSF websites.
- For listings, approvals and code compliances not listed here please contact Elkhart Products product engineering for further information.

Valves

APOLLOPRESS valves have been designed to meet the most rigorous industry standards. Depending upon the product, numerous approvals are available including NSF 61, NSF 372, CSA, ASSE and USC. See individual product submittal sheets for specific approvals.



Handling

APOLLOPRESS fittings and valves should remain in their packaging immediately prior to installation. This ensures the fitting remains un-damaged and clean from on-site debris. Unused fittings should be kept in the original packaging with any openings sealed to ensure fitting cleanliness is maintained. Components should be free from dirt, debris and grime that may interfere with the sealing EPDM O-ring.

APOLLOPRESS copper, brass and bronze fittings and valves may be used with ½" - 1 ¼" soft copper tube and ½" - 4" and hard copper tube, type K, L and M and complies with ASTM B88 standards. Installing contractor shall be sure tube surface is free of imperfections and stamped print strings that will interfere with the sealing of the EPDM O-ring.

Underground Installations

When permitted by state and local codes APOLLOPRESS fittings are approved for use in underground installations. When buried in an area with corrosive soil conditions the fitting must be protected.

Expansion

Thermal expansion and contraction of installed joints can cause undue stress. Installing contractors shall compensate for thermal expansion and contraction with expansion joints or mechanical expansion compensator may be used to reduce or remove these stresses.

Freezing Conditions

APOLLOPRESS fittings and valves may be installed in ambient temperatures down to 0°F. Installed tubing systems exposed to freezing conditions must be protected per state and local code requirements and good installation practice.

Tube Hangers and Supports

APOLLOPRESS tube hangers and supports do not require special consideration. Tube hangers and supports should be made of a material suitable for copper tube and conform to local code requirements. Care should be taken to insure piping system is isolated from shock and vibration.

Re-Pressing a Pressed Fitting

If a fitting is required to be re-pressed, reposition the crimping tool 90 degrees from the previous pressed position, then re-press.

System Sizing

APOLLOPRESS systems should be sized and designed in accordance with standard wrought copper fitting systems. The deformation caused by the press joint is not a proven source of turbulence. Properly sized and installed systems with the proper design flow velocities will minimize the risk of erosion corrosion.

Electrical Bonding

The mechanical press formed provides a continuous metal-to-metal contact between the fitting and the pipe. When properly installed APOLLOPRESS fittings and valves comply with section I211.15 - Electrical Bonding and Grounding, of the Uniform Plumbing Code.

Material Compatibility

APOLLOPRESS fittings and valves shall not come in contact with chemicals or solvents that may compromise the integrity of the EPDM sealing element before or after installation. Chemicals and solvents include household cleaning products, oil based paints, non-EPC approved lubricants, flux, mineral oils, adhesives, ammonia and nitrates.

Pressure Testing

Installed systems should be pressure tested in accordance with local code requirements. With Leak Before Press® functionally, un-pressed APOLLOPRESS joints will be easily identified. When local code requirements do not exist or refer to the manufacturer, please pressure test as follows:

- Water Recommend pressure testing between 15-85psi
- Air Recommend between ½ - 45psi but as high as 200psi is acceptable if required by project specification or local code.

For safety reasons we recommend on initial pressure test no higher than 25psi. A low pressure test will safely identify any un-pressed joints.

Fittings and valves may not pass a pressure test for one of the following reasons:

- The joint was never pressed press fitting following our instruction
- The tube was not fully inserted replace
- The jaw, sling, ring, chain was not properly aligned replace
- The joint may have rotated re-press; rotate jaw, sling, ring, chain 90 degrees from 1st press preferred but not necessary.



Between APOLLOPRESS Joints

To prevent distortion of the pipe, fittings require a minimum distance between fittings (refer to chart below). Failure to provide this distance may result in an improper seal.

Fitting Size	Minimum Spacing	Fitting Size	Minimum Spacing
½"	0"	2"	¾"
¾"	0"	2 ½"	⅝"
1"	0"	3"	⅝"
1 ¼"	½"	4"	⅝"
1 ½"	⅝"		

Between an APOLLOPRESS Joint and Existing Solder Joint

The minimum distance when making an APOLLOPRESS joint near a solder joint is in the table below. No residual solder, flux, or debris should be on the tubing.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1 ½"	2"	6"
¾"	2 ¼"	2 ½"	7 ½"
1"	3"	3"	9"
1 ¼"	3 ¾"	4"	12"
1 ½"	4 ½"		

Between an APOLLOPRESS Joint and Existing Brazed Joint

The minimum distance when making an APOLLOPRESS joint near a brazed joint is 2 pipe diameters of the tube being pressed.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1"	2"	4"
¾"	1 ½"	2 ½"	5"
1"	2"	3"	6"
1 ¼"	2 ½"	4"	8"
1 ½"	3"		

When Soldering near an APOLLOPRESS Joint

Minimum distance is found in the table below. The installer shall take proper precautions to protect and keep cool the APOLLOPRESS joint using one of the following methods.

- Wrap joint in a cold wet rag.
- Use a spray type spot freezing product. The product should NOT come into contact with the joint.
- Prefabricate the solder connection, waiting for it to cool and then make the press connection.

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
½"	1 ½"	2"	6"
¾"	2 ¼"	2 ½"	7 ½"
1"	3"	3"	9"
1 ¼"	3 ¾"	4"	12"
1 ½"	4 ½"		

When Brazing near an APOLLOPRESS Joint

Stay at least 12 inches away from the pressed connection. The installer shall take proper precautions to protect and keep cool the APOLLOPRESS joint using one of the following methods.

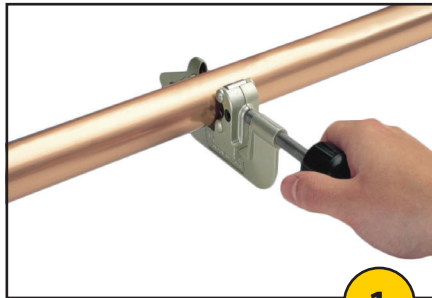
- Wrap joint in a cold wet rag.
- Use a spray type spot freezing product. The product should NOT come into contact with the joint.
- Prefabricate the brazed connection, waiting for it to cool and then make the press connection.



TOOLS

APOLLOPRESS products are tested and approved for use with multiple tool manufacturers. Please see our "Jaw Compatibility" on page 65 for specific approvals. Like other tools and equipment pressing tools and their accessories require servicing. Please follow tool manufacturer instruction.

Pressing Instructions



1

Cut the tube square using a rotary tube cutter or fine toothed steel saw.



2

Remove internal and external burrs at tube ends using fine tooth file or commercially available de-burring tools.

3

Inspect fitting or valve to insure bead O-ring is present, un-damaged and free from dirt and debris.



4

Mark insertion depth by inserting tube into the fitting or valve with twisting motion until it meets tube stop OR tape measure and insertion depth chart.

Nominal Pipe Size (inches)	Insertion Depth (inches)
½	¾ (0.75)
¾	15/16 (0.94)
1	15/16 (0.94)
1¼	1-1/16 (1.06)
1½	1-7/16 (1.44)
2	1-9/16 (1.56)
2½	1¾ (1.9)
3	2¾ (2.1)
4	2½ (2.5)

APOLLOPRESS INSTALLATION VIDEO



Scan QR Code BELOW TO



WATCH INSTALLATION VIDEO

WARNING:

It is the responsibility of the end-user to follow all instructions for installing APOLLOPRESS press fittings. Failure to follow these instructions and safe plumbing practices may result in extensive property damage, serious injury or death.



Jaw Pressing Instructions

Typically for ½" Through 2" Sizes



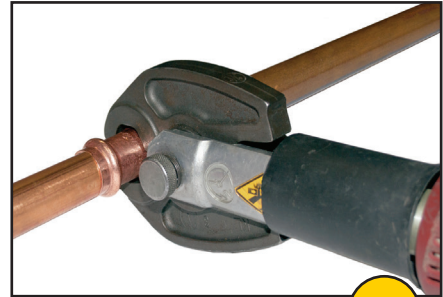
1

Insert the tube into the fitting or valve with twisting motion until it meets tube stop AND insertion depth mark. Wetting the tube, fitting or valve with clean water may reduce insertion force.



2

Using approved press tool and jaw of the correct size, open the jaw and place over the bead of the fitting or valve at a 90 degree angle to the tube centerline.



3

Press. Please refer to the specific tool manufacturer instruction.

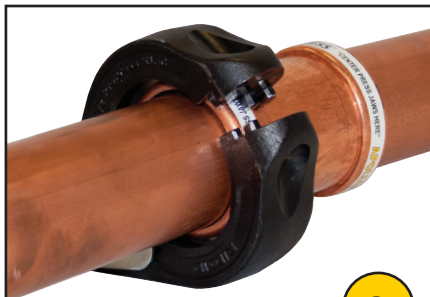
Ring, Sling, Chain Pressing Instructions

Typically for 2 ½" Through 4" Sizes



1

Insert the tube into the fitting or valve with twisting motion until it meets tube stop AND insertion depth mark. Wetting the tube, fitting or valve with clean water may reduce insertion force.



2

Using approved press tool and ring, sling, chain of the correct size, open the ring, sling or chain and place over the bead of the fitting or valve at a 90 degree angle to the tube centerline.



3

Press. Please refer to the specific tool manufacturer instruction.



Approval is granted based on laboratory testing performed by Elkhart Products Corporation (EPC) utilizing performance requirements in IAPMO PS117, proprietary standards developed by EPC, and by following the jaw, actuator, and pressing tool operating instructions. The following best practices apply as a requirement of all approvals.

- Jaws require cleaning to remove copper buildup or chips. Typically, cleaning is performed dry with an abrasive pad; however, specific jaw cleaning instructions are included in the jaw manufacturers operating instructions. Jaw cleaning intervals will vary by size, material, and engineering design.
- Jaws may require periodic inspections and or re-calibration; check the jaw manufacturers operating instructions for details.
- Pressing tools (sometimes called press tools or guns) require periodic inspection and re-calibration. Specific recommendations vary by manufacturer and model number; consult the operating instructions provided with the pressing tool.
- Jaw cleanliness, jaw inspection/re-calibration (if required), and periodic pressing tool re-calibration/inspection are the responsibility of the installer. Failure to maintain the pressing tool, jaw, or actuator may void the manufacturer's warranty.

Note - Jaw approval testing is performed using jaws and pressing tools submitted by each jaw and pressing tool manufacturer listed below. EPC or Apollo do not conduct testing of jaw and pressing tool interchangeability.

½" to 2" APOLLOPRESS Valves and Copper/Low-Lead Brass Fittings:

Milwaukee		NIBCO		RIGID		ROTHENBERGER	
M12 Compact Jaws (inches)		Standard Jaws (inches)		Compact Jaws (inches)		Compact Jaws (inches)	
½	49-16-2450	½	PC-10S	½	16958	½	15031V
¾	49-16-2451	¾	PC-11S	½	22768	¾	15032V
1	49-16-2452	1	PC-12S	¾	16963	1	15033V
1¼	49-16-2453	1¼	PC-13S ²	¾	22773	Standard Jaws (inches)	
M18 Standard Jaws (inches)		1½	PC-14S	1	16978	½	15222X
½	49-16-2650	2	PC-15S	1	22778	¾	15223X
¾	49-16-2651	REMS		1¼	31228	1	15224X ²
1	49-16-2652 ²	Compact Jaw (Mini Tongs-inches)		Standard Jaws (inches)		1¼	15225X ²
1¼	49-16-2653 ²	½ VUS ½	578566	½	76652	1½	15226X
1½	49-16-2654	¾ VUS ¾	578568	½	21848	2	15227X
2	49-16-2655	1 VUS 1	578570 ¹	¾	76657	Stanley-Virax	
		1¼ VUS 1¼	578606	¾	21853	Copper Inserts (inches)	
		Standard Jaws (Tongs-inches)		1	76662	½	252933
		½ VUS ½	571770	1	21858	¾	252934
		¾ VUS ¾	571775	1¼	76667	1	252935
		1 VUS 1	571780 ²	1¼	21863	Copper Jaws (inches)	
		1¼ VUS 1¼	571785 ²	1½	76672	½	253291
		1½ VUS 1½	571790	1½	21868	¾	253292
		2 VUS 2	571795	2	76677	1	253293
				2	21873	1¼	253294 ²
						1½	253295 ²
						2	253296

Note 1: Jaws date coded prior to 2/14 could have a potential interference problem with Apollopress 77W, 77WLF, 77V, and 77VLF press ball valves.

Note 2: Jaws are compatible with new production 77W, 77WLF, 77V, and 77VLF press ball valves identified with "M18" on the valve box label and hang tag.

2½" to 4" APOLLOPRESS LD-C Valves and Copper Fittings

Milwaukee		REMS		RIGID	
M18 Standard Jaws (inches)		Standard Pressing Ring (inches)		Standard Jaws (inches)	
2½	49-16-2656	2½ VUSF 2½	572819	2½	20543
3	49-16-2657	3 VUSF 3	572820	3	20548
4	49-16-2658	4 VUSF 4	572821	4	20553
Ring Jaw	49-16-2659	Adapter Tong Z5	572802	Actuator	21878

Please refer to our website: www.apollovalves.com/apollopress for the most current Jaws Approval.



APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10075554	90° Elbow, Copper, SD, 807, CxC	½	77317	9055455PC	PF02722
10075556	90° Elbow, Copper, SD, 807, CxC	¾	77022	9055600PC	PF01634
10075052	90° Elbow, Copper, SD, 807, CxC	1	77027	9055750PC	PF01647
10075078	90° Elbow, Copper, SD, 807, CxC	1¼	77032	9055950PC	PF02084
10075080	90° Elbow, Copper, SD, 807, CxC	1½	77037	9056150PC	PF02085
10075082	90° Elbow, Copper, SD, 807, CxC	2	77042	9056400PC	PF02086
10066101	90° Reducing Elbow, Copper, SD, 807, CxC	¾ x ½	77325	9055655PC	PF02736
10066083	90° Reducing Elbow, Copper, SD, 807, CxC,	1 x ¾	77330		PF02749
10062021	Close Turn 90° Elbow, Copper, LD, 807-C, CxC	2½			
10062027	Close Turn 90° Elbow, Copper, LD, 807-C, CxC	3			
10062032	Close Turn 90° Elbow, Copper, LD, 807-C, CxC	4			
10062066	Long Turn 90° Elbow, Copper, LD, 807-L, CxC	2½	20623	9056650PC	PF02082
10062067	Long Turn 90° Elbow, Copper, LD, 807-L, CxC	3	20628	9056900PC	PF02092
10062069	Long Turn 90° Elbow, Copper, LD, 807-L, CxC	4	20633	9057200PC	PF02095
10075566	90° Street Elbow, Copper, SD, 807-2, FTGxC	½	77347	9059110PC	PF02822
10075568	90° Street Elbow, Copper, SD, 807-2, FTGxC	¾	77052		PF01654
10075046	90° Street Elbow, Copper, SD, 807-2, FTGxC	1	77057		PF02344
10075072	90° Street Elbow, Copper, SD, 807-2, FTGxC	1¼	77062		PF02384
10075074	90° Street Elbow, Copper, SD, 807-2, FTGxC	1½	77067		PF02385
10075076	90° Street Elbow, Copper, SD, 807-2, FTGxC	2	77072		PF02386
10062007	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, FTGxC	2½			
10062012	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, FTGxC	3			
10062017	Close Turn 90° Street Elbow, Copper, LD, 807-C-2, FTGxC	4			
10062071	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, FTGxC	2½	20638	9059400PC	PF02363
10062073	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, FTGxC	3	20643	9059450PC	PF02368
10062074	Long Turn 90° Street Elbow, Copper, LD, 807-L-2, FTGxC	4	20648	9059550PC	PF02395
10066560	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	½	79525	9082755PC	PF01507
10066561	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	¾	79540	9059150PC	PF01532
10066562	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	1	79550	9059200PC	PF01559
10066563	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	1¼	79560	9059255PC	PF01594
10066564	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	1½	79565	9082830PC	PF01632
10066565	Female 90° Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	2	79570	9059355PC	PF01680
10066566	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	½ x 3/8	79520		NO CROSS
10066567	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	½ x ¾	79530		NO CROSS
10066568	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	¾ x ½	79535		NO CROSS
10066569	Female 90° Reducing Elbow, Copper & Low Lead Brass, SD, 8707-3, CxF	1 x ½	79545		NO CROSS
10075366	Drop Ear 90° Elbow, Copper & Low Lead Brass, SD, 8707-3-5, CxF	½	79190	B066850PC	PF01508
10075368	Drop Ear 90° Elbow, Copper & Low Lead Brass, SD, 8707-3-5, CxF	¾	79195	B067000PC	PF02581
10075367	Reducing Drop Ear 90° Elbow, Low Lead Brass, SD, 8707-3-5, CxF	½ x 3/8	79185		NO CROSS
10075060	45° Elbow, Copper, SD, 806, CxC	½	77607	9042800PC	PF03026
10075062	45° Elbow, Copper, SD, 806, CxC	¾	77023	9042900PC	PF03034
10075064	45° Elbow, Copper, SD, 806, CxC	1	77028	9043000PC	PF03044
10075090	45° Elbow, Copper, SD, 806, CxC	1¼	77033	9043100PC	PF03050
10075092	45° Elbow, Copper, SD, 806, CxC,	1½	77038	9043200PC	PF03055
10075094	45° Elbow, Copper, SD, 806, CxC	2	77043	9043300PC	PF03059
10062052	45° Elbow, Copper, LD, 806, CxC	2½	20653	9043400PC	PF03063
10062057	45° Elbow, Copper, LD, 806, CxC	3	20658	9043500PC	PF03067
10062062	45° Elbow, Copper, LD, 806, CxC	4	20663	9043700PC	PF03073
10075054	45° Street Elbow, Copper, SD, 806-2, FTGxC	½	77637	9046200PC	PF03326
10075056	45° Street Elbow, Copper, SD, 806-2, FTGxC	¾	77053	9046300PC	PF03334
10075058	45° Street Elbow, Copper, SD, 806-2, FTGxC	1	77058	9046400PC	PF03344
10075084	45° Street Elbow, Copper, SD, 806-2, FTGxC	1¼	77063	9046500PC	PF03350
10075086	45° Street Elbow, Copper, SD, 806-2, FTGxC	1½	77068	9046600PC	PF03355

CROSS REFERENCE CHART



"Apollo" PRESS

APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10075088	45° Street Elbow, Copper, LD, 806-2, FTGxC	2	77073	9046700PC	PF03359
10062037	45° Street Elbow, Copper, LD, 806-2, FTGxC	2½	20668	9046800PC	PF03363
10062042	45° Street Elbow, Copper, LD, 806-2, FTGxC	3	20673	9046900PC	PF03368
10062047	45° Street Elbow, Copper, LD, 806-2, FTGxC	4	20678	9047000PC	PF03373
10077739	Tee, Copper, SD, 811, CxCxC	½	77377	9097200PC	PF04006
10077740	Tee, Copper, SD, 811, CxCxC	¾	77387	9098401PC	PF04031
10077741	Tee, Copper, SD, 811, CxCxC	1	77412	9099300PC	PF04048
10077742	Tee, Copper, SD, 811, CxCxC	1¼	77442	9100050PC	PF04068
10077743	Tee, Copper, SD, 811, CxCxC	1½	77457	9101150PC	PF04084
10077744	Tee, Copper, SD, 811, CxCxC	2	77477	9102600PC	PF04102
10057518	Tee, Copper, LD, 811, CxCxC	2½	20683	9104450PC	PF04123
10062072	Tee, Copper, LD, 811, CxCxC	3	20693	9106600PC	PF04152
10062077	Tee, Copper, LD, 811, CxCxC	4	20708	9112150PC	PF04200
10077745	Reducing Outlet Tee, Copper, SD, 811, CxCxC	¾x¾x½	77402	9098550PC	PF04033
10077746	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1x1x½	77432	9099550PC	PF04051
10077747	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1x1x¾	77437	9099455PC	PF04049
10077748	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1¼x1¼x½	94757	9100305PC	PF04071
10077749	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1¼x1¼x¾	77452	9100255PC	PF04070
10077750	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1¼x1¼x1	77447	9100200PC	PF04069
10077751	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1½x1½x½	15448	9101450PC	PF04088
10077752	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1½x1½x¾	77462	9101400PC	PF04087
10077753	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1½x1½x1	77467	9101350PC	PF04086
10077754	Reducing Outlet Tee, Copper, SD, 811, CxCxC	1½x1½x1¼	77472	9101305PC	PF04085
10077755	Reducing Outlet Tee, Copper, SD, 811, CxCxC	2x2x½	15538	9103005PC	PF04107
10077756	Reducing Outlet Tee, Copper, SD, 811, CxCxC	2x2x¾	94777	9102955PC	PF04106
10077757	Reducing Outlet Tee, Copper, SD, 811, CxCxC	2x2x1	94772	9102900PC	PF04105
10077758	Reducing Outlet Tee, Copper, SD, 811, CxCxC	2x2x1¼	77487	9102855PC	PF04104
10077759	Reducing Outlet Tee, Copper, SD, 811, CxCxC	2x2x1½	77482	9102800PC	PF04103
10062079	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	3 x 3 x 2½	20703	9106750PC	PF04151
10068078	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x ½	20788	911265PC	PF04191
10068081	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x ¾	20793	911260PC	PF04192
10068084	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 1	20794	9112550PC	PF04193
10068087	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 1¼	20795	911250PC	PF04194
10068090	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 1½	20808	911245PC	PF04195
10068093	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 2	20713	911240PC	PF04196
10062078	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 2½	20718	9112350PC	PF04197
10062076	Reducing Outlet Tee, Copper, LD, 811R, CxCxC	4 x 4 x 3	20723	9112300PC	PF04198
10068042	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½ x 2½ x ½	22303	910490PC	PF04129
10068045	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½ x 2½ x ¾	22298	910485PC	PF04128
10068048	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½ x 2½ x 1	22293	910480PC	PF04127
10068051	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½x2½x1¼	22288	910475PC	PF04126
10068054	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½ x 2½ x 1½	20803	910470PC	PF04125
10068057	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	2½ x 2½ x 2	20688	910465PC	PF04124
10068060	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x ½	20759	910705PC	PF04145
10068063	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x ¾	22323	910700PC	PF04146
10068066	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x 1	22308	910695PC	PF04147
10068069	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x 1¼	22313	910690PC	PF04148
10068072	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x 1½	20798	910685PC	PF04149
10068075	Reducing Outlet Tee, Copper, LD w/ SD Outlet, 811R, CxCxC	3 x 3 x 2	20698	910680PC	PF04150
10077784	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	¾x½x½	77392	9098905PC	PF04043
10077785	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	¾x½x¾	77397	9098851PC	PF04041
10077786	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x½x¾	22263	9099950PC	PF04062
10077787	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x½x1	94767	9099905PC	PF04061



APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10077788	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x3/4x1/2	77417	9099800PC	PF04058
10077789	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x3/4x3/4	77422	9099755PC	PF04056
10077790	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x3/4x1	77427	9099705PC	PF04055
10077791	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1/2x1/4	22253		PF04083
10077792	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1/2x3/4	22258		PF04080
10077793	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1/2x1	22268		PF04079
10077794	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1/2x1/4	22248		PF04078
10077795	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/2	22238		PF04076
10077796	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/4	94762	9100555PC	PF04075
10077797	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1	14568	9100505PC	PF04074
10066397	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	1/2 x 3/4 x 1			
10077798	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1/2x3/4	79660	9102055PC	PF04098
10077799	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1	15458	9102005PC	PF04097
10066081	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	1/2 x 1 x 1/4			
10077800	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/2	15463	9101905PC	PF04095
10077801	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/4x3/4	22233		PF04093
10077802	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/4x1	15453	9101755PC	PF04092
10077803	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	1x1x1/4x1/4	15483	9101705PC	PF04091
10066197	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	2 x 1 x 1/2			
10066018	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	2 x 1 x 2		9103705PC	
10077804	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/4x1/4	15518	9103505PC	PF40117
10066125	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	2 x 1 1/4 x 1 1/2			
10066064	Reducing Run/Outlet Tee, Copper, SD, 811R, CxCxC	2 x 1 1/4 x 2			
10077805	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/2x3/4	15513	9103305PC	PF40113
10077806	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/2x1	15498	9103255PC	PF40112
10077807	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/2x1/4	15508	9103205PC	PF40111
10077808	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/2x1/2	15503	9103155PC	PF40110
10077809	Reducing Run/Outlet Tee, Copper, SD, 811, CxCxC	2x1x1/2x2	22228	9104255PC	PF40109
10066515	Reducing Run/Outlet Tee, Copper, LD, 811R, CxCxC	2 1/2 x 2 x 3			
10066604	Reducing Run/Outlet Tee, Copper, LD, 811R, CxCxC	3 x 2 x 2	20732	910755PC	PF40164
10066136	Reducing Run/Outlet Tee, Copper, LD, 811R, CxCxC	3 x 2 1/2 x 2 1/2	20749	9107150PC	PF40158
10066579	Female Outlet Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1/2	79580	9116470PC	PF01512
10066580	Female Outlet Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	3/4	79595		PF01538
10066581	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	3/4 x 3/4 x 1/2	79590	9116502PC	PF01539
10066582	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 x 1 x 1/2	79760	9116505PC	PF01570
10066583	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 x 1 x 3/4	79765	9116516PC	PF01572
10066584	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 1/4 x 1 1/4 x 1/2	79770	9116525PC	PF01613
10066585	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 1/4 x 1 1/4 x 3/4	79775	9116532PC	PF02654
10066586	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 1/2 x 1 1/2 x 1/2	79780	9116535PC	PF01645
10066587	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	1 1/2 x 1 1/2 x 3/4	79785	9116542PC	PF02673
10066588	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	2 x 2 x 1/2	79790	9116545PC	PF01699
10066589	Female Outlet Reducing Tee, Copper & Low Lead Brass, SD, 8712, CxCxF	2 x 2 x 3/4	79795	9116555PC	PF02706
10077810	Bullhead Tee, Copper, SD, 811, CxCxC	1/2 x 1/2 x 3/4	77382	9097305PC	PF04047
10066071	Bullhead Tee, Copper, SD, 811BH, CxCxC	3/4 x 3/4 x 1	77407	9098450PC	PF04065
10066090	Bullhead Tee, Copper, SD, 811BH, CxCxC	1 1/2 x 1 1/2 x 2			
10075750	Female Adapter, Lead Free Brass, SD, 803, CxF	1/2	79300	9024650PC	PF01231
10075752	Female Adapter, Lead Free Brass, SD, 803, CxF	3/4	79315	9024950PC	PF01246
10075754	Female Adapter, Lead Free Brass, SD, 803, CxF	1	79330	9025250PC	PF01263
10075756	Female Adapter, Lead Free Brass, SD, 803, CxF	1 1/4	79350	9025550PC	PF01271
10075758	Female Adapter, Lead Free Brass, SD, 803, CxF	1 1/2	79365	9025900PC	PF01279
10075760	Female Adapter, Lead Free Brass, SD, 803, CxF	2	79370	9026150PC	PF01287
10075780	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1/2 x 3/8	79295	9024805PC	PF01232
10075782	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1/2 x 3/4	79305	9024750PC	PF01230

CROSS REFERENCE CHART



"Apollo" PRESS

APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10075784	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	¾ x ½	79310	9025100PC	PF01247
10075796	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1 x ½	79320	9025375PC	PF01265
10075798	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1 x ¾	79325	9025400PC	PF01264
10075800	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1 x 1¼	79335	9025355PC	PF01261
10075786	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1¼ x ½	79340		NO CROSS
10075788	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1¼ x 1	79345	9025560PC	PF01272
10075790	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1¼ x 1½	79355	9025655PC	PF01270
10075792	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1½ x ¾			
10075794	Female Reducing Adapter, Lead Free Brass, SD, 803R, CxF	1½ x 1¼	79360	9025910PC	PF01280
10075762	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	½	79430	9028305PC	PF15310
10075768	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	¾	79445	9028555PC	PF01546
10075772	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	1	79450	9028755PC	PF01563
10075774	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	1¼	79465	9029005PC	PF01571
10075776	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	1½	79470	9029155PC	PF01579
10075778	Female Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	2	79475	9029305PC	PF01587
10075764	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	½ x 3/8	79425	9028405PC	NO CROSS
10075766	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	½ x ¾	79435	9028955PC	PF01534
10075770	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	¾ x ½	79440	9028115PC	PF01547
10075804	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	1 x ½	79455	9028355PC	NO CROSS
10075802	Female Reducing Street Adapter, Lead Free Brass, SD, 803-2, FTGxF	1¼ x ½	79460	9028445PC	NO CROSS
10075806	Male Adapter, Lead Free Brass, SD, 804, CxM	½	79215	9030600PC	PF01131
10075808	Male Adapter, Lead Free Brass, SD, 804, CxM	¾	79230	9030950PC	PF01146
10075844	Male Adapter, Lead Free Brass, SD, 804, CxM	1	79245	9031350PC	PF01163
10075810	Male Adapter, Lead Free Brass, SD, 804, CxM	1¼	79260	9031700PC	PF01171
10075812	Male Adapter, Lead Free Brass, SD, 804, CxM	1½	79275	9032000PC	PF01179
10075814	Male Adapter, Lead Free Brass, SD, 804, CxM	2	79290	9032300PC	PF01187
10061982	Male Adapter - International, Low Lead Brass, LD, 804, CxM	2½	20823	9032650PC	PF01196
10061987	Male Adapter - International, Low Lead Brass, LD, 804, CxM	3	20828	9032700PC	PF01199
10061992	Male Adapter - International, Low Lead Brass, LD, 804, CxM	4	20838	9032750PC	PF01150
10075836	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	½ x 3/8	79210	9030805PC	PF01132
10075838	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	½ x ¾	79220	9030750PC	PF01130
10075840	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	¾ x ½	79225	9031200PC	PF01147
10075842	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	¾ x 1	79235		PF01145
10075854	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1 x ¾	79240	9031550PC	PF01164
10075856	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1 x 1¼	79250	9031500PC	PF01162
10075846	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1¼ x 1	79255	9031850PC	PF01172
10075848	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1¼ x 1½	79265	9031800PC	PF01170
10075850	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1½ x 1¼	79270	9032100PC	PF01180
10075852	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	1½ x 2	79280		PF01178
10075858	Male Reducing Adapter, Lead Free Brass, SD, 804R, CxM	2 x 1½	79285		PF01188
10075816	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	½	79380	9033905PC	PF01431
10075822	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	¾	79395	9034055PC	PF01446
10075826	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	1	79405	9034305PC	PF01463
10075828	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	1¼	79410	9034405PC	PF01471
10075830	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	1½	79415	9034505PC	PF01479
10075834	Male Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	2	79420	9034605PC	PF01487
10075818	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	½ x 3/8	79375	9034005PC	NO CROSS
10075820	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	½ x ¾	79385	9033955PC	PF01434
10075824	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	¾ x ½	79390	9034105PC	PF01447
10075832	Male Reducing Street Adapter, Lead Free Brass, SD, 804-2, FTGxM	1 x ¾	79400	9034125PC	PF01464
10075702	125 lb. Flange, Copper, SD, 8741	2			
10061761	125 lb. Flange, Copper, LD, 8741	2½			
10061767	125 lb. Flange, Copper, LD, 8741	3			



APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10061736	125 lb. Flange, Copper, LD, 8741	4			
10061763	150 lb. Flange, Copper, LD, 8771	2½			
10061769	150 lb. Flange, Copper, LD, 8771	3			
10061738	150 lb. Flange, Copper, LD, 8771	4			
10077850	Tube Cap, Copper, SD, 817	½	77712	9172650PC	PF07007
10077851	Tube Cap, Copper, SD, 817	¾	77717	9172700PC	PF07009
10077852	Tube Cap, Copper, SD, 817	1	77722	9172750PC	PF07011
10075172	Tube Cap, Copper, SD, 817	1¼	77727	9172800PC	PF07012
10075174	Tube Cap, Copper, SD, 817	1½	77732	9172850PC	PF07013
10075176	Tube Cap, Copper, SD, 817	2	77737	9172900PC	PF07014
10062142	Tube Cap, Copper, LD, 817	2½	20833	9172950PC	PF07015
10062147	Tube Cap, Copper, LD, 817	3	20843	9173000PC	PF07016
10062152	Tube Cap, Copper, LD, 817	4	20848	9173100PC	PF07018
10075860	Union, Low Lead Brass, SD, 8733, CxC	½	79125	9256400PC	PF08003
10075862	Union, Low Lead Brass, SD, 8733, CxC	¾	79130	9256500PC	PF08004
10075864	Union, Low Lead Brass, SD, 8733, CxC	1	79135	9256600PC	PF08005
10075866	Union, Low Lead Brass, SD, 8733, CxC	1¼	79140	9256630PC	PF11205
10075868	Union, Low Lead Brass, SD, 8733, CxC	1½	79145	9256640PC	PF11206
10075870	Union, Low Lead Brass, SD, 8733, CxC	2	79150	9256650PC	PF11207
10075872	Female Union, Low Lead Brass, SD, 8733-3, CxF	½	79700	9256700PC	PF11422
10075874	Female Union, Low Lead Brass, SD, 8733-3, CxF	¾	79705	9256710PC	PF11423
10075876	Female Union, Low Lead Brass, SD, 8733-3, CxF	1	79710	9256720PC	PF11424
10075878	Female Union, Low Lead Brass, SD, 8733-3, CxF	1¼	79715	9256730PC	PF11425
10075880	Female Union, Low Lead Brass, SD, 8733-3, CxF	1½	79720	9256740PC	PF11426
10075882	Female Union, Low Lead Brass, SD, 8733-3, CxF	2	79725	9256750PC	PF11427
10075884	Male Union, Low Lead Brass, SD, 8733-4, CxM	½	79730	9256800PC	PF11210
10075886	Male Union, Low Lead Brass, SD, 8733-4, CxM	¾	79735	9256810PC	PF11211
10075888	Male Union, Low Lead Brass, SD, 8733-4, CxM	1	79740	9256820PC	PF11212
10075890	Male Union, Low Lead Brass, SD, 8733-4, CxM	1¼	79745	9256830PC	PF11213
10075892	Male Union, Low Lead Brass, SD, 8733-4, CxM	1½	79750	9256840PC	PF11214
10075894	Male Union, Low Lead Brass, SD, 8733-4, CxM	2	79755	9256850PC	PF11215
10075146	Fitting Reducer, Copper, SD, 818, FTGxC	¾ x ½	78077	9008100PC	PF01326
10075150	Fitting Reducer, Copper, SD, 818, FTGxC	1 x ½	78082	9008350PC	PF01339
10075148	Fitting Reducer, Copper, SD, 818, FTGxC	1 x ¾	78087	9008300PC	PF01337
10075336	Fitting Reducer, Copper, SD, 818, FTGxC	1¼ x ½	22333		PF01347
10075154	Fitting Reducer, Copper, SD, 818, FTGxC	1¼ x ¾	78092	9008555PC	PF01345
10075156	Fitting Reducer, Copper, SD, 818, FTGxC	1¼ x 1	78097	9008500PC	PF01343
10075334	Fitting Reducer, Copper, SD, 818, FTGxC	1½ x ¾	14543	9008855PC	PF01353
10075158	Fitting Reducer, Copper, SD, 818, FTGxC	1½ x 1	78102	9008800PC	PF01351
10075160	Fitting Reducer, Copper, SD, 818, FTGxC	1½ x 1¼	78107	9008750PC	PF01350
10075338	Fitting Reducer, Copper, SD, 818, FTGxC	2 x ½			
10075340	Fitting Reducer, Copper, SD, 818, FTGxC	2 x ¾			
10075162	Fitting Reducer, Copper, SD, 818, FTGxC	2 x 1	78112	9009150PC	PF01360
10075152	Fitting Reducer, Copper, SD, 818, FTGxC	2 x 1¼	78117	9009105PC	PF01359
10075164	Fitting Reducer, Copper, SD, 818, FTGxC	2 x 1½	78122	9009050PC	PF01358
10068001	Fitting Reducer, Copper, LD, 818, FTGxC	2½ x ¾			
10068002	Fitting Reducer, Copper, LD, 818, FTGxC	2½ x 1	20814	900950PC	PF01370
10068017	Fitting Reducer, Copper, LD, 818, FTGxC	2½ x 1¼	20815	900945PC	PF01369
10068004	Fitting Reducer, Copper, LD, 818, FTGxC	2½ x 1½	20813	900940PC	PF01368
10075165	Fitting Reducer, Copper, LD, 818, FTGxC	2½ x 2	20758	900935PC	PF01367
10068019	Fitting Reducer, Copper, LD, 818, FTGxC	3 x ¾			
10068008	Fitting Reducer, Copper, LD, 818, FTGxC	3 x 1¼	20817	900979PC	PF01379
10068020	Fitting Reducer, Copper, LD, 818, FTGxC	3 x 1½	20818	900975PC	PF01378

CROSS REFERENCE CHART



"Apollo" PRESS

APOLLOPRESS Part No.	Description	Size	Viega ProPress	Nibco	Mueller Streamline PRS™
10068010	Fitting Reducer, Copper, LD, 818, FTGxC	3 x 2	20763	900970PC	PF01377
10057500	Fitting Reducer, Copper, LD, 818, FTGxC	3 x 2½	20768	9009650PC	PF01376
10068022	Fitting Reducer, Copper, LD, 818, FTGxC	4 x ¾			
10068016	Fitting Reducer, Copper, LD, 818, FTGxC	4 x 2	20773	901045PC	PF01389
10057503	Fitting Reducer, Copper, LD, 818, FTGxC	4 x 2½	20778	9010400PC	PF01388
10057506	Fitting Reducer, Copper, LD, 818, FTGxC	4 x 3	20783	9010350PC	PF01387
10075370	Cross-Over, Copper, SD, 836, CxC	½	77742	9280250PC	PF02535
10075372	Cross-Over, Copper, SD, 836, CxC	¾	77747	928035PC	PF02583
10075500	Coupling w/ Stop, Copper, SD, 800, CxC	½	78047	9001100PC	PF10145
10075502	Coupling w/ Stop, Copper, SD, 800, CxC	¾	78052	9001250PC	PF10146
10075504	Coupling w/ Stop, Copper, SD, 800, CxC	1	78057	9001450PC	PF10147
10075506	Coupling w/ Stop, Copper, SD, 800, CxC	1¼	78062	9001700PC	PF10148
10075508	Coupling w/ Stop, Copper, SD, 800, CxC	1½	78067	9002000PC	PF10149
10075510	Coupling w/ Stop, Copper, SD, 800, CxC	2	78072	9002350PC	PF10150
10061947	Coupling w/ Stop, Copper, LD, 800, CxC	2½	20728	9002655PC	PF10151
10061952	Coupling w/ Stop, Copper, LD, 800, CxC	3	20733	9003055PC	PF10152
10061957	Coupling w/ Stop, Copper, LD, 800, CxC	4	20738	9003855PC	PF10154
10075513	Coupling w/o Stop, Copper, SD, 801, CxC	½	78172	9020300PC	PF01903
10075515	Coupling w/o Stop, Copper, SD, 801, CxC	¾	78177	9020400PC	PF01905
10075517	Coupling w/o Stop, Copper, SD, 801, CxC	1	78182	9020500PC	PF01906
10075521	Coupling w/o Stop, Copper, SD, 801, CxC	1¼	78187	9020550PC	PF01907
10075523	Coupling w/o Stop, Copper, SD, 801, CxC	1½	78192	9020600PC	PF01908
10075527	Coupling w/o Stop, Copper, SD, 801, CxC	2	78197	9020650PC	PF01909
10075030	Coupling w/o Stop - Extended, Copper, SD, 801, CxC	½	79005		
10075032	Coupling w/o Stop - Extended, Copper, SD, 801, CxC	¾	79010		
10075034	Coupling w/o Stop - Extended, Copper, SD, 801, CxC	1	79015		
10061932	Coupling w/o Stop - Extended, Copper, LD, 801, CxC	2½	20743	9020700PC	PF01910
10061937	Coupling w/o Stop - Extended, Copper, LD, 801, CxC	3	20748	9020750PC	PF01911
10061942	Coupling w/o Stop - Extended, Copper, LD, 801, CxC	4	20753	9020850PC	PF01913
10075900	Reducer Coupling, Copper, SD, 801R, CxC	¾ x ½	78147	9001300PC	PF01036
10075144	Reducer Coupling, Copper, SD, 801R, CxC	1 x ½	15603	9001555PC	PF01051
10075898	Reducer Coupling, Copper, SD, 801R, CxC	1 x ¾	78152	9001500PC	PF01049
10066001	Reducer Coupling, Copper, SD, 801R, CxC	1¼ x ¾	15593	9001805PC	PF01058
10075896	Reducer Coupling, Copper, SD, 801R, CxC	1¼ x 1	78157	9001750PC	PF01056
10066380	Reducer Coupling, Copper, SD, 801R, CxC	1½ x ½			
10066381	Reducer Coupling, Copper, SD, 801R, CxC	1½ x ¾			
10066003	Reducer Coupling, Copper, SD, 801R, CxC	1½ x 1	15588	9002100PC	PF01065
10075128	Reducer Coupling, Copper, SD, 801R, CxC	1½ x 1¼	78162	9002055PC	PF01064
10066398	Reducer Coupling, Copper, SD, 801R, CxC	2 x ¾	18468	9002555PC	PF01077
10066005	Reducer Coupling, Copper, SD, 801R, CxC	2 x 1	15608	9002500PC	PF01075
10066072	Reducer Coupling, Copper, SD, 801R, CxC	2 x 1¼	22328	900280PC	PF01074
10075130	Reducer Coupling, Copper, SD, 801R, CxC	2 x 1½	78167	900275PC	PF01073
10066440	Reducer Coupling, Copper, LD, 801R, CxC	2½ x 1	20685	900285PC	PF01086
10066074	Reducer Coupling, Copper, LD, 801R, CxC	2½ x 2	20700	900270PC	PF01083
10066446	Reducer Coupling, Copper, LD, 801R, CxC	3 x 2	20710	9003150PC	PF01094
10066076	Reducer Coupling, Copper, LD, 801R, CxC	3 x 2½	20715	9003100PC	PF01093
10066447	Reducer Coupling, Copper, LD, 801R, CxC	4 x 2	20720	900405PC	PF10111
10066152	Reducer Coupling, Copper, LD, 801R, CxC	4 x 3	20730	9003950PC	PF10109



Types of Service	System Operating Conditions Comments	Pressure	Temperature	EPDM O-Ring
Fluids and Water				
Hot & Cold Potable Water	-	200PSI	32°F to 250°F	Yes
Rainwater Gray Water	-	200PSI	32°F to 250°F	Yes
Fire Sprinkler	-	175PSI	32°F to 250°F	Yes
Chilled Water	Ethylene Propylene Glycol	200PSI	32°F to 250°F	Yes
Hydronic Heating	Ethylene Propylene Glycol	200PSI	32°F to 250°F	Yes
Cooling Water	Up to 50% Ethylene Glycol or Propylene Glycol Solution	200PSI	32°F to 250°F	Yes
Low-Pressure Steam	-	Up to 15PSI	248°F	Yes
Fuel, Oil & Lubricant				
Ethanol	Pure Grain Alcohol	200PSI	32°F to 250°F	Yes
Gases				
Compressed Air	Less than 25mg/m ³ oil content	200PSI	32°F to 250°F	Yes
Oxygen O ² (Non-Med)	Keep oil and fat free non-liquid O ²	140PSI	up to 140°F	Yes
Nitrogen - N ²	-	200PSI	32°F to 250°F	Yes
Carbon Dioxide - CO ²	Dry	200PSI	32°F to 250°F	Yes
Argon	Welding use	200PSI	Ambient	Yes
Hydrogen - H ²	-	125PSI	0°F to 250°F	Yes
Vacuum	-	29.2 in Hg	Call	Yes
Please contact Apollo Flow Controls product engineering for evaluation and approval of other chemicals that are compatible with EPDM O-Ring				



WARRANTY AND LIMITATIONS OF LIABILITY

Conbraco Industries, Inc. and Elkhart Products Corporation warrants, to its initial purchaser only, that its products which are delivered to this initial purchaser will be of the kind described in the order or price list and will be free of defects in workmanship or material. For Valve products, this warranty is for a period of FIVE years from the date of delivery to you, our initial purchaser. This warranty applies to Apollo brand product with "Made in the USA" markings only. Should any failure to conform to these warranties appear within FIVE years after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense. For All Fittings, (Elkhart Products Corporation) this warranty is for a period of FIFTY years from the date of delivery to you, our initial purchaser. Elkhart Products Corporation also warrants that all fittings will be free from defects in material and workmanship which will impair their usefulness provided they are used in the service for which they are recommended. Any fitting which proves to be defective will be replaced or a credit issued, but no incidental labor charges, expenses or damages will be allowed. Apollo International™ Products: Conbraco Industries, Inc. warrants its Apollo International™ products, to be of the kind described in the order or price list and will be free of defects in workmanship or material for a period of TWO years from the date of delivery to you, our initial purchaser.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY OF QUALITY, WHETHER EXPRESSED OR IMPLIED, EXCEPT THE WARRANTY OF TITLE AND AGAINST PATENT INFRINGEMENT. Correction of non-conformities, in the manner and for the period of time provided above, shall constitute fulfillment of all liabilities of Conbraco Industries, Inc. and Elkhart Products Corporation to our initial purchaser, with respect to the goods, whether based on contract, negligence, strict tort or otherwise. It is the intention of Conbraco Industries, Inc. that no warranty of any kind, whether expressed or implied shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, Inc. and Elkhart Products Corporation SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGES OR TO LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN, ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE GOODS UPON WHICH SUCH LIABILITY IS BASED.

* It is the end user's responsibility to confirm that items intended for use satisfy local codes and standards.

TERMS & CONDITIONS OF SALE

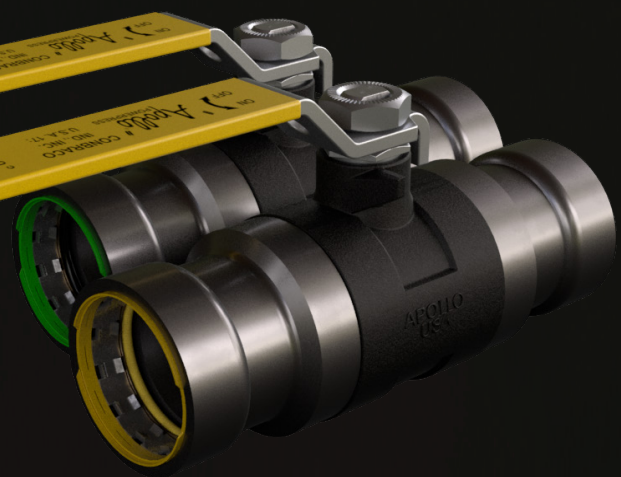
- Payment: 2% 10th prox. Net 30 days.
- All prices F.O.B. shipping point with freight allowed on shipments of 750 pounds and/or \$5,000 net minimum to all shipping points within the United States excluding Alaska and Hawaii. No freight allowed on Air Freight or Parcel Post shipments. Claims for shortages must be made within 10 days of receipt of material. Our responsibility ends when a delivery receipt is furnished us by the carrier.
- No invoice rendered For Less than \$50.00.
- No freight will be allowed on Air Freight, Air Express, Parcel Post or U.P.S. shipments.
- All Conbraco products may be combined to make sufficient weight for full freight allowance.
- Phone order quoted prices are subject to correction. Prices and designs are subject to change without notice.
- Orders for material of special design or specification are made to customer's order and are not subject to cancellation or return.
- All goods returned to us will not be accepted unless a full explanation has been made and our written authorized permission obtained in advance. All goods returned - if accepted - will be credited at invoice price, less 30% for service and rehandling charges, plus shipping expenses.
- We reserve the right to adjust orders to box quantities.



"Apollo" POWERPRESS

FIRST OF ITS KIND

The only carbon steel press valve in the market.



68-85 The APOLLO**POWERPRESS** System

86-95 **Non-Gas System**

87 Valves

88 Couplings

89-90 Elbows

91-92 Tees

92 Reducers

93 Adapters

94 Unions

94 Flanges

95 Cap & Seal

96-105 **Gas System**

97 Valves

98 Couplings

99-100 Elbows

101-102 Tees

102 Reducers

103 Adapters

104 Unions

104 Flanges

105 Cap & Seal

106-111 **Cross Reference**



1 APOLLO POWERPRESS System

APOLLO POWERPRESS is a press and fitting system designed for thick wall steel pipe as defined by ASTM A53, A106, A135, A795 (schedule 10 to 40) standards. The APOLLO POWERPRESS system significantly reduces installation times and helps maintain a clean working environment.

APOLLO POWERPRESS products are manufactured using advanced fully automated modern machinery. This ensures a consistent, safe, high quality product. 100% of welded components undergo a leak test ensuring issue free installations in the field. In addition, all straight connectors with threaded ends are made from a single piece, thus eliminating potential leaks.

Fitting quality is validated per national and international standards. Quality certifications can be provided for gas and sprinkler installations.

We guarantee quality fittings with consistent dimensional measurements.

APOLLO POWERPRESS Advantages:

- Simple, fast connections
- Size range from ½" to 2"
- Compact fittings for recessed work
- Clear & Easy Identification of Construction Materials
(Color Coded Visual Inspection Ring to ASME Standards)
- Patented Visual Press Inspection Ring & Indicator (Break-away Tabs)
- Leak Before Press® Feature ensures visible leakage of non-pressed fittings
- Full line of integrated valves (eliminates need for adapters)

The APOLLO POWERPRESS system offers a complete solution with a wide range of flexibility. The system can be utilized on standard steel pipe and can be used with different brands of press tools.

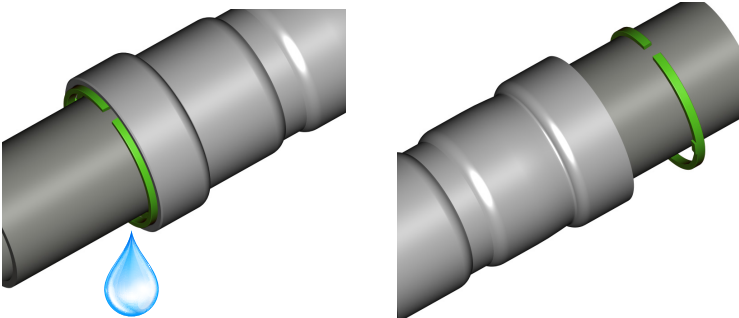
2 Advantages of APOLLO POWERPRESS

Reliable:

The integrity of the APOLLO POWERPRESS connection is determined by the tool and not the skill of the installer, thus installation errors are greatly reduced.

APOLLO POWERPRESS includes a Leak Before Press® feature (LBP). This feature ensures that unpressed fittings will visibly leak during the low pressure test, ensuring that the issue is resolved before commissioning.

All fittings also include a break-away ring: a visual control feature that will snap off when the fitting is properly pressed, giving immediate verification of a properly installed fitting. This feature eliminates the need to manually mark fittings as they are pressed, saving installation time and improving installation quality.



All O-ring sealing surfaces are designed to prevent leakage, even with uneven surfaces.



Easy and Clean:

When compared with other connection methods, APOLLO POWERPRESS is extremely user-friendly:

- Eliminating complicated clamping techniques
- Reducing preparation time
- Eliminating drying times
- Eliminating messy installations
- Eliminating threaded pipe connections
- Eliminating assembly lubrication
- Simplifying pipe insertion
- Eliminating issues associated with short bend radii

The simple process reduces the need for special skills and greatly improves the quality of the end product.

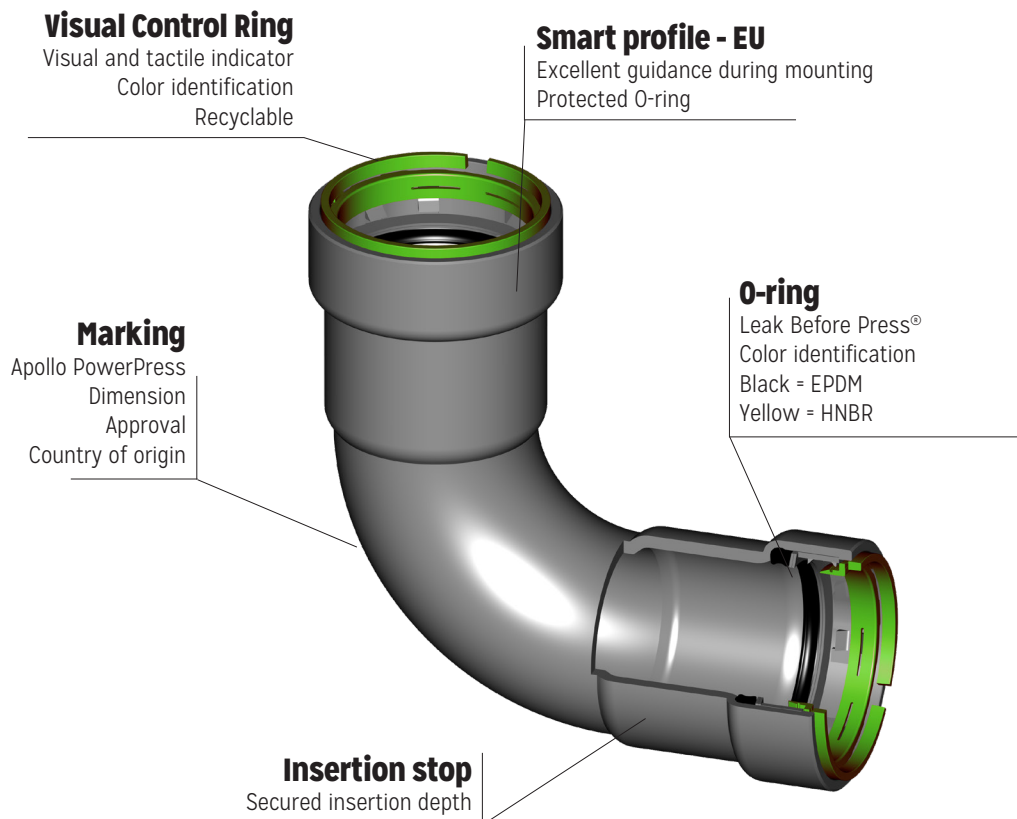
Safe:

Installations using the APOLLO POWERPRESS system do not require a heat source (as required with welding or soldering) and the tools utilized are not bulky and heavy as with some other systems. This makes APOLLO POWERPRESS the ideal solution for repair and renovation projects and ensures minimal disturbance to the existing piping system.

Fast:

The simple, fast connection technology results in considerable cost savings. The connections are made with a single press tool, thus eliminating the need for other materials such as gas, solder, adhesives, threading machines, etc.

3 Technical Data



Approved Applications:

APOLLO POWERPRESS is approved for use in the following applications:



heating



cooling



compressed air



steam



sprinkler



gas

If your application is not listed, please contact Apollo Flow Controls regarding approval for your application. In all cases installations must comply with local regulations.

INDUSTRY APPROVALS LIST				
Approvals	NON-GAS Fittings	NON-GAS Valves	GAS Fittings	GAS Valves
CSA LC-4	-	-	1/2" to 2"	1/2" to 2"
FM 1630	1/2" to 2"	-	-	-
IAPMO LC-4	-	-	1/2" to 2"	1/2" to 2"
IAPMO PS 117	1/2" to 2"	-	-	-
Canadian Registration Number (CRN)	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/2" to 2"
UL 213	1/2" to 2"	-	-	-
ULC/ORD C213	1/2" to 2"	-	-	-
Uniform Plumbing Code (UPC)	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/2" to 2"
National Plumbing Code of Canada	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/2" to 2"
International Plumbing Code (IPC)	1/2" to 2"	1/2" to 2"	1/2" to 2"	1/2" to 2"
International Fuel Gas Code (IFGC)	-	-	1/2" to 2"	1/2" to 2"

Table 1 - Industry Approvals

Material Selection and Operation Limits:

All APOLLO POWERPRESS fittings are produced from ASTM A106 Grade A steel and protected against corrosion by a zinc-nickel coating. The coating provides protection from condensation that can occur on cooling systems.

All fittings are offered with one of two O-ring options: EPDM (black) or HNBR (yellow). Reference Table 2 for proper O-ring and pipe selection as well as recommended operating limits. If your application is not shown in Table 2, please contact us to determine if the fittings are suitable for your application.

Application	O-rings	Operating Temperature (F°)	Max Intermittent Temperature (F°)	Max Operating Pressure (psig)	Steel Pipe Standards	Pipe Sizes (inch)
Central Heating	EPDM* (black)	-40 to 302	338	235	ASTM A53, A106, A135, A795 (Schedule 10-40)	1/2 - 2
Cooling Water						
Sprinkler	COMING SOON					
Compressed Air***	EPDM* (black)	-40 to 194	—	125	ASTM A53 (Schedule 40)	1/2 - 2
Gas	HNBR** (yellow)					

Table 2 - Apollo PowerPress Applications

*Ethylene Propylene Diene Monomer - For Hot and Cold Water, Circulation Pipes, Fire Mains, Compressed Air

**Hydrogenated Nitrile Butadiene Rubber - For Combustible Gases: Natural Gas and Liquid Gas

***Reference Table 3 For O-Ring Selection When Using Compressed Air

*Air Quality Class Per ISO 8573 Part 1	Water Content (mg/m ³)	Oil Content (mg/m ³)	O-Ring
1	3	0.01	EPDM
2	120	0.1	EPDM
3	880	1	EPDM
4	6000	5	EPDM
5	7800	25	EPDM
6	9400	>25	HNBR

Table 3 - O-Ring Selection for Compressed Air & ISO Class

When operating on Compressed Air:

Max allowed water content = 880 mg/m³ (Class 3 when tested per ISO8573 part 1)

Max allowed oil content = 25 mg/m³ (Class 5 when tested per ISO8573 part 1)

Compressed air systems must be properly tested when the installation is complete. The system designer and contractor must ensure that safe methods are selected for testing the system. The method must comply with all current health and safety regulations and may include pressure testing the system with fluids, compressed air or a combination of both. It is recommended that the maximum working pressure of the product never be exceeded under any circumstances during the process.

APOLLO POWERPRESS valves and fittings are suitable for both wet and dry fixed sprinkler systems. Always consult the corresponding approval for the latest release of APOLLO POWERPRESS for sprinkler installations.

The installation, inspection, testing and purging of gas installations should be in accordance with local codes or the authority having jurisdiction. In the absence of local codes, the installation should be in accordance with the International Fuel Gas Code, NFPA 54/ National Fuel Gas Code z2231, the Uniform Plumbing Code, NFPA 58 or CSA B 149.1.

Markings:

All APOLLO POWERPRESS fittings are clearly marked for easy identification and quality control. A color coding system is also employed to clearly identify the difference between standard fittings and gas fittings.

- 1 Visual Control Ring (Green)
- 2 Apollo PowerPress Signature Logo
- 3 Approvals
- 4 Dimension/Size
- 5 Traceability Code
- 6 Country of Origin



Apollo PowerPress Non-Gas (Standard) Fittings

- 1 Visual Control Ring (Yellow)
- 2 Apollo PowerPress Signature Logo
- 3 Approvals
- 4 Dimension/Size
- 5 Traceability Code
- 6 Country of Origin



Apollo PowerPress Gas Fittings

Threads:

The APOLLO POWERPRESS product range includes fittings with inner and outer threads. These threads are manufactured in accordance with DIN 2999/ISO 7/1 or ANSI/ASME B1.20.1. Hemp or other chloride-free sealants are suitable for sealing the threads of APOLLO POWERPRESS.

4 Installation Guidelines

Protective Equipment:

When installing APOLLO POWERPRESS always wear proper protective gear. At a minimum, safety shoes, hat, glasses and gloves should be worn.

Transportation and Storage:

When transporting and storing APOLLO POWERPRESS fittings, damage and contamination must be avoided. The optimal storage temperature for the fittings is between 50°F and 80°F. The products must be stored in a dry place (max. humidity 65%) in the original packaging until the time of installation.

Pipe Preparation:*Cutting Pipe To Length*

After measuring, the tubes can be cut to length using a tube cutter (see fig. 6), a fine-toothed handsaw or a mechanical saw with electrical motor suitable for the tube material. The tube must always be cut completely through. Never partially cut the tube and break it off as this could cause corrosion. When cutting already installed pipes, always take into account a minimum distance to weldings and bends. A minimum distance of 3 x outside pipe diameter is required (with a minimal length of 4").

DO NOT USE OIL-COOLED SAWS, GRINDING WHEELS OR FLAME CUTTERS.



FIGURE 6: CUTTING THE PIPE

Deburring Pipe

The tube ends must be carefully and thoroughly deburred inside and out after being cut to length. This prevents damage to the O-ring when inserting the tube into the press fitting. A file or hand deburrer suitable for the material or an electrical tube deburrer may be used. Burrs sticking to the tube must be removed.



FIGURE 7: DEBURRING THE PIPE

Marking Insertion Depth

The required insertion depth must be marked on the male end of the tube or the press fitting in order to guarantee a safe and proper joint. The marking on the tube must remain visible (but close to the fitting) after the connection is pressed. This is imperative to ensure the tensile strength of the joint.



FIGURE 8: MARKING INSERTION DEPTH

Surface Preparation

Pipe surfaces must be smooth, free of indentations, pits and deformations and must be clean and free of debris, rust, scale, paint, oil and grease. This can be achieved with a wire brush or fine grit sand paper. It is not necessary to completely remove protective coatings or to expose the bare steel material.

In order to prevent leaks, engraved or stamped pipe should not be used with the APOLLO POWERPRESS fitting system even if the engraving or stamping has been mechanically removed with a grinder or other means.

When using painted black (and lacquered) iron pipe, the pipes should be inspected for excessive paint runs. If runs exist, the surface of the pipe should be smoothed using a fine grit sand paper and wiped clean before installation.

Epoxy coatings on black steel pipe have the tendency to increase the outer dimension of the pipe. The thickness of the coating should be kept to a minimum to allow the installation of the APOLLO POWERPRESS fitting. The maximum allowed thickness of the epoxy coating is 0.0118 in. If the coating exceeds this dimension then the pipe can be sanded using a fine grit sand paper, but the surface of the pipe must be smooth.



Figure 1: Black Steel



Figure 2: Galvanized Steel

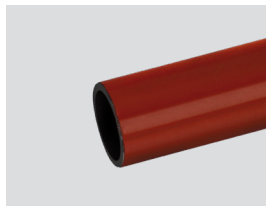


Figure 3: Epoxy Coated

After cleaning the surface you should see a clear metal surface.



FIGURE 9: CLEANING PIPE

Pre-Press Fitting Check:



Before assembly, remove the protective cap. The fitting must be checked to ensure that the O-rings are present and correctly positioned, and that the visual control ring is properly aligned. The pipe, fitting and O-ring must be examined for any foreign materials (e.g. dirt, burrs), which must be removed, if present.

FIGURE 9: SURFACE AFTER CLEANING



Pre-Press Assembly:

Insert the tube carefully into the press fitting up to the marked insertion depth, pushing it in the direction of the axis. Be careful not to cock or tilt the tube when inserting into the fitting. Failure to do so may result in damage to the O-ring seal. The insertion depth marking must remain visible. In the case of fittings without a stop, the fittings should be inserted at least as far as the marked insertion depth.

FIGURE 10: ASSEMBLY

If assembly is difficult due to snugness of fit, a lubricant such as water or soap may be used. Under no circumstances may oils, fats or grease be used as lubricants. Time may be saved by first assembling a number of connections and then pressing the various pipe connections one after the other. Before starting the final pressing process, it is important to check the minimum required distances for the installation to ensure that there is adequate room for the press tool to operate (See Table 4).

Fitting Size (in)	Insertion Depth es (in)	Minimum Distance dmin (in)	Minimum Pipe Length 2 x es + dmin (in)
1/2	1.07	0.20/0.59*	2.48/2.87*
3/4	1.17	0.20/0.59*	2.68/3.07*
1	1.36	.2	3.07
1-1/4	1.85	0.39/0.59*	4.25/4.65*
1-1/2	1.87	0.39/0.59*	4.29/4.49*
2	2.01	0.39/0.59*	4.57/4.76*

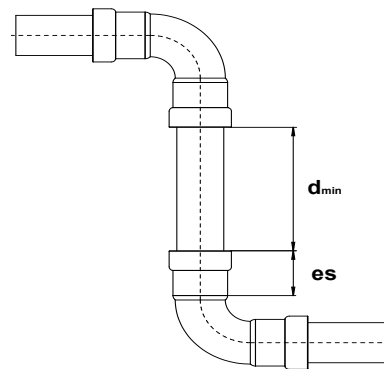


FIGURE 11

Outside ϕ (in)	Fig 12		Fig 13		Fig 14	
	a (in)	b (in)	a (in)	b (in)	c (in)	a_{min} (in)
1/2	2.76/2.95*	1.18/2.36*	3.15/2.95*	1.38/2.36*	1.97/3.15*	1.97/0.79*
3/4	3.15/3.35*	1.38/2.56*	3.54/3.35*	1.57/2.56*	2.17/3.15*	1.97/0.79*
1	3.74	1.77	4.13	1.97	2.56	1.97
1-1/4	4.92*	3.74*	4.92*	3.74*	3.15*	0.79*
1-1/2	5.31*	4.13*	5.31*	4.13*	3.15*	0.79*
2	5.51*	4.13*	5.51*	4.13*	3.15*	0.79*

Table 4 - Minimum Distance Between Press Joints (* For Slings)

Table 5 gives the minimum required working distance for correct tool operation as depicted in figures 12-14.

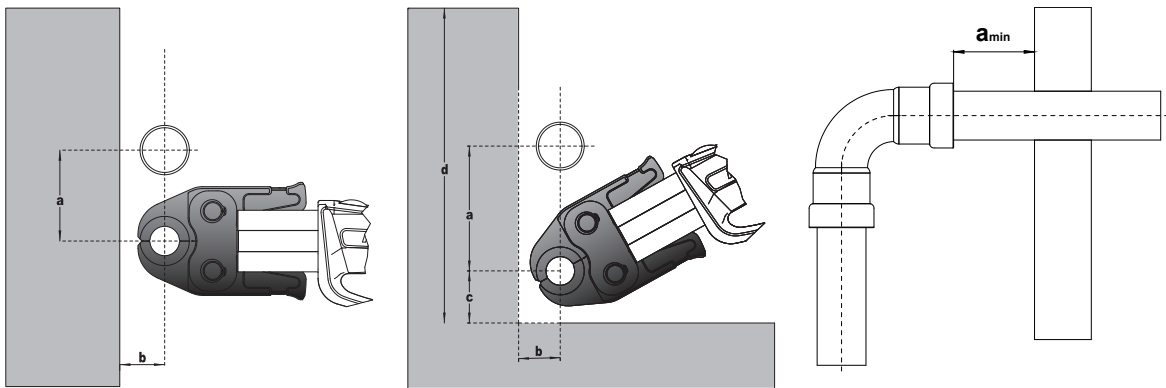


FIGURE 12

FIGURE 13

FIGURE 14

Table 5 - Space Needed For Installation

Pressing:

Press tools consist of a press machine and the corresponding press jaw or sling. Every joint in the system must be pressed in order to achieve a leak free system. Figure 5 shows a cross-section of the APOLLO POWERPRESS profile before and after pressing.

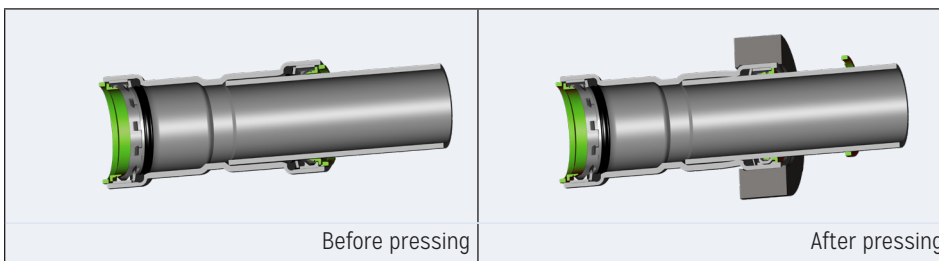


Figure 5: Before and After Pressing

Dimension	Manufacturer	Press Tool	Press jaws/slings
1/2"-2"	Novopress	ECO1 Pressboy (230V) ECO201/202/203 (230V) ACO1 Pressboy (12V) ACO202/203 (18V) EFP2 (230V) EFP201/202/203 (230V) AFP201/202 (14.4V) ACO202XL/203XL (18V)	Novopress jaws: 1/2"-1" Slings: 1-1/4"-2" with adapter ZB203
1/2"-2"	Milwaukee	M18 (18v)	Milwaukee M18 jaws: 1/2"-1" Milwaukee M18 Bip slings: 1-1/4"-2" with adapter V2
1/2"-2"	Ridgid	RP10-S (230V) RP10-B (12V) RP320 RP330C/330B RP340C/340B CT400	MegaPress jaws: 1/2"-1" (4299.9) MegaPress Slings: 1-1/4"-2" with adapter V2

Table 6 - Approved Press Tools for APOLLO POWERPRESS

Figure 15: Pressing



The sling profile that corresponds to the diameter of fitting being installed must be used. In some cases an adaptor may be required in addition to the press slings. Conbraco guarantees an excellent press connection, provided the tools are used correctly.

Before starting to press, the press jaws and slings must be checked for dirt, and cleaned if necessary. Furthermore, the press machine must be in good condition and the manufacturer's instructions must be observed.

In order to create a correctly pressed connection, the groove of the press tool must enclose the press fitting O-ring bead. Once the pressing has started, always complete the press cycle and under no circumstances interrupt the process. **It is not permitted to press a connection more than once.**

The pressing process can cause deflection (angular displacement). This behavior can be corrected by alternating the position of the press tool/jaw on each connection. For example place the machine first on the left side, then for the next connection the machine would be placed on the right side. The deflection of the joint is not something which can be prevented, but it can be minimized using the above method.

Press Tool Maintenance:

Regular maintenance and lubrication of the press jaws, slings and tools is necessary. Please observe the tool manufacturer's instructions for use and maintenance. Badly maintained and/or damaged press jaws pose a potential risk.

5 Post-Installation

Pressure Test:

Immediately after installation, the system should be checked for leaks prior to applying insulation, paint or other operations that may obstruct view of the piping joints.

Pressure tests must always be performed in accordance with local ordinances. The test medium and the results of the pressure test should be documented in a test report.

When testing an APOLLO POWERPRESS installation using water as the test media, make sure that no water remains in the system afterwards, in order to avoid the risk of corrosion.

Pressure test for natural gas, heating & cooling systems, and air

Pressure test for natural gas and liquid gas systems must be performed in accordance with local regulations.

Pressure test of sprinkler systems

Sprinkler system piping must be tested in accordance with local regulations such as NFPA 13 for at least two hours. NFPA 13 requires:

- Test Pressure to the greater of 200 psi or 50 psi above working pressure, measured at low point in the system.

Dry sprinkler systems must also be tested pneumatically to:

- A pressure of not less than 36 psi for at least 24 hours.
- Any leakage, which results in a pressure drop of more than 2 psi over the 24 h, must be corrected.

Any faults identified, such as permanent deformations, ruptures or leakages must be corrected and the above test must be repeated.

Flushing:

After installation, the system must be flushed thoroughly before being placed into service. This ensures that any foreign matter is removed from the system and helps prevent hygiene problems and corrosion damage.

In exceptional cases, it may be necessary to flush the system with a disinfecting substance.

When flushing with a disinfectant substance, special care must be taken to ensure that no chlorides remain on the inside of the pipes. Always make sure to flush with clean potable water.

Insulation:

The following must be observed when insulating steel piping systems:

- Cold water lines should be protected against condensation and overheating in accordance with DIN 1988, Part 200.
- Hot water lines must be insulated to prevent heat loss in accordance with the Energy-Conservation Act (EnEG).

Adequate measures should be employed to limit heat loss. Consult local authorities for regulations on minimum insulation thickness and standards.

Electric Heat Tracing:

APOLLO POWERPRESS may be used with electrical heat tracing in order to maintain the temperature of the piping. Sealed pipes should not be heated because of the danger posed by excessive increase in pressure.

(Main) Equipotential Bonding:

All metal piping systems using equipotential bonding must comply with equipotential bonding requirements as dictated by local ordinances. Continuity checks must be conducted by a qualified electrician once the installation work has been finished. APOLLO POWERPRESS in combination with the respective pipes are electrical conductive pipe systems due to the metal-to-metal contact between the fitting and pipe. Therefore, they must be included in the equipotential bonding assessment.

Corrosion Protection:

In cases where full corrosion protection is needed (such as cooling installations), always take care to protect the pipe surface that was sanded or polished during installation.

6 General Information

Thermal Expansion In Piping System:

The level of thermal expansion within piping systems depends on the type of materials used. This linear expansion needs to be taken into account during the piping design and installation. Small changes in length can be accommodated by having adequate space for expansion as well as by the elastic properties of the piping system itself. More substantial changes in length need to be offset by other means; e.g. installation of special expansion compensation devices, fixed anchoring points and brackets.

The effects of expansion can be offset by the use of a pipe segment (figure 15), U-bend (figure 17) or compensators. The level of expansion to be offset can be determined beforehand by calculating the changes in length. The equation for calculating the changes in length is as follows:

$$\Delta l = l \times \alpha \times \Delta T$$

Where:

Δl =Total Linear Expansion (in)

l =Length of Segment In Question (in)

ΔT =Change in Temperature (°F)

α =Thermal Expansion Coefficient (in/(in·°F))

In the case where major expansion occurs, expansion compensators are required, or in complicated cases, Ω -shaped compensation loops may be required. In these cases the compensation amount can be calculated as shown below:

$$B_d = k \times \sqrt{(d_e \times l)}$$

Where:

B_d =Expansion Length To Be Allowed (in)

k =Material Constant

d_e =External Diameter of Pipe (in)

Δl =Linear Expansion that Must Be Allowed (in)

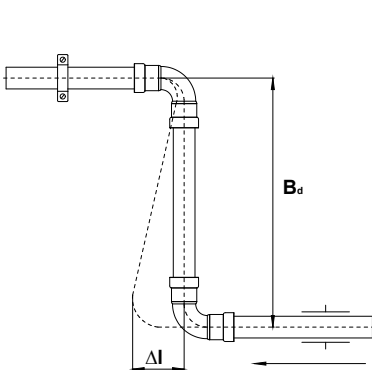


FIGURE 15

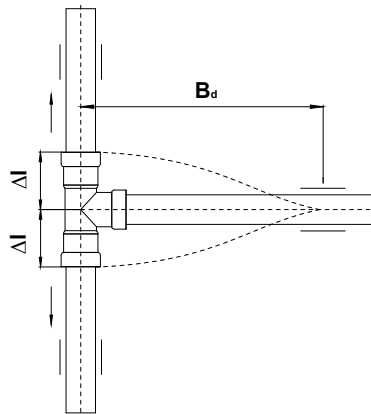


FIGURE 16

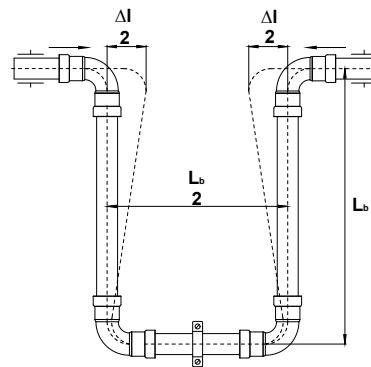


FIGURE 17

As shown in figures 15-17, the correct compensation of the expansion depends also on the placement of fixing devices, such as brackets and anchoring points. Never plan to or place fixed pipe mounting clips close to a pipe connection. The clips should be positioned so that they do not act as a fixed restraint. When there are straight segments of pipe, without expansion compensation, use only one saddle clip to prevent possible deformation. Position it as close to the middle of the straight segment as possible. This allows expansion in both directions and the length of the expansion equalizer required will be halved. It is recommended that pipe clips with a rubber inlay be used as this will muffle any possible noise and vibrations and better distribute stresses.

Pressure Drop:

Every fluid that flows through a piping system experiences continuous and local flow resistances or pressure drops. There is a difference between the continuous and the local pressure drop. A continuous pressure drop is mainly caused by the flow resistance in straight pipe sections, which is a result of the friction between the fluid and the pipe wall. Local pressure drops are those flow resistances that are created by a change in the internal pipe diameter, a pipe branch, an elbow, a valve, etc.

Continuous Pressure Drop

Continuous pressure drop in a straight section of pipe with a constant inside diameter can be calculated using the Darcy-Weisbach formula shown below:

$$\Delta_p = (f \times L \times v^2 \times \rho) / (2 \times D) + \rho \times g \times \Delta h$$

Where:

Δ_p = Pressure Drop Across Entire Length of Straight Pipe (Pa)

f = friction factor (unitless)

L = Total Length of Straight Pipe (m)

v = Velocity of Fluid Inside of Pipe (m/sec)

ρ = Density of Fluid (kg/m³)

d = Inside Diameter of Pipe (m)

g = Acceleration Due To Gravity (m/(sec²)) = 9.806 (m/(sec²))

Δh = Total Change In Elevation From One End of Pipe To Other (m)

The friction factor f is calculated via one of two methods depending on the value of the Reynolds Number Re.

If the calculated Reynolds Number Re is less than 2300 then the friction factor is calculated as follows:

$$f = 64 / Re$$

If the calculated Reynolds number is greater than 2300 but less than 100,000 then the friction factor can be calculated using the Blasius Correlation shown below:

$$f = (0.3164) / Re^{0.25}$$

Reynolds number Re is calculated as follows:

$$Re = (\rho \times v \times d) / \mu$$

Where:

Re = Reynolds Number (unitless)

ρ = Density of Fluid (kg/m³)

v = Fluid Velocity Inside of Pipe (m/sec)

d = Inside Diameter of Pipe (m)

μ = Dynamic Viscosity of the Fluid (kg/(sec m))

$$\mu = \nu \times \rho$$

Where:

ν = Kinematic Viscosity of the Fluid (m²/sec)

Common values for the viscosity of water are shown in Table 7. If using a fluid other than water, consult the published viscosity curves for the fluid you are using.

Fluid Type (@ °F)	Viscosity (cst)	Viscosity (m ² /sec)	Density (kg/m ³)
Water @ 32	1.792322618	1.7923E-06	999.82
Water @ 41	1.52	0.00000152	1000
Water @ 50	1.308300909	1.3083E-06	999.77
Water @ 60.8	1.110076774	1.1101E-06	999.03
Water @ 71.6	0.957048083	9.5705E-07	997.86
Water @ 80.6	0.854915261	8.5492E-07	996.59
Water @ 91.4	0.752945434	7.5295E-07	994.76
Water @ 100.4	0.682779456	6.8278E-07	993
Water @ 111.2	0.612735201	6.1274E-07	990.64
Water @ 120.2	0.562485457	5.6249E-07	988.47
Water @ 131	0.511337696	5.1134E-07	985.65
Water @ 140	0.475013477	4.7501E-07	983.13
Water @ 150.8	0.436779263	4.3678E-07	979.9
Water @ 161.6	0.403494219	4.0349E-07	976.47
Water @ 170.6	0.379060259	3.7906E-07	973.46
Water @ 181.4	0.352690035	3.5269E-07	969.69
Water @ 190.4	0.333191916	3.3319E-07	966.41
Water @ 201.2	0.312789018	3.1279E-07	962.31
Water @ 210.2	0.297252759	2.9725E-07	958.78
Water @ 212	0.294347894	2.9435E-07	958.05

Table 7

Velocity through the pipe is dependent on the Pipe Inner Diameter and volumetric flow rate and can be calculated as shown below:

$$V = Q/A$$

$$A = (\pi \times d^2)/4$$

$$V = (4 \times Q)/(\pi \times d^2)$$

Where:

A=Cross Sectional Area of Pipe Inner Diameter (m²)

Q=Volumetric Flow Rate (m³/sec)

Local Pressure Drop

A local pressure drop is the resistance to flow that results from changes in the flow direction, changes in cross-sectional area or flow splitting over several channels. There are two ways of calculating such pressure drops: the direct analytical method and the method that uses "equivalent lengths".



Unit Type	Measured Units	Multiply By	Resulting Units
Pressure	Atm	101325	Pa
	Bar	100000	
	In-Hg	3386.388	
	Kpa	1000	
	Mpa	1000000	
	PSI	6894.757	
Length	cm	0.01	m
	ft	0.3048	
	in	0.0254	
	km	1000	
	yards	0.9144	
Velocity	ft/hr	8.46667E-05	m/sec
	ft/min	0.00508	
	ft/sec	0.3048	
	km/hr	0.277778	
	km/min	16.66667	
	km/sec	1000	
	m/hr	0.000277778	
	m/min	0.01666667	
Density	g/cm ³	1000	kg/m ³
	g/m ³	0.001	
	lb/ft ³	16.01846	
	lb/in ³	27679.9	
Acceleration	cm/sec ²	0.01	m/sec ²
	ft/sec ²	0.3048	
	free fall g	9.80665	
	in/sec ²	0.0254	
Dynamic Viscosity	cP	0.001	kg/sec m
	Poise	0.1	
	lbf sec/ft ²	47.880259	
	lbf sec/in ²	6894.75729	
	reyn	6894.75729	
	slug/foot sec	47.880259	
	N sec/m ²	1	
Flow	ft ³ /hr	7.86579E-06	m ³ /sec
	ft ³ /min	0.000471947	
	ft ³ /sec	0.02831685	
	gal/day	4.38126E-08	
	gal/hr	1.0515E-06	
	gal/min	6.30902E-05	
	gal/sec	0.003785412	
	l/day	1.15741E-08	
	l/hr	2.77778E-07	
	l/min	1.66667E-05	
	l/sec	0.001	
	m ³ /day	1.12741E-05	
	m ³ /hr	0.000277778	
m ³ /min	0.01666667		

Equivalent Length Method

The Equivalent Length method assumes that the pressure drop across a fitting or valve can be equated to a length of straight pipe of "equivalent length". This "equivalent length" or the sum of all of the equivalent lengths in the system can be added to the total length "l" from the Darcy-Weisbach formula listed above in order to calculate a total pressure drop for the system or the "equivalent length" can be plugged into the equation independently to determine the local pressure drop across the single fitting or valve. The equivalent lengths for APOLLO POWERPRESS fittings can be found in Table 9.

Pressure drop for entire system would be:

$$\Delta p = (f \times (l + \sum l_e) \times v^2 \times \rho) / (2 \times d) + \rho \times g \times \Delta h$$



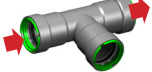
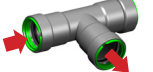

Local Pressure drop for a single fitting would be:

$$\Delta p = (f \times l_e \times v^2 \times \rho) / (2 \times d)$$

Where:

l_e = Equivalent Length of Fitting (m)

Δp = Pressure Drop (Pa)

direct analytical method / equivalent length method (m)											
											
OD	DN	ζ	(m)	ζ	(m)	ζ	(m)	ζ	(m)	ζ	(m)
1/2"	10										
3/4"	12	0.61	0.37	0.51	0.32	0.38	0.24	0.96	0.59	0.32	0.20
1"	15	0.64	0.53	0.54	0.46	0.42	0.35	1.06	0.89	0.29	0.24
1 1/4"	20	0.51	0.62	0.38	0.47	0.32	0.39	0.93	1.13	0.26	0.31
1 1/2"	25	0.45	0.65	0.32	0.47	0.29	0.42	0.83	1.22	0.22	0.33
2"	32	0.48	0.94	0.35	0.69	0.29	0.57	0.93	1.82	0.22	0.44

Resistance Coefficient Method

Alternately the resistance coefficient method can be used to calculate the pressure drop across a fitting or valve. This method is often preferred since it is independent of pipe roughness and material type. However, this method assumes that the “local flow resistance coefficient” is independent of velocity. This is normally a safe assumption for domestic installations where the Reynolds number is relatively low and does not change significantly. Values for the “local flow resistance coefficient” for APOLLO POWERPRESS fittings can be found in Table 9. The local pressure drop formula using this method is shown below.

Combining the Darcy-Weisbach formula from above, the total pressure drop for the entire system would be:

$$\Delta p = (f \times L \times v^2 \times \rho) / (2 \times D) + \rho \times g \times \Delta h + ((\sum \zeta \times v^2 \times \rho) / 2)$$

Local Pressure drop for a single fitting would be:

$$\Delta p = ((\zeta \times v^2 \times \rho) / 2)$$

Where:

ζ = Local Flow Resistance Coefficient (unitless)

Δp = Pressure Drop (Pa)

Welding Requirements:

When welding adjacent to an installed APOLLO POWERPRESS connection, the installer must remain at least 4 inches away from the connection to prevent damage to the O-ring. When welding inline to an APOLLO POWERPRESS connection, the installer must remain at least 3 feet away from the connection to prevent damage to the O-ring. The installer should take the following precautions to keep the APOLLO POWERPRESS connection cool while welding:

- Wrap the connection with a cold wet rag.
- Protect the connection with a weld blanket.
- When possible, fabricate weld connections prior to installing the pressed fitting (make Sure the pipe has cooled before installing the fitting).
- Constantly apply “spray type” spot freezing.
-

Mounting Bracket Guidelines:

Pipe Hangers, supports and their installation should conform to the requirements of ANSI/MSS SP58. The installer should ensure that sliding hangers are installed such that they allow free movement of the piping in the intended direction.

The spacing of mounting brackets is critical and the recommendations of ANSI/MSS SP58 should be followed as a minimum. In addition to this standard, the movement associated with thermal expansion of the system should also be considered and mounting bracket spacing should be adjusted accordingly.

In all cases, mounting brackets should be sized sufficiently to handle the full weight of the piping system. They should be designed to handle torsion and expansion loads occurring during operation.

Brackets should never be installed onto fittings or valves. They should only be installed onto straight sections of piping.

Corrosion Information:

There are different kinds of corrosion: chemical corrosion, electro-chemical corrosion, internal and external local corrosion, stray current corrosion, etc. All types of corrosion have very particular chemical or mechanical causes. The following provides some simple hints on how to avoid such problems.

Electro-chemical corrosion

Electro-chemical corrosion occurs under the following circumstances:

- An electrochemical potential difference between parts
- The presence of a conductive fluid (electrolyte), such as water
- The presence of oxygen (O₂)

There are no significant amounts of oxygen in heating installations, thus these installations have few corrosion issues. In potable water installations, however, the oxygen content is very high, nearly at the saturation point. Therefore it is important that the APOLLO POWERPRESS System be installed only downstream of other, less noble components. For example, it is possible to install stainless steel pipe branches downstream from a pipe system consisting of galvanized steel pipes; however, in such cases, a non-ferrous metal or synthetic connection piece should be utilized between the two materials (see DIN1988).

Another important factor to consider is the ratio between the surface area of the noble metal and that of the less noble metal. The higher this ratio, the greater the corrosion potential.

Stray Current Corrosion

Corrosion by stray currents rarely occurs in practice. When it does occur, it is immediately recognizable, appearing as a cone-shaped crater on the outside of the pipe.

Stray current corrosion requires a direct current that turns the metal into an anode. The stray current jumps to a section of the piping and then back to ground farther down the system. In order to penetrate into the piping system, the ground current must have an entry point where the normal protective cover of the pipe or connection is damaged or missing.

This is why metal pipe systems must be grounded. Stray current issues are more prominent in direct current installations, however direct current is not commonly used in domestic households. Stray current issues are not very common with alternating current installations. Research has shown that problems by stray currents occur sporadically and do not depend on the type of metal.

Internal Corrosion

Internal corrosion cannot occur with closed-loop water heating systems during operation. The oxygen in the water in closed-loop systems creates a layer of iron oxide on the inside of the pipe thus preventing further corrosion. However, when the heating system is not in use, it must be kept full at all times or be completely drained and dried.

Approved additives, oxygen scavengers and corrosion inhibitors can be added to prevent frost damage, calcification and corrosion. Please contact Conbraco concerning the use of additives. Always observe the applicable legislation, regulations and local rules regarding anti-corrosion additives.

Galvanized Steel pipes and fittings are not permitted in potable water installations. Contact corrosion will occur with galvanized steel if it enters into direct contact with stainless steel.

In addition, piping systems should be properly sized to minimize the risk of erosion corrosion resulting from excessive velocities.

External Corrosion

Steel pipe systems are generally installed in such a way that the outer surfaces do not come into contact with corrosive media. However, if they do come in contact with corrosive media appropriate measures should be taken to minimize corrosion.

In some cases, pipes are exposed for a long period to rain, humidity or dampness which leads to corrosion. One way of combatting this is to use "closed cell" insulation. This insulation can prevent corrosion, but it must be applied in a guaranteed waterproof condition if corrosion is to be prevented.

Galvanized steel only offers corrosion protection for short term exposure to humidity or dampness. APOLLO POWERPRESS fittings that are exposed to long term humidity or dampness are subject to electrolytic outer corrosion and should be protected in accordance with NFPA 54 Section 404.8, NACE Standard RP0169-2002 Section 5, 2009 UPC Chapter 6 section 609.3.1, 2009 UMC Chapter 13 Section 1312.1.3. Local codes and ordinances should always be observed when applying corrosion protection techniques.

Care should also be taken to select hangers of suitable material that is galvanically compatible with the piping system.

Suitable primers - or metallic paints offer some corrosion protection. It is advisable to always use some form of corrosion protection on piping in situations where corrosion is likely to occur (damp room, crawl spaces, etc.).

Application Concerns:

Heat transfer (e.g. with a heating band)

Heat transfer from outside inwards must be prevented as this can lead to a build-up of film on the inside of the pipe wall. This film can cause an increase in the concentration of chloride ions, which cause pitting in critical concentrations.

Underground Installations

APOLLO POWERPRESS fitting systems and black iron pipe are approved for underground installations. However, any installations must meet all local codes.

Stainless steel - Galvanized Steel - Copper

With all 3 materials - stainless steel, galvanized steel, copper - waterline corrosion can occur as a result of interaction between three actors (water, metal and air). This corrosion can be prevented if the piping installation remains permanently filled.

Partial filling can occur if the pipes are emptied after a pressure test with water, therefore pressure testing with gas/air may be preferred.

Sprinkler Certificates:

Design of Sprinkler Installation

Sprinkler installations must be designed and installed in accordance with the standard NFPA13 and/or local regulations. The following steps must be carried out:

- Planning
- Installation
- Maintenance

All bodies involved up to the last test before commissioning the system must take part in the entire process from project planning to delivery. Depending on the approvals, a range of different operating pressures is permitted. For FM and UL/cUL, the maximum working pressure is 175 psi.

FM Certificate

The APOLLO POWERPRESS system has an FM certificate for fittings in accordance with FM standard 1630 for use in wet and dry sprinkler installations with a maximum operating pressure of 175 psi (12.1 bar). The certificate applies to the APOLLO POWERPRESS Sprinkler system in sizes 3/4"-2" (DN20 to DN50).

Mounting and Installation of FM-Certified Sprinkler Installations

The mounting and installation of the APOLLO POWERPRESS system may only be carried out by trained and qualified technicians.

UL/cUL Certificate

The APOLLO POWERPRESS system has a UL/cUL certificate (VIZM/VIZY) for fittings and tubes for use in above ground sprinkler installations with a maximum operating pressure of 175 psi for sizes 1" to 2" (DN20-DN50). In accordance with NFPA13, at least DN25 (1") should be used for steel branch and distributor lines. The use of APOLLO POWERPRESS under UL requirements is limited to a maximum ambient temperature of 150°F(120°F under cUL). Only machines fitted with a battery are permitted under the UL/cUL certificate.

Mounting and Installation for UL/cUL-Certified Sprinkler Installations

The mounting and installation of the APOLLO POWERPRESS system may only be carried out by trained and qualified technicians.

**NON-
GAS
VALVES &
FITTINGS**



APOLLOPOWERPRESS NON-GAS 89FV BALL VALVE



DESCRIPTION

The Apollo PowerPress 89FV Ball Valve is ideal for installation in chilled water, compressed air, hydronic heating and fire sprinkler (coming soon) applications. This valve design significantly reduces installation time and helps maintain a clean working environment. The ApolloPowerPress is designed for steel pipe, schedules 10 to 40, as defined by ASTM A53, A106, A135 and A795 standards.



FEATURES

- Patented Visual Inspection Ring & Indicator (Green)
- EPDM O-ring
- Full-Port Flow
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Ridgid® & Milwaukee Press Tool Compatible
- Leak Before Press® Technology
- Blow-Out Proof Stem
- Corrosion Resistant Materials
- 100% Factory Tested
- Silicone Free Assembly
- Made in USA, ARRA Compliant

PERFORMANCE RATING

- Maximum Operating Pressure 200 psi
- Temperature Range: -40°F - 302°F

APPROVED APPLICATIONS

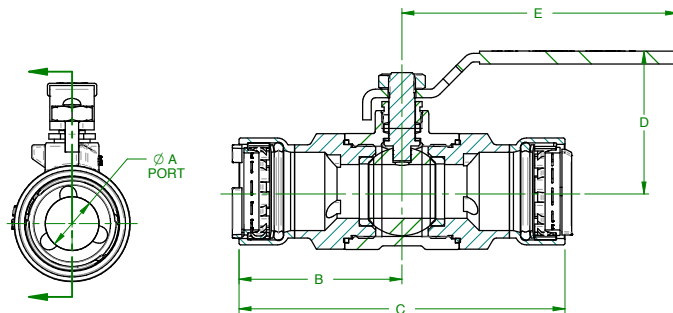
- Chilled Water
- Hydronic Heating (50% glycol max)
- Low Pressure Steam, 15 psi max
- Compressed Air
- Fire Sprinkler Applications (Coming Soon)
- Not suitable for flammable gas service

OPTIONS

- 01: Standard (PTFE Packing, RPTFE Body Seal)
- 02: Grounded Stem
- 04: 2-1/4 inch Stem Extension
- 11: THERMA-SEAL® Insulating Tee Handle
- 14: Side Vented Ball (Uni-Directional)
- 24: Graphite Stem Packing
- 27: SS Latch-Lock Lever and Nut
- 32: SS Tee Handle and Nut
- 39: SS Hi-Rise Locking Wheel Handle with SS Nut
- 45: Less Lever and Nut
- 47: SS Latch Lock Oval Handle
- 48: SS Oval Handle (No Latch)
- 49: Assembled Dry
- 60: Grounded Ball and Stem

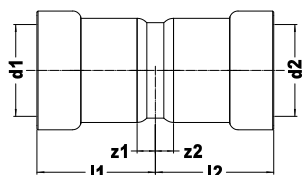
Dimensions (in)

Part Number	Description	Size	A	B	C	D	E	Wt (lbs.)
89FVE4301	89FV Ball Valve, Full-Port, Carbon Steel	1/2"	0.50	2.08	4.16	1.74	3.85	0.6
89FVE4401	89FV Ball Valve, Full-Port, Carbon Steel	3/4"	0.75	2.28	4.55	1.96	3.85	0.9
89FVE4501	89FV Ball Valve, Full-Port, Carbon Steel	1"	1.00	2.72	5.44	2.29	4.76	1.4
89FVE4601	89FV Ball Valve, Full-Port, Carbon Steel	1-1/4"	1.25	3.41	6.82	3.20	7.76	4.2
89FVE4701	89FV Ball Valve, Full-Port, Carbon Steel	1-1/2"	1.50	3.62	7.24	3.30	7.76	4.8
89FVE4801	89FV Ball Valve, Full-Port, Carbon Steel	2"	2.00	3.93	7.85	3.68	7.76	7.2



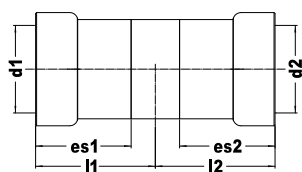
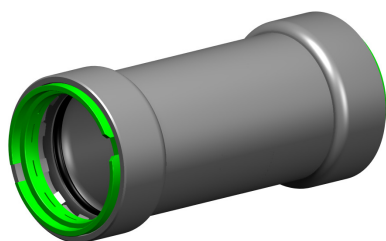
STANDARD material specifications:

Part Name	Material
Body	ASTM A216-WCB Carbon Steel
Seat	Reinforced PTFE
Ball	ASTM A276-316 Stainless Steel
Stem Packing	Multi-Fill PTFE
Nut	Corrosion Resistant Plated Steel
Stem	ASTM A276-316 Stainless Steel
Retainer	ASTM A108-12L14 Carbon Steel
O-Ring	EPDM (Black)
Handle	Plated Steel/Insulated Polyvinyl
Gland	ASTM A108-1215 Carbon Steel
Stem Bearing	Reinforced PTFE
Body Seal	PTFE



400 APOLLO POWERPRESS COUPLING WITH STOP (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2
PWR7480000	Coupling with Stop, 400, FF 1/2	1.34	0.20
PWR7480011	Coupling with Stop, 400, FF 3/4	1.48	0.24
PWR7480022	Coupling with Stop, 400, FF 1	1.67	0.24
PWR7480033	Coupling with Stop, 400, FF 1-1/4	2.20	0.28
PWR7480044	Coupling with Stop, 400, FF 1-1/2	2.28	0.33
PWR7480055	Coupling with Stop, 400, FF 2	2.40	0.31

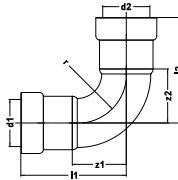
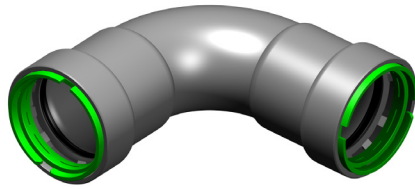


401 APOLLO POWERPRESS COUPLING WITHOUT STOP (2 X Press)

Part No.	Description (size in inches)	l1/l2	es1/es2
PWR7480066	Coupling without Stop, 401, FF 1/2	1.54	1.14
PWR7480077	Coupling without Stop, 401, FF 3/4	1.63	1.24
PWR7480088	Coupling without Stop, 401, FF 1	1.83	1.44
PWR7480099	Coupling without Stop, 401, FF 1-1/4	2.32	1.93
PWR7480101	Coupling without Stop, 401, FF 1-1/2	2.46	1.95
PWR7480110	Coupling without Stop, 401, FF 2	2.56	2.09

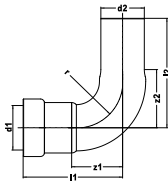
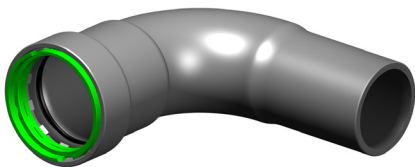


ELBOWS



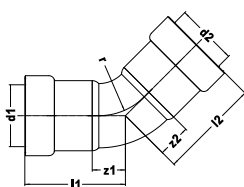
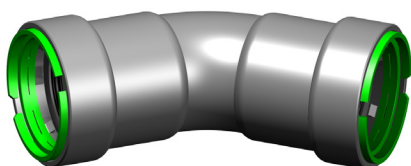
407 APOLLO POWERPRESS 90° ELBOW (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2	r
PWR7480121	90° Elbow, 407, FF 1/2	2.17	1.02	0.98
PWR7480132	90° Elbow, 407, FF 3/4	2.50	1.26	1.18
PWR7480143	90° Elbow, 407, FF 1	3.01	1.57	1.50
PWR7480154	90° Elbow, 407, FF 1-1/4	3.82	1.89	1.77
PWR7480165	90° Elbow, 407, FF 1-1/2	4.09	2.15	1.97
PWR7480176	90° Elbow, 407, FF 2	4.80	2.72	2.56



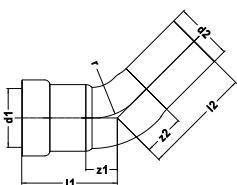
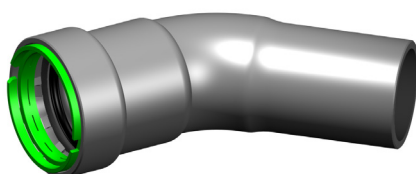
407-2 APOLLO POWERPRESS 90° STREET ELBOW (Press x Male)

Part No.	Description (size in inches)	l1	l2	z1	z2	r
PWR7480187	90° Street Elbow, 407-2, FØ 1/2	2.17	2.70	1.02	1.56	0.98
PWR7480198	90° Street Elbow, 407-2, FØ 3/4	2.50	2.95	1.26	1.71	1.18
PWR7480209	90° Street Elbow, 407-2, FØ 1	3.01	3.56	1.57	2.13	1.50
PWR7480211	90° Street Elbow, 407-2, FØ 1-1/4	3.82	4.19	1.89	2.26	1.77
PWR7480220	90° Street Elbow, 407-2, FØ 1-1/2	4.09	4.27	2.15	2.32	1.97
PWR7480231	90° Street Elbow, 407-2, FØ 2	4.80	5.30	2.72	3.21	2.56



406 APOLLO POWERPRESS 45° ELBOW (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2	r
PWR7480242	45° Elbow, 406, FF 1/2	1.59	0.45	0.98
PWR7480253	45° Elbow, 406, FF 3/4	1.81	0.57	1.18
PWR7480264	45° Elbow, 406, FF 1	2.13	0.69	1.50
PWR7480275	45° Elbow, 406, FF 1-1/4	2.78	0.85	1.77
PWR7480286	45° Elbow, 406, FF 1-1/2	2.93	0.98	1.97
PWR7480297	45° Elbow, 406, FF 2	3.31	1.22	2.56

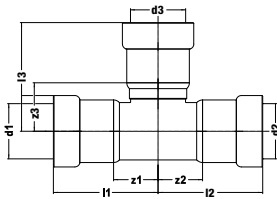
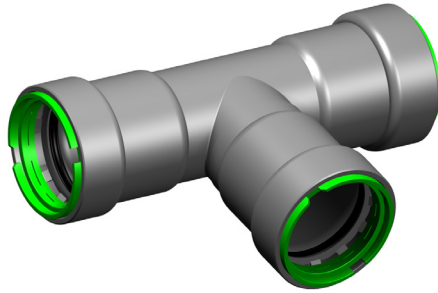


406-2 APOLLO POWERPRESS 45° STREET ELBOW (Press x Male)

Part No.	Description (size in inches)	l1	l2	z1	z2	r
PWR7480308	45° Street Elbow, 406-2, FØ 1/2	1.59	2.13	0.45	0.98	0.98
PWR7480319	45° Street Elbow, 406-2, FØ 3/4	1.81	2.26	0.57	1.02	1.18
PWR7480321	45° Street Elbow, 406-2, FØ 1	2.13	2.68	0.69	1.24	1.50
PWR7480330	45° Street Elbow, 406-2, FØ 1-1/4	2.78	3.15	0.85	1.22	1.77
PWR7480341	45° Street Elbow, 406-2, FØ 1-1/2	2.93	3.11	0.98	1.16	1.97
PWR7480352	45° Street Elbow, 406-2, FØ 2	3.31	3.80	1.22	1.71	2.56

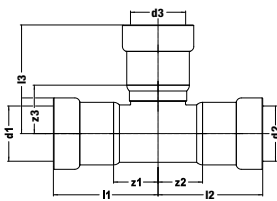
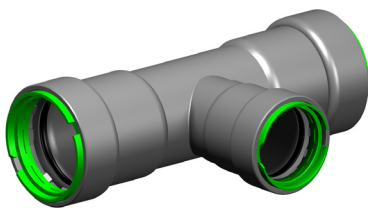


TEES



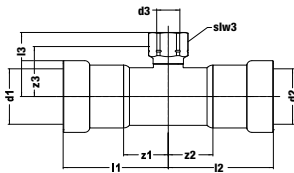
411 APOLLO POWERPRESS TEE (3 x Press)

Part No.	Description (size in inches)	l1/l2	l3	z1/z2	z3
PWR7480363	Tee, 411, FFF 1/2	2.05	2.09	0.91	1.02
PWR7480374	Tee, 411, FFF 3/4	2.24	2.30	1.08	1.14
PWR7480385	Tee, 411, FFF 1	2.60	2.66	1.24	1.30
PWR7480396	Tee, 411, FFF 1-1/4	3.23	3.35	1.30	1.50
PWR7480407	Tee, 411, FFF 1-1/2	3.48	3.50	1.61	1.63
PWR7480418	Tee, 411, FFF 2	3.78	3.92	1.77	1.91



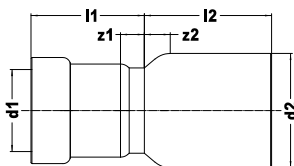
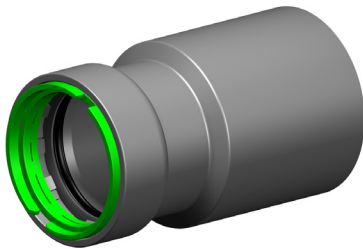
411R APOLLO POWERPRESS REDUCING OUTLET/BRANCH TEE (3 x Press)

Part No.	Description (size in inches)	l1/l2	l3	z1/z2	z3
PWR7480429	Tee - Reducing/Outlet Branch, 411R, FFF 3/4 x 3/4 x 1/2	2.24	2.19	1.08	1.12
PWR7480431	Tee - Reducing/Outlet Branch, 411R, FFF 1 x 1 x 1/2	2.60	2.34	1.24	1.28
PWR7480440	Tee - Reducing/Outlet Branch, 411R, FFF 1 x 1 x 3/4	2.60	2.46	1.24	1.30
PWR7480451	Tee - Reducing/Outlet Branch, 411R, FFF 1-1/4 x 1-1/4 x 1	3.23	2.31	1.38	1.46
PWR7480462	Tee - Reducing/Outlet Branch, 411R, FFF 1-1/2 x 1-1/2 x 1/2	3.48	2.58	1.61	1.52
PWR7480473	Tee - Reducing/Outlet Branch, 411R, FFF 1-1/2 x 1-1/2 x 3/4	3.48	2.69	1.61	1.53
PWR7480484	Tee - Reducing/Outlet Branch, 411R, FFF 1-1/2 x 1-1/2 x 1	3.48	2.89	1.61	1.54
PWR7480495	Tee - Reducing/Outlet Branch, 411R, FFF 1-1/2 x 1-1/2 x 1-1/4	3.48	2.43	1.61	1.57
PWR7480506	Tee - Reducing/Outlet Branch, 411R, FFF 2 x 2 x 1/2	3.78	2.87	1.77	1.81
PWR7480517	Tee - Reducing/Outlet Branch, 411R, FFF 2 x 2 x 3/4	3.78	2.99	1.77	1.83
PWR7480528	Tee - Reducing/Outlet Branch, 411R, FFF 2 x 2 x 1	3.78	3.19	1.77	1.83
PWR7480539	Tee - Reducing/Outlet Branch, 411R, FFF 2 x 2 x 1-1/4	3.78	3.72	1.77	1.87
PWR7480541	Tee - Reducing/Outlet Branch, 411R, FFF 2 x 2 x 1-1/2	3.78	3.80	1.77	1.93



4712 APOLLO POWERPRESS TEE W/ FEMALE THREAD OUTLET BRANCH (Press x Female Thread x Press)

Part No.	Description (size in inches)	l1/l2	l3	z1/z2	z3	slw2
PWR7480550	Tee - Female Thread Outlet/Branch, 4712, FFF 3/4 x 3/4 x FPT 1/2	2.26	1.65	1.02	1.34	1.10
PWR7480561	Tee - Female Thread Outlet/Branch, 4712, FFF 3/4 x 3/4 x FPT 3/4	2.26	1.71	1.02	1.37	1.26
PWR7480572	Tee - Female Thread Outlet/Branch, 4712, FFF 1 x 1 x FPT 1/2	2.62	1.81	1.18	1.50	1.10
PWR7480583	Tee - Female Thread Outlet/Branch, 4712, FFF 1 x 1 x FPT 3/4	2.62	1.87	1.18	1.53	1.26
PWR7480594	Tee - Female Thread Outlet/Branch, 4712, FFF 1-1/4 x 1-1/4 x FPT 1/2	3.23	1.97	1.30	1.65	1.26
PWR7480605	Tee - Female Thread Outlet/Branch, 4712, FFF 1-1/2 x 1-1/2 x FPT 1/2	3.50	2.05	1.56	1.73	1.10
PWR7480616	Tee - Female Thread Outlet/Branch, 4712, FFF 1-1/2 x 1-1/2 x FPT 3/4	3.50	2.11	1.56	1.76	1.26
PWR7480627	Tee - Female Thread Outlet/Branch, 4712, FFF 1-1/2 x 1-1/2 x FPT 1	3.50	2.26	1.56	1.85	1.61
PWR7480638	Tee - Female Thread Outlet/Branch, 4712, FFF 1-1/2 x 1-1/2 x FPT 1-1/4	3.50	2.36	1.56	1.94	1.97
PWR7480649	Tee - Female Thread Outlet/Branch, 4712, FFF 2 x 2 x FPT 1/2	3.80	2.34	1.71	2.03	1.10
PWR7480651	Tee - Female Thread Outlet/Branch, 4712, FFF 2 x 2 x FPT 3/4	3.80	2.40	1.71	2.06	1.26
PWR7480660	Tee - Female Thread Outlet/Branch, 4712, FFF 2 x 2 x FPT 1	3.80	2.56	1.71	2.15	1.61
PWR7480671	Tee - Female Thread Outlet/Branch, 4712, FFF 2 x 2 x FPT 1-1/4	3.80	2.66	1.71	2.24	1.97
PWR7480682	Tee - Female Thread Outlet/Branch, 4712, FFF 2 x 2 x FPT 1-1/2	3.80	2.66	1.71	2.24	2.36

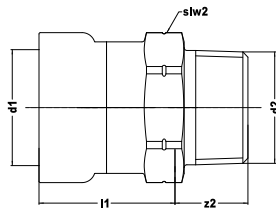
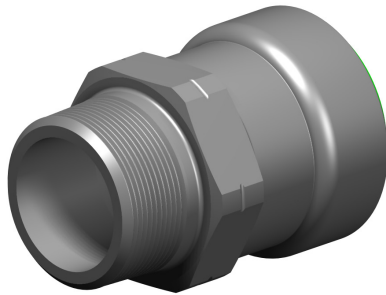


418 APOLLO POWERPRESS FITTING REDUCER (Male x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2
PWR7480693	Fitting Reducer (Male x Press), 418, ØF 3/4 x 1/2	1.26	1.26	0.12	0.02
PWR7480704	Fitting Reducer (Male x Press), 418, ØF 1 x 1/2	1.26	1.44	0.12	0.00
PWR7480715	Fitting Reducer (Male x Press), 418, ØF 1 x 3/4	1.42	1.30	0.18	-0.14
PWR7480748	Fitting Reducer (Male x Press), 418, ØF 1-1/4 x 1	1.63	1.73	0.20	-0.20
PWR7480761	Fitting Reducer (Male x Press), 418, ØF 1-1/2 x 3/4	1.87	2.42	0.63	0.47
PWR7480770	Fitting Reducer (Male x Press), 418, ØF 1-1/2 x 1	1.63	1.79	0.20	-0.16
PWR7480781	Fitting Reducer (Male x Press), 418, ØF 1-1/2 x 1-1/4	2.17	1.67	0.24	-0.28
PWR7480814	Fitting Reducer (Male x Press), 418, ØF 2 x 1	2.07	2.64	0.63	0.55
PWR7480825	Fitting Reducer (Male x Press), 418, ØF 2 x 1-1/4	2.17	1.79	0.24	-0.30
PWR7480836	Fitting Reducer (Male x Press), 418, ØF 2 x 1-1/2	2.13	1.81	0.18	-0.28

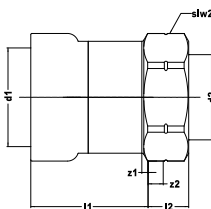


ADAPTERS



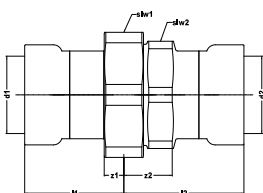
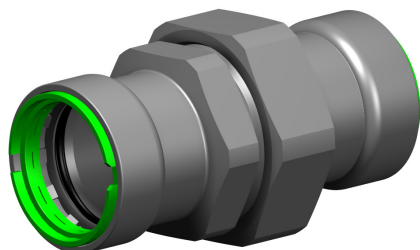
404 APOLLO POWERPRESS MALE THREAD ADAPTER (Press x Male Thread)

Part No.	Description (size in inches)	l1	z2	slw2
PWR7480847	Male Thread Adapter, 404, FM 1/2 x MPT 1/2	1.12	0.98	1.10
PWR7480858	Male Thread Adapter, 404, FM 3/4 x MPT 3/4	1.22	0.98	1.42
PWR7480869	Male Thread Adapter, 404, FM 1 x MPT 1	1.42	1.10	1.61
PWR7480871	Male Thread Adapter, 404, FM 1-1/4 x MPT 1-1/4	1.91	1.14	1.97
PWR7480880	Male Thread Adapter, 404, FM 1-1/2 x MPT 1-1/2	1.93	1.12	2.36
PWR7480891	Male Thread Adapter, 404, FM 2 x MPT 2	2.07	1.16	2.76



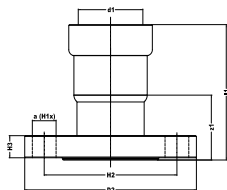
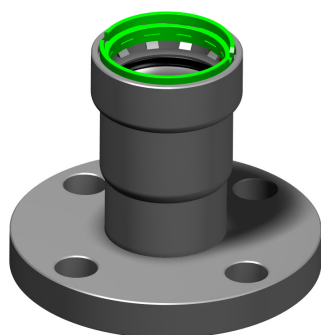
403 APOLLO POWERPRESS FEMALE THREAD ADAPTER (Press x Female Thread)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw2
PWR7480902	Female Thread Adapter, 403, FF 1/2 x FPT 1/2	1.22	0.61	0.08	0.00	1.10
PWR7480913	Female Thread Adapter, 403, FF 3/4 x FPT 1/2	1.30	0.67	0.06	0.06	1.42
PWR7480924	Female Thread Adapter, 403, FF 3/4 x FPT 3/4	1.32	0.63	0.08	0.00	1.42
PWR7480935	Female Thread Adapter, 403, FF 1 x FPT 1/2	1.57	0.67	0.14	0.06	1.61
PWR7480946	Female Thread Adapter, 403, FF 1 x FPT 3/4	1.52	0.69	0.08	0.06	1.61
PWR7480957	Female Thread Adapter, 403, FF 1 x FPT 1	1.54	0.75	0.10	0.00	1.61
PWR7480968	Female Thread Adapter, 403, FF 1-1/4 x FPT 1/2	2.17	0.67	0.24	0.06	1.97
PWR7480979	Female Thread Adapter, 403, FF 1-1/4 x FPT 3/4	2.11	0.69	0.18	0.06	1.97
PWR7480981	Female Thread Adapter, 403, FF 1-1/4 x FPT 1	2.03	0.83	0.10	0.08	1.97
PWR7480990	Female Thread Adapter, 403, FF 1-1/4 x FPT 1-1/4	1.91	0.89	0.00	0.00	1.97
PWR7481001	Female Thread Adapter, 403, FF 1-1/2 x FPT 1/2	2.26	0.67	0.31	0.06	2.36
PWR7481012	Female Thread Adapter, 403, FF 1-1/2 x FPT 3/4	2.20	0.69	0.26	0.06	2.36
PWR7481023	Female Thread Adapter, 403, FF 1-1/2 x FPT 1	2.13	0.83	0.18	0.08	2.36
PWR7481034	Female Thread Adapter, 403, FF 1-1/2 x FPT 1-1/4	2.03	0.85	0.08	0.08	2.36
PWR7481045	Female Thread Adapter, 403, FF 1-1/2 x FPT 1-1/2	2.05	0.77	0.10	0.00	2.36
PWR7481056	Female Thread Adapter, 403, FF 2 x FPT 1/2	2.54	0.67	0.45	0.06	2.76
PWR7481067	Female Thread Adapter, 403, FF 2 x FPT 3/4	2.48	0.69	0.39	0.06	2.76
PWR7481078	Female Thread Adapter, 403, FF 2 x FPT 1	2.40	0.83	0.31	0.08	2.76
PWR7481089	Female Thread Adapter, 403, FF 2 x FPT 1-1/4	2.30	0.85	0.22	0.08	2.76
PWR7481091	Female Thread Adapter, 403, FF 2 x FPT 1-1/2	2.22	0.85	0.14	0.08	2.76
PWR7481100	Female Thread Adapter, 403, FF 2 x FPT 2	2.19	0.79	0.10	0.00	2.76



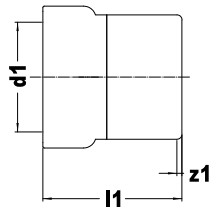
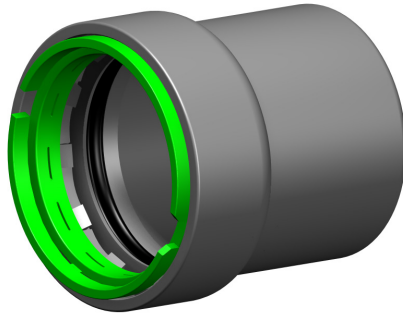
4733 APOLLO POWERPRESS UNION (Press x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw1	slw2
PWR7481111	Union, 4733, FF 1/2	1.73	0.59	2.11	1.14	1.61	0.45
PWR7481122	Union, 4733, FF 3/4	1.93	0.69	2.17	1.24	1.61	0.49
PWR7481133	Union, 4733, FF 1	2.20	0.77	2.48	1.44	2.17	0.57
PWR7481144	Union, 4733, FF 1-1/4	2.17	0.24	2.85	1.93	2.76	0.76
PWR7481155	Union, 4733, FF 1-1/2	3.03	1.08	2.81	1.95	2.76	0.77
PWR7481166	Union, 4733, FF 2	3.31	1.22	3.23	2.09	3.35	0.82



4771 APOLLO POWERPRESS FLANGE ADAPTER CLASS 150 (1 x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw1	slw2	Holes
PWR7481177	Flange Adapter Class 150, 4771, F 1/2	2.44	0.39	1.30	0.40	3.54	0.63	4
PWR7481188	Flange Adapter Class 150, 4771, F 3/4	2.64	0.31	1.40	0.45	3.94	0.63	4
PWR7481199	Flange Adapter Class 150, 4771, F 1	2.95	0.22	1.52	0.51	4.33	0.63	4
PWR7481201	Flange Adapter Class 150, 4771, F 1-1/4	3.58	0.14	1.65	0.59	4.53	0.63	4
PWR7481210	Flange Adapter Class 150, 4771, F 1-1/2	3.82	0.10	1.87	0.65	4.92	0.63	4
PWR7481221	Flange Adapter Class 150, 4771, F 2	3.92	1.30	1.83	0.71	5.91	0.75	4



417 APOLLO POWERPRESS CAP (1 x Press)

Part No.	Description (size in inches)	l1	z1
PWR7481232	Cap, 417, F 1/2	1.40	0.26
PWR7481243	Cap, 417, F 3/4	1.50	0.26
PWR7481254	Cap, 417, F 1	1.71	0.28
PWR7481265	Cap, 417, F 1-1/4	2.20	0.28
PWR7481276	Cap, 417, F 1-1/2	2.28	0.33
PWR7481287	Cap, 417, F 2	2.40	0.31



PWR7452 APOLLO POWERPRESS FLAT SEAL (Black, EPDM)

Part No.	Nom. Size (inches)
PWR7480759	1/2 & 3/4
PWR7480803	1
PWR7480726	1-1/4 & 1-1/2
PWR7482596	2

GAS VALVES & FITTINGS



DESCRIPTION

The Apollo PowerPress 89FV Gas Ball Valve is ideal for installation in compressed air and fuel gas applications. This valve design significantly reduces installation time and helps maintain a clean working environment. The ApolloPowerPress is designed for steel pipe, schedules 10 to 40, as defined by ASTM A53, A106, A135 and A795 standards.



FEATURES

- Patented Visual Inspection Ring & Indicator (Yellow)
- HNBR O-ring
- Full-Port Flow
- Adjustable Stem Packing
- Fast, Reliable, Economical Press Installation
- Ridgid® & Milwaukee Press Tool Compatible
- Leak Before Press® Technology
- Blow-Out Proof Stem
- Corrosion Resistant Materials
- 100% Factory Tested
- Silicone Free Assembly
- Made in USA, ARRA Compliant

PERFORMANCE RATING

- Maximum Operating Pressure:
125 psi max for fuel gas applications
200 psi max for other approved applications
- Temperature Range: -40°F - 194°F

APPROVALS

- ANSI LC 4/CSA 6.32
- IAPMO LC 4

APPROVED APPLICATIONS

- Compressed Air
- Fuel Gas

OPTIONS

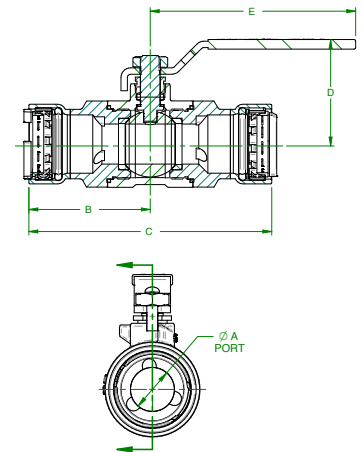
- 01: Standard (PTFE Packing, RPTFE Body Seal)
- 02: Grounded Stem
- 04: 2-1/4 inch Stem Extension
- 11: THERMA-SEAL® Insulating Tee Handle
- 14: Side Vented Ball (Uni-Directional)
- 24: Graphite Stem Packing
- 27: SS Latch-Lock Lever and Nut
- 32: SS Tee Handle and Nut
- 39: SS Hi-Rise Locking Wheel Handle with SS Nut
- 45: Less Lever and Nut
- 47: SS Latch Lock Oval Handle
- 48: SS Oval Handle (No Latch)
- 49: Assembled Dry
- 60: Grounded Ball and Stem

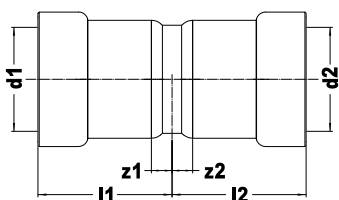
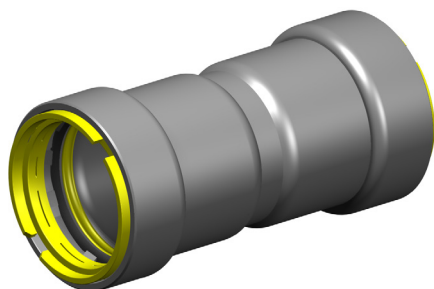
Dimensions (in)

Part Number	Description	Size	A	B	C	D	E	Wt (lbs.)
89FVH4301	89FV Ball Valve, Gas, Full-Port, Carbon Steel	1/2"	0.50	2.08	4.16	1.74	3.85	0.6
89FVH4401	89FV Ball Valve, Gas, Full-Port, Carbon Steel	3/4"	0.75	2.28	4.55	1.96	3.85	0.9
89FVH4501	89FV Ball Valve, Gas, Full-Port, Carbon Steel	1"	1.00	2.72	5.44	2.29	4.76	1.4
89FVH4601	89FV Ball Valve, Gas, Full-Port, Carbon Steel	1-1/4"	1.25	3.41	6.82	3.20	7.76	4.2
89FVH4701	89FV Ball Valve, Gas, Full-Port, Carbon Steel	1-1/2"	1.50	3.62	7.24	3.30	7.76	4.8
89FVH4801	89FV Ball Valve, Gas, Full-Port, Carbon Steel	2"	2.00	3.93	7.85	3.68	7.76	7.2
89FVH4324	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	1/2"	0.50	2.08	4.16	1.74	3.85	0.6
89FVH4424	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	3/4"	0.75	2.28	4.55	1.96	3.85	0.9
89FVH4524	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	1"	1.00	2.72	5.44	2.29	4.76	1.4
89FVH4624	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	1-1/4"	1.25	3.41	6.82	3.20	7.76	4.2
89FVH4724	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	1-1/2"	1.50	3.62	7.24	3.30	7.76	4.8
89FVH4824	89FV Ball Valve - Graphite Stem Packing, Gas, Full-Port, Carbon Steel	2"	2.00	3.93	7.85	3.68	7.76	7.2

STANDARD MATERIAL SPECIFICATIONS:

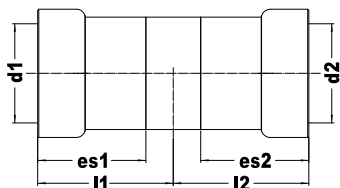
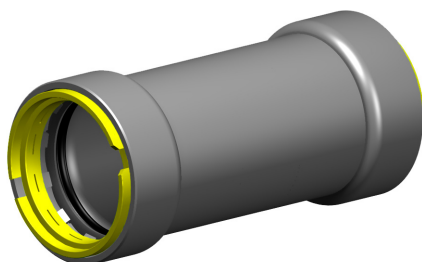
Part Name	Material
Body	ASTM A216-WCB Carbon Steel
Seat	Reinforced PTFE
Ball	ASTM A276-316 Stainless Steel
Stem Packing	Multi-Fill PTFE
Nut	Corrosion Resistant Plated Steel
Stem	ASTM A276-316 Stainless Steel
Retainer	ASTM A108-12L14 Carbon Steel
O-Ring	HNBR (Yellow)
Handle	Plated Steel/Insulated Polyvinyl
Gland	ASTM A108-1215 Carbon Steel
Stem Bearing	Reinforced PTFE
Body Seal	PTFE





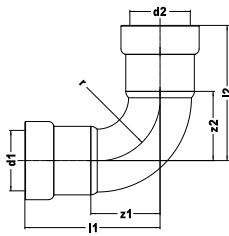
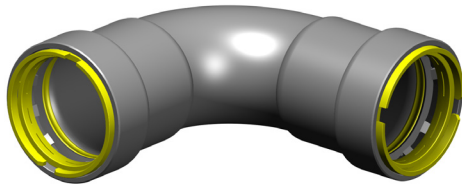
400G APOLLO POWERPRESS GAS COUPLING WITH STOP (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2
PWR7481298	Coupling with Stop, 400G, FF 1/2	1.34	0.20
PWR7481309	Coupling with Stop, 400G, FF 3/4	1.48	0.24
PWR7481311	Coupling with Stop, 400G, FF 1	1.67	0.24
PWR7481320	Coupling with Stop, 400G, FF 1-1/4	2.20	0.28
PWR7481331	Coupling with Stop, 400G, FF 1-1/2	2.28	0.33
PWR7481342	Coupling with Stop, 400G, FF 2	2.40	0.31



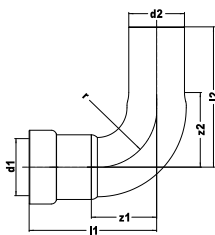
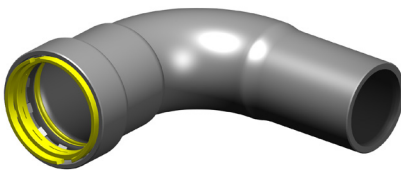
401G APOLLO POWERPRESS GAS COUPLING WITHOUT STOP (2 x Press)

Part No.	Description (size in inches)	l1/l2	es1/es2
PWR7481353	Coupling without Stop, 401G, FF 1/2	1.54	1.14
PWR7481364	Coupling without Stop, 401G, FF 3/4	1.63	1.24
PWR7481375	Coupling without Stop, 401G, FF 1	1.83	1.44
PWR7481386	Coupling without Stop, 401G, FF 1-1/4	2.32	1.93
PWR7481397	Coupling without Stop, 401G, FF 1-1/2	2.46	1.95
PWR7481408	Coupling without Stop, 401G, FF 2	2.56	2.09



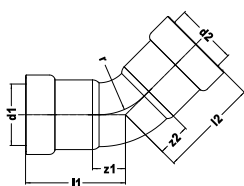
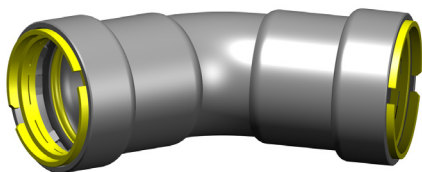
407G APOLLO POWERPRESS GAS 90° ELBOW (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2	r
PWR7481419	90° Elbow, 407G, FF 1/2	2.17	1.02	0.98
PWR7481421	90° Elbow, 407G, FF 3/4	2.50	1.26	1.18
PWR7481430	90° Elbow, 407G, FF 1	3.01	1.57	1.50
PWR7481441	90° Elbow, 407G, FF 1-1/4	3.82	1.89	1.77
PWR7481452	90° Elbow, 407G, FF 1-1/2	4.09	2.15	1.97
PWR7481463	90° Elbow, 407G, FF 2	4.80	2.72	2.56



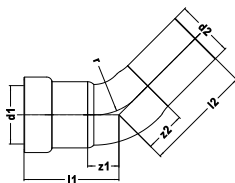
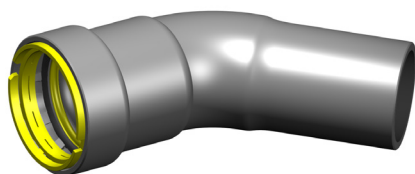
407-2G APOLLO POWERPRESS GAS 90° STREET ELBOW

Part No.	Description (size in inches)	l1	l2	z1	z2	r
PWR7481474	90° Street Elbow, 407-2G, FØ 1/2	2.17	2.70	1.02	1.56	0.98
PWR7481485	90° Street Elbow, 407-2G, FØ 3/4	2.50	2.95	1.26	1.71	1.18
PWR7481496	90° Street Elbow, 407-2G, FØ 1	3.01	3.56	1.57	2.13	1.50
PWR7481507	90° Street Elbow, 407-2G, FØ 1-1/4	3.82	4.19	1.89	2.26	1.77
PWR7481518	90° Street Elbow, 407-2G, FØ 1-1/2	4.09	4.27	2.15	2.32	1.97
PWR7481529	90° Street Elbow, 407-2G, FØ 2	4.80	5.30	2.72	3.21	2.56



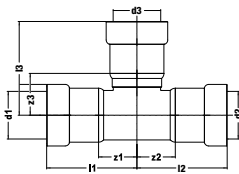
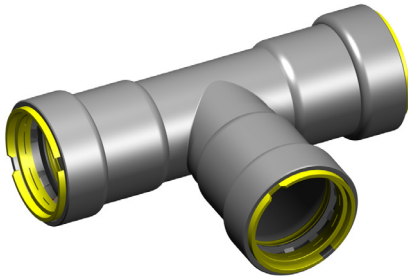
406G APOLLO POWERPRESS GAS 45° ELBOW (2 x Press)

Part No.	Description (size in inches)	l1/l2	z1/z2	r
PWR7481531	45° Elbow, 406G, FF 1/2	1.59	0.45	0.98
PWR7481540	45° Elbow, 406G, FF 3/4	1.81	0.57	1.18
PWR7481551	45° Elbow, 406G, FF 1	2.13	0.69	1.50
PWR7481562	45° Elbow, 406G, FF 1-1/4	2.78	0.85	1.77
PWR7481573	45° Elbow, 406G, FF 1-1/2	2.93	0.98	1.97
PWR7481584	45° Elbow, 406G, FF 2	3.31	1.22	2.56

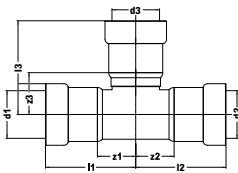
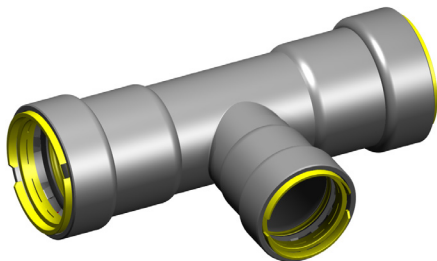


406-2G APOLLO POWERPRESS GAS 45° STREET ELBOW (Press x Male)

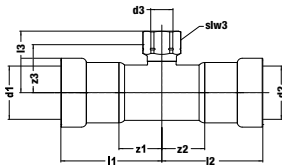
Part No.	Description (size in inches)	l1	l2	z1	z2	r
PWR7481595	45° Street Elbow, 406-2G, FØ 1/2	1.59	2.13	0.45	0.98	0.98
PWR7481606	45° Street Elbow, 406-2G, FØ 3/4	1.81	2.26	0.57	1.02	1.18
PWR7481617	45° Street Elbow, 406-2G, FØ 1	2.13	2.68	0.69	1.24	1.50
PWR7481628	45° Street Elbow, 406-2G, FØ 1-1/4	2.78	3.15	0.85	1.22	1.77
PWR7481639	45° Street Elbow, 406-2G, FØ 1-1/2	2.93	3.11	0.98	1.16	1.97
PWR7481641	45° Street Elbow, 406-2G, FØ 2	3.31	3.80	1.22	1.71	2.56



411G APOLLO POWERPRESS GAS TEE (3 x Press)					
Part No.	Description (size in inches)	11/12	13	z1/z2	z3
PWR7481650	Tee, 411G, FFF 1/2	2.05	2.09	0.91	1.02
PWR7481661	Tee, 411G, FFF 3/4	2.24	2.30	1.08	1.14
PWR7481672	Tee, 411G, FFF 1	2.60	2.66	1.24	1.30
PWR7481683	Tee, 411G, FFF 1-1/4	3.23	3.35	1.30	1.50
PWR7481694	Tee, 411G, FFF 1-1/2	3.48	3.50	1.61	1.63
PWR7481705	Tee, 411G, FFF 2	3.78	3.92	1.77	1.91

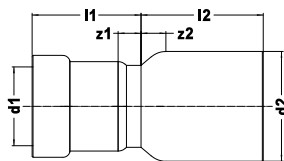
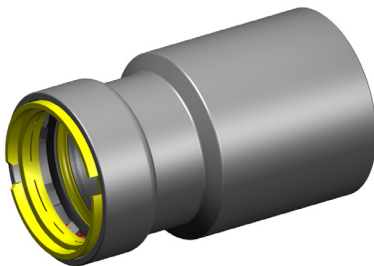


411RG APOLLO POWERPRESS GAS REDUCING OUTLET/BRANCH TEE (3 x Press)					
Part No.	Description (size in inches)	11/12	13	z1/z2	z3
PWR7481716	Tee - Reducing/Outlet Branch, 411RG, FFF 3/4 x 3/4 x 1/2	2.24	2.19	1.08	1.12
PWR7481727	Tee - Reducing/Outlet Branch, 411RG, FFF 1 x 1 x 1/2	2.60	2.34	1.24	1.28
PWR7481738	Tee - Reducing/Outlet Branch, 411RG, FFF 1 x 1 x 3/4	2.60	2.46	1.24	1.30
PWR7481749	Tee - Reducing/Outlet Branch, 411RG, FFF 1-1/4 x 1-1/4 x 1	3.23	2.31	1.38	1.46
PWR7481751	Tee - Reducing/Outlet Branch, 411RG, FFF 1-1/2 x 1-1/2 x 1/2	3.48	2.58	1.61	1.52
PWR7481760	Tee - Reducing/Outlet Branch, 411RG, FFF 1-1/2 x 1-1/2 x 3/4	3.48	2.69	1.61	1.53
PWR7481771	Tee - Reducing/Outlet Branch, 411RG, FFF 1-1/2 x 1-1/2 x 1	3.48	2.89	1.61	1.54
PWR7481782	Tee - Reducing/Outlet Branch, 411RG, FFF 1-1/2 x 1-1/2 x 1-1/4	3.48	2.43	1.61	1.57
PWR7481793	Tee - Reducing/Outlet Branch, 411RG, FFF 2 x 2 x 1/2	3.78	2.87	1.77	1.81
PWR7481804	Tee - Reducing/Outlet Branch, 411RG, FFF 2 x 2 x 3/4	3.78	2.99	1.77	1.83
PWR7481815	Tee - Reducing/Outlet Branch, 411RG, FFF 2 x 2 x 1	3.78	3.19	1.77	1.83
PWR7481826	Tee - Reducing/Outlet Branch, 411RG, FFF 2 x 2 x 1-1/4	3.78	3.72	1.77	1.87
PWR7481837	Tee - Reducing/Outlet Branch, 411RG, FFF 2 x 2 x 1-1/2	3.78	3.80	1.77	1.93



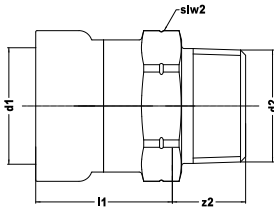
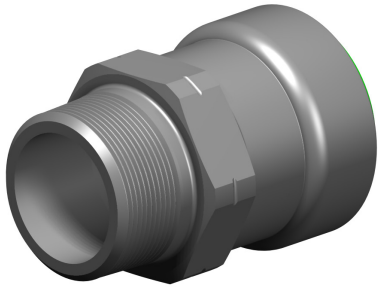
4712G APOLLO POWERPRESS GAS TEE W/FEMALE THREAD OUTLET/BRANCH (Press x Female Thread x Press)

Part No.	Description (size in inches)	l1/l2	l3	z1/z2	z3	slw2
PWR7481848	Tee - Female Thread Outlet/Branch, 4712G, FFF 3/4 x 3/4 x FPT 1/2	2.26	1.65	1.02	1.34	1.10
PWR7481859	Tee - Female Thread Outlet/Branch, 4712G, FFF 3/4 x 3/4 x FPT 3/4	2.26	1.71	1.02	1.37	1.26
PWR7481861	Tee - Female Thread Outlet/Branch, 4712G, FFF 1 x 1 x FPT 1/2	2.62	1.81	1.18	1.50	1.10
PWR7481870	Tee - Female Thread Outlet/Branch, 4712G, FFF 1 x 1 x FPT 3/4	2.62	1.87	1.18	1.53	1.26
PWR7481881	Tee - Female Thread Outlet/Branch, 4712G, FFF 1-1/4 x 1-1/4 x FPT 1/2	3.23	1.97	1.30	1.65	1.26
PWR7481892	Tee - Female Thread Outlet/Branch, 4712G, FFF 1-1/2 x 1-1/2 x FPT 1/2	3.50	2.05	1.56	1.73	1.10
PWR7481903	Tee - Female Thread Outlet/Branch, 4712G, FFF 1-1/2 x 1-1/2 x FPT 3/4	3.50	2.11	1.56	1.76	1.26
PWR7481914	Tee - Female Thread Outlet/Branch, 4712G, FFF 1-1/2 x 1-1/2 x FPT 1	3.50	2.26	1.56	1.85	1.61
PWR7481925	Tee - Female Thread Outlet/Branch, 4712G, FFF 1-1/2 x 1-1/2 x FPT 1-1/4	3.50	2.36	1.56	1.94	1.97
PWR7481936	Tee - Female Thread Outlet/Branch, 4712G, FFF 2 x 2 x FPT 1/2	3.80	2.34	1.71	2.03	1.10
PWR7481947	Tee - Female Thread Outlet/Branch, 4712G, FFF 2 x 2 x FPT 3/4	3.80	2.40	1.71	2.06	1.26
PWR7481958	Tee - Female Thread Outlet/Branch, 4712G, FFF 2 x 2 x FPT 1	3.80	2.56	1.71	2.15	1.61
PWR7481969	Tee - Female Thread Outlet/Branch, 4712G, FFF 2 x 2 x FPT 1-1/4	3.80	2.66	1.71	2.24	1.97
PWR7481971	Tee - Female Thread Outlet/Branch, 4712G, FFF 2 x 2 x FPT 1-1/2	3.80	2.66	1.71	2.24	2.36



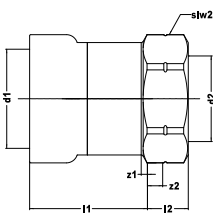
418G APOLLO POWERPRESS GAS FITTING REDUCER (Male x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2
PWR7481980	Fitting Reducer (Male x Press), 418G, ØF 3/4 x 1/2	1.26	1.26	0.12	0.02
PWR7481991	Fitting Reducer (Male x Press), 418G, ØF 1 x 1/2	1.26	1.44	0.12	0.00
PWR7482002	Fitting Reducer (Male x Press), 418G, ØF 1 x 3/4	1.42	1.30	0.18	-0.14
PWR7482013	Fitting Reducer (Male x Press), 418G, ØF 1-1/4 x 1	1.63	1.73	0.20	-0.20
PWR7482024	Fitting Reducer (Male x Press), 418G, ØF 1-1/2 x 3/4	1.87	2.42	0.63	0.47
PWR7482035	Fitting Reducer (Male x Press), 418G, ØF 1-1/2 x 1	1.63	1.79	0.20	-0.16
PWR7482046	Fitting Reducer (Male x Press), 418G, ØF 1-1/2 x 1-1/4	2.17	1.67	0.24	-0.28
PWR7482057	Fitting Reducer (Male x Press), 418G, ØF 2 x 1	2.07	2.64	0.63	0.55
PWR7482068	Fitting Reducer (Male x Press), 418G, ØF 2 x 1-1/4	2.17	1.79	0.24	-0.30
PWR7482079	Fitting Reducer (Male x Press), 418G, ØF 2 x 1-1/2	2.13	1.81	0.18	-0.28



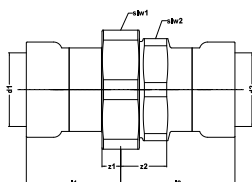
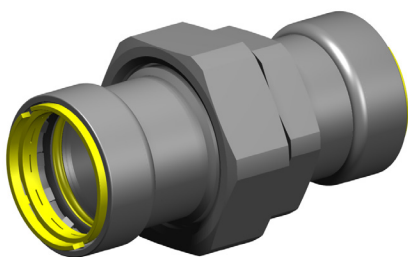
404G APOLLO POWERPRESS GAS MALE THREAD ADAPTER (Press x Male Thread)

Part No.	Description (size in inches)	l1	z2	slw2
PWR7482081	Male Thread Adapter, 404G, FM 1/2 x MPT 1/2	1.12	0.98	1.10
PWR7482090	Male Thread Adapter, 404G, FM 3/4 x MPT 3/4	1.22	0.98	1.42
PWR7482101	Male Thread Adapter, 404G, FM 1 x MPT 1	1.42	1.10	1.61
PWR7482112	Male Thread Adapter, 404G, FM 1-1/4 x MPT 1-1/4	1.91	1.14	1.97
PWR7482123	Male Thread Adapter, 404G, FM 1-1/2 x MPT 1-1/2	1.93	1.12	2.36
PWR7482134	Male Thread Adapter, 404G, FM 2 x MPT 2	2.07	1.16	2.76



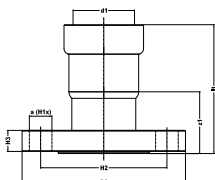
403G APOLLO POWERPRESS GAS FEMALE THREAD ADAPTER (Press x Female Thread)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw2
PWR7482145	Female Thread Adapter, 403G, FF 1/2 x FPT 1/2	1.22	0.61	0.08	0.00	1.10
PWR7482156	Female Thread Adapter, 403G, FF 3/4 x FPT 1/2	1.30	0.67	0.06	0.06	1.42
PWR7482167	Female Thread Adapter, 403G, FF 3/4 x FPT 3/4	1.32	0.63	0.08	0.00	1.42
PWR7482178	Female Thread Adapter, 403G, FF 1 x FPT 1/2	1.57	0.67	0.14	0.06	1.61
PWR7482189	Female Thread Adapter, 403G, FF 1 x FPT 3/4	1.52	0.69	0.08	0.06	1.61
PWR7482191	Female Thread Adapter, 403G, FF 1 x FPT 1	1.54	0.75	0.10	0.00	1.61
PWR7482200	Female Thread Adapter, 403G, FF 1-1/4 x FPT 1/2	2.17	0.67	0.24	0.06	1.97
PWR7482211	Female Thread Adapter, 403G, FF 1-1/4 x FPT 3/4	2.11	0.69	0.18	0.06	1.97
PWR7482222	Female Thread Adapter, 403G, FF 1-1/4 x FPT 1	2.03	0.83	0.10	0.08	1.97
PWR7482233	Female Thread Adapter, 403G, FF 1-1/4 x FPT 1-1/4	1.91	0.89	0.00	0.00	1.97
PWR7482244	Female Thread Adapter, 403G, FF 1-1/2 x FPT 1/2	2.26	0.67	0.31	0.06	2.36
PWR7482255	Female Thread Adapter, 403G, FF 1-1/2 x FPT 3/4	2.20	0.69	0.26	0.06	2.36
PWR7482266	Female Thread Adapter, 403G, FF 1-1/2 x FPT 1	2.13	0.83	0.18	0.08	2.36
PWR7482277	Female Thread Adapter, 403G, FF 1-1/2 x FPT 1-1/4	2.03	0.85	0.08	0.08	2.36
PWR7482288	Female Thread Adapter, 403G, FF 1-1/2 x FPT 1-1/2	2.05	0.77	0.10	0.00	2.36
PWR7482299	Female Thread Adapter, 403G, FF 2 x FPT 1/2	2.54	0.67	0.45	0.06	2.76
PWR7482301	Female Thread Adapter, 403G, FF 2 x FPT 3/4	2.48	0.69	0.39	0.06	2.76
PWR7482310	Female Thread Adapter, 403G, FF 2 x FPT 1	2.40	0.83	0.31	0.08	2.76
PWR7482321	Female Thread Adapter, 403G, FF 2 x FPT 1-1/4	2.30	0.85	0.22	0.08	2.76
PWR7482332	Female Thread Adapter, 403G, FF 2 x FPT 1-1/2	2.22	0.85	0.14	0.08	2.76
PWR7482343	Female Thread Adapter, 403G, FF 2 x FPT 2	2.19	0.79	0.10	0.00	2.76



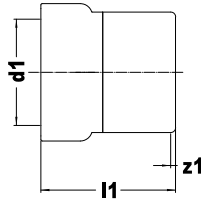
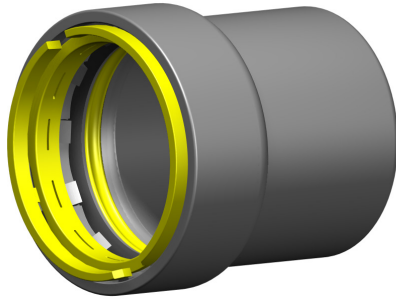
4733G APOLLO POWERPRESS GAS UNION (Press x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw1	slw2
PWR7482354	Union, 4733G, FF 1/2	1.73	0.59	2.11	1.14	1.61	0.45
PWR7482365	Union, 4733G, FF 3/4	1.93	0.69	2.17	1.24	1.61	0.49
PWR7482376	Union, 4733G, FF 1	2.20	0.77	2.48	1.44	2.17	0.57
PWR7482387	Union, 4733G, FF 1-1/4	2.17	0.24	2.85	1.93	2.76	0.76
PWR7482398	Union, 4733G, FF 1-1/2	3.03	1.08	2.81	1.95	2.76	0.77
PWR7482409	Union, 4733G, FF 2	3.31	1.22	3.23	2.09	3.35	0.82



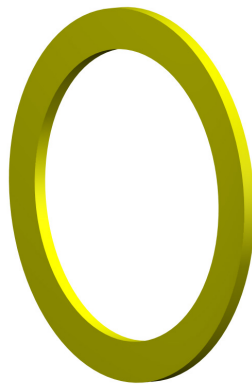
4771G APOLLO POWERPRESS GAS FLANGE ADAPTER CLASS 150 (1 x Press)

Part No.	Description (size in inches)	l1	l2	z1	z2	slw1	slw2	Holes
PWR7482411	Flange Adapter Class 150, 4771G, F 1/2	2.44	0.39	1.30	0.40	3.54	0.63	4
PWR7482420	Flange Adapter Class 150, 4771G, F 3/4	2.64	0.31	1.40	0.45	3.94	0.63	4
PWR7482431	Flange Adapter Class 150, 4771G, F 1	2.95	0.22	1.52	0.51	4.33	0.63	4
PWR7482442	Flange Adapter Class 150, 4771G, F 1-1/4	3.58	0.14	1.65	0.59	4.53	0.63	4
PWR7482453	Flange Adapter Class 150, 4771G, F 1-1/2	3.82	0.10	1.87	0.65	4.92	0.63	4
PWR7482464	Flange Adapter Class 150, 4771G, F 2	3.92	1.30	1.83	0.71	5.91	0.75	4



417G APOLLO POWERPRESS GAS CAP (1 x Press)

Part No.	Description (size in inches)	l1	z1
PWR7482475	Cap, 417G, F 1/2	1.40	0.26
PWR7482486	Cap, 417G, F 3/4	1.50	0.26
PWR7482497	Cap, 417G, F 1	1.71	0.28
PWR7482508	Cap, 417G, F 1-1/4	2.20	0.28
PWR7482519	Cap, 417G, F 1-1/2	2.28	0.33
PWR7482521	Cap, 417G, F 2	2.40	0.31



PWR7452G APOLLO POWERPRESS FLAT SEAL (Yellow, HNBR)

Part No.	Nom. Size (inches)
PWR7481983	1/2 & 3/4
PWR7482004	1
PWR7482015	1-1/4 & 1-1/2
PWR7482037	2

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CROSS REFERENCE GUIDE



Apollo POWERPRESS Part No.	POWERPRESS Description	Size	Viega MegaPress Part No.
PWR7480121	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	½	25200
PWR7480132	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	¾	25205
PWR7480143	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	1	25210
PWR7480154	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	1¼	25215
PWR7480165	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	1½	25220
PWR7480176	"Apollo" POWERPRESS 90° Elbow, Carbon Steel, EPDM, 407, FF	2	25225
PWR7480187	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	½	26050
PWR7480198	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	¾	26055
PWR7480209	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	1	26060
PWR7480211	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	1¼	26065
PWR7480220	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	1½	26070
PWR7480231	"Apollo" POWERPRESS 90° Street Elbow, Carbon Steel, EPDM, 407-2, FØ	2	26075
PWR7480242	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	½	25230
PWR7480253	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	¾	25235
PWR7480264	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	1	25240
PWR7480275	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	1¼	25245
PWR7480286	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	1½	25250
PWR7480297	"Apollo" POWERPRESS 45° Elbow, Carbon Steel, EPDM, 406, FF	2	25255
PWR7480308	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	½ x ½	26100
PWR7480319	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	¾ x ¾	26105
PWR7480321	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	1 x 1	26110
PWR7480330	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	1¼ x 1¼	26115
PWR7480341	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	1½ x 1½	26120
PWR7480352	"Apollo" POWERPRESS 45° Street Elbow, Carbon Steel, EPDM, 406-2, FØ	2 x 2	26125
PWR7480363	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	½	25300
PWR7480374	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	¾	25305
PWR7480385	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	1	25310
PWR7480396	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	1¼	25315
PWR7480407	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	1½	25320
PWR7480418	"Apollo" POWERPRESS Tee, Carbon Steel, EPDM, 411, FFF	2	25325
PWR7480429	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	¾ x ¾ x ½	25330
PWR7480431	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1 x 1 x ½	25335
PWR7480440	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1 x 1 x ¾	25340
PWR7480451	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1¼ x 1¼ x 1	25350
PWR7480462	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1½ x 1½ x ½	25360
PWR7480473	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1½ x 1½ x ¾	25365
PWR7480484	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1½ x 1½ x 1	25370
PWR7480495	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	1½ x 1½ x 1¼	25375
PWR7480506	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	2 x 2 x ½	25380
PWR7480517	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	2 x 2 x ¾	25385
PWR7480528	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	2 x 2 x 1	25390
PWR7480539	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	2 x 2 x 1¼	25395
PWR7480541	"Apollo" POWERPRESS Tee - Reducing/Outlet Branch, Carbon Steel, EPDM, 411R, FFF	2 x 2 x 1½	25400
PWR7480550	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	¾ x ¾ x FPT ½	25405
PWR7480561	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	¾ x ¾ x FPT ¾	25480
PWR7480572	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1 x 1 x FPT ½	25410
PWR7480583	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1 x 1 x FPT ¾	25415
PWR7480594	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1¼ x 1¼ x FPT ½	25485
PWR7480605	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1½ x 1½ x FPT ½	25435
PWR7480616	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1½ x 1½ x FPT ¾	25440
PWR7480627	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1½ x 1½ x FPT 1	25445



Apollo POWERPRESS Part No.	POWERPRESS Description	Size	Viega MegaPress Part No.
PWR7480638	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	1½ x 1½ x FPT 1¼	25450
PWR7480649	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	2 x 2 x FPT ½	25455
PWR7480651	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	2 x 2 x FPT ¾	25460
PWR7480660	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	2 x 2 x FPT 1	25465
PWR7480671	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	2 x 2 x FPT 1¼	25470
PWR7480682	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Carbon Steel, EPDM, 4712, FFF	2 x 2 x FPT 1½	25475
PWR7480693	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	¾ x ½	26000
PWR7480704	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1 x ½	26005
PWR7480715	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1 x ¾	26010
PWR7480748	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1¼ x 1	26015
PWR7480761	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1½ x ¾	26020
PWR7480770	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1½ x 1	26025
PWR7480781	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	1½ x 1¼	26030
PWR7480814	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	2 x 1	26035
PWR7480825	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	2 x 1¼	26040
PWR7480836	"Apollo" POWERPRESS Fitting Reducer (Male x Press), Carbon Steel, EPDM, 418, ØF	2 x 1½	26045
PWR7480847	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	½ x MPT ½	25100
PWR7480858	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	¾ x MPT ¾	25105
PWR7480869	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	1 x MPT 1	25110
PWR7480871	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	1¼ x MPT 1¼	25115
PWR7480880	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	1½ x MPT 1½	25120
PWR7480891	"Apollo" POWERPRESS Male Thread Adapter, Carbon Steel, EPDM, 404, FM	2 x MPT 2	25125
PWR7480902	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	½ x FPT ½	25130
PWR7480913	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	¾ x FPT ¾	25575
PWR7480924	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	¾ x FPT ¾	25135
PWR7480935	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1 x FPT ½	25580
PWR7480946	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1 x FPT ¾	25585
PWR7480957	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1 x FPT 1	25140
PWR7480968	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1¼ x FPT ½	25590
PWR7480979	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1¼ x FPT ¾	25595
PWR7480981	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1¼ x FPT 1	25600
PWR7480990	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1¼ x FPT 1¼	25145
PWR7481001	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1½ x FPT ½	25605
PWR7481012	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1½ x FPT ¾	25610
PWR7481023	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1½ x FPT 1	25615
PWR7481034	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1½ x FPT 1¼	25620
PWR7481045	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	1½ x FPT 1½	25150
PWR7481056	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT ½	25625
PWR7481067	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT ¾	25630
PWR7481078	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT 1	25635
PWR7481089	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT 1¼	25640
PWR7481091	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT 1½	25645
PWR7481100	"Apollo" POWERPRESS Female Thread Adapter, Carbon Steel, EPDM, 403, FF	2 x FPT 2	25155
PWR7481111	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	½	25700
PWR7481122	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	¾	25705
PWR7481133	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	1	25710
PWR7481144	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	1¼	25715
PWR7481155	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	1½	25720
PWR7481166	"Apollo" POWERPRESS Union, Carbon Steel, EPDM, 4733, FF	2	25725
PWR7481177	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	½	25760
PWR7481188	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	¾	25765

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Apollo POWERPRESS

Apollo POWERPRESS Part No.	POWERPRESS Description	Size	Viega MegaPress Part No.
PWR7481199	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	1	25770
PWR7481201	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	1¼	25775
PWR7481210	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	1½	25780
PWR7481221	"Apollo" POWERPRESS Flange Adapter Class 150, Carbon Steel, EPDM, 4771, F	2	25785
PWR7481232	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	½	25730
PWR7481243	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	¾	25735
PWR7481254	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	1	25740
PWR7481265	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	1¼	25745
PWR7481276	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	1½	25750
PWR7481287	"Apollo" POWERPRESS Cap, Carbon Steel, EPDM, 417, F	2	25755
PWR7480000	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	½	25000
PWR7480011	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	¾	22005
PWR7480022	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	1	25010
PWR7480033	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	1¼	25015
PWR7480044	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	1½	25020
PWR7480055	"Apollo" POWERPRESS Coupling with Stop, Carbon Steel, EPDM, 400, FF	2	25025
PWR7480066	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	½	25030
PWR7480077	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	¾	25035
PWR7480088	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	1	25040
PWR7480099	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	1¼	25045
PWR7480101	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	1½	25050
PWR7480110	"Apollo" POWERPRESS Coupling without Stop, Carbon Steel, EPDM, 401, FF	2	25055
PWR7481419	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	½	25201
PWR7481421	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	¾	25206
PWR7481430	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	1	25211
PWR7481441	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	1¼	25216
PWR7481452	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	1½	25221
PWR7481463	"Apollo" POWERPRESS 90° Elbow, Gas, Carbon Steel, HNBR, 407G, FF	2	25226
PWR7481474	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	½	26051
PWR7481485	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	¾	26056
PWR7481496	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	1	26061
PWR7481507	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	1¼	26066
PWR7481518	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	1½	26071
PWR7481529	"Apollo" POWERPRESS 90° Street Elbow, Gas, Carbon Steel, HNBR, 407-2G, FØ	2	26076
PWR7481531	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	½	25231
PWR7481540	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	¾	25236
PWR7481551	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	1	25241
PWR7481562	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	1¼	25246
PWR7481573	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	1½	25251
PWR7481584	"Apollo" POWERPRESS 45° Elbow, Gas, Carbon Steel, HNBR, 406G, FF	2	25256
PWR7481595	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	½ x ½	26101
PWR7481606	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	¾ x ¾	26106
PWR7481617	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	1 x 1	26111
PWR7481628	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	1¼ x 1¼	26116
PWR7481639	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	1½ x 1½	26121
PWR7481641	"Apollo" POWERPRESS 45° Street Elbow, Gas, Carbon Steel, HNBR, 406-2G, FØ	2 x 2	26126
PWR7481650	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	½	25301
PWR7481661	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	¾	25306
PWR7481672	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	1	25311
PWR7481683	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	1¼	25316
PWR7481694	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	1½	25321



Apollo POWERPRESS Part No.	POWERPRESS Description	Size	Viega MegaPress Part No.
PWR7481705	"Apollo" POWERPRESS Tee, Gas, Carbon Steel, HNBR, 411G, FFF	2	25326
PWR7481716	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	¾ x ¾ x ½	25331
PWR7481727	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1 x 1 x ½	25336
PWR7481738	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1 x 1 x ¾	25341
PWR7481749	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1¼ x 1¼ x 1	25351
PWR7481751	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1½ x 1½ x ½	25361
PWR7481760	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1½ x 1½ x ¾	25366
PWR7481771	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1½ x 1½ x 1	25371
PWR7481782	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	1½ x 1½ x 1¼	25376
PWR7481793	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	2 x 2 x ½	25381
PWR7481804	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	2 x 2 x ¾	25386
PWR7481815	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	2 x 2 x 1	25391
PWR7481826	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	2 x 2 x 1¼	25396
PWR7481837	"Apollo" POWERPRESS Tee - Reducing Outlet/Branch, Gas, Carbon Steel, HNBR, 411RG, FFF	2 x 2 x 1½	25401
PWR7481848	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	¾ x ¾ x FPT ½	25406
PWR7481859	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	¾ x ¾ x FPT ¾	25481
PWR7481861	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1 x 1 x FPT ½	25411
PWR7481870	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1 x 1 x FPT ¾	25416
PWR7481881	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1¼ x 1¼ x FPT ½	25486
PWR7481892	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1½ x 1½ x FPT ½	25436
PWR7481903	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1½ x 1½ x FPT ¾	25441
PWR7481914	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1½ x 1½ x FPT 1	25446
PWR7481925	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	1½ x 1½ x FPT 1¼	25451
PWR7481936	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	2 x 2 x FPT ½	25456
PWR7481947	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	2 x 2 x FPT ¾	25461
PWR7481958	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	2 x 2 x FPT 1	25466
PWR7481969	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	2 x 2 x FPT 1½	25471
PWR7481971	"Apollo" POWERPRESS Tee - Female Thread Outlet/Branch, Gas, Carbon Steel, HNBR, 4712G, FFF	2 x 2 x FPT 1¼	25476
PWR7481980	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	¾ x ½	26001
PWR7481991	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1 x ½	26006
PWR7482002	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1 x ¾	26011
PWR7482013	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1¼ x 1	26016
PWR7482024	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1½ x ¾	26021
PWR7482035	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1½ x 1	26031
PWR7482046	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	1½ x 1¼	26026
PWR7482057	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	2 x 1	26036
PWR7482068	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	2 x 1¼	26041
PWR7482079	"Apollo" POWERPRESS Fitting Reducer (Male Press), Gas, Carbon Steel, HNBR, 418G, ØF	2 x 1½	26046
PWR7482081	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	½ x MPT ½	25101
PWR7482090	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	¾ x MPT ¾	25106
PWR7482101	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	1 x MPT 1	25111
PWR7482112	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	1¼ x MPT 1¼	25116
PWR7482123	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	1½ x MPT 1½	25121
PWR7482134	"Apollo" POWERPRESS Male Thread Adapter, Gas, Carbon Steel, HNBR, 404G, FM	2 x MPT 2	25126
PWR7482145	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	½ x FPT ½	25131
PWR7482156	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	¾ x FPT ½	25576
PWR7482167	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	¾ x FPT ¾	25136
PWR7482178	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1 x FPT ½	25581
PWR7482189	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1 x FPT ¾	25586
PWR7482191	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1 x FPT 1	25141
PWR7482200	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1¼ x FPT ½	25591

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Apollo POWERPRESS Part No.	POWERPRESS Description	Size	Viega MegaPress Part No.
PWR7482211	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1¼ x FPT ¾	25596
PWR7482222	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1¼ x FPT 1	25601
PWR7482233	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1¼ x FPT 1¼	25146
PWR7482244	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1½ x FPT ½	25606
PWR7482255	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1½ x FPT ¾	25611
PWR7482266	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1½ x FPT 1	25616
PWR7482277	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1½ x FPT 1¼	25621
PWR7482288	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	1½ x FPT 1½	25151
PWR7482299	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT ½	25626
PWR7482301	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT ¾	25631
PWR7482310	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT 1	25636
PWR7482321	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT 1¼	25641
PWR7482332	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT 1½	25646
PWR7482343	"Apollo" POWERPRESS Female Thread Adapter, Gas, Carbon Steel, HNBR, 403G, FF	2 x FPT 2	25156
PWR7482354	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	½	25701
PWR7482365	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	¾	25706
PWR7482376	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	1	25711
PWR7482387	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	1¼	25716
PWR7482398	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	1½	25721
PWR7482409	"Apollo" POWERPRESS Union, Gas, Carbon Steel, HNBR, 4733G, FF	2	25726
PWR7482411	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	½	25761
PWR7482420	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	¾	25766
PWR7482431	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	1	25771
PWR7482442	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	1¼	25776
PWR7482452	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	1½	25781
PWR7482464	"Apollo" POWERPRESS Flange Adapter Class 150, Gas, Carbon Steel, HNBR, 4771G, F	2	25786
PWR7482475	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	½	25731
PWR7482486	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	¾	25736
PWR7482497	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	1	25741
PWR7482508	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	1¼	25746
PWR7482519	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	1½	25751
PWR7482521	"Apollo" POWERPRESS Cap, Gas, Carbon Steel, HNBR, 417G, F	2	25756
PWR7481298	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	½	25001
PWR7481309	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	¾	22009
PWR7481311	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	1	25011
PWR7481320	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	1¼	25016
PWR7481331	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	1½	25021
PWR7481342	"Apollo" POWERPRESS Coupling w/ Stop, Gas, Carbon Steel, HNBR, 400G, FF	2	25026
PWR7481353	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	½	25031
PWR7481364	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	¾	25036
PWR7481375	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	1	25041
PWR7481386	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	1¼	25046
PWR7481397	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	1½	25051
PWR7481408	"Apollo" POWERPRESS Coupling w/o Stop, Gas, Carbon Steel, HNBR, 401G, FF	2	25056

the
ORIGINAL
push fitting



SECTION CONTENTS

114	Features & Benefits
115	Couplings & Reducers
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TECTITE™
by "Apollo."

"Apollo" Piping Systems

TECTITE™

by "Apollo"

sizes from **1/4" TO 2"**

Individually Packaged and Color Coded by Size.



FEATURES & BENEFITS

- Reduce lost time on jobs.
- Use in wet installations.
- Reduce repair interruption time.
- Removable Lead Free brass fittings in size 1/4" to 2".
- No special installation tools required.
- Quick and easy, removable and reusable installation.
- Ideal for service and repair, even on wet lines.
- EPDM O-Ring for leak free seals.
- Pre-lubricated for quick installation.
- Potable water and hydronic installation.
- 50 Year Warranty*

TYPES OF PIPE TECTITE JOINS	COPPER	CPVC	PEX	PE	PB	PVC (SCH 40 & 80)
Small Diameter (1/4"-1")	✓	✓	✓	✓	✓	✓
Large Diameter (1 1/4"-2")	✓	✓	✓			

APPLICATIONS

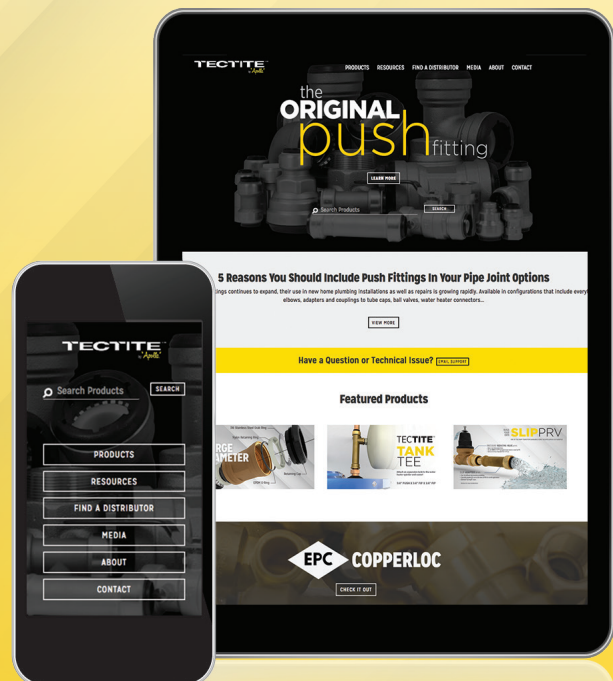
- Potable Water
- Hot Water
- Chilled Water Systems.*

*Further details on pressure code compliance and warranty available on our website.

PRODUCT SPECIFICATIONS

- Fittings and valves are pressure rated at 200 psi (13.8 bar) over a temperature range of 0° to 250°F (-18° to 121°C) with various liquids and gases.
- Hoses are pressure rated at 125 psi over a temperature range of 0°-150°F
- Fittings are manufactured with an EPDM o-ring seal, a Nylon guide ring and a 316 Stainless Steel grab ring.

Contact our technical representatives for application specific information.



EXPERIENCE SOMETHING NEW

Visit our site and see what all the excitement is about. Use our new enhanced search features to find everything you need in just a few clicks.

push.apollovalves.com



200 COUPLING WITH STOP (CxC)

Part No.	Nom. Size (inches)
10177383	1/4
10155527	3/8
10155452	1/2
10155454	3/4
10155456	1



LARGE DIAMETER

10188013	1-1/4
10188019	1-1/2
10188029	2



201-R REDUCER COUPLING (CxC)

Part No.	Nom. Size (inches)
10177347	1/2 x 3/8
10155458	3/4 x 1/2
10155460	1 x 3/4



New!

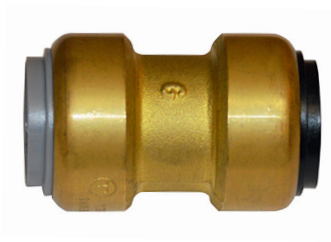
LARGE DIAMETER

10155461	1-1/2 x 1
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218 FITTING REDUCER (FTGxC)

Part No.	Nom. Size (inches)
10177443	1/2 x 3/8
10177446	3/4 x 3/8
10177449	1 x 1/2
10177452	1 x 3/4



200-PB POLYBUTYLENE TRANSITION COUPLING (CxC)

Part No.	Nom. Size (inches)
10155453	1/2
10155455	3/4



Allows the use of TECTITE with IPS (SCHD 40 / SCHD 80 Only).
Simply insert street end of IPS transition adapter into any TECTITE fitting, hose or valve.



219 IPS TRANSITION ADAPTER (CxIPSxFTGxC)

Part No.	Nom. Size (inches)
10177501	1/2
10177502	3/4
10177504	1

*requires IPS demount clip for removal
SCHD 40 & 80 ONLY



Add slip capability to any TECTITE fitting, hose or valve.

201-2 SLIP ADAPTER (FTGxC)

Part No.	Nom. Size (inches)
10177510	1/2
10177511	3/4
10177513	1



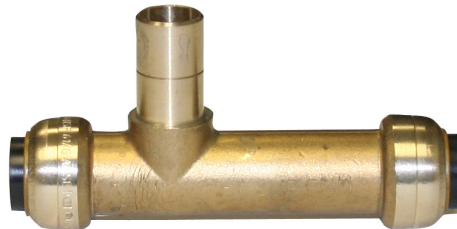
201 SLIP COUPLING (Cx C)

Part No.	Nom. Size (inches)
10155514	1/2
10155516	3/4
10155518	1



211-1 SLIP TEE (Cx Cx C)

Part No.	Nom. Size (inches)
10177419	1/2
10177422	3/4



211-1-2 STREET SLIP COUPLING (Cx Cx FTG)

Part No.	Nom. Size (inches)
10177416	1/2



211-1-3 FEMALE OUTLET SLIP TEE (Cx Cx F)

Part No.	Nom. Size (inches)
10177434	1/2
10177437	3/4



204 MALE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10155532	3/8
10155468	1/2
10155470	3/4
10155472	1
LARGE DIAMETER	
10188066	1-1/4
10188069	1-1/2
10188090	2



203 FEMALE ADAPTER (CxF)

Part No.	Nom. Size (inches)
10155529	3/8
10155462	1/2
10155464	3/4
10155466	1
LARGE DIAMETER	
10188048	1-1/4
10188058	1-1/2
10188064	2





204-R REDUCING MALE ADAPTER (CxM)	
Part No.	Nom. Size (inches)
10177392	1/4 x 1/2
10155534	3/8 x 1/2
10177380	1/2 x 3/4
10177395	3/4 x 1/2
10177542	3/4 x 1
10155474	1 x 3/4



203-R REDUCING MALE ADAPTER (CxF)	
Part No.	Nom. Size (inches)
10177386	1/4 x 1/2
10177355	3/8 x 1/2
10177358	1/2 x 3/4
10177389	3/4 x 1/2



203-2 FEMALE STREET ADAPTER (CTSxF)	
Part No.	Nom. Size (inches)
10177455	3/4
10177458	1



207-3 90° FEMALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10155538	3/8
10177345	1/2



207-4 90° MALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10155539	3/8
10177351	1/2
10177467	1/4 x 3/8
10177470	1/2 x 3/8
10177471	3/4



207-8 DISHWASHER ELBOW (CxM)

Part No.	Nom. Size (inches)
10177473	1/2 x 3/4



2707-5 90° DROP EAR ELBOW (CxM)

Part No.	Nom. Size (inches)
10177404	1/2



2703-3-5 90° FEMALE DROP EAR ELBOW (CxM)

Part No.	Nom. Size (inches)
10155540	3/8
10155484	1/2
10177410	3/4

2707-3-5-R REDUCING 90° FEMALE DROP EAR ELBOW (CxM)

Part No.	Nom. Size (inches)
10155541	3/8 x 1/2



206 45° ELBOW (CxC)

LARGE DIAMETER

Part No.	Nom. Size (inches)
10188092	1-1/4
10188095	1-1/2
10188097	2



206-2 45° STREET ELBOW (FTGxC)

LARGE DIAMETER

Part No.	Nom. Size (inches)
10188112	1-1/4
10188114	1-1/2
10188116	2



207 90° ELBOW (CxC)

Part No.	Nom. Size (inches)
10177401	1/4
10155536	3/8
10155476	1/2
10155478	3/4
10155482	1
LARGE DIAMETER	
10188032	1-1/4
10188036	1-1/2
10188046	2



207-R REDUCING 90° ELBOW (CxC)

Part No.	Nom. Size (inches)
10155537	1/2 x 3/8
10155480	3/4 x 1/2
10177545	1 x 3/4



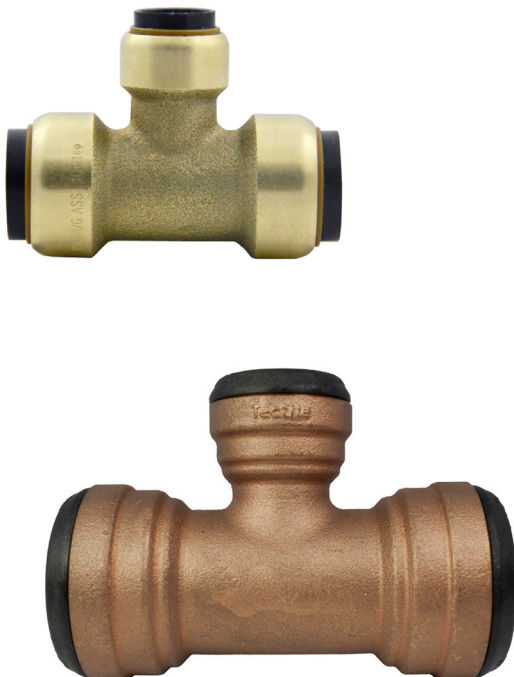


211 TEE (CxCxC)

Part No.	Nom. Size (inches)
10177413	1/4
10155542	3/8
10155486	1/2
10155488	3/4
10155496	1

LARGE DIAMETER

10188107	1-1/4
10188109	1-1/2
10188125	2



211-R REDUCER TEE (CxCxC)

Part No.	Nom. Size (inches)
10155543	3/8 x 3/8 x 1/2
10177425	1/2 x 1/2 x 1/4
10155544	1/2 x 1/2 x 3/8
10155490	3/4 x 1/2 x 1/2
10155492	3/4 x 1/2 x 3/4
10155494	3/4 x 3/4 x 1/2
10155498	1 x 1 x 3/4

LARGE DIAMETER

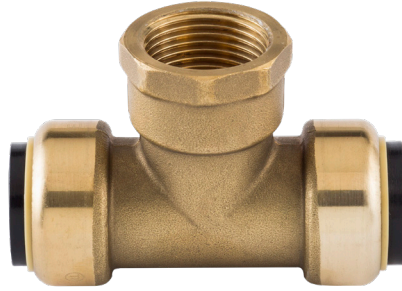
10188127	1-1/4 x 1-1/4 x 1/2
10188129	1-1/4 x 1-1/4 x 3/4
10188117	1-1/4 x 1-1/4 x 1
10188119	1-1/2 x 1-1/2 x 3/4
10188120	1-1/2 x 1-1/2 x 1
10188122	1-1/2 x 1-1/2 x 1-1/4
10188124	2 x 2 x 1
10188126	2 x 2 x 1-1/4
10188128	2 x 2 x 1-1/2



New!

211-3 EXPANSION TANK TEE (CxFIPxFIP)

Part No.	Nom. Size (inches)
10177417	3/4 FIP x 3/4 x 3/4 FIP



New!

211 FEMALE BRANCH TEE (CxCxF)

Part No.	Nom. Size (inches)
10177418	3/4 x 3/4 x 3/4 FIP

CAPS



217 TUBE CAP (C)

Part No.	Nom. Size (inches)
10177440	1/4
10155545	3/8
10155500	1/2
10155502	3/4
10155504	1
LARGE DIAMETER	
10188130	1-1/4
10188132	1-1/2
10188134	2



217D TUBE CAP WITH DRAIN (C)

Part No.	Nom. Size (inches)
10177441	1/2
10177442	3/4



210 BALL VALVE (Cx)

Part No.	Nom. Size (inches)
10155559	3/8
10155521	1/2
10155523	3/4
10155525	1

LARGE DIAMETER

10188118	1-1/4
10188121	1-1/2
10188123	2



210D BALL VALVE WITH DRAIN VENT (Cx)

Part No.	Nom. Size (inches)
10177011	1/2
10177012	3/4
10177013	1



210-3 FEMALE BALL VALVE (Cx)

Part No.	Nom. Size (inches)
10177482	1/2
10177485	3/4
10177488	1



250 CHECK VALVE (Cx)

Part No.	Nom. Size (inches)
10177374	1/2
10177376	3/4
10177372	1



210P PRESSURE REDUCING VALVE (CxC)

Apollo Part No.	Part No.	Nom. Size (inches)
36ELF10301P	10177527	1/2
36ELF10401P	10177530	3/4
36ELF10501P	10177533	1

Factory set at 50 PSI. Adjustable from 15-75 PSI.



250BC BALL-CONE CHECK VALVE (CxC)

Apollo Part No.	Part No.	Nom. Size (inches)
61LF10301P	10177534	1/2
61LF10401P	10177535	3/4
61LF10501P	10177537	1



230 Y-STRAINER (CxC)

Apollo Part No.	Part No.	Nom. Size (inches)
59LF00301P	10177538	1/2
59LF00401P	10177541	3/4
59LF00501P	10177543	1



210-TERV THERMAL EXPANSION RELIEF VALVE (CxCx)

Apollo Part No.	Part No.	Nom. Size (inches)
78RV88P125	10177544	3/4 x 3/4 x 1/4
78RV88P100	10177546	3/4 x 3/4 x 1/4
78RV88P80	10177548	3/4 x 3/4 x 1/4



34ALF Series Lead Free Thermostatic Mixing Valve- ASSE 1017

Apollo Part No.	Part No.	Nom. Size (inches)
34ALF213P		1/2
34ALF214P		3/4
34ALF215P		1

34BLF Series Lead Free Thermostatic Mixing Valve- ASSE 1070

34BLF313P		1/2
34BLF314P		3/4
34BLF315P		1



228 PUSH ANGLE STOP (Cx)

Part No.	Nom. Size (inches)
10177500	1/2 x 1/4



228-9 COMPRESSION ANGLE STOP (CxCOMP)

Part No.	Nom. Size (inches)
10177503	1/2 x 1/4
10177506	1/2 x 3/8



229 PUSH STRAIGHT STOP (Cx)

Part No.	Nom. Size (inches)
10177509	1/2 x 1/4



229-9 COMPRESSION STRAIGHT STOP (CxCOMP)

Part No.	Nom. Size (inches)
10177512	1/2 x 1/4
10177515	1/2 x 3/8



215 LAVATORY STOP W/22" FAUCET CONNECTOR (Cx)

Part No.	Nom. Size (inches)
10172999	1/2



215 LAVATORY STOP W/16" TOILET CONNECTOR (Cx)

Part No.	Nom. Size (inches)
10172995	1/2 x 7/8



208 BRAIDED SS WATER HEATER CONNECTOR (CxFIP)

Part No.	Nom. Size (inches)	Length (in.)
10155508	1/2 x 3/4 FIP	20
10155506	3/4 x 3/4 x FIP	20



210-8 BRAIDED SS WATER HEATER CONNECTOR W/BALL VALVE (CxFIP)

Part No.	Nom. Size (inches)	Length (in.)
10177476	1/2 x 3/4 FIP	21
10177479	3/4 x 3/4 FIP	21



209 BRAIDED SS REPAIR HOSE (CxX)

Part No.	Nom. Size (inches)	Length (in.)
10155510	1/2	12
10155512	3/4	12



208 CORRUGATED SS REPAIR HOSE (CxX)

Part No.	Nom. Size (inches)	Length (in.)
10155563	1/2 x 3/4 FIP	12
10155564	1/2 x 3/4 FIP	15
10155565	1/2 x 3/4 FIP	18
10155566	1/2 x 3/4 FIP	21
10155567	3/4 x 3/4 FIP	12
10155568	3/4 x 3/4 FIP	15
10155569	3/4 x 3/4 FIP	18
10155570	3/4 x 3/4 FIP	21
10155571	3/4 x 3/4 FIP	24
10155572	3/4 x 1 FIP	24



210-8 CORRUGATED SS WATER HEATER CONNECTOR W/BALL VALVE (CxX)

Part No.	Nom. Size (inches)	Length (in.)
10155561	1/2 x 3/4 FIP	18
10155562	3/4 x 3/4 FIP	18



WATER HEATER INSTALLATION KIT (CxX)

Part No.	Nom. Size (inches)
10135600	1/2 x 3/4
10188309	3/4 x 3/4



DEMOUNT CLIP

Part No.	Nom. Size (inches)
10165621	1/4
10189890	3/8
10165630	1/2
10165625	3/4
10165627	1

*Required for removal.



CHAMFER/DEPTH GAUGE TOOL

Part No.	Nom. Size (inches)
10165656	3/8, 1/2, 3/4 & 1



IPS DEMOUNT CLIP

Part No.	Nom. Size (inches)
10177505	1/2
10177507	3/4
10177508	1

*Required for removal of IPS transition adapter.



DEBURRING TOOL

Part No.	Nom. Size (inches)
10065692	1/4-2

LARGE DIAMETER TOOLS



TECTITE
by Apollo



DEMOUNT WRENCH

Part No.	Nom. Size (inches)
10065626	1-1/4, 1-1/2 & 2

Required for Large Diameter Removal



DEMOUNT RINGS

Part No.	Nom. Size (inches)
10065623	1-1/4, 1-1/2 & 2

SET OF 3 SIZES: 1-1/4", 1-1/2" & 2"
Required for Large Diameter Removal

LARGE DIAMETER REPLACEMENT PARTS



RETAINING CAP

Part No.	Nom. Size (inches)
10065634	1-1/4
10065655	1-1/2
10065675	2



GRAB RING

Part No.	Nom. Size (inches)
10065639	1-1/4
10065650	1-1/2
10065670	2



PROTECTION RING

Part No.	Nom. Size (inches)
10065638	1-1/4
10065653	1-1/2
10065673	2



O-RING REPLACEMENT PACK

Part No.	Nom. Size (inches)
10065637	1-1/4
10065651	1-1/2
10065671	2



STARTER TOOLBOX - 30 PC. ASSORTMENT

Part No.	Nom. Size (inches)
10155550	1/2, 3/4

TOOLBOX CONTENTS

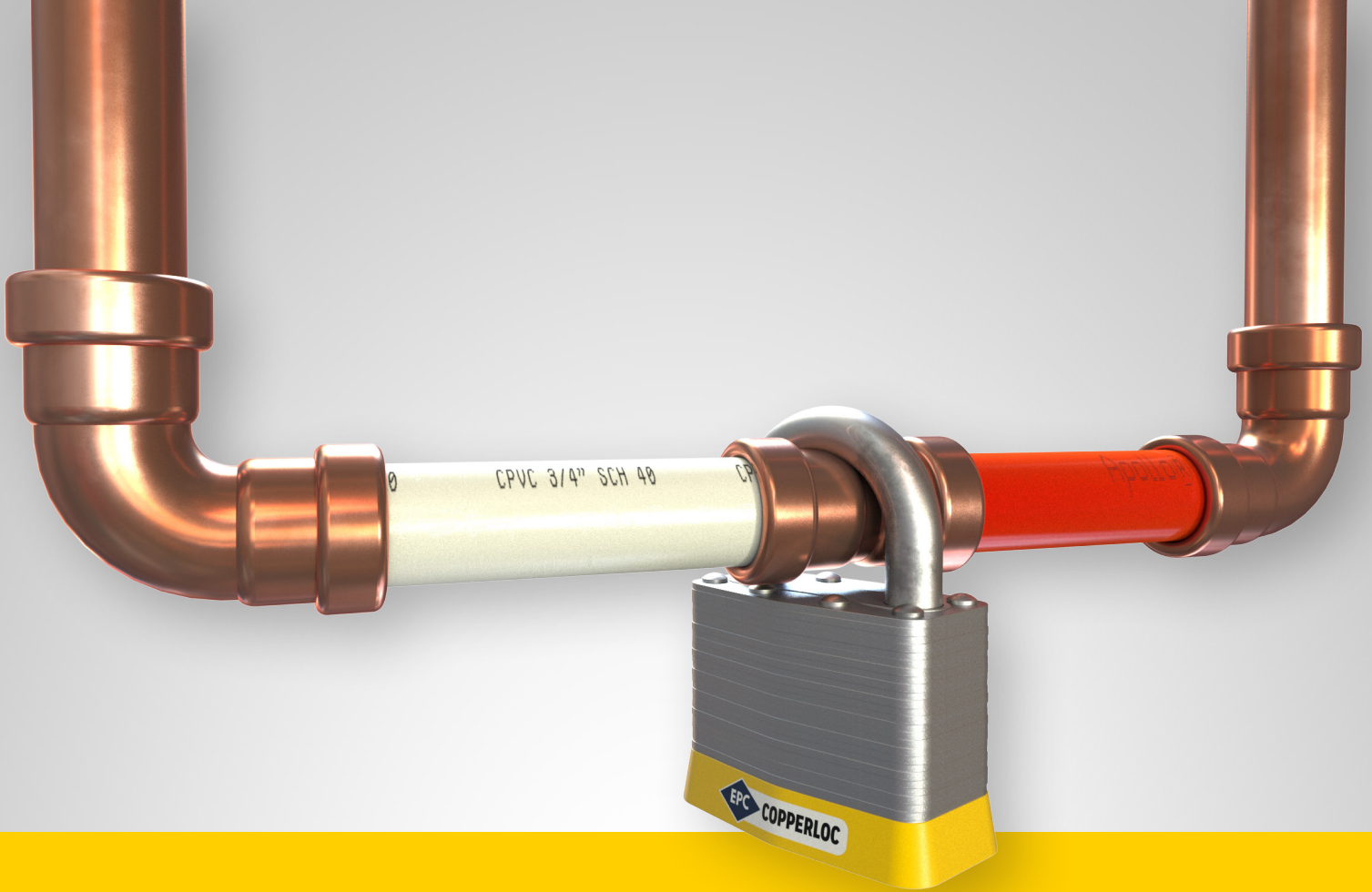
ITEM #	DESC.	QTY
10155452	1/2 CPLG	2
10155454	3/4 CPLG	2
10155458	3/4 x 1/2 CPLG	2
10155462	1/2 x FIP	2
10155464	3/4 x FIP	2
10155468	1/2 x MIP	2
10155470	3/4 x MIP	2
10155476	1/2 90 EL	2
10155478	3/4 90 EL	2
10155486	1/2 TEE	1
10155488	3/4 TEE	1
10155500	1/2 CAP	1
10155502	3/4 CAP	1
10165630	1/2 DEMOUNT	1
10165625	3/4 DEMOUNT	1
10155521	1/2 BALL VLV	2
10155523	3/4 BALL VLV	2
10177506	1/2 x 3/8 STOP VLV	2





TTCP #	DESCRIPTION	CP QTY	INDIVIDUAL BAG TECTITE #
10155551	200 1/2 CXC CPLG W/ST W/PEX	10	10155452
10155552	200 3/4 CXC CPLG W/ST W/PEX	5	10155454
10155553	200 1 CXC CPLG W/ST W/PEX	5	10155456
10155459	201R 34X12 CXC CPLG W/ST W/PEX	10	10155458
10155554	201R 1X3/4 CXC CPLG W/ST W/PEX	5	10155460
10155517	201 3/4 CXC SLIP CPLG W/PEX	5	10155516
10155549	203 1/2 CXF ADAPT W/ST W/PEX	5	10155462
10155555	203 3/4 CXF ADAPT W/ST W/PEX	5	10155464
10155467	203 1 CXF ADAPT W/PEX	5	10155466
10155469	204 1/2 CXM ADPT W/PEX	5	10155468
10155000	204 3/4 CXM ADPT W/PEX	5	10155470
10155473	204 1 CXM ADPT W/PEX	5	10155472
10155556	204-R 1X3/4 CXM ADAPT W/ST W/PEX	5	10155474
10155477	207 1/2 CXC 90 EL W/PEX	5	10155476
10155479	207 3/4 CXC 90 EL W/PEX	5	10155478
10155001	207 1 CXC 90 EL W/PEX	5	10155482
10155560	207-R 1X3/4 CXC 90 ELBOW W/PEX	5	10177545
10155002	211 1/2 CXCXC TEE W/PEX	5	10155486
10155003	211 3/4 CXCXC TEE W/PEX	5	10155488
10155497	211 1 CXCXC TEE W/PEX	5	10155496
10155491	211 3/4X1/2X1/2 CXCXC TEE W/PEX	5	10155490
10155557	217 1/2 TUBE CAP W/ST W/PEX	10	10155500
10155558	217 3/4 TUBE CAP W/ST W/PEX	10	10155502
10155505	217 1 TUBE CAP W/PEX	5	10155504
10155004	1/2" DEMOUNTING CLIP, TECTITE	5	10165630
10155005	3/4" DEMOUNTING CLIP, TECTITE	5	10165625
10155006	1" DEMOUNTING CLIP, TECTITE	5	10165627
10155522	210 1/2" BALL VALVE, TEC W/PEX	10	10155521
10155524	210 3/4" BALL VALVE, TEC W/PEX	5	10155523
10155526	210 1" BALL VALVE, TEC W/PEX	5	10155525

NOTE: Contractor Packs contain pre-installed PEX inserts.



COPPERLOC

**Made in America.
Non-removable copper push fitting
with a 50 year warranty.**

This helps join Copper, CPVC, or PEX with no tools, heat, glues, flux or solder required. They range from 1/2 to 1" size for potable water, and hot and cold water systems. What sets these fittings apart from our Tectite by Apollo fittings is that they can be used behind walls without an access panel since they are non-removable.

FEATURES & BENEFITS

- Made In America
- 50 Year Warranty
- Non-Removeable
- Pure Copper Body
- Use Behind Walls Without Access Panels
- Sizes From 1/2" to 1"
- Joins Copper, CPVC and PEX



APPLICATIONS

RESIDENTIAL

- Plumbing Lines
- Potable Water Lines

COMMERCIAL

- Plumbing Lines
- Commercial Heating

MECHANICAL

- Heat Pump Systems
- Air Handling Units
- Fan Coil Units

134 Couplings

134 Adapters

135-136 Elbows

136 Tube Caps

137 Tees

137 Accessories

All CopperLoc fittings are LEAD FREE
and IGC 188/NSF-61 certified.

Individually Packaged and Color Coded by Size.



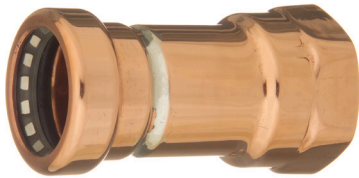


900 COUPLING WITH STOP (CxC)	
Part No.	Nom. Size (inches)
10170700	1/2
10170705	3/4
10170710	1

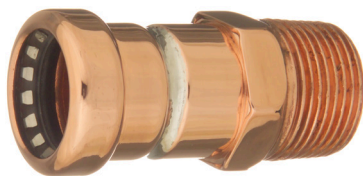


901-R REDUCER COUPLING (CxC)	
Part No.	Nom. Size (inches)
10170715	3/4 x 1/2
10170720	1 x 1/2
10170725	1 x 3/4

ADAPTERS



903 FEMALE ADAPTER (CxM)	
Part No.	Nom. Size (inches)
10170730	1/2
10170735	3/4
10170740	1



904 MALE ADAPTER (CxM)	
Part No.	Nom. Size (inches)
10170745	1/2
10170750	3/4
10170755	1



906 45° ELBOW (CxC)	
Part No.	Nom. Size (inches)
10170760	1/2
10170765	3/4
10170770	1



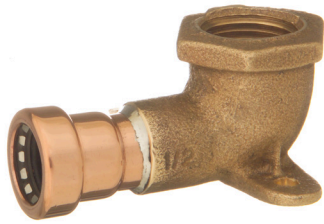
906-2 45° STREET ELBOW (FTGxC)	
Part No.	Nom. Size (inches)
10170775	1/2
10170780	3/4
10170785	1



907 90° ELBOW (CxC)	
Part No.	Nom. Size (inches)
10170790	1/2
10170795	3/4
10170800	1



907-2 90° STREET ELBOW (FTGxC)	
Part No.	Nom. Size (inches)
10170805	1/2
10170810	3/4
10170815	1



9707-3-5 90° DROP EAR ELBOW (Cx F)

Part No.	Nom. Size (inches)
10170835	1/2



907-3 90° FEMALE ELBOW (Cx F)

Part No.	Nom. Size (inches)
10170820	1/2
10170825	3/4
10170830	1



907-4 90° MALE ELBOW (Cx M)

Part No.	Nom. Size (inches)
10170840	1/2
10170845	3/4
10170850	1

TUBE CAPS



917 TUBE CAP (C)

Part No.	Nom. Size (inches)
10170885	1/2
10170890	3/4
10170895	1

TEES



911 TEE (CxCx)	
Part No.	Nom. Size (inches)
10170855	1/2
10170860	3/4
10170865	1



911-R REDUCING TEE (CxCx)	
Part No.	Nom. Size (inches)
10170870	3/4 x 3/4 x 1/2
10170875	1 x 1 x 1/2
10170880	1 x 1 x 3/4

ACCESSORIES



PEX LINER	
Part No.	Nom. Size (inches)
10065824	1/2
10065828	3/4
10065832	1



DEBURRING TOOL	
Part No.	Nom. Size (inches)
10065692	1/4-2



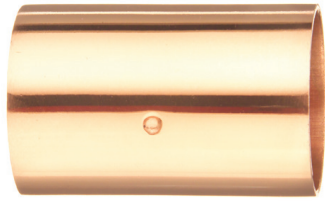
140-142	Couplings
142	Unions
143-145	Adapters
146-149	Elbows
150-153	Tees
153	Plug & Tube Cap
154	Reducers
155	Bushings
156	Straps & Hangers
157	Air Chambers
157	P-Trap & Return Bend

158-163 WROTCOPPER DWV

158	Couplings
158-159	Bushings
159-161	Adapters
161-162	Elbows
163	Tees & Misc



WROTCOPPER



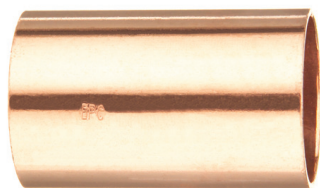
100 COUPLING WITH STOP (CxC)

Part No.	Nom. Size (inches)
10030896	1/4
10030898	3/8
10030900	1/2
10030902	5/8
10030904	3/4
10030906	7/8
10030908	1
10030910	1-1/4
10030914	1-1/2
10030916	2
10030918	2-1/2
10030920	3
10030922	3-1/2
10030924	4
10030926	5
10030928	6
10030930	8



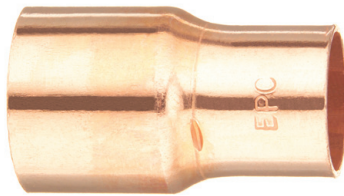
100-RS COUPLING W/ROLL STOP (CxC)

Part No.	Nom. Size (inches)
10030666	1/8
10030678	1/4
10030686	3/8
10030694	1/2
10030702	5/8
10030712	3/4
10030724	7/8
10030730	1
10030746	1-1/4
10030764	1-1/2
10030782	2



101 COUPLING WITHOUT STOP (CxC)

Part No.	Nom. Size (inches)
10030944	1/8
10030948	1/4
10030950	3/8
10030952	1/2
10030954	5/8
10030956	3/4
10030960	1
10030962	1-1/4
10030964	1-1/2
10030966	2
10030968	2-1/2
10030970	3
10030972	3-1/2
10030974	4
10030976	5
10030978	6
10030980	8



Part No.	Nom. Size (inches)
10030684	1/4 x 1/8
10030692	3/8 x 1/8
10030688	3/8 x 1/4
10030700	1/2 x 1/8
10030698	1/2 x 1/4
10030696	1/2 x 3/8
10030708	5/8 x 1/4
10030706	5/8 x 3/8
10030704	5/8 x 1/2
10030720	3/4 x 1/4
10030718	3/4 x 3/8
10030716	3/4 x 1/2
10030714	3/4 x 5/8
10030740	1 x 3/8
10030738	1 x 1/2
10030736	1 x 5/8
10030734	1 x 3/4
10030756	1-1/4 x 1/2
10030752	1-1/4 x 3/4
10030748	1-1/4 x 1
10030776	1-1/2 x 1/2
10030772	1-1/2 x 3/4
10030768	1-1/2 x 1
10030766	1-1/2 x 1-1/4
10030792	2 x 1/2
10030790	2 x 3/4
10030788	2 x 1
10030786	2 x 1-1/4
10030784	2 x 1-1/2
10030806	2-1/2 x 1
10030804	2-1/2 x 1-1/4
10030802	2-1/2 x 1-1/2
10030800	2-1/2 x 2
10030820	3 x 1-1/2
10030818	3 x 2
10030816	3 x 2-1/2
10030832	3-1/2 x 3
10030846	4 x 2
10030844	4 x 2-1/2
10030842	4 x 3
10030840	4 x 3-1/2
10030856	5 x 2
10030854	5 x 2-1/2
10030852	5 x 3
10030850	5 x 4
10030868	6 x 2
10030866	6 x 2-1/2
10030864	6 x 3

101-R REDUCER COUPLING W/STOP (CxXc)	
Part No.	Nom. Size (inches)
10030684	1/4 x 1/8
10030692	3/8 x 1/8
10030688	3/8 x 1/4
10030700	1/2 x 1/8
10030698	1/2 x 1/4
10030696	1/2 x 3/8
10030708	5/8 x 1/4
10030706	5/8 x 3/8
10030704	5/8 x 1/2
10030720	3/4 x 1/4
10030718	3/4 x 3/8
10030716	3/4 x 1/2
10030714	3/4 x 5/8
10030740	1 x 3/8
10030738	1 x 1/2
10030736	1 x 5/8
10030734	1 x 3/4
10030756	1-1/4 x 1/2
10030752	1-1/4 x 3/4
10030748	1-1/4 x 1
10030776	1-1/2 x 1/2
10030772	1-1/2 x 3/4
10030768	1-1/2 x 1
10030766	1-1/2 x 1-1/4
10030792	2 x 1/2
10030790	2 x 3/4
10030788	2 x 1
10030786	2 x 1-1/4
10030784	2 x 1-1/2
10030806	2-1/2 x 1
10030804	2-1/2 x 1-1/4
10030802	2-1/2 x 1-1/2
10030800	2-1/2 x 2
10030820	3 x 1-1/2
10030818	3 x 2
10030816	3 x 2-1/2
10030832	3-1/2 x 3
10030846	4 x 2
10030844	4 x 2-1/2
10030842	4 x 3
10030840	4 x 3-1/2
10030856	5 x 2
10030854	5 x 2-1/2
10030852	5 x 3
10030850	5 x 4
10030868	6 x 2
10030866	6 x 2-1/2
10030864	6 x 3



110 ECCENTRIC COUPLING (CxC)

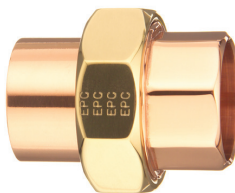
Part No.	Nom. Size (inches)
10031042	3/4 x 1/2
10031044	1 x 3/4
10031048	1-1/4 x 3/4
10031046	1-1/4 x 1



136 CROSS OVER COUPLING (CxC)

Part No.	Nom. Size (inches)
10031070	1/2
10031072	3/4

UNIONS



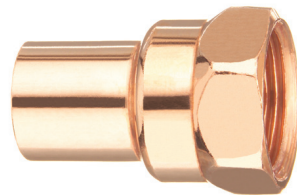
102 UNION (CxC)

Part No.	Nom. Size (inches)
10033576	1/4
10033578	3/8
10033580	1/2
10033582	3/4
10033584	1
10033585	1 1/4
10033586	1 1/2
10033587	2



103 FEMALE ADAPTER (CxF)

Part No.	Nom. Size (inches)
10030100	1/8
10030110	1/4
10030120	3/8
10030130	1/2
10030150	3/4
10030160	1
10030170	1 1/4
10030180	1 1/2
10030190	2
10030200	2 1/2



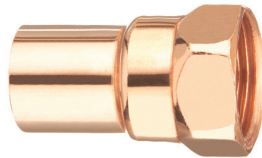
103-2 FEMALE STREET ADAPTER (FTGxF)

Part No.	Nom. Size (inches)
10030224	1/4
10030230	3/8
10030236	1/2
10030242	3/4
10030248	1
10030254	1 1/4
10030260	1 1/2
10030266	2



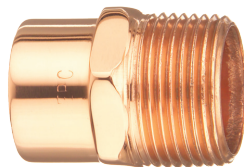
103-R FEMALE REDUCING ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10030106	1/8 x 1/4
10030116	1/4 x 1/8
10030114	1/4 x 3/8
10030112	1/4 x 1/2
10030126	3/8 x 1/4
10030124	3/8 x 1/2
10030122	3/8 x 3/4
10030138	1/2 x 1/4
10030136	1/2 x 3/8
10030134	1/2 x 3/4
10030144	5/8 x 1/2
10030142	5/8 x 3/4
10030156	3/4 x 1/2
10030154	3/4 x 1
10030168	1 x 1/2
10030166	1 x 3/4
10030164	1 x 1 1/4
10030174	1 1/4 x 1
10030172	1 1/4 x 1 1/2
10030184	1 1/2 x 1 1/4
10030182	1 1/2 x 2
10030192	2 x 1 1/2



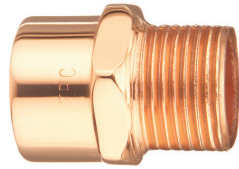
103-2-R FEMALE REDUCING STREET ADAPTER (FTg x F)

Part No.	Nom. Size (inches)
10030240	1/2 x 1/4
10030238	1/2 x 3/8



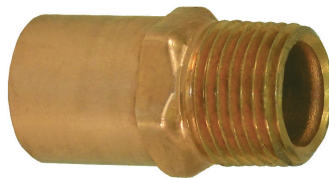
104 MALE ADAPTER (Cx M)

Part No.	Nom. Size (inches)
10030280	1/8
10030290	1/4
10030300	3/8
10030310	1/2
10030330	3/4
10030342	1
10030354	1 1/4
10030368	1 1/2
10030378	2
10030388	2 1/2
10030400	3
10030410	4



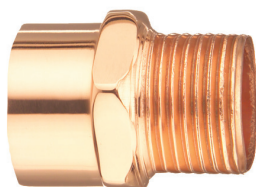
104-R MALE REDUCING ADAPTER (CxM)

Part No.	Nom. Size (inches)
10030284	$\frac{1}{8} \times \frac{1}{4}$
10030282	$\frac{1}{8} \times \frac{3}{8}$
10030296	$\frac{1}{4} \times \frac{1}{8}$
10030294	$\frac{1}{4} \times \frac{3}{8}$
10030292	$\frac{1}{4} \times \frac{1}{2}$
10030306	$\frac{3}{8} \times \frac{1}{4}$
10030304	$\frac{3}{8} \times \frac{1}{2}$
10030302	$\frac{3}{8} \times \frac{3}{4}$
10030320	$\frac{1}{2} \times \frac{1}{4}$
10030318	$\frac{1}{2} \times \frac{3}{8}$
10030316	$\frac{1}{2} \times \frac{3}{4}$
10030314	$\frac{1}{2} \times 1$
10030326	$\frac{5}{8} \times \frac{1}{2}$
10030324	$\frac{5}{8} \times \frac{3}{4}$
10030338	$\frac{3}{4} \times \frac{1}{2}$
10030336	$\frac{3}{4} \times 1$
10030350	$1 \times \frac{1}{2}$
10030348	$1 \times \frac{3}{4}$
10030346	$1 \times \frac{1}{4}$
10030344	$1 \times \frac{1}{2}$
10030362	$1\frac{1}{4} \times \frac{3}{4}$
10030360	$1\frac{1}{4} \times 1$
10030358	$1\frac{1}{4} \times \frac{1}{2}$
10030374	$1\frac{1}{2} \times 1$
10030372	$1\frac{1}{2} \times \frac{1}{4}$
10030370	$1\frac{1}{2} \times 2$
10030382	$2 \times \frac{1}{4}$
10030380	$2 \times \frac{1}{2}$



104-2 MALE STREET ADAPTER (FTGxM)

Part No.	Nom. Size (inches)
10030424	$\frac{1}{4}$
10030430	$\frac{3}{8}$
10030436	$\frac{1}{2}$
10030444	$\frac{3}{4}$
10030452	1
10030460	$1\frac{1}{4}$
10030470	$1\frac{1}{2}$
10030480	2



104-2-R MALE REDUCING STREET ADAPTER (FTGxM)

Part No.	Nom. Size (inches)
10030440	$\frac{1}{2} \times \frac{3}{8}$
10030438	$\frac{1}{2} \times \frac{3}{4}$
10030448	$\frac{3}{4} \times \frac{1}{2}$



106 45° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10031082	1/8
10031086	1/4
10031090	3/8
10031096	1/2
10031102	5/8
10031106	3/4
10031120	1
10031128	1 1/4
10031134	1 1/2
10031140	2
10031148	2 1/2
10031156	3
10031162	3 1/2
10031168	4
10031170	5
10031172	6
10031174	8



106-2 45° STREET ELBOW (FTG x F)

Part No.	Nom. Size (inches)
10031186	1/4
10031190	3/8
10031194	1/2
10031198	5/8
10031202	3/4
10031206	1
10031212	1 1/4
10031216	1 1/2
10031220	2
10031224	2 1/2
10031228	3
10031232	3 1/2
10031236	4



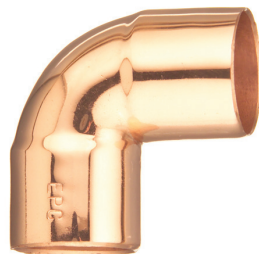
105-C 90° STREET ELBOW CLOSE RUFF (FTG x FTG)

Part No.	Nom. Size (inches)
10031452	1/4
10031456	3/8
10031460	1/2
10031464	5/8
10031468	3/4
10031472	1
10031476	1 1/4



105-L 90° STREET ELBOW LONG TURN (FTGxFTG)

Part No.	Nom. Size (inches)
10031896	3/8
10031902	1/2
10031914	3/4
10031926	1
10031932	1 1/4
10031938	1 1/2
10031944	2



107-C 90° ELBOW CLOSE RUFF (CxC)

Part No.	Nom. Size (inches)
10031260	1/8
10031262	1/4
10031266	3/8
10031272	1/2
10031280	5/8
10031288	3/4
10031296	1
10031306	1 1/4
10031314	1 1/2
10031322	2
10031330	2 1/2
10031338	3
10031346	3 1/2
10031352	4
10031360	5
10031368	6
10031371	8



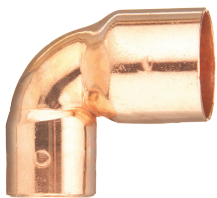
107-C-R REDUCING ELBOW CLOSE RUFF (CxC)

Part No.	Nom. Size (inches)
10031264	1/4 x 1/8
10031268	3/8 x 1/4
10031276	1/2 x 1/4
10031274	1/2 x 3/8
10031282	3/4 x 1/2
10031290	3/4 x 1/2
10031300	1 x 1/2
10031298	1 x 3/4
10031308	1 1/4 x 1
10031316	1 1/2 x 1 1/4
10031324	2 x 1 1/2
10031332	2 1/2 x 2
10031340	3 x 2 1/2
10031354	4 x 3
10031362	5 x 4
10031370	6 x 4



107-C-2 ELBOW CLOSE RUFF (FTGxC)

Part No.	Nom. Size (inches)
10031390	1/8
10031392	1/4
10031396	3/8
10031400	1/2
10031404	5/8
10031408	3/4
10031412	1
10031416	1 1/4
10031420	1 1/2
10031424	2
10031428	2 1/2
10031432	3
10031436	3 1/2
10031440	4



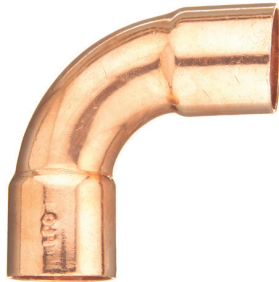
107-MT 90° ELBOW MEDIUM TURN (CxC)

Part No.	Nom. Size (inches)
10031510	1/8
10031512	1/4
10031516	3/8
10031522	1/2
10031530	5/8
10031536	3/4
10031542	1



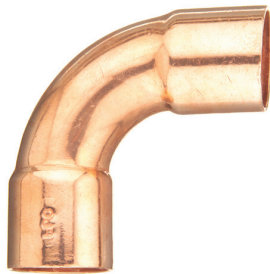
107-MT-2 90° STREET ELBOW MEDIUM TURN (FTGxC)

Part No.	Nom. Size (inches)
10031560	1/8
10031562	1/4
10031566	3/8
10031572	1/2
10031578	5/8
10031584	3/4
10031590	1



107-L 90° ELBOW LONG TURN (CxC)

Part No.	Nom. Size (inches)
10031664	1/8
10031668	1/4
10031672	3/8
10031676	1/2
10031684	5/8
10031692	3/4
10031702	7/8
10031708	1
10031720	1 1/4
10031730	1 1/2
10031740	2
10031750	2 1/2
10031756	3
10031762	3 1/2
10031770	4



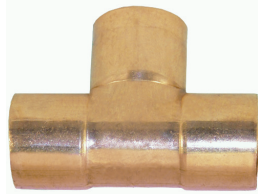
107-L-R REDUCING ELBOW LONG TURN (CxC)

Part No.	Nom. Size (inches)
10031674	3/8 x 1/4
10031678	1/2 x 3/8
10031686	5/8 x 1/2
10031698	3/4 x 3/8
10031696	3/4 x 1/2
10031694	3/4 x 5/8
10031710	1 x 3/4
10031734	1 1/2 x 1
10031732	1 1/2 x 1 1/4
10031742	2 x 1 1/2



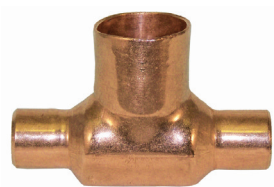
107-L-2 90° STREET ELBOW LONG TURN (FTGxC)

Part No.	Nom. Size (inches)
10031790	1/8
10031792	1/4
10031796	3/8
10031802	1/2
10031810	5/8
10031816	3/4
10031830	1
10031838	1 1/4
10031844	1 1/2
10031850	2
10031856	2 1/2
10031862	3
10031868	3 1/2
10031874	4



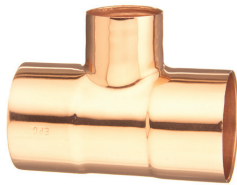
III TEE (CxCxC)

Part No.	Nom. Size (inches)
10032606	1/8
10032640	1/4
10032668	3/8
10032700	1/2
10032732	5/8
10032768	3/4
10032818	1
10032866	1 1/4
10032910	1 1/2
10032970	2
10033030	2 1/2
10033124	3
10033250	3 1/2
10033258	4
10033400	5
10033420	6
10033454	8



III-BH BULLHEAD TEE (CxCxC)

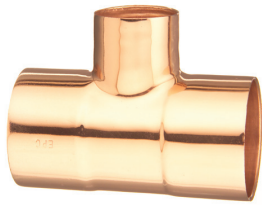
Part No.	Nom. Size (inches)
10032610	1/8 x 1/8 x 1/4
10032644	1/4 x 1/4 x 3/8
10032642	1/4 x 1/4 x 1/2
10032672	3/8 x 3/8 x 1/2
10032706	1/2 x 1/2 x 5/8
10032704	1/2 x 1/2 x 3/4
10032702	1/2 x 1/2 x 1
10032736	5/8 x 5/8 x 3/4
10032770	3/4 x 3/4 x 1
10032822	1 x 1 x 1 1/4
10032820	1 x 1 x 1 1/2
10032870	1 1/4 x 1 1/4 x 1 1/2
10032868	1 1/4 x 1 1/4 x 2
10032912	1 1/2 x 1 1/2 x 2
10032972	2 x 2 x 2 1/2
10033032	2 1/2 x 2 1/2 x 3
10033126	3 x 3 x 4



Part No.	Nom. Size (inches)
10032716	$\frac{1}{2} \times \frac{3}{8} \times \frac{1}{2}$
10032712	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{8}$
10032710	$\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$
10032708	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{8}$
10032748	$\frac{5}{8} \times \frac{1}{2} \times \frac{1}{2}$
10032742	$\frac{5}{8} \times \frac{5}{8} \times \frac{1}{4}$
10032740	$\frac{5}{8} \times \frac{5}{8} \times \frac{3}{8}$
10032738	$\frac{5}{8} \times \frac{5}{8} \times \frac{1}{2}$
10032806	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{8}$
10032802	$\frac{3}{4} \times \frac{3}{8} \times \frac{3}{4}$
10032798	$\frac{3}{4} \times \frac{1}{2} \times \frac{1}{4}$
10032796	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{8}$
10032794	$\frac{3}{4} \times \frac{1}{2} \times \frac{1}{2}$
10032790	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$
10032786	$\frac{3}{4} \times \frac{5}{8} \times \frac{5}{8}$
10032778	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{4}$
10032776	$\frac{3}{4} \times \frac{3}{4} \times \frac{3}{8}$
10032774	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$
10032772	$\frac{3}{4} \times \frac{3}{4} \times \frac{5}{8}$
10032860	$1 \times \frac{1}{2} \times \frac{1}{2}$
10032858	$1 \times \frac{1}{2} \times \frac{3}{4}$
10032856	$1 \times \frac{1}{2} \times 1$
10032844	$1 \times \frac{3}{4} \times \frac{3}{8}$
10032842	$1 \times \frac{3}{4} \times \frac{1}{2}$
10032838	$1 \times \frac{3}{4} \times \frac{3}{4}$
10032836	$1 \times \frac{3}{4} \times 1$
10032830	$1 \times 1 \times \frac{3}{8}$
10032828	$1 \times 1 \times \frac{1}{2}$
10032826	$1 \times 1 \times \frac{5}{8}$
10032824	$1 \times 1 \times \frac{3}{4}$
10032904	$1\frac{1}{4} \times \frac{1}{2} \times 1\frac{1}{4}$
10032900	$1\frac{1}{4} \times \frac{3}{4} \times \frac{1}{2}$
10032988	$2 \times 1\frac{1}{2} \times 1\frac{1}{4}$
10032986	$2 \times 1\frac{1}{2} \times 1\frac{1}{2}$
10032984	$2 \times 1\frac{1}{2} \times 2$
10032982	$2 \times 2 \times \frac{1}{2}$
10032980	$2 \times 2 \times \frac{3}{4}$
10032978	$2 \times 2 \times 1$
10032976	$2 \times 2 \times 1\frac{1}{4}$
10032974	$2 \times 2 \times 1\frac{1}{2}$
10033108	$2\frac{1}{2} \times \frac{3}{4} \times 2\frac{1}{2}$
10033092	$2\frac{1}{2} \times 1 \times 2\frac{1}{2}$
10033078	$2\frac{1}{2} \times 1\frac{1}{4} \times 2$
10033076	$2\frac{1}{2} \times 1\frac{1}{4} \times 2\frac{1}{2}$
10033068	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$
10033066	$2\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{2}$
10033064	$2\frac{1}{2} \times 1\frac{1}{2} \times 2$

111-R REDUCING TEE (CxCxC)

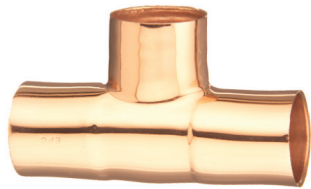
Part No.	Nom. Size (inches)
10032898	$1\frac{1}{4} \times \frac{3}{4} \times \frac{3}{4}$
10032896	$1\frac{1}{4} \times \frac{3}{4} \times 1$
10032894	$1\frac{1}{4} \times \frac{3}{4} \times 1\frac{1}{4}$
10032888	$1\frac{1}{4} \times 1 \times \frac{1}{2}$
10032886	$1\frac{1}{4} \times 1 \times \frac{3}{4}$
10032884	$1\frac{1}{4} \times 1 \times 1$
10032882	$1\frac{1}{4} \times 1 \times 1\frac{1}{4}$
10032876	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$
10032874	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{4}$
10032872	$1\frac{1}{4} \times 1\frac{1}{4} \times 1$
10032960	$1\frac{1}{2} \times \frac{1}{2} \times 1\frac{1}{2}$
10032956	$1\frac{1}{2} \times \frac{3}{4} \times \frac{1}{2}$
10032954	$1\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$
10032952	$1\frac{1}{2} \times \frac{3}{4} \times 1$
10032950	$1\frac{1}{2} \times \frac{3}{4} \times 1\frac{1}{4}$
10032948	$1\frac{1}{2} \times \frac{3}{4} \times 1\frac{1}{2}$
10032944	$1\frac{1}{2} \times 1 \times \frac{1}{2}$
10032942	$1\frac{1}{2} \times 1 \times \frac{3}{4}$
10032940	$1\frac{1}{2} \times 1 \times 1$
10032938	$1\frac{1}{2} \times 1 \times 1\frac{1}{4}$
10032936	$1\frac{1}{2} \times 1 \times 1\frac{1}{2}$
10032932	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{1}{2}$
10032930	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{4}$
10032928	$1\frac{1}{2} \times 1\frac{1}{4} \times 1$
10032926	$1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{4}$
10032924	$1\frac{1}{2} \times 1\frac{1}{4} \times 1\frac{1}{2}$
10032920	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$
10032918	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{4}$
10032916	$1\frac{1}{2} \times 1\frac{1}{2} \times 1$
10032914	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$
10033024	$2 \times \frac{1}{2} \times 2$
10033020	$2 \times \frac{3}{4} \times 2$
10033016	$2 \times 1 \times 1$
10033012	$2 \times 1 \times 2$
10033008	$2 \times 1\frac{1}{4} \times \frac{1}{2}$
10033006	$2 \times 1\frac{1}{4} \times \frac{3}{4}$
10033004	$2 \times 1\frac{1}{4} \times 1$
10033002	$2 \times 1\frac{1}{4} \times 1\frac{1}{4}$
10033000	$2 \times 1\frac{1}{4} \times 1\frac{1}{2}$
10032998	$2 \times 1\frac{1}{4} \times 2$
10032994	$2 \times 1\frac{1}{2} \times \frac{1}{2}$
10032992	$2 \times 1\frac{1}{2} \times \frac{3}{4}$
10032990	$2 \times 1\frac{1}{2} \times 1$
10032664	$\frac{1}{4} \times \frac{1}{8} \times \frac{1}{8}$
10032656	$\frac{1}{4} \times \frac{1}{8} \times \frac{1}{4}$
10032648	$\frac{1}{4} \times \frac{1}{4} \times \frac{1}{8}$
10032694	$\frac{3}{8} \times \frac{1}{8} \times \frac{3}{8}$
10032688	$\frac{3}{8} \times \frac{1}{4} \times \frac{1}{8}$
10032686	$\frac{3}{8} \times \frac{1}{4} \times \frac{1}{4}$
10032684	$\frac{3}{8} \times \frac{1}{4} \times \frac{3}{8}$
10032678	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{8}$
10032674	$\frac{3}{8} \times \frac{3}{8} \times \frac{1}{4}$
10032728	$\frac{1}{2} \times \frac{1}{4} \times \frac{1}{4}$
10032724	$\frac{1}{2} \times \frac{1}{4} \times \frac{1}{2}$
10032718	$\frac{1}{2} \times \frac{3}{8} \times \frac{3}{8}$



III-R REDUCING TEE (CxCx) cont'd

Part No.	Nom. Size (inches)
10033062	2½ x 1½ x 2½
10033058	2½ x 2 x ½
10033056	2½ x 2 x ¾
10033054	2½ x 2 x 1
10033052	2½ x 2 x 1¼
10033050	2½ x 2 x 1½
10033048	2½ x 2 x 2
10033046	2½ x 2 x 2½
10033044	2½ x 2½ x ½
10033042	2½ x 2½ x ¾
10033040	2½ x 2½ x 1
10033038	2½ x 2½ x 1¼
10033036	2½ x 2½ x 1½
10033034	2½ x 2½ x 2
10033232	3 x ¾ x 3
10033214	3 x 1 x 3
10033196	3 x 1¼ x 3
10033186	3 x 1½ x 1½
10033184	3 x 1½ x 2
10033182	3 x 1½ x 2½
10033180	3 x 1½ x 3
10033172	3 x 2 x 1
10033170	3 x 2 x 1¼
10033168	3 x 2 x 1½
10033166	3 x 2 x 2
10033164	3 x 2 x 2½
10033162	3 x 2 x 3
10033156	3 x 2½ x ¾
10033154	3 x 2½ x 1
10033152	3 x 2½ x 1¼
10033150	3 x 2½ x 1½
10033148	3 x 2½ x 2
10033146	3 x 2½ x 2½
10033144	3 x 2½ x 3
10033140	3 x 3 x ½
10033138	3 x 3 x ¾
10033136	3 x 3 x 1
10033134	3 x 3 x 1¼
10033132	3 x 3 x 1½
10033130	3 x 3 x 2
10033128	3 x 3 x 2½
10033380	4 x 1 x 4
10033340	4 x 1½ x 4
10033326	4 x 2 x 2
10033320	4 x 2 x 4
10033304	4 x 2½ x 2½
10033300	4 x 2½ x 4
10033286	4 x 3 x 2
10033284	4 x 3 x 2½
10033282	4 x 3 x 3
10033280	4 x 3 x 4
10033276	4 x 4 x ½
10033274	4 x 4 x ¾
10033272	4 x 4 x 1
10033270	4 x 4 x 1¼
10033268	4 x 4 x 1½

Part No.	Nom. Size (inches)
10033266	4 x 4 x 2
10033264	4 x 4 x 2½
10033262	4 x 4 x 3
10033399	5 x 4 x 4
10033398	5 x 4 x 5
10033418	5 x 5 x ¾
10033416	5 x 5 x 1
10033414	5 x 5 x 1¼
10033412	5 x 5 x 1½
10033410	5 x 5 x 2
10033408	5 x 5 x 2½
10033406	5 x 5 x 3
10033404	5 x 5 x 4
10033446	6 x 4 x 4
10033443	6 x 4 x 6
10033441	6 x 6 x ½
10033440	6 x 6 x ¾
10033438	6 x 6 x 1
10033436	6 x 6 x 1¼
10033434	6 x 6 x 1½
10033432	6 x 6 x 2
10033430	6 x 6 x 2½
10033428	6 x 6 x 3
10033426	6 x 6 x 4
10033424	6 x 6 x 5
10033468	8 x 6 x 6
10033466	8 x 8 x 2
10033464	8 x 8 x 2½
10033462	8 x 8 x 3
10033460	8 x 8 x 4
10033458	8 x 8 x 5
10033456	8 x 8 x 6



111-2 STREET TEE (CxFTGxC)

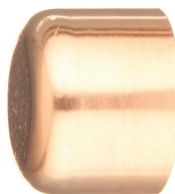
Part No.	Nom. Size (inches)
10033506	1/2
10033508	3/4

PLUG & TUBE CAP



116 FITTING END PLUG (C)

Part No.	Nom. Size (inches)
10032020	3/8
10032022	1/2
10032026	3/4
10032028	1



117 TUBE CAP (C)

Part No.	Nom. Size (inches)
10030620	1/8
10030622	1/4
10030624	3/8
10030626	1/2
10030628	5/8
10030630	3/4
10030632	1
10030634	1 1/4
10030636	1 1/2
10030638	2
10030640	2 1/2
10030642	3
10030644	3 1/2
10030646	4



10032120	2½ x 1
10032118	2½ x 1¼
10032116	2½ x 1½
10032114	2½ x 2
10032132	3 x 1¼
10032130	3 x 1½
10032128	3 x 2
10032126	3 x 2½
10032140	3½ x 2
10032138	3½ x 2½
10032136	3½ x 3
10032150	4 x 2
10032148	4 x 2½
10032146	4 x 3
10032144	4 x 3½
10032160	5 x 2
10032158	5 x 2½
10032156	5 x 3
10032154	5 x 4
10032172	6 x 2
10032170	6 x 2½
10032168	6 x 3
10032166	6 x 4
10032164	6 x 5
10032182	8 x 3
10032180	8 x 4
10032178	8 x 5
10032176	8 x 6

118 FITTING REDUCER (FTGxC)

Part No.	Nom. Size (inches)
10032042	¼ x ⅛
10032046	⅜ x ⅛
10032044	⅜ x ¼
10032050	½ x ¼
10032048	½ x ⅜
10032058	⅝ x ¼
10032056	⅝ x ⅜
10032054	⅝ x ½
10032068	¾ x ¼
10032066	¾ x ⅜
10032064	¾ x ½
10032062	¾ x ⅝
10032078	1 x ⅜
10032076	1 x ½
10032074	1 x ⅝
10032072	1 x ¾
10032086	1¼ x ½
10032084	1¼ x ¾
10032082	1¼ x 1
10032096	1½ x ½
10032094	1½ x ¾
10032092	1½ x 1
10032090	1½ x 1¼
10032110	2 x ½
10032108	2 x ¾
10032106	2 x 1
10032104	2 x 1¼
10032102	2 x 1½



118-2 FIT-TO-FIT REDUCER FITTING (FTGxFTG)

Part No.	Nom. Size (inches)
10168000	¾ x ½
10168003	1 x ½
10168006	1 x ¾
10168009	1¼ x ½
10168012	1¼ x ¾
10168015	1¼ x 1
10168018	1½ x ½
10168021	1½ x ¾
10168024	1½ x 1
10168027	1½ x 1¼
10168030	2 x ½
10168033	2 x ¾
10168036	2 x 1
10168039	2 x 1¼



119 FLUSH BUSHING (FTGxC)

Part No.	Nom. Size (inches)
10030530	1/4 x 1/8
10030532	3/8 x 1/4
10030538	1/2 x 1/4
10030536	1/2 x 3/8
10030544	5/8 x 3/8
10030542	5/8 x 1/2
10030550	3/4 x 1/2
10030548	3/4 x 5/8
10030560	1 x 1/2
10030556	1 x 3/4
10030564	1 1/4 x 1
10030570	1 1/2 x 1 1/4
10030580	2 x 1 1/2



119-3 FEMALE FLUSH BUSHING (FTGxF)

Part No.	Nom. Size (inches)
10030602	1/2 x 1/8
10030600	1/2 x 1/4



120 COPPER TUBE STRAP DOUBLE HOLE

Part No.	Nom. Size (inches)
10032410	$\frac{1}{8}$
10032412	$\frac{1}{4}$
10032414	$\frac{3}{8}$
10032416	$\frac{1}{2}$
10032418	$\frac{5}{8}$
10032420	$\frac{3}{4}$
10032422	1
10032424	$1\frac{1}{4}$
10032426	$1\frac{1}{2}$
10032428	2



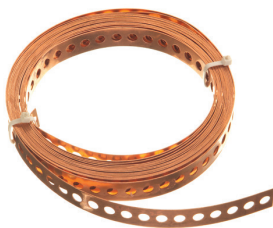
120-S COPPER TUBE STRAP SINGLE HOLE HEAVY WEIGHT

Part No.	Nom. Size (inches)
10032440	$\frac{1}{8}$
10032442	$\frac{1}{4}$
10032444	$\frac{3}{8}$
10032446	$\frac{1}{2}$



124 HI-EAR HANGER C

Part No.	Nom. Size (inches)
10031980	$\frac{1}{2}$
10031982	$\frac{3}{4}$
10031984	1



125 PERFORATED COPPER STRAP $\frac{3}{8}$ " WIDE

Part No.	Nom. Size (inches)
10032400	10 FT ROLL
10032402	25 FT ROLL



121 STUB OUT AIR CHAMBER FOR FITTING END

Part No.	Nom. Size (inches)
10032530	1/2 x 6
10032532	1/2 x 8
10032536	1/2 x 12
10032552	3/4 x 12



122 AIR CHAMBER FOR FITTING END

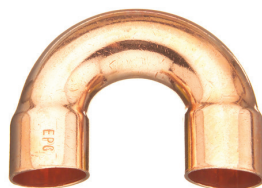
Part No.	Nom. Size (inches)
10030500	1/2 x 1 x 6
10030506	1/2 x 1 x 12

P-TRAP & RETURN BEND



123 SUCTION LINE P-TRAP (CxC)

Part No.	Nom. Size (inches)
10032000	1/2
10032002	5/8
10032004	3/4
10032006	1
10032008	1 1/4
10032010	1 1/2
10032012	2



138 RETURN BEND (CxC)

Part No.	Nom. Size (inches)
10032300	1/8 x 1
10032304	1/4 x 1 1/4
10032302	1/4 x 1 1/2
10032320	3/8 x 1 1/2
10032316	3/8 x 2
10032346	1/2 x 1 1/2
10032344	1/2 x 1 9/16
10032334	1/2 x 2 1/4
10032332	1/2 x 2 1/2
10032330	1/2 x 3
10032354	5/8 x 2 1/8
10032352	5/8 x 2 1/4
10032366	3/4 x 2 3/8
10032364	3/4 x 2 1/2
10032370	1 x 3
10032368	1 x 3 1/4
10032374	1 1/4 x 4
10032382	1 1/2 x 4 3/8
10032386	2 x 5 1/8
10032384	2 x 5 1/2



301 COUPLING W/STOP (Cx C)

Part No.	Nom. Size (inches)
10046230	1/4
10046232	1/2
10046236	2
10046242	3
10046250	4



301-R REDUCER COUPLING W/STOP (Cx C)

Part No.	Nom. Size (inches)
10046234	1/2 x 1/4
10046240	2 x 1/4
10046238	2 x 1/2
10046248	3 x 1/4
10046246	3 x 1/2
10046244	3 x 2
10046252	4 x 3



301-NS COUPLING WITHOUT STOP (Cx C)

Part No.	Nom. Size (inches)
10046270	1/4
10046272	1/2
10046274	2
10046276	3
10046278	4

DWV BUSHINGS



301-2 EXTENDED BUSHING (FTGxC)

Part No.	Nom. Size (inches)
10046160	1/2 x 1/4
10046164	2 x 1/4
10046162	2 x 1/2
10046170	3 x 1/4
10046168	3 x 1/2
10046166	3 x 2

DWV BUSHINGS



301-2-F FLUSH BUSHING (FTGxC)

Part No.	Nom. Size (inches)
10046180	1½ x 1¼
10046182	2 x 1½

DWV ADAPTERS



301-7 TRAP ADAPTER (CxSJ)

Part No.	Nom. Size (inches)
10046110	1¼ OD



301-7-R REDUCING TRAP ADAPTER (CxSJ)

Part No.	Nom. Size (inches)
10046114	1½ x 1¼ OD



301-2-7 FITTING TRAP ADAPTER (FTGxSJ)

Part No.	Nom. Size (inches)
10046122	1½ OD



301-2-7-R REDUCER FITTING TRAP ADAPTER (FTGxSJ)

Part No.	Nom. Size (inches)
10046124	1½ x 1¼ OD



303 FEMALE ADAPTER (CxF)

Part No.	Nom. Size (inches)
10046000	1¼
10046002	1½
10046004	2



303-7 FEMALE TRAP ADAPTER (FxSJ)

Part No.	Nom. Size (inches)
10046130	1¼ OD
10046132	1½ OD



304 MALE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10046030	1/4
10046040	2



304-7 MALE TRAP ADAPTER (MxSJ)

Part No.	Nom. Size (inches)
10046140	1 1/4 OD
10046142	1 1/2 OD



304-7-R REDUCING MALE TRAP ADAPTER (MxSJ)

Part No.	Nom. Size (inches)
10046144	1 1/2 x 1 1/4 OD



305 SOIL PIPE ADAPTER (CxSP)

Part No.	Nom. Size (inches)
10046056	2
10046062	3
10046066	4



305-R REDUCING SOIL PIPE ADAPTER (CxSP)

Part No.	Nom. Size (inches)
10046050	1 1/2 x 2
10046054	1 1/2 x 2
10046052	1 1/2 x 3
10046060	2 x 3
10046064	3 x 4



305-NH NO HUB SOIL PIPE ADAPTER (CxNo Hub)

Part No.	Nom. Size (inches)
10046086	2
10046088	3
10046090	4



305-NH-R NO HUB REDUCING SOIL PIPE ADAPTER (CxNo Hub)

Part No.	Nom. Size (inches)
10046082	1 1/4 x 2
10046084	1 1/2 x 2

DWV ADAPTERS



305-P PLAIN END SOIL PIPE ADAPTER (CxSpigot)

Part No.	Nom. Size (inches)
10046076	2

DWV ELBOWS



309 11 1/2° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10046310	1 1/4
10046312	1 1/2
10046314	2
10046316	3



308 22 1/2° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10046330	1 1/4
10046332	1 1/2
10046334	2
10046336	3



306 45° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10046352	1 1/4
10046354	1 1/2
10046356	2
10046358	3
10046360	4



306-2 45° STREET ELBOW (Cx C)

Part No.	Nom. Size (inches)
10046370	1 1/4
10046372	1 1/2
10046374	2
10046376	3
10046378	4



360 60° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10046390	1 1/4
10046392	1 1/2
10046394	2



307 90° ELBOW (CxC)

Part No.	Nom. Size (inches)
10046410	1/4
10046412	1/2
10046416	2
10046418	3
10046422	4



307-R 90° REDUCING ELBOW (CxC)

Part No.	Nom. Size (inches)
10046414	1/2 x 1/4



307-LT 90° LONG RADIUS ELBOW (CxC)

Part No.	Nom. Size (inches)
10046430	1/2
10046432	2



307-2 90° STREET ELBOW (FTGxC)

Part No.	Nom. Size (inches)
10046450	1/4
10046452	1/2
10046454	2
10046456	3
10046458	4



310 45° Y (CxCxC)

Part No.	Nom. Size (inches)
10046630	1/4
10046632	1/2
10046636	2
10046642	3



310-R REDUCING 45° Y (CxCxC)

Part No.	Nom. Size (inches)
10046634	1/2 x 1/2 x 1/4
10046638	2 x 2 x 1/2
10046648	3 x 3 x 1/4
10046646	3 x 3 x 1/2
10046644	3 x 3 x 2



311 90° SANITARY TEE (CxCxC)

Part No.	Nom. Size (inches)
10046560	1¼
10046562	1½
10046570	2
10046580	3



311-R 90° REDUCING SANITARY TEE (CxCxC)

Part No.	Nom. Size (inches)
10046568	1½ x 1¼ x 1¼
10046566	1½ x 1¼ x 1½
10046564	1½ x 1½ x 1¼
10046578	2 x 1½ x 1½
10046576	2 x 1½ x 2
10046574	2 x 2 x 1¼
10046572	2 x 2 x 1½
10046586	3 x 3 x 1¼
10046584	3 x 3 x 1½
10046582	3 x 3 x 2



316-T TEST CAP (Not intended for sustained pressure)

Part No.	Nom. Size (inches)
10046200	½
10046202	¾
10046204	1
10046206	1¼
10046208	1½
10046210	2
10046212	3



351 CLOSET FLANGE

Part No.	Nom. Size (inches)
10046470	3
10046472	4



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CASTBRASS



4701-R LEAD FREE COUPLING WITH STOP (CxC)

Part No.	Nom. Size (inches)
10051002	3 x 1
10051004	3 x 1¼

LEADED COUPLING WITH STOP (not for potable water)

Part No.	Nom. Size (inches)
10034712	3 x 1
10034710	3 x 1¼

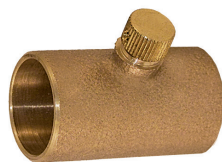


4700-5-1 LEAD FREE HI-EAR COUPLING (CxC)

Part No.	Nom. Size (inches)
10055088	½
10055086	¾
10056913	1

LEADED COUPLING WITH STOP (not for potable water)

Part No.	Nom. Size (inches)
10038242	½
10038243	¾
10038244	1

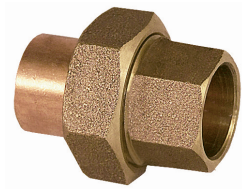


4175 LEAD FREE DRAIN COUPLING W/DRAIN CAP (CxC)

Part No.	Nom. Size (inches)
10051006	½
10051008	¾
10051010	1

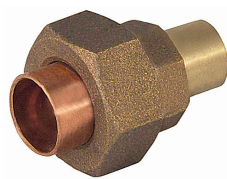
LEADED DRAIN COUPLING (not for potable water)

Part No.	Nom. Size (inches)
10034766	½
10034768	1



4733 LEAD FREE UNION (CxC)	
Part No.	Nom. Size (inches)
10051012	3/8
10056662	1/2
10056664	3/4
10056672	1
10056666	1-1/4
10056678	1-1/2
10056674	2
10056668	2-1/2
10056680	3

LEADED UNION (not for potable water)	
Part No.	Nom. Size (inches)
10037933	3/8
10037936	5/8
10037937	3/4
10037940	1-1/4



4733-2 LEADED STREET UNION (FTGxC)	
Part No.	Nom. Size (inches)
10051016	1/2



4733-3 LEAD FREE FEMALE UNION (CxF)

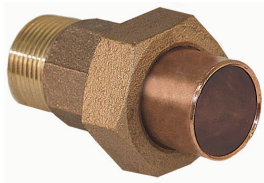
Part No.	Nom. Size (inches)
10056684	1/2
10056888	3/4
10056686	1
10056696	1-1/4
10056690	1-1/2
10056692	2
10051022	2-1/2

LEADED FEMALE UNION (not for potable water)

Part No.	Nom. Size (inches)
10037965	1/4
10037966	3/8
10037967	1/2
10037969	3/4
10037970	1
10037973	1-1/4
10037977	2
10037979	2-1/2

LEAD FREE MALE UNION

4733-4 (C x M)



4733-4 LEAD FREE MALE UNION (CxM)

Part No.	Nom. Size (inches)
10056702	1/2
10056716	3/4
10056712	1
10056708	1-1/4
10056704	1-1/2
10056706	2
10051028	2-1/2

LEADED FEMALE UNION (not for potable water)

Part No.	Nom. Size (inches)
10037985	1/4
10037986	3/8
10037998	1-1/4
10037999	1-1/2
10038002	2-1/2



4703 LEAD FREE FEMALE ADAPTER (CxF)

Part No.	Nom. Size (inches)
10056906	3
10056904	4
10051030	5
10051032	6

LEADED FEMALE ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034263	6



4703-R LEAD FREE FEMALE REDUCING ADAPTER (CxF)

Part No.	Nom. Size (inches)
10051034	1/2 x 1
10056892	3/4 x 3/8
10051038	1 x 1-1/2
10056894	1-1/4 x 3/4
10056900	1-1/2 x 1

LEADED FEMALE REDUCING ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034212	1/2 x 1
10034218	3/4 x 1-1/4
10034224	1 x 1-1/2
10034233	1-1/4 x 3/4
10034229	1-1/4 x 2
10034238	1-1/2 x 1



4703-2 LEAD FREE FEMALE STREET ADAPTER (FTGxF)

Part No.	Nom. Size (inches)
10051042	2-1/2
10051044	3

LEADED FEMALE STREET ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034297	2-1/2
10034298	3



4703-2-R LEAD FREE FEMALE REDUCING STREET ADAPTER (FTGxF)	
Part No.	Nom. Size (inches)
10055078	3/4 x 1/2
LEADED FEMALE REDUCING STREET ADAPTER (not for potable water)	
Part No.	Nom. Size (inches)
10034288	1 x 1/2
10034287	1 x 3/4



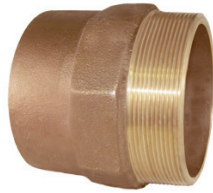
4703-5 LEAD FREE FEMALE DROP EAR ADAPTER (CxF)	
Part No.	Nom. Size (inches)
10056916	1/2
LEADED FEMALE DROP EAR ADAPTER (not for potable water)	
Part No.	Nom. Size (inches)
10034446	1/2



4703-5-1 LEAD FREE HI EAR ADAPTER (CxF)	
Part No.	Nom. Size (inches)
10056918	1/2
LEADED FEMALE HI EAR ADAPTER (not for potable water)	
Part No.	Nom. Size (inches)
10034458	1/2



4703-5-W LEAD FREE FEMALE WING ADAPTER (CxF)	
Part No.	Nom. Size (inches)
10056914	1/2
10056912	3/4
LEADED FEMALE WING ADAPTER (not for potable water)	
Part No.	Nom. Size (inches)
10034455	3/4

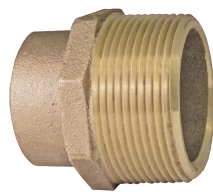


4704 LEAD FREE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10051050	5
10051052	6

LEADED ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034374	5
10034377	6

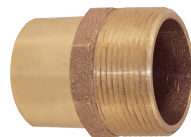


4704-R LEAD FREE MALE REDUCING ADAPTER (CxM)

Part No.	Nom. Size (inches)
10051055	3/4 x 3/8
10051054	3/4 x 1-1/4
10051058	1-1/4 x 2
10051060	2 x 2-1/2
10056924	2-1/2 x 2

LEADED MALE REDUCING ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034330	3/4 x 1-1/4
10034329	3/4 x 1-1/2
10034345	1-1/4 x 2
10034357	2 x 2-1/2



4704-2 LEAD FREE MALE STREET ADAPTER (FTGxM)

Part No.	Nom. Size (inches)
10056944	2-1/2
10056942	3

LEADED MALE STREET ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034422	3

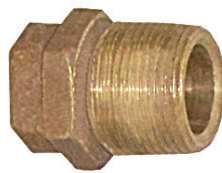


4704-F LEAD FREE MALE FLUSH ADAPTER (CxM)

Part No.	Nom. Size (inches)
10056940	1/2
10056938	3/4

LEADED MALE FLUSH ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034382	3/4



4130 LEAD FREE MALE FINE THREAD ADAPTER (CxM)

Part No.	Nom. Size (inches)
10051062	1/2 x 3/4-20

LEADED MALE FINE THREAD ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034765	1/2 x 3/4-20



4704-HT LEAD FREE HOSE ADAPTER (CxHose Thread)

Part No.	Nom. Size (inches)
10051064	1/2 x 3/4

LEADED HOSE ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10034433	1/2 x 3/4



4707-R LEAD FREE 90° REDUCING ELBOW CLOSE RUFF (CxC)

Part No.	Nom. Size (inches)
10051066	1-1/4 x 1/2
10051068	1-1/4 x 3/4
10051070	1-1/2 x 1/2
10051072	1-1/2 x 3/4
10056875	1-1/2 x 1
10051074	2 x 3/4
10051076	2 x 1
10051078	2 x 1-1/4
10051080	3 x 2

LEADED 90° REDUCING ELBOW CLOSE RUFF (not for potable water)

Part No.	Nom. Size (inches)
10035214	1-1/4 x 1/2
10035212	1-1/4 x 3/4
10035222	1-1/2 x 1/2
10035220	1-1/2 x 3/4
10035218	1-1/2 x 1
10035229	2 x 3/4
10035226	2 x 1-1/4



**LEAD FREE 90° DROP EAR ELBOW
4707-5 (C x C)**

4707-5 LEAD FREE 90° DROP EAR ELBOW (CxC)

Part No.	Nom. Size (inches)
10056882	1/2
10056880	3/4

LEADED 90° DROP EAR ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035424	1/2
10035426	3/4



4707-5-1 LEAD FREE 90° HI EAR ELBOW (CxC)

Part No.	Nom. Size (inches)
10056874	1/2
10051082	3/4

LEADED 90° HI EAR ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035458	1/2
10035459	3/4



4707-3 LEAD FREE 90° FEMALE ADAPTER ELBOW (CxF)

Part No.	Nom. Size (inches)
10051084	1/4
10051086	3/8
10056816	1/2
10056794	3/4
10056798	1
10056802	1-1/4
10056804	1-1/2
10056820	2

LEADED 90° FEMALE ADAPTER ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035302	3/8
10035317	1
10035322	1-1/4
10035328	1-1/2
10035337	2



4707-3-R LEAD FREE 90° REDUCING FEMALE ADAPTER ELBOW (CxF)

Part No.	Nom. Size (inches)
10051008	1/2 x 1/4
10056806	1/2 x 3/8
10056792	1/2 x 3/4
10056810	3/4 x 1/2
10051090	3/4 x 1
10056812	1 x 1/2
10051092	1 x 3/4
10051094	1-1/4 x 3/4

LEADED 90° REDUCING FEMALE ADAPTER ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035309	1/2 x 3/8
10035308	1/2 x 3/4
10035315	3/4 x 1/2
10035314	3/4 x 1
10035320	1 x 1/2
10035319	1 x 3/4



4707-3-5 LEAD FREE 90° FEMALE DROP ELBOW (CxF)

Part No.	Nom. Size (inches)
10051096	3/8
10056856	1/2
10056858	3/4
10056862	1

LEADED 90° FEMALE DROP ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035438	3/8
10035447	1

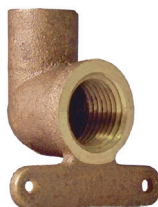


4707-3-5-R LEAD FREE 90° REDUCING FEMALE DROP ELBOW (CxF)

Part No.	Nom. Size (inches)
10051098	3/8 x 1/2
10056864	1/2 x 3/8
10056860	3/4 x 1/2

LEADED 90° REDUCING FEMALE DROP ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035444	1/2 x 3/8
10035446	3/4 x 1/2



4707-5-3 LEAD FREE 90° FEMALE HI EAR ELBOW (CxF)

Part No.	Nom. Size (inches)
10056876	1/2
10056878	3/4

LEADED 90° FEMALE HI EAR ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035464	1/2
10035466	3/4



4708 LEAD FREE 90° FEMALE FLANGED SINK BELOW (CxF)

Part No.	Nom. Size (inches)
10056948	1/2



4707-4 LEAD FREE 90° MALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10051100	3/8
10056842	1/2
10056826	3/4
10056838	1
10056832	1-1/4
10056844	1-1/2
10056840	2

LEADED 90° MALE ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035360	3/8
10035365	1/2
10035370	3/4
10035376	1
10035380	1-1/4
10035390	2



4707-4-R REDUCING MALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10051102	1/2 x 3/8
10051104	1/2 x 3/4
10051106	3/4 x 1/2
10051108	3/4 x 1
10051110	1 x 3/4

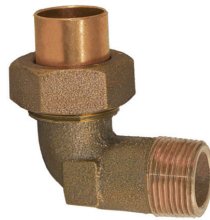
LEADED 90° REDUCING MALE ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035368	1/2 x 3/8
10035367	1/2 x 3/4
10035372	3/4 x 1
10035378	1 x 3/4

ELBOWS



EPC CASTBRASS



4707-4-6 LEAD FREE 90° MALE UNION ELBOW (C x M)

Part No.	Nom. Size (inches)
10051112	1/2
10051114	3/4
10051116	1

LEADED 90° MALE UNION ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10035533	1/2
10035534	3/4
10035535	1



4236 LEAD FREE 90° DRAIN ELBOW W/DRAIN CAP (C x C)

Part No.	Nom. Size (inches)
10051118	1/2
10051120	3/4
10051122	1

LEADED 90° DRAIN ELBOW W/DRAIN CAP (not for potable water)

Part No.	Nom. Size (inches)
10035578	1/2

TEES



4711-R LEAD FREE REDUCING TEE (C x C x C)

Part No.	Nom. Size (inches)
10051124	1-1/4 x 1/2 x 1/2
10051126	1-1/4 x 1/2 x 1
10051128	1-1/2 x 1/2 x 1-1/4
10051130	2 x 3/4 x 3/4
10051132	2 x 1 x 1-1/2
10051134	2 x 2 x 3
10051136	2-1/2 x 1/2 x 2-1/2

LEADED REDUCING TEE (not for potable water)

Part No.	Nom. Size (inches)
10036783	1-1/4 x 1/2 x 1/2
10036780	1-1/4 x 1/2 x 1
10036814	1-1/2 x 1/2 x 1-1/4
10036862	2 x 3/4 x 3/4
10036852	2 x 1 x 1-1/2
10036916	2-1/2 x 1/2 x 2-1/2



LEAD FREE TEE
4710-3 (F x F x C)

Part No.	Nom. Size (inches)
10051138	1/2
10051140	3/4

LEADED TEE
(NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037674	3/4



LEAD FREE REDUCING TEE
4710-3-R (F x F x C)

Part No.	Nom. Size (inches)
10051142	3/4 x 1/2 x 1/2
10051144	3/4 x 1/2 x 3/4
10051146	3/4 x 3/4 x 1/2

LEADED REDUCING TEE
(NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037677	3/4 x 1/2 x 1/2
10037676	3/4 x 1/2 x 3/4
10037675	3/4 x 3/4 x 1/2



LEAD FREE TEE
4710-3-4 (F x M x C)

Part No.	Nom. Size (inches)
10051148	3/4 x 3/4 x 1/2

LEADED TEE
(NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037696	3/4 x 3/4 x 1/2

**4712 LEAD FREE TEE (CxCxF)**

Part No.	Nom. Size (inches)
10051150	3/8
10056960	1/2
10056962	3/4
10056952	1
10051152	1-1/4
10051154	1-1/2
10051156	2

LEADED TEE (not for potable water)

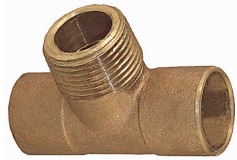
Part No.	Nom. Size (inches)
10037405	3/8
10037418	3/4
10037427	1
10037436	1-1/4
10037446	1-1/2
10037456	2

**4712-R LEAD FREE REDUCING TEE (CxCxF)**

Part No.	Nom. Size (inches)
10051158	1/2 x 1/2 x 1/8
10051160	1/2 x 1/2 x 1/4
10051162	1/2 x 1/2 x 3/8
10051164	1/2 x 1/2 x 3/4
10015169	3/4 x 1/2 x 3/4
10051166	3/4 x 3/4 x 3/8
10056964	3/4 x 3/4 x 1/2
10051170	3/4 x 3/4 x 1
10056954	1 x 1 x 1/2
10051172	1 x 1 x 3/4
10056958	1 1/4 x 1 1/4 x 1/2
10051174	1 1/4 x 1 1/4 x 3/4
10051176	1 1/4 x 1 1/4 x 1
10051178	1 1/2 x 1 1/2 x 1/2
10051180	1 1/2 x 1 1/2 x 3/4
10056956	1 1/2 x 1 1/2 x 1
10051183	2 x 2 x 1/2
10051184	2 x 2 x 3/4
10051186	2 x 2 x 1

LEADED REDUCING TEE (not for potable water)

Part No.	Nom. Size (inches)
10037414	1/2 x 1/2 x 1/4
10037413	1/2 x 1/2 x 3/8
10037412	1/2 x 1/2 x 3/4
10037424	3/4 x 1/2 x 3/4
10037422	3/4 x 3/4 x 3/8
10037419	3/4 x 3/4 x 1
10037439	1 1/4 x 1 1/4 x 3/4
10037438	1 1/4 x 1 1/4 x 1
10037450	1 1/2 x 1 1/2 x 1/2
10037449	1 1/2 x 1 1/2 x 3/4
10037448	1 1/2 x 1 1/2 x 1



4713 LEAD FREE TEE (CxCxM)	
Part No.	Nom. Size (inches)
10051188	3/4
LEADED TEE (NOT FOR POTABLE WATER)	
Part No.	Nom. Size (inches)
10037497	3/4



4714 LEAD FREE TEE (CxFxC)	
Part No.	Nom. Size (inches)
10051190	1/2
10056972	3/4
10051192	1
10051195	1 1/4
10051196	1 1/2
10051199	2
LEADED TEE (NOT FOR POTABLE WATER)	
Part No.	Nom. Size (inches)
10037528	1/2
10037537	3/4
10037545	1
10037553	1 1/4
10037560	1 1/2
10037567	2



4714-R LEAD FREE REDUCING TEE (CxFxC)	
Part No.	Nom. Size (inches)
10051200	1/2 x 3/4 x 1/2
10056974	3/4 x 1/2 x 3/4
10051202	1 x 1/2 x 1
10056970	1 x 3/4 x 1
10051204	1 1/4 x 1/2 x 1 1/4
10051206	1 1/4 x 3/4 x 1 1/4
10051208	1 1/2 x 1/2 x 1 1/2
10051211	1 1/2 x 3/4 x 1 1/2
10051212	2 x 1/2 x 2
10051215	2 x 3/4 x 2



4714-R LEADED REDUCING TEE (not for potable water)

Part No.	Nom. Size (inches)
10037540	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$
10037548	1 x $\frac{1}{2}$ x 1
10037547	1 x $\frac{3}{4}$ x 1
10037558	$1\frac{1}{4} \times \frac{1}{2} \times 1\frac{1}{4}$
10037556	$1\frac{1}{4} \times \frac{3}{4} \times 1\frac{1}{4}$
10037566	$1\frac{1}{2} \times \frac{1}{2} \times 1\frac{1}{2}$
10037564	$1\frac{1}{2} \times \frac{3}{4} \times 1\frac{1}{2}$
10037569	2 x $\frac{1}{2}$ x 2



4711-5 LEAD FREE DROP EAR TEE (CxCxC)

Part No.	Nom. Size (inches)
10056950	1/2

LEADED DROP EAR TEE (NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037742	1/2



4712-5 LEAD FREE DROP EAR TEE (CxCxF)

Part No.	Nom. Size (inches)
10056966	$\frac{1}{2}$
10056968	$\frac{3}{4}$

LEADED DROP EAR TEE (NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037753	$\frac{1}{2}$
10037755	$\frac{3}{4}$



4712-5-R LEAD FREE REDUCING DROP EAR TEE (CxCxF)

Part No.	Nom. Size (inches)
10051216	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{8}$

LEADED REDUCING DROP EAR TEE (NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10037754	$\frac{1}{2} \times \frac{1}{2} \times \frac{3}{8}$



4714-B LEAD FREE BASEBOARD TEE (CxFxC)

Part No.	Nom. Size (inches)
10051218	$\frac{1}{2} \times \frac{1}{8} \times \frac{1}{2}$
10051220	$\frac{1}{2} \times \frac{1}{8} \times \frac{3}{4}$
10056980	$\frac{3}{4} \times \frac{1}{8} \times \frac{3}{4}$
10051222	$1 \times \frac{1}{8} \times 1$
10051224	$1\frac{1}{4} \times \frac{1}{8} \times 1\frac{1}{4}$

TUBE & DRAIN CAPS



4717 LEAD FREE TUBE CAP (C)

Part No.	Nom. Size (inches)
10051226	5
10051228	6



800 LEADED DRAIN CAP & WASHER (C)

Part No.	Nom. Size (inches)
10088002	N/A



4735 LEAD FREE CROSS (CxCxCxC)

Part No.	Nom. Size (inches)
10056976	1/2
10056978	3/4
10051236	1
10051238	1 1/4
10051240	1 1/2
10051242	2

LEADED CROSS (NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10034842	3/8
10034844	1/2
10034847	3/4
10034854	1
10034863	1 1/4
10034928	2

Y FITTINGS

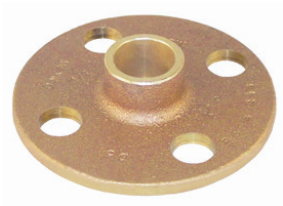


4749 LEAD FREE 45° Y (CxCxC)

Part No.	Nom. Size (inches)
10051320	1/2
10051324	3/4
10051314	1
10051318	1 1/4
10051316	1 1/2
10051322	2

LEADED 45° Y (NOT FOR POTABLE WATER)

Part No.	Nom. Size (inches)
10038063	1/2
10038069	1 1/4
10038072	1 1/2
10038075	2



**4741 LEAD FREE 125LB COMPANION FLANGE
W/ASME DRILLING (C) (BOLTS NOT INCLUDED)**

Part No.	Nom. Size (inches)
10051244	1/2
10051246	3/4
10051248	1
10051250	1 1/4
10056626	1 1/2
10056628	2
10056630	2 1/2
10056632	3
10056634	4
10051252	5
10056638	6
10051254	8

**LEADED 125LB COMPANION FLANGE W/ASME DRILLING
(BOLTS NOT INCLUDED) (not for potable water)**

Part No.	Nom. Size (inches)
10035644	1/2
10035646	3/4
10035649	1
10035653	1 1/4
10035663	2 1/2
10035682	8



**4771 LEAD FREE 150LB COMPANION FLANGE
W/ASME DRILLING (C) (BOLTS NOT INCLUDED)**

Part No.	Nom. Size (inches)
10056642	1
10056644	1 1/4
10056646	1 1/2
10056648	2
10056650	2 1/2
10056652	3
10056654	4
10056656	5
10056658	6
10056660	8

**LEADED 150LB COMPANION FLANGE W/ASME DRILLING
(BOLTS NOT INCLUDED) (not for potable water)**

Part No.	Nom. Size (inches)
10035794	1
10035799	1 1/4
10035810	2
10035816	2 1/2
10035834	4

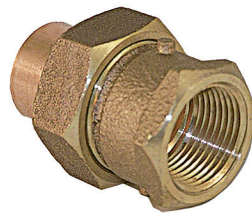


7101 LEAD FREE FLARED COUPLING (CxC)

Part No.	Nom. Size (inches)
10051258	1/2
10051260	3/4
10051262	1

LEADED FLARED COUPLING (not for potable water)

Part No.	Nom. Size (inches)
10042226	1/2
10042232	3/4
10042238	1
10042244	1 1/4
10042250	1 1/2
10042256	2



7103 LEAD FREE FLARED FEMALE ADAPTER (CxF)

Part No.	Nom. Size (inches)
10051270	1/2
10051272	3/4

LEADED FLARED FEMALE ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10042046	1/2
10042062	3/4
10042072	1
10042078	1 1/4
10042082	1 1/2
10042086	2

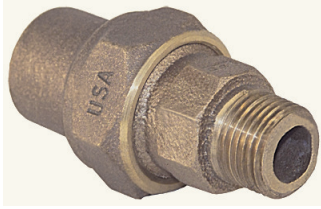


7104 LEAD FREE FLARED MALE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10051282	1/2
10051284	3/4
10051286	1
10051288	1 1/4
10051290	1 1/2

LEADED FLARED MALE ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10042126	1/2
10042140	3/4
10042148	1
10042156	1 1/4
10042162	1 1/2
10042164	2



7104-R LEAD FREE FLARED MALE REDUCING ADAPTER (CxM)

Part No.	Nom. Size (inches)
10051294	$\frac{3}{4} \times \frac{1}{2}$

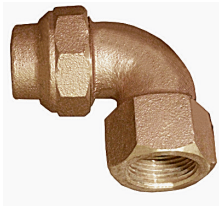
LEADED FLARED MALE REDUCING ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10042144	$\frac{3}{4} \times \frac{1}{2}$



7107 LEADED 90° FLARED ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10042398	$\frac{1}{2}$
10042404	$\frac{3}{4}$
10042410	1
10042418	2



7107-3 LEADED 90° FLARED FEMALE ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10042470	1



7107-4 LEAD FREE 90° FLARED MALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10051306	$\frac{3}{4}$

LEADED 90° FLARED MALE ELBOW (not for potable water)

Part No.	Nom. Size (inches)
10042536	$\frac{3}{4}$
10042542	1



7111 LEADED FLARED TEE (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10042748	$\frac{3}{4}$
10042770	1

DWV COUPLINGS



5801-R REDUCER COUPLING (CxC)

Part No.	Nom. Size (inches)
10047818	4 x 2

DWV BUSHINGS



5801-2 EXTENDED REDUCER BUSHING (FTGxC) (not for potable water)

Part No.	Nom. Size (inches)
10047618	4 x 2
10047616	4 x 3

DWV ADAPTERS



5803 FEMALE ADAPTER (CxF) (not for potable water)

Part No.	Nom. Size (inches)
10047022	3
10047028	4



5803-2 FEMALE FITTING ADAPTER (FTGxF) (not for potable water)

Part No.	Nom. Size (inches)
10047098	1-1/2
10047102	2
10047106	3



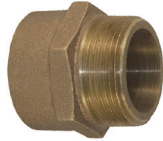
5804 MALE ADAPTER (CxM) (not for potable water)

Part No.	Nom. Size (inches)
10047052	1-1/2
10047058	2
10047066	3
10047070	4



5804-R MALE REDUCING ADAPTER (CxM) (not for potable water)

Part No.	Nom. Size (inches)
10047050	1/4 x 1/2
10047056	1/2 x 1/4
10047054	1/2 x 2
10047060	2 x 1/2



5804-2 MALE FITTING ADAPTER (FTGxM) (not for potable water)

Part No.	Nom. Size (inches)
10047128	1-1/2
10047130	2

DWV ELBOWS



5807 90° REDUCING ELBOW (CxC) (not for potable water)

Part No.	Nom. Size (inches)
10048138	2 x 1-1/2



5837 DOUBLE ELBOW (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10048368	1-1/2
10048372	2



5837-R DOUBLE ELBOW (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10048370	1½ x 1¼ x 1¼
10048374	2 x 1½ x 1½

DWV TEES



5811 90° SANITARY TEE (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10048812	4



5811-R 90° SANITARY REDUCING TEE (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10048814	4 x 4 x 3
10048816	4 x 4 x 2



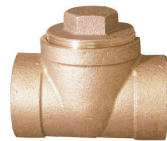
5811-CCF TEE (CxCxF) (not for potable water)

Part No.	Nom. Size (inches)
10048912	1-1/2
10048920	2



5811-CFC TEE (CxFxC) (not for potable water)

Part No.	Nom. Size (inches)
10048974	1-1/2



5814 TEST TEE W/PLUG (CxCxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10049258	1-1/2
10049260	2
10049262	3



5499 UTILITY TEE (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10049306	2



5835 DOUBLE TEE (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10049390	1/4
10049392	1/2
10049398	2



5835-R REDUCING DOUBLE TEE (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10049406	2 x 1 1/2 x 1 1/2 x 1 1/2
10049404	2 x 2 x 1 1/4 x 1 1/4
10049400	2 x 2 x 1 1/2 x 1 1/2
10049416	3 x 3 x 1 1/2 x 1 1/2
10049412	3 x 3 x 2 x 2



5516 DOUBLE LONG TURN TEE (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10049572	2 x 1 1/2 x 1 1/2 x 1 1/2



5810 45° Y (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10050762	1-1/2
10050798	4



5810-R 45° REDUCING Y (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10050778	2 x 1½ x 1½
10050776	2 x 1½ x 2
10050774	2 x 2 x 1¼
10050802	4 x 4 x 2
10050800	4 x 4 x 3



5834 45° DOUBLE Y (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10051182	1-1/2
10051194	2
10051210	3



5834-R REDUCING DOUBLE Y (Cx) (not for potable water)

Part No.	Nom. Size (inches)
10051198	2 x 2 x 1½ x 1½



5812 LONG TURN T-Y (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10050442	1-1/2
10050448	2
10050462	3
10050476	4



5812-R LONG TURN REDUCING T-Y (CxCx) (not for potable water)

Part No.	Nom. Size (inches)
10050456	2 x 1½ x 1½
10050450	2 x 2 x 1½
10050466	3 x 3 x 2

DWV Y FITTINGS



5836 DOUBLE LONG TURN T-Y (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10050632	1-1/2
10050638	4



5836-R DOUBLE LONG TURN REDUCING T-Y (CxCxCxC) (not for potable water)

Part No.	Nom. Size (inches)
10056640	2 x 2 x 1½ x 1½

DWV P-TRAPS



5550 P-TRAP (CxC) (not for potable water)

Part No.	Nom. Size (inches)
10049750	1-1/4
10049752	1-1/2
10049758	2
10049762	3



5551 P-TRAP W/CLEANOUT W/PLUG (CxCxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10049770	1-1/4
10049772	1-1/2
10049776	2
10049780	3



5555 P-TRAP W/CLEANOUT W/PLUG (CxSxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10049842	1-1/2 x 1-1/2 OD



5557 FEMALE P-TRAP W/UNION JOIN (FxSJ) (not for potable water)

Part No.	Nom. Size (inches)
10049932	1-1/2



5558 FEMALE P-TRAP W/UNION JOIN (CxSJ) (not for potable water)

Part No.	Nom. Size (inches)
10049882	1-1/2



P-TRAPS



5556 FEMALE LA PATTERN P-TRAP W/ UNION JOINT (FxsJ)
(not for potable water)

Part No.	Nom. Size (inches)
10049952	1-1/2 x 1-1/2 OD



5559 LA PATTERN P-TRAP W/UNION JOINT (CxSJ)
(not for potable water)

Part No.	Nom. Size (inches)
10049892	1-1/2 x 1-1/2 OD
10049886	2 OD

TRAP ADAPTERS



5801-7 TRAP ADAPTER (CxSJ) (not for potable water)

Part No.	Nom. Size (inches)
10047368	1-1/2 x 1-1/2 x OD



5180 TRAP ADAPTER (CxOD) (not for potable water)

Part No.	Nom. Size (inches)
10047382	1-1/4 x 1-1/4 OD
10047384	1-1/2 x 1-1/2 OD



5180-R REDUCING TRAP ADAPTER (CxOD) (not for potable water)

Part No.	Nom. Size (inches)
10047386	1-1/2 x 1-1/4 OD



5804-S MALE TRAP ADAPTER (CxM) (not for potable water)

Part No.	Nom. Size (inches)
10047310	1-1/4
10047314	1-1/2
10047320	2



5804-S-R REDUCING MALE TRAP ADAPTER (not for potable water)

Part No.	Nom. Size (inches)
10047312	1-1/4 x 1-1/2

TRAP ADAPTERS



5558 FEMALE P-TRAP W/UNION JOIN (CxSJ) (not for potable water)

Part No.	Nom. Size (inches)
10047472	1-1/4 OD x 1-1/2



5802-C FEMALE P-TRAP W/UNION JOIN (not for potable water)

Part No.	Nom. Size (inches)
10047336	1-1/2
10047340	2

MISC. TRAP FITTINGS



5879 FEMALE P-TRAP W/UNION JOIN (CxX) (not for potable water)

Part No.	Nom. Size (inches)
10047576	1-1/4
10047578	1-1/2
10047582	2
10047588	3



5879-R FEMALE P-TRAP W/UNION JOIN (CxX) (not for potable water)

Part No.	Nom. Size (inches)
10047584	2 x 1-1/2



5878 FEMALE P-TRAP W/UNION JOIN (CxXxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10047556	1-1/4
10047558	1-1/2
10047562	2



5427 MALE FINE THREAD REDUCING TRAP UPTURN (MxOD) (not for potable water)

Part No.	Nom. Size (inches)
10050416	1-1/2 x 1-1/2 OD



5890 DRUM TRAP W/BOTTOM INLET W/PLUG (CxFxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10049628	1-1/2 x 3 x 5



5891 SWIVEL DRUM TRAP W/PLUG (CxCxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10049646	1-1/2 x 3 x 6



5802 MARVEL THREAD PIECE (CxSJ) (not for potable water)

Part No.	Nom. Size (inches)
10047350	1-1/4
10047354	1-1/2
10047358	2



5816 FITTING CLEANOUT W/PLUG (FTGxCleanout) (not for potable water)

Part No.	Nom. Size (inches)
10047742	1 1/4 x 3/4
10047744	1 1/2 x 1
10047746	2 x 1 1/2
10047748	3 x 2 1/2
10047750	4 x 3



5816-S FLUSH FITTING CLEANOUT W/PLUG (FTGxCleanout)
(not for potable water)

Part No.	Nom. Size (inches)
10047768	1 1/4 x 3/4
10047770	1 1/2 x 1
10047772	2 x 1 1/2
10047774	3 x 2 1/2
10047776	4 x 3



5819 CORED HEX HEAD PLUG (not for potable water)

Part No.	Nom. Size (inches)
10048602	1-1/2



INTERNATIONAL FITTINGS



4707-3 LEAD FREE 90° FEMALE ADAPTER ELBOW (CxF)

Part No.	Nom. Size (inches)
10159200	1



4707-3-R LEAD FREE 90° REDUCING FEMALE ADAPTER ELBOW (CxF)

Part No.	Nom. Size (inches)
10159201	1 x ½
10159202	½ x ¼
10159203	½ x ⅜
10159207	1 x ¾



4707-4-R LEAD FREE 90° REDUCING MALE ELBOW (CxM)

Part No.	Nom. Size (inches)
10159204	1



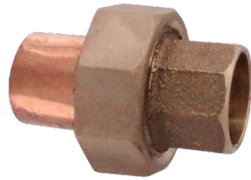
4712 LEAD FREE TEE (CxCF)

Part No.	Nom. Size (inches)
10159205	1



4712-R LEAD FREE REDUCING TEE (CxCF)

Part No.	Nom. Size (inches)
10159206	1 x 1 x ½
10159212	½ x ½ x ¼
10159213	¾ x ¾ x ½
10159214	1 x 1 x ¾
10159215	½ x ½ x ¾



4733 LEAD FREE UNION (CxC)

Part No.	Nom. Size (inches)
10159223	2½



4236 LEAD FREE DRAIN ELBOW W/CAP (CxC)

Part No.	Nom. Size (inches)
10159239	¾
10159240	1



4707-3-5-R LEAD FREE 90° DROP EAR REDUCING ELBOW (CxF)

Part No.	Nom. Size (inches)
10159242	¾ x ½



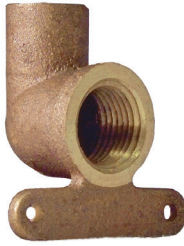
4707-3-5 LEAD FREE 90° DROP EAR ELBOW (CxF)

Part No.	Nom. Size (inches)
10159243	1



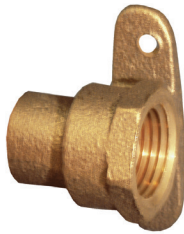
4707-5 LEAD FREE 90° DROP EAR ELBOW (CxC)

Part No.	Nom. Size (inches)
10159244	¾



4707-5-3 LEAD FREE 90° HI EAR ELBOW (Cx F)

Part No.	Nom. Size (inches)
10159245	3/4



4703-5 LEAD FREE DROP EAR ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10159247	1/2



4703-5-1 LEAD FREE HI EAR ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10159248	1/2



4714 LEAD FREE TEE (Cx FxC)

Part No.	Nom. Size (inches)
10159251	3/4



4714-R LEAD FREE REDUCING TEE (Cx FxC)

Part No.	Nom. Size (inches)
10159252	3/4 x 1/2 x 3/4



4703 LEAD FREE ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10159258	3



4703-R LEAD FREE REDUCING ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10159260	1 1/4 x 3/4



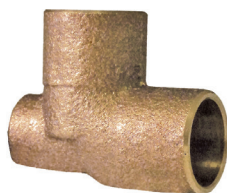
4735 LEAD FREE CROSS (Cx Cx Cx C)

Part No.	Nom. Size (inches)
10159261	3/4



4710-3-R LEAD FREE REDUCING TEE (Fx Fx C)

Part No.	Nom. Size (inches)
10159268	3/4 x 1/2 x 1/2
10159269	3/4 x 1/2 x 3/4



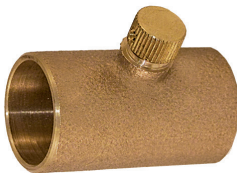
4714-B-R LEAD FREE 90° REDUCING BASEBOARD TEE (Cx Fx C)

Part No.	Nom. Size (inches)
10159270	1/2 x 3/8 x 1/2



4707-R LEAD FREE 90° REDUCING ELBOW (CxC)

Part No.	Nom. Size (inches)
10159265	1½ x 1



4175 LEAD FREE COUPLING W/DRAIN (CxC)

Part No.	Nom. Size (inches)
10159272	½
10159281	¾



4704-F LEAD FREE FLUSH ADAPTER (CxM)

Part No.	Nom. Size (inches)
10159274	½



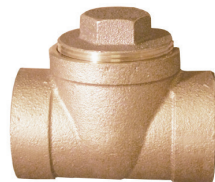
4703-2-R LEAD FREE REDUCING ADAPTER (FTGxF)

Part No.	Nom. Size (inches)
10159266	¾ x ½



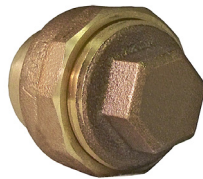
5499 LEADED UTILITY TEE (CxCxCxC)

Part No.	Nom. Size (inches)
10159264	2



5814 LEADED TEST TEE W/PLUG (CxCxCO)

Part No.	Nom. Size (inches)
10159267	2



5816 LEADED FITTING W/PLUG (FTGxC0)

Part No.	Nom. Size (inches)
10159280	2



5816-S LEADED FLUSH FITTING W/PLUG (FTGxC0)

Part No.	Nom. Size (inches)
10159279	2
10159278	1½



5802-C LEADED TRAP ADAPTER (CxM)

Part No.	Nom. Size (inches)
10159275	1½



5802 LEADED MARVEL THREAD PIECE (CxS)

Part No.	Nom. Size (inches)
10159276	1½



5801-7 LEADED ADAPTER (CxS)

Part No.	Nom. Size (inches)
10159277	1½



5812 LEADED LONG TURN T-Y (CxS)

Part No.	Nom. Size (inches)
10159263	1½
10159271	2

204-205

Couplings

206-208

Adapters

208-211

Elbows

211-213

Tees

214

Plugs & Caps

214

Bushings

215

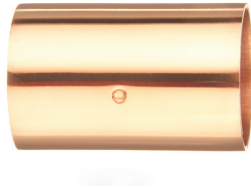
Reducers

216

P-Trap, Crossover & Return Bend



KLEENFIT



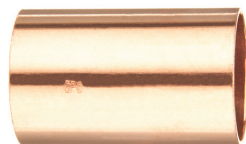
100 COUPLING W/STOP (CxC)

Part No.	Nom. Size (inches)
10230897	1/4
10230899	3/8
10230901	1/2
10230907	3/4
10230905	1
10230909	1 1/4
10230912	1 1/2
10230915	2
10230917	2 1/2
10230919	3
10230921	3 1/2
10230925	4
10230927	5
10230929	6
10230932	8



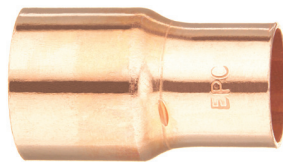
100-RS COUPLING W/ROLL STOP (CxC)

Part No.	Nom. Size (inches)
10230669	1/8
10230681	1/4
10230687	3/8
10230701	1/2
10230703	5/8
10233082	3/4
10230731	1
10233207	1 1/4
10230765	1 1/2
10233083	2



101 COUPLING WITHOUT STOP (CxC)

Part No.	Nom. Size (inches)
10233469	1/4
10233471	3/8
10230955	1/2
10230958	3/4
10230971	1
10230965	1 1/4
10233075	1 1/2
10233079	2
10230973	2 1/2
10233080	3
10233223	4
10233277	6



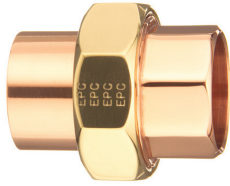
101-R REDUCER COUPLING W/STOP (CxC)

Part No.	Nom. Size (inches)
10230685	¼ x ⅙
10230690	⅜ x ¼
10233197	½ x ¼
10230699	½ x ¼
10230697	½ x ⅜
10230177	⅝ x ¼
10230709	⅝ x ⅜
10230705	⅝ x ½
10230722	¾ x ¼
10230719	¾ x ⅜
10230717	¾ x ½
10230721	¾ x ⅝
10230742	1 x ⅜
10230737	1 x ½
10233010	1 x ⅝
10230733	1 x ¾
10230758	1¼ x ½
10230754	1¼ x ¾
10230750	1¼ x 1
10230778	1½ x ½
10230773	1½ x ¾
10230770	1½ x 1
10230767	1½ x 1¼
10230794	2 x ½
10230791	2 x ¾
10230789	2 x 1
10230787	2 x 1¼
10230785	2 x 1½
10233195	2½ x 1
10230805	2½ x 1¼
10230803	2½ x 1½
10230801	2½ x 2
10230822	3 x 1½
10230819	3 x 2
10230817	3 x 2½
10233015	3½ x 3
10230157	4 x 2
10230845	4 x 2½
10230843	4 x 3
10233401	4 x 3½
10233271	5 x 3
10233403	5 x 4
10233449	6 x 2
10233199	6 x 3
10233463	6 x 4
10230877	8 x 6



110 ECCENTRIC COUPLING (CxM)

Part No.	Nom. Size (inches)
10231041	¾ x ½
10231043	1 x ¾
10231045	1¼ x 1



102 UNION (CxC)

Part No.	Nom. Size (inches)
10233577	1/4
10233234	3/8
10233581	1/2
10233583	3/4
10233591	1
10233081	1 1/4
10233588	1 1/2
10233589	2



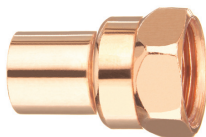
103 FEMALE ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10233029	1/8
10230111	1/4
10230121	3/8
10230132	1/2
10230152	3/4
10230162	1
10230175	1 1/4
10230181	1 1/2
10230191	2
10232881	2 1/2



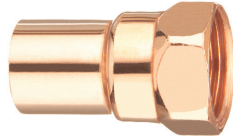
103-R REDUCING FEMALE ADAPTER (Cx F)

Part No.	Nom. Size (inches)
10230109	1/4 x 1/8
10230113	1/4 x 3/8
10233212	3/8 x 1/4
10230137	3/8 x 1/2
10230140	1/2 x 1/4
10232879	1/2 x 3/8
10230135	1/2 x 3/4
10233485	3/8 x 3/4
10230158	3/4 x 1/2
10231155	3/4 x 1
10230169	1 x 1/2
10230167	1 x 3/4
10233070	1 x 1 1/4
10230185	1 1/2 x 1 1/4



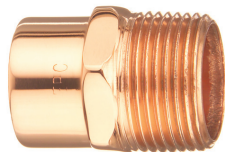
103-2 FEMALE STREET ADAPTER (FTG x F)

Part No.	Nom. Size (inches)
10230226	1/4
10233245	3/8
10230115	1/2
10230243	3/4
10233023	1
10233247	1 1/4
10233257	1 1/2
10233259	2



103-2-R FEMALE REDUCING STREET ADAPTER (FTGxF)

Part No.	Nom. Size (inches)
10230241	1/2 x 1/4
10233233	1/2 x 3/8



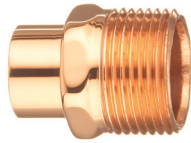
104 MALE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10233217	1/8
10230291	1/4
10233192	3/8
10230312	1/2
10230332	3/4
10230345	1
10230356	1 1/4
10230371	1 1/2
10230381	2
10230145	2 1/2
10230402	3
10230412	4



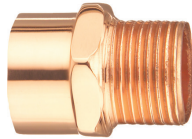
104-R REDUCING MALE ADAPTER (CxM)

Part No.	Nom. Size (inches)
10230108	1/4 x 3/8
10230293	1/4 x 1/2
10233243	3/8 x 1/4
10230179	3/8 x 1/2
10230322	1/2 x 1/4
10230319	1/2 x 3/8
10233489	1/2 x 3/4
10233483	3/4 x 3/4
10233011	3/4 x 1/2
10230337	3/4 x 1
10230349	1 x 1/2
10230351	1 x 3/4
10230347	1 x 1 1/4
10230343	1 x 1 1/2



104-2 MALE STREET ADAPTER (FTGxM)

Part No.	Nom. Size (inches)
10233273	1/2
10233253	3/4
10233238	1
10233251	1 1/4
10233013	1 1/2
10233093	2



104-2-R REDUCING MALE STREET ADAPTER (FTGxM)

Part No.	Nom. Size (inches)
10233290	3/4 x 1/2

ELBOWS



105-C 90° STREET ELBOW CLOSE RUFF (FTGxFTG)

Part No.	Nom. Size (inches)
10230139	1/2
10259969	3/4
10233193	1



105-L 90° STREET ELBOW LONG TURN (FTGxFTG)

Part No.	Nom. Size (inches)
10233269	3/4
10231933	1 1/4



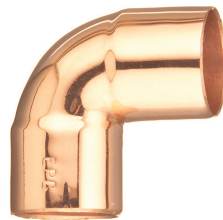
106 45° ELBOW (Cx C)

Part No.	Nom. Size (inches)
10231084	1/8
10231088	1/4
10231092	3/8
10231098	1/2
10233213	5/8
10231108	3/4
10231122	1
10231130	1 1/4
10231136	1 1/2
10231142	2
10231150	2 1/2
10231205	2 3/4
10231158	3
10231164	3 1/2
10231169	4
10231171	5
10231173	6
10231176	8



106-2 45° STREET ELBOW (FTGxC)

Part No.	Nom. Size (inches)
10231188	1/4
10231093	3/8
10231196	1/2
10231204	3/4
10231208	1
10231214	1 1/4
10231218	1 1/2
10231222	2
10230128	2 1/2
10232892	3
10230131	4



107-C 90° ELBOW CLOSE RUFF (Cx C)

Part No.	Nom. Size (inches)
10231261	1/8
10231263	1/4
10231267	3/8
10231273	1/2
10231281	5/8
10231289	3/4
10231297	1
10231307	1 1/4
10231315	1 1/2
10231323	2
10231331	2 1/2
10231339	3
10231348	3 1/2
10231353	4
10231361	5
10231369	6
10231373	8



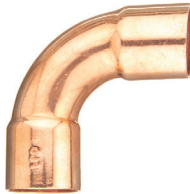
107-C-R 90° REDUCING ELBOW CLOSE RUFF (Cx C)

Part No.	Nom. Size (inches)
10230163	3/8 x 1/4
10233236	1/2 x 1/4
10233194	1/2 x 3/8
10231292	3/4 x 1/2
10231255	1 x 1/2
10230155	1 x 3/4
10233263	1 1/4 x 1
10233491	1 1/2 x 1 1/4
10231253	2 x 1 1/2
10233221	2 1/2 x 2
10231341	3 x 2 1/2



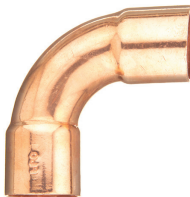
107-C-2 90° STREET ELBOW CLOSE RUFF (FTGxC)

Part No.	Nom. Size (inches)
10233481	1/4
10231259	3/8
10231402	1/2
10231405	5/8
10231410	3/4
10231414	1
10231418	1 1/4
10231422	1 1/2
10231426	2
10230146	2 1/2
10230149	3
10232188	3 1/2
10230129	4



107-L 90° ELBOW LONG TURN (CxC)

Part No.	Nom. Size (inches)
10231665	1/8
10231669	1/4
10231675	3/8
10231677	1/2
10231685	5/8
10231693	3/4
10231711	1
10231722	1 1/4
10231731	1 1/2
10230173	2
10233239	2 1/2
10231758	3
10231764	3 1/2
10231772	4



107-L-R 90° REDUCING ELBOW LONG TURN (CxC)

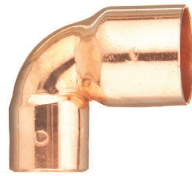
Part No.	Nom. Size (inches)
10232893	3/4 x 3/8
10233241	1 x 3/4
10231732	1 1/2 X 1 1/4



107-L-2 90° STREET ELBOW LONG TURN (FTGxC)

Part No.	Nom. Size (inches)
10231793	3/4
10231795	3/8
10231815	3/4
10231832	1
10231837	1 1/4
10231251	1 1/2
10231855	2
10233479	2 1/2
10233255	3 1/2
10231874	4

ELBOWS



107-MT 45° ELBOW (CxC)

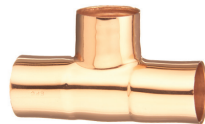
Part No.	Nom. Size (inches)
10230133	1/2
10233017	3/4
10233019	1



107-MT-2 90° STREET ELBOW MEDIUM TURN (FTGxC)

Part No.	Nom. Size (inches)
10230143	3/8
10230127	1/2
10231415	3/4

TEES



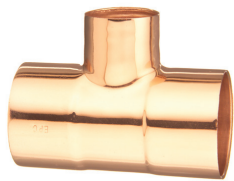
III TEE (CxCx)

Part No.	Nom. Size (inches)
10232605	1/8
10232641	1/4
10232669	3/8
10232701	1/2
10232734	5/8
10232771	3/4
10232819	1
10232867	1 1/4
10232911	1 1/2
10232971	2
10233031	2 1/2
10233125	3
10233252	3 1/2
10233260	4
10233402	5
10233422	6
10233455	8



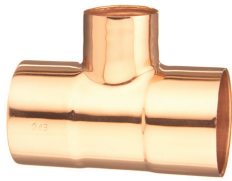
III BULLHEAD TEE (BH)

Part No.	Nom. Size (inches)
10230161	3/8 x 3/8 x 1/2
10232707	1/2 x 1/2 x 3/4
10232703	1/2 x 1/2 x 1
10232773	3/4 x 3/4 x 1
10232827	1 x 1 x 1 1/4
10232821	1 x 1 x 1 1/2
10232871	1 1/4 x 1 1/4 x 1 1/2
10232877	1 1/4 x 1 1/4 x 2
10232913	1 1/2 x 1 1/2 x 2
10232989	2 x 2 x 2 1/2
10233033	2 1/2 x 2 1/2 x 3



111-R REDUCING TEE (CxCxC)	
Part No.	Nom. Size (inches)
10233071	1/4 x 1/8 x 1/4
10232651	1/4 x 1/4 x 1/8
10233085	3/8 x 1/4 x 1/4
10232190	3/8 x 3/8 x 1/8
10233084	3/8 x 3/8 x 1/4
10232711	1/2 x 1/2 x 1/4
10232725	1/2 x 1/4 x 1/2
10232183	1/2 x 3/8 x 3/8
10233060	1/2 x 3/8 x 1/2
10233086	1/2 x 1/2 x 1/8
10232709	1/2 x 1/2 x 3/8
10231269	3/4 x 3/8 x 3/8
10230141	3/4 x 1/2 x 3/8
10232797	3/4 x 1/2 x 1/2
10232792	3/4 x 1/2 x 3/4
10232780	3/4 x 3/4 x 1/4
10232747	3/4 x 3/4 x 3/8
10232775	3/4 x 3/4 x 1/2
10233476	3/4 x 3/4 x 3/8
10232861	1 x 1/2 x 1/2
10232859	1 x 1/2 x 3/4
10232857	1 x 1/2 x 1
10232841	1 x 3/4 x 3/8
10232845	1 x 3/4 x 1/2
10232840	1 x 3/4 x 3/4
10232837	1 x 3/4 x 1
10232834	1 x 1 x 1/4
10233240	1 x 1 x 3/8
10232829	1 x 1 x 1/2
10232831	1 x 1 x 5/8
10232825	1 x 1 x 3/4
10233087	1 1/4 x 1/2 x 1 1/4
10232902	1 1/4 x 3/4 x 1/2
10232899	1 1/4 x 3/4 x 3/4
10232897	1 1/4 x 3/4 x 1
10232895	1 1/4 x 3/4 x 1 1/4
10232890	1 1/4 x 1 x 1/2
10232887	1 1/4 x 1 x 3/4
10232885	1 1/4 x 1 x 1

10232883	1 1/4 x 1 x 1 1/4
10232878	1 1/4 x 1 1/4 x 1/2
10232875	1 1/4 x 1 1/4 x 3/4
10232873	1 1/4 x 1 1/4 x 1
10232962	1 1/2 x 1/2 x 1 1/2
10230119	1 1/2 x 3/4 x 1/2
10232955	1 1/2 x 3/4 x 3/4
10232953	1 1/2 x 3/4 x 1
10232951	1 1/2 x 3/4 x 1 1/4
10232949	1 1/2 x 3/4 x 1 1/2
10232946	1 1/2 x 1 x 1/2
10232943	1 1/2 x 1 x 3/4
10232941	1 1/2 x 1 x 1
10232939	1 1/2 x 1 x 1 1/4
10232937	1 1/2 x 1 x 1 1/2
10233088	1 1/2 x 1 1/4 x 1/2
10232931	1 1/2 x 1 1/4 x 3/4
10232929	1 1/2 x 1 1/4 x 1
10232927	1 1/2 x 1 1/4 x 1 1/4
10232925	1 1/2 x 1 1/4 x 1 1/2
10232922	1 1/2 x 1 1/2 x 1/2
10232919	1 1/2 x 1 1/2 x 3/4
10232917	1 1/2 x 1 1/2 x 1
10232915	1 1/2 x 1 1/2 x 1 1/4
10233229	2 x 1/2 x 2
10233022	2 x 3/4 x 2
10233249	2 x 1 x 1
10233014	2 x 1 x 2
10233467	2 x 1 1/4 x 1/2
10232997	2 x 1 1/4 x 3/4
10233005	2 x 1 1/4 x 1
10233003	2 x 1 1/4 x 1 1/4
10233001	2 x 1 1/4 x 1 1/2
10232999	2 x 1 1/4 x 2
10259996	2 x 1 1/2 x 1/2
10232995	2 x 1 1/2 x 3/4
10232991	2 x 1 1/2 x 1
10230148	2 x 1 1/2 x 1 1/4
10232987	2 x 1 1/2 x 1 1/2
10232985	2 x 1 1/2 x 2
10232983	2 x 2 x 1/2



10232981	2 x 2 x 3/4	10233139	3 x 3 x 1
10232979	2 x 2 x 1	10233137	3 x 3 x 1/4
10232977	2 x 2 x 1/4	10233133	3 x 3 x 1/2
10232975	2 x 2 x 1/2	10233131	3 x 3 x 2
10232889	2 1/2 x 3/4 x 2 1/2	10233129	3 x 3 x 2 1/2
10232891	2 1/2 x 1 x 2 1/2	10233261	4 x 1 x 4
10233077	2 1/2 x 1/4 x 2 1/2	10231203	4 x 1 1/2 x 4
10233067	2 1/2 x 1 1/2 x 1 1/2	10233322	4 x 2 x 4
10233065	2 1/2 x 1 1/2 x 2	10233306	4 x 2 1/2 x 2 1/2
10233063	2 1/2 x 1 1/2 x 2 1/2	10233289	4 x 3 x 2
10233057	2 1/2 x 2 x 3/4	10233287	4 x 3 x 2 1/2
10233055	2 1/2 x 2 x 1	10233283	4 x 3 x 3
10233053	2 1/2 x 2 x 1/4	10233459	4 x 3 x 4
10230147	2 1/2 x 2 x 1 1/2	10233025	4 x 4 x 1/2
10233051	2 1/2 x 2 x 2	10232996	4 x 4 x 3/4
10230159	2 1/2 x 2 x 2 1/2	10233275	4 x 4 x 1
10233045	2 1/2 x 2 1/2 x 1/2	10230165	4 x 4 x 1/4
10233043	2 1/2 x 2 1/2 x 3/4	10232993	4 x 4 x 1/2
10233041	2 1/2 x 2 1/2 x 1	10233267	4 x 4 x 2
10233039	2 1/2 x 2 1/2 x 1/4	10233089	4 x 4 x 2 1/2
10233037	2 1/2 x 2 1/2 x 1 1/2	10233265	4 x 4 x 3
10233035	2 1/2 x 2 1/2 x 2	10233206	5 x 5 x 2
10233475	3 x 3/4 x 3	10233407	5 x 5 x 3
10233074	3 x 1 x 3	10233404	5 x 5 x 4
10233187	3 x 1 1/2 x 1 1/2	10233448	6 x 4 x 4
10233181	3 x 1 1/2 x 3	10233201	6 x 6 x 1/2
10233225	3 x 2 x 1	10233442	6 x 6 x 3/4
10233227	3 x 2 x 1/4	10233447	6 x 6 x 1
10231249	3 x 2 x 1 1/2	10233433	6 x 6 x 1/4
10233090	3 x 2 x 2	10233203	6 x 6 x 1/2
10233091	3 x 2 x 2 1/2	10233435	6 x 6 x 2
10233167	3 x 2 x 3	10233431	6 x 6 x 2 1/2
10231257	3 x 2 1/2 x 3/4	10233429	6 x 6 x 3
10233157	3 x 2 1/2 x 1	10233427	6 x 6 x 4
10259971	3 x 2 1/2 x 1/4	10232193	8 x 6 x 6
10233151	3 x 2 1/2 x 1 1/2	10233488	8 x 8 x 2
10233149	3 x 2 1/2 x 2	10233465	8 x 8 x 2 1/2
10230151	3 x 2 1/2 x 2 1/2	10233468	8 x 8 x 4
10230153	3 x 2 1/2 x 3	10233458	8 x 8 x 5
10233142	3 x 3 x 1/2	10233457	8 x 8 x 6
10233141	3 x 3 x 3/4		



116 FITTING END PLUG (C)

Part No.	Nom. Size (inches)
10232024	1/2
10232027	3/4



117 TUBE CAP (C)

Part No.	Nom. Size (inches)
10230658	1/8
10230623	1/4
10230629	3/8
10230627	1/2
10233231	5/8
10230631	3/4
10230633	1
10230635	1 1/4
10230637	1 1/2
10230639	2
10230641	2 1/2
10230645	3
10230648	4

BUSHINGS



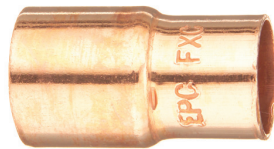
119 FLUSH BUSHING (FTGxC)

Part No.	Nom. Size (inches)
10233208	1/2 x 3/8
10233210	3/8 x 1/4
10233211	5/8 x 1/2
10233027	3/4 x 1/2
10233209	1 x 3/4
10233021	1 1/4 x 1
10233453	1 1/2 x 1 1/4
10230579	2 x 1 1/2



119-3 FEMALE FLUSH BUSHING (FTGxF)

Part No.	Nom. Size (inches)
10230123	1/2 x 1/8
10230125	1/2 x 1/4



118 FITTING REDUCER (FTGxC)	
Part No.	Nom. Size (inches)
10233451	1/4 x 1/8
10232047	3/8 x 1/8
10232045	3/8 x 1/4
10232052	1/2 x 1/4
10232049	1/2 x 3/8
10232055	5/8 x 1/2
10232070	3/4 x 1/4
10232067	3/4 x 3/8
10232065	3/4 x 1/2
10232069	3/4 x 5/8
10233219	1 x 3/8
10232077	1 x 1/2
10232073	1 x 3/4
10232088	1 1/4 x 1/2
10232085	1 1/4 x 3/4
10232083	1 1/4 x 1
10232098	1 1/2 x 1/2
10232095	1 1/2 x 3/4
10232093	1 1/2 x 1
10232091	1 1/2 x 1 1/4
10232112	2 x 1/2
10232109	2 x 3/4
10232107	2 x 1
10232105	2 x 1 1/4
10232103	2 x 1 1/2
10232122	2 1/2 x 1
10232119	2 1/2 x 1 1/4
10233072	2 1/2 x 1 1/2
10232115	2 1/2 x 2
10232134	3 x 1 1/4
10232131	3 x 1 1/2
10232129	3 x 2
10230118	3 x 2 1/2
10232142	3 1/2 x 2
10232137	3 1/2 x 3
10232152	4 x 2
10232149	4 x 2 1/2
10232147	4 x 3
10232145	4 x 3 1/2
10233204	5 x 2
10232157	5 x 3
10232155	5 x 4
10232185	6 x 2
10232169	6 x 2 1/2
10232171	6 x 3
10232167	6 x 4
10232165	6 x 5
10232184	8 x 3
10232181	8 x 4
10232178	8 x 5
10233279	8 x 6



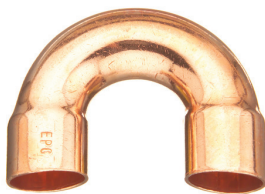
123 P-TRAP (CxC)

Part No.	Nom. Size (inches)
10232177	1/2
10233487	5/8
10232179	3/4
10232471	1
10233477	1 1/4
10233473	1 1/2



136 CROSS OVER (CxC)

Part No.	Nom. Size (inches)
10231071	1/2
10233461	3/4



138 RETURN BEND (CxC)

Part No.	Nom. Size (inches)
10232303	1/4 x 1 1/2
10232317	3/8 x 2
10232175	1/2 x 1 1/2
10232339	1/2 x 2 1/2
10233281	3/4 x 2 1/2
10232173	1 x 3
10232383	1 1/2 x 4 3/8
10232385	2 x 5 1/2

218 Lasco Push
219-235 **Schedule 40**

219-222	Tees
223-227	Elbows
227	Crosses
228-229	Couplings
229-230	Extenders
230-231	Adapters
232-233	Bushings
233-234	Caps
234	Plugs
235	Unions
235	O-Rings
235	Wye

236-249 **Schedule 80**

236-237	Tees
238-239	Elbows
240	Crosses
240-241	Couplings
241	Adapters
242-243	Reducer Bushings
244	Caps
245	Plugs
246-247	Flanges & Nipples
248	Wye
248-249	Unions
249	O-Rings

250-259 **SCHEDULE 80 CPVC**

260 HVAC

262-280 DWV

282-286 CTS-CPVC





SLIP TEE (PVC)

Part No.	Nom. Size (inches)
LPC01005	1/2
LPC01007	3/4
LPC01010	1



SLIP ELBOW (PVC)

Part No.	Nom. Size (inches)
LPC06005	1/2
LPC06007	3/4
LPC06010	1



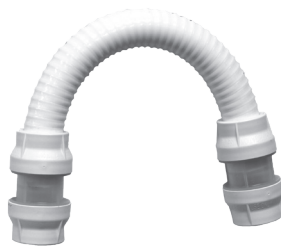
SLIP COUPLING (PVC)

Part No.	Nom. Size (inches)
LPC29005	1/2
LPC29007	3/4
LPC29010	1



SLIP CAP (PVC)

Part No.	Nom. Size (inches)
LPC47005	1/2
LPC47007	3/4
LPC47010	1



FLEX REPAIR COUPLING (PVC)

Part No.	Nom. Size (inches)
LPC2918005	1/2
LPC2918007	3/4
LPC2918010	1



REMOVAL TOOL (LASCO PUSH)

Part No.	Nom. Size (inches)
LPRT005	1/2
LPRT007	3/4
LPRT010	1


TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
401-003	$\frac{3}{8}$
401-005	$\frac{1}{2}$
401-007	$\frac{3}{4}$
401-010	1
401-012	$1\frac{1}{4}$
401-015	$1\frac{1}{2}$
401-020	2
401-025	$2\frac{1}{2}$
401-030	3
401-040	4
401-050	5
401-060	6
401-080	8
401-100	10
401-120	12


REDUCING TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
401-094	$\frac{3}{4} \times \frac{1}{2} \times \frac{1}{2}$
401-095	$\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$
401-101	$\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$
401-122	$1 \times \frac{1}{2} \times 1$
401-124	$1 \times \frac{3}{4} \times \frac{1}{2}$
401-125	$1 \times \frac{3}{4} \times \frac{3}{4}$
401-126	$1 \times \frac{3}{4} \times 1$
401-130	$1 \times 1 \times \frac{1}{2}$
401-131	$1 \times 1 \times \frac{3}{4}$
401-156	$1\frac{1}{4} \times 1 \times \frac{1}{2}$
401-157	$1\frac{1}{4} \times 1 \times \frac{3}{4}$
401-158	$1\frac{1}{4} \times 1 \times 1$
401-166	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{1}{2}$
401-167	$1\frac{1}{4} \times 1\frac{1}{4} \times \frac{3}{4}$
401-168	$1\frac{1}{4} \times 1\frac{1}{4} \times 1$
401-199	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{1}{2}$
401-201	$1\frac{1}{2} \times 1\frac{1}{4} \times \frac{3}{4}$
401-202	$1\frac{1}{2} \times 1\frac{1}{4} \times 1$
401-209	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{1}{2}$
401-210	$1\frac{1}{2} \times 1\frac{1}{2} \times \frac{3}{4}$
401-211	$1\frac{1}{2} \times 1\frac{1}{2} \times 1$
401-212	$1\frac{1}{2} \times 1\frac{1}{2} \times 1\frac{1}{4}$
401-238	$2 \times 1\frac{1}{2} \times \frac{3}{4}$
401-239	$2 \times 1\frac{1}{2} \times 1$
401-241	$2 \times 1\frac{1}{2} \times 1\frac{1}{2}$
401-247	$2 \times 2 \times \frac{1}{2}$
401-248	$2 \times 2 \times \frac{3}{4}$
401-249	$2 \times 2 \times 1$
401-250	$2 \times 2 \times 1\frac{1}{4}$



REDUCING TEE CONT'D (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
401-251	2 x 2 x 1½
401-287	2½ x 2½ x ½
401-288	2½ x 2½ x ¾
401-289	2½ x 2½ x 1
401-290	2½ x 2½ x 1¼
401-291	2½ x 2½ x 1½
401-292	2½ x 2½ x 2
401-333	3 x 3 x ½
401-334	3 x 3 x ¾
401-335	3 x 3 x 1
401-336	3 x 3 x 1¼
401-337	3 x 3 x 1½
401-338	3 x 3 x 2
401-339	3 x 3 x 2½
401-416	4 x 4 x ¾
401-417	4 x 4 x 1
401-418	4 x 4 x 1¼
401-419	4 x 4 x 1½
401-420	4 x 4 x 2
401-422	4 x 4 x 3
401-486	5 x 5 x 2
401-488	5 x 5 x 3
401-490	5 x 5 x 4
401-528	6 x 6 x 2
401-530	6 x 6 x 3
401-532	6 x 6 x 4
401-582	8 x 8 x 4
401-585	8 x 8 x 6
401-624	10 x 10 x 4
401-626	10 x 10 x 6
401-628	10 x 10 x 8
401-664	12 x 12 x 4
401-666	12 x 12 x 6
401-668	12 x 12 x 8
401-670	12 x 12 x 10



BULLHEAD TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
401-074	½ x ¾
401-102	¾ x 1
401-132	1 x 1¼
401-133	1 x 1½
401-213	1½ x 2
401-341	3 x 4


 TEE
 Slip x Slip x FPT

Part No.	Nom. Size (inches)
402-005	½
402-007	¾
402-010	1
402-012	1¼
402-015	1½
402-020	2
402-030	3
402-040	4

402-334	3 x 3 x ¾
402-335	3 x 3 x 1
402-336	3 x 3 x 1¼
402-337	3 x 3 x 1½
402-338	3 x 3 x 2
402-416	4 x 4 x ¾
402-417	4 x 4 x 1
402-418	4 x 4 x 1¼
402-419	4 x 4 x 1½
402-420	4 x 4 x 2
402-422	4 x 4 x 3
402-490	5 x 5 x 4
402-528	6 x 6 x 2
402-530	6 x 6 x 3
402-532	6 x 6 x 4

*Fabricated with bushing



REDUCING TEE (Slip x Slip x FPT)

Part No.	Nom. Size (inches)
402-071	½ x ½ x ¾
402-072	½ x ½ x ¼
402-074	½ x ½ x ¾
402-094	¾ x ½ x ½
402-095	¾ x ½ x ¾
402-101	¾ x ¾ x ½
402-124	1 x ¾ x ½
402-125	1 x ¾ x ¾
402-130	1 x 1 x ½
402-131	1 x 1 x ¾
402-156	1¼ x 1 x ½
402-157	1¼ x 1 x ¾
402-166	1¼ x 1¼ x ½
402-167	1¼ x 1¼ x ¾
402-168	1¼ x 1¼ x 1
402-199	1½ x 1¼ x ½
402-202	1½ x 1¼ x 1
402-209	1½ x 1½ x ½
402-210	1½ x 1½ x ¾
402-211	1½ x 1½ x 1
402-212	1½ x 1½ x 1¼
402-239	2 x 1½ x 1
402-247	2 x 2 x ½
402-248	2 x 2 x ¾
402-249	2 x 2 x 1
402-250	2 x 2 x 1¼
402-251	2 x 2 x 1½
402-287	2½ x 2½ x ½
402-288	2½ x 2½ x ¾
402-289	2½ x 2½ x 1
402-290	2½ x 2½ x 1¼
402-291	2½ x 2½ x 1½
402-292	2½ x 2½ x 2
402-333	3 x 3 x ½



MANIFOLD TEE (Slip x Slip x MPT)

Part No.	Nom. Size (inches)
402B-010	1



TEE (Slip x FPT x Slip)

Part No.	Nom. Size (inches)
403-005	½
403-007	¾



TEE (FPT x FPT x FPT)

Part No.	Nom. Size (inches)
405-005	½
405-007	¾
405-010	1
405-012	1¼
405-015	1½



TEE (Snap-On x FPT)

Part No.	Nom. Size (inches)
464-007	¾
464-101	¾ x ½
464-130	1 x ½
464-131	1 x ¾



TRANSITION TEE (Slip x Slip x Insert)

Part No.	Nom. Size (inches)
1102-249	2 x 2 x 1



90° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
406-003	3/8
406-005	1/2
406-007	3/4
406-010	1
406-012	1 1/4
406-015	1 1/2
406-020	2
406-025	2 1/2
406-030	3
406-040	4
406-050	5
406-060	6
406-080	8
406-100	10
406-120	12



90° REDUCING ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
406-003	3/8
406-005	1/2
406-007	3/4
406-010	1
406-012	1 1/4
406-015	1 1/2
406-020	2
406-025	2 1/2
406-030	3
406-040	4
406-050	5
406-060	6
406-080	8



90° ELBOW (Slip x FPT)

Part No.	Nom. Size (inches)
407-005	1/2
407-007	3/4
407-010	1
407-012	1 1/4
407-015	1 1/2
407-020	2
407-025	2 1/2
407-030	3
407-040	4



90° REDUCING ELBOW (Slip x FPT)

Part No.	Nom. Size (inches)
407-074	½ x ¾
407-101	¾ x 1½
407-130	1 x 1½
407-131	1 x ¾
407-168	1¼ x 1
407-211	1½ x 1
407-212	1½ x 1¼
407-249	2 x 1
407-250	2 x 1¼
407-251	2 x 1½



90° ELBOW (FPT x FPT)

Part No.	Nom. Size (inches)
408-005	½
408-007	¾
408-010	1
408-012	1¼
408-015	1½
408-020	2



90° STREET ELBOW (SPF x Slip)

Part No.	Nom. Size (inches)
409-005	½
409-007	¾
409-010	1
409-012	1¼
409-015	1½
409-020	2
409-025	2 ½
409-030	3
409-100	10
409-120	12



90° STREET ELBOW (MPT x Slip)

Part No.	Nom. Size (inches)
410-005	½
410-007	¾
410-010	1
410-012	1¼
410-015	1½
410-020	2
410-101	¾ x 1½



90° STREET ELBOW (SPG x FPT)

Part No.	Nom. Size (inches)
411-005	½
411-007	¾
411-010	1
411-012	1¼
411-015	1½



90° STREET ELBOW (MPT x FPT)

Part No.	Nom. Size (inches)
412-005	½ PVC
412-007	¾ PVC
412-010	1 PVC
412-012	1¼ PVC
412-015	1½ PVC



90° REDUCING STREET ELBOW (MPT x FPT)

Part No.	Nom. Size (inches)
M412-005	½ Poly*
M412-007	¾ Poly*
M412-010	1 Poly*

*Not Listed by NSF (Poly also known as Marlex)



90° SIDE OUTLET ELBOW (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
413-005	½
413-007	¾
413-010	1
413-015	1½
413-020	2



90° SIDE OUTLET ELBOW (Slip x Slip x FPT)

Part No.	Nom. Size (inches)
414-005	½
414-007	¾
414-101	¾ X ½
414-130	1 X 1 X ½



90° REDUCING ELBOW (Slip x Slip w/Spigot)

Part No.	Nom. Size (inches)
416-251	2 x 1½ (2 Sp)
416-292	2½ x 2 (2½ Sp)



45° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
417-005	½
417-007	¾
417-010	1
417-012	1¼
417-015	1½
417-020	2
417-025	2½
417-030	3
417-040	4
417-050	5
417-060	6
417-080	8
417-100	10
417-120	12



45° STREET ELBOW (Spigot x Slip)

Part No.	Nom. Size (inches)
423-015	1½
423-020	2
423-025	2½
423-030	3
423-100	10
423-120	12



1½° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
461-100	10
461-120	12

Fabricated from pipe



22 1/2° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
465-015	1 1/2
465-020	2
465-025	2 1/2
465-030	3
465-040	4
465-060	6
465-100	10*
465-120	12*

250 p.s.i. working pressure. 200 p.s.i. working pressure does not comply with ASTM D2466. *Fabricated from pipe.



CROSS (Slip x Slip x Slip x Slip)

Part No.	Nom. Size (inches)
420-005	1/2
420-007	3/4
420-010	1
420-012	1 1/4
420-015	1 1/2
420-020	2
420-025	2 1/2
420-030	3
420-040	4



REDUCING CROSS (Slip x Slip x Slip x Slip)

Part No.	Nom. Size (inches)
420-335	3 x 1
420-337	3 x 1 1/2
420-338	3 x 2
420-419	4 x 1 1/2
420-420	4 x 2



MANIFOLD CROSS (Slip x Slip x MPT x MPT)

Part No.	Nom. Size (inches)
421A-010	1



LONG SOCKET COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
428-015	1½ (1.825")
428-020	2 (1.945")

*Socket depth, each side.



COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
429-003	¾
429-005	½
429-007	¾
429-010	1
429-012	1¼
429-015	1½
429-020	2
429-025	2 ½
429-030	3
429-040	4
429-050	5
429-060	6
429-080	8
429-100	10
429-120	12



REDUCER COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
429-101	¾ x ½
429-131	1 x ¾
429-168	1¼ x 1
429-211	1½ x 1
429-212	1½ x 1¼
429-251	2 x 1½
429-338	3 x 2
429-422	4 x 3
429-532	6 x 4
429-582	8 x 4
429-585	8 x 6
429-626	10 x 6
429-628	10 x 8
429-668	12 x 8
429-670	12 x 10



COUPLING (FPTx FPT)	
Part No.	Nom. Size (inches)
430-005	1/2
430-007	3/4
430-010	1
430-012	1 1/4
430-015	1 1/2
430-020	2
430-101	3/4 x 1/2
430-131	1 x 3/4
430-005-45	1/2 GRAY
430-007-45	3/4 GRAY
430-101-45	3/4 x 1/2 GRAY
430-131-45	1 x 3/4 GRAY



NESTED COUPLING (Slip x Slip)	
Part No.	Nom. Size (inches)
477-005	1/2*
477-007	3/4
477-010	1

*1/2" nested couplings do not meet ASTM Standards for Sch 40 fittings and are not NSF listed.



DEEP SOCKET COUPLING (Slip x Slip)	
Part No.	Nom. Size (inches)
482-015	1 1/2 (2.169*)
482-020	2 (2.389*)
482-025	2 1/2 (3.385*)
482-030	3 (3.625*)
482-040	4 (3.625*)

*Socket depth, each side.



RISER EXTENDER (MPT x FPT)	
Part No.	Nom. Size (inches)
434-005	1/2
434-007	3/4
434-008	3/4*
434-010	1
434-020	2
439-198	Increasing 1 1/2 x 2

*2-5/16 Long



RISER EXTENDER (Slip x FPT)

Part No.	Nom. Size (inches)
435-005	½
435-007	¾
435-010	1
435-012	1¼
435-015	1½
435-020	2
435-025	2½
435-030	3
435-040	4
435-050	5
435-060	6
435-080	8



REDUCING FEMALE ADAPTER (Slip x FPT)

Part No.	Nom. Size (inches)
435-074	½ x ¾
435-101	¾ x ½
435-102	¾ x 1
435-130	1 x ½
435-131	1 x ¾
435-211	1 x 1½



MALE ADAPTER (MPT x Slip)

Part No.	Nom. Size (inches)
436-005	½
436-007	¾
436-010	1
436-012	1¼
436-015	1½
436-020	2
436-025	2½
436-030	3
436-040	4
436-050	5
436-060	6
436-080	8



REDUCING MALE ADAPTER (MPT x Slip)

Part No.	Nom. Size (inches)
436-073	½ x ¾
436-074	½ x ¾
436-101	¾ x 1
436-102	¾ x 1
436-131	1 x ¾
436-132	1 x 1¼
436-133	1 x 1½
436-168	1¼ x 1
436-169	1¼ x 1½
436-212	1½ x 1¼
436-213	1½ x 2
436-251	2 x 1½
436-252	2 x 2½
436-253	2 x 3
436-293	2½ x 3
436-341	3 x 4



ADAPTER (Insert Barb x Slip)

Part No.	Nom. Size (inches)
474-007	¾
474-010	1
474-015	1½
474-020	2



FITTING ADAPTER (Spigot x FPT)

Part No.	Nom. Size (inches)
478-010	1
478-012	½
478-015	1½
478-020	2



INSERT ADAPTER (Insert x Spigot)

Part No.	Nom. Size (inches)
460-007	¾ x ¾ SP (½ Slip)
460-010	1 x 1 SP (¾ Slip)
460-015	1½ x 1½ SP

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



REDUCER BUSHING (Spigot x Slip)	
Part No.	Nom. Size (inches)
437-073	½ x ¾
437-101	¾ x ½
437-130	1 x ½
437-131	1 x ¾
437-166	1¼ x ½
437-167	1¼ x ¾
437-168	1¼ x 1
437-209	1½ x ½
437-210	1½ x ¾
437-211	1½ x 1
437-212	1½ x 1¼
437-247	2 x ½
437-248	2 x ¾
437-249	2 x 1
437-250	2 x 1¼
437-251	2 x 1½
437-287	2½ x ½
437-288	2½ x ¾
437-289	2½ x 1
437-290	2½ x 1¼
437-291	2½ x 1½
437-292	2½ x 2
437-334*	3 x ¾
437-335	3 x 1
437-336	3 x 1¼

437-337	3 x 1½
437-338	3 x 2
437-339	3 x 2½
437-420	4 x 2
437-421	4 x 2½
437-422	4 x 3
437-488	5 x 3
437-490	5 x 4
437-528	6 x 2
437-529*	6 x 2½
437-530	6 x 3
437-532	6 x 4
437-534	6 x 5
437-580*	8 x 3
437-582	8 x 4
437-585	8 x 6
437-623	10 x 3
437-624	10 x 4
437-626	10 x 6
437-628	10 x 8
437-661	12 x 3
437-664	12 x 4
437-666	12 x 6
437-668	12 x 8
437-670	12 x 10

*Fabricated with Molded Pieces



REDUCER BUSHING (Spigot x FPT)	
Part No.	Nom. Size (inches)
438-071	½ x ¾
438-072	½ x 1
438-073	½ x ¾
438-098	¾ x 1
438-101	¾ x ½
438-130	1 x ½
438-131	1 x ¾
438-166	1¼ x ½
438-167	1¼ x ¾
438-168	1¼ x 1
438-209	1½ x ½
438-210	1½ x ¾
438-211	1½ x 1
438-212	1½ x 1¼
438-247	2 x ½
438-248	2 x ¾
438-249	2 x 1

438-250	2 x 1¼
438-251	2 x 1½
438-288	2½ x ¾
438-289	2½ x 1
438-290	2½ x 1¼
438-291	2½ x 1½
438-292	2½ x 2
438-335	3 x 1
438-336	3 x 1¼
438-337	3 x 1½
438-338	3 x 2
438-339	3 x 2½
438-420	4 x 2
438-421	4 x 2½
438-422	4 x 3
438-490	5 x 4
438-528	6 x 2
438-532	6 x 4



THREADED REDUCER BUSHING (MPT x FPT)

Part No.	Nom. Size (inches)
439-005	½
439-052	¾ x ¼
439-072	½ x ¼
439-073	½ x ⅜
439-098	¾ x ¼
439-099	¾ x ⅜
439-101	¾ x ½
439-130	1 x ½
439-131	1 x ¾
439-166	1¼ x ½
439-167	1¼ x ¾
439-168	1¼ x 1
439-198	Increasing 1½ x 2
439-209	1½ x ½
439-210	1½ x ¾
439-211	1½ x 1
439-212	1½ x 1¼
439-249	2 x 1
439-250	2 x 1¼
439-251	2 x 1½
439-292	2½ x 2
439-338	3 x 2



CAP (Slip)

Part No.	Nom. Size (inches)
447-005	½
447-007	¾
447-010	1
447-012	1¼
447-015	1½
447-020	2
447-025	2 ½
447-030	3
447-040	4
447-050	5
447-060	6
447-080	8
447-100	10
447-120	12



THREADED CAP (FPT)

Part No.	Nom. Size (inches)
448-005	½
448-007	¾
448-010	1
448-012	1¼
448-015	1½
448-020	2
448-025	2 ½
448-030	3
448-040	4



PLUG (Spigot)

Part No.	Nom. Size (inches)
449-003	¾
449-005	1
449-007	1¼
449-010	1½
449-012	2
449-015	2½
449-020	3
449-025	4
449-030	
449-040	



PLUG (MPT)

Part No.	Nom. Size (inches)
450-005	½
450-007	¾
450-010	1
450-012	1¼
450-015	1½
450-020	2
450-025	2½
450-030	3
450-040	4



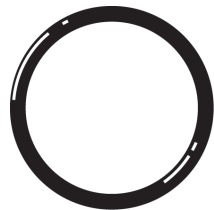
UNION (Slip x Slip)	
Part No.	Nom. Size (inches)
457-005	½
457-007	¾
457-010	1
457-012	1¼
457-015	1½
457-020	2
457-030	3

Pressure rated at 150 p.s.i. at 73.4°F. Unions are listed as NSF 61



UNION (FPT x FPT)	
Part No.	Nom. Size (inches)
458-005	½
458-007	¾
458-010	1
458-012	1¼
458-015	1½
458-020	2
458-030	3
458-040	4

Pressure rated at 150 p.s.i. at 73.4°F. Unions are listed as NSF 61



UNION O-RING Buna-N (Nitrile) Current Style	
Part No.	Nom. Size (inches)
40116	½
40119	¾
40123	1
40128	1¼
40224	1½
40228	2
40119Q	3



WYE (Slip)	
Part No.	Nom. Size (inches)
475-015	1½*
475-020	2*
475-040	4**
475-422	4 x 4 x 3**
475-060	6
475-532	6 x 4
475-030	3
475-060	6
475-080	8
475-582	8 x 4

*235 psi working pressure **150 psi working pressure



TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
801-002	¼
801-003	⅜
801-005	½
801-007	¾
801-010	1
801-012	1¼
801-015	1½
801-020	2
801-025	2½
801-030	3
801-040	4
801-060	6
801-080	8
801-100	10
801-120	12

REDUCING TEE (Slip x Slip x Slip)



Part No.	Nom. Size (inches)
801-072	½ x ½ x ¾
801-073	½ x ¾
801-101	¾ x ¾ x 1½
801-130	1 x 1 x ½
801-131	1 x 1 x ¾
801-157	1¼ x 1 x ¾
801-158*	1¼ x 1 x 1
801-159*	1¼ x 1 x 1¼
801-166*	1¼ x 1¼ x ½
801-167*	1¼ x 1¼ x ¾
801-168	1¼ x 1¼ x 1
801-202*	1½ x 1¼ x 1
801-209*	1½ x 1½ x ½
801-210	1½ x 1½ x ¾
801-211	1½ x 1½ x 1
801-212	1½ x 1½ x 1¼
801-247	2 x 2 x ½
801-248	2 x 2 x ¾
801-249	2 x 2 x 1
801-250	2 x 2 x 1¼
801-251	2 x 2 x 1½
801-290	2½ x 2½ x 1¼
801-291	2½ x 2½ x 1½
801-292	2½ x 2½ x 2



801-337	3 x 3 x 1½
801-338	3 x 3 x 2
801-417*	4 x 4 x 1
801-418*	4 x 4 x 1¼
801-419*	4 x 4 x 1½
801-420	4 x 4 x 2
801-421*	4 x 2½
801-422	4 x 4 x 3
801-525*	6 x 6 x 1
801-526*	6 x 6 x 1¼
801-527*	6 x 6 x 1½
801-528*	6 x 6 x 2
801-529*	6 x 6 x 2½
801-530	6 x 6 x 3
801-532	6 x 6 x 4
801-580	8 x 8 x 3
801-585*	8 x 8 x 6
801-623*	10 x 10 x 3
801-624*	10 x 10 x 4
801-626*	10 x 10 x 6
801-628*	10 x 10 x 8
801-666*	12 x 12 x 6
801-668*	12 x 12 x 8
801-670*	12 x 12 x 10

*Sized with Bushing


REDUCING TEE (Slip x Slip x FPT)

Part No.	Nom. Size (inches)
802-005	½
802-007	¾
802-010	1
802-012	1¼
802-015	1½
802-020	2



802-333*	3 x 3 x ½
802-334*	3 x 3 x ¾
802-335*	3 x 3 x 1
802-336*	3 x 3 x 1¼
802-337*	3 x 3 x 1½
802-338*	3 x 3 x 2
802-339*	3 x 3 x 2½
802-415*	4 x 4 x ½
802-416*	4 x 4 x ¾
802-417*	4 x 4 x 1
802-418*	4 x 4 x 1¼
802-419*	4 x 4 x 1½
802-420*	4 x 4 x 2
802-421*	4 x 4 x 2½
802-422*	4 x 4 x 3
802-528*	6 x 6 x 2
802-529*	6 x 6 x 2½
802-530*	6 x 6 x 3
802-532*	6 x 6 x 4

*Sized with Bushing

REDUCING TEE (Slip x Slip x FPT)
New!
 sizes

Part No.	Nom. Size (inches)
802-072*	½ x ½ x ¼
802-101*	¾ x ¾ x ½
802-130*	1 x 1 x ½
802-131*	1 x 1 x ¾
802-166*	1¼ x 1¼ x ½
802-167*	1¼ x 1¼ x ¾
802-168*	1¼ x 1¼ x 1
802-209*	1½ x 1½ x ½
802-210*	1½ x 1½ x ¾
802-211*	1½ x 1½ x 1
802-212*	1½ x 1½ x 1¼
802-247*	2 x 2 x ½
802-248*	2 x 2 x ¾
802-249*	2 x 2 x 1
802-250	2 x 2 x 1¼
802-251	2 x 2 x 1½
802-291	2½ x 2½ x 1½
802-292*	2½ x 2½ x 2

TEE (FPT x FPT x FPT)

Part No.	Nom. Size (inches)
805-002	¼
805-003	¾
805-005	½
805-007	¾
805-010	1
805-012	1¼
805-015	1½
805-020	2
805-025	2½
805-030	3
805-040	4





90° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
806-002	¼
806-003	⅜
806-005	½
806-007	¾
806-010	1
806-012	1¼
806-015	1½
806-020	2
806-025	2½
806-030	3
806-040	4
806-060	6
806-080	8



90° ELBOW (Slip x FPT)

Part No.	Nom. Size (inches)
807-005	½
807-007	¾
807-010	1
807-012	1¼
807-015	1½
807-020	2



90° ELBOW (FPT x FPT)

Part No.	Nom. Size (inches)
808-002	¼
808-003	⅜
808-005	½
808-007	¾
808-010	1
808-012	1¼
808-015	1½
808-020	2
808-025	2½
808-030	3
808-040	4



11½° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
861-100	10
861-120	12

Fabricated from Pipe



22½° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
865-020	2
865-030	3
865-100	10
865-120	12

Note: Meets ASTM D-2467 socket and wall dimensions, but fitting pattern is not in D-2467. Working pressure rating of 150 p.s.i. Not NSF Standard 14 Listed.



30° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
815-060	6



45° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
817-002	¼
817-003	⅜
817-005	½
817-007	¾
817-010	1
817-012	1¼
817-015	1½
817-020	2
817-025	2½
817-030	3
817-040	4
817-060	6
817-080	8
817-100	10
817-120	12



45° ELBOW (FPT x FPT)

Part No.	Nom. Size (inches)
819-005	½
819-007	¾
819-010	1
819-012	1¼
819-015	1½
819-020	2
819-025	2½
819-030	3
819-040	4

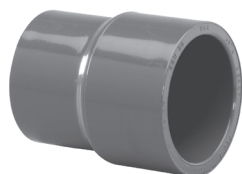


CROSS (Slip x Slip x Slip x Slip)	
Part No.	Nom. Size (inches)
820-015	1½
820-020	2
820-030	3
820-040	4

REDUCING CROSS (Slip x Slip x Slip x Slip) New!	
Part No.	Nom. Size (inches)
820-209*	1½ X ½
820-210*	1½ X ¾
820-211*	1½ X 1
820-212*	1½ X 1¼



COUPLING (Slip x Slip)	
Part No.	Nom. Size (inches)
829-002	¼
829-003	⅜
829-005	½
829-007	¾
829-010	1
829-012	1¼
829-015	1½
829-020	2
829-025	2½
829-030	3
829-040	4
829-060	6
829-080	8
829-100	10
829-120	12



REDUCER COUPLING (Slip x Slip) New! sizes	
Part No.	Nom. Size (inches)
829-052*	¾ x ¼
829-072*	½ x ¼
829-101	¾ x ½
829-131	1 x ¾
829-166*	1¼ x ½
829-167*	1¼ x ¾
829-168	1¼ x 1
829-209*	1½ x ½
829-210	1½ x ¾
829-211	1½ x 1
829-212	1½ x 1¼
829-247*	2 x ½
829-248*	2 x ¾
829-249*	2 x 1
829-250*	2 x 1¼
829-251	2 x 1½
829-290*	2½ x 1¼
829-291*	2½ x 1½
829-292*	2½ x 2
829-335*	3 x 1

829-336*	3 x 1¼
829-337*	3 x 1½
829-338	3 x 2
829-339*	3 x 2½
829-417*	4 x 1
829-419*	4 x 1½
829-420*	4 x 2
829-421*	4 x 2½
829-422	4 x 3
829-528*	6 x 2
829-530*	6 x 3
829-251	2 x 1½
829-338	3 x 2
829-422	4 x 3
829-532	6 x 4
829-585	8 x 6
829-619*	10 x 2
829-623*	10 x 3
829-624*	10 x 4
829-626*	10 x 6

*Sized with Bushing



COUPLING (FPT x FPT)	
Part No.	Nom. Size (inches)
830-002	1/4
830-005	1/2
830-007	3/4
830-010	1
830-012	1 1/4
830-015	1 1/2
830-020	2
830-025	2 1/2
830-030	3
830-040	4



FEMALE ADAPTER (Slip x FPT)	
Part No.	Nom. Size (inches)
835-002	1/4
835-005	1/2
835-007	3/4
835-010	1
835-012	1 1/4
835-015	1 1/2
835-020	2
835-025	2 1/2
835-030	3
835-040	4



MALE ADAPTER (MPT x Slip)	
Part No.	Nom. Size (inches)
836-005	1/2
836-007	3/4
836-010	1
836-012	1 1/4
836-015	1 1/2
836-020	2
836-025	2 1/2
836-030	3
836-040	4

New!
SIZES

REDUCER BUSHING FLUSH STYLE (Spigot x Slip)

Part No.	Nom. Size (inches)
837-052	3/8 x 1/4
837-072	1/2 x 1/4
837-073	1/2 x 3/8
837-101	3/4 x 1/2
837-129*	1 x 3/8
837-130	1 x 1/2
837-131	1 x 3/4
837-166	1 1/4 x 1/2
837-167	1 1/4 x 3/4
837-168	1 1/4 x 1
837-209	1 1/2 x 1/2
837-210	1 1/2 x 3/4
837-211	1 1/2 x 1
837-212	1 1/2 x 1 1/4
837-247	2 x 1/2
837-248	2 x 3/4
837-249	2 x 1
837-250	2 x 1 1/4
837-251	2 x 1 1/2
837-287*	2 1/2 x 1/2
837-288*	2 1/2 x 3/4
837-289	2 1/2 x 1
837-290	2 1/2 x 1 1/4
837-291	2 1/2 x 1 1/2
837-292	2 1/2 x 2
837-333*	3 x 1/2
837-334*	3 x 3/4
837-335	3 x 1



837-336	3 x 1 1/4
837-337	3 x 1 1/2
837-338	3 x 2
837-339	3 x 2 1/2
837-415*	4 x 1/2
837-416*	4 x 3/4
837-417*	4 x 1
837-418*	4 x 1 1/4
837-419*	3 x 1 1/2
837-420	4 x 2
837-421	4 x 2 1/2
837-422	4 x 3
837-524*	6 x 3/4
837-525*	6 x 1
837-526*	6 x 1 1/4
837-527*	6 x 1 1/2
837-528	6 x 2
837-529*	6 x 2 1/2
837-530	6 x 3
837-532	6 x 4
837-580*	8 x 3
837-582*	8 x 4
837-585	8 x 6
837-624*	10 x 4
837-626	10 x 6
837-628	10 x 8
837-666*	12 x 6
837-668	12 x 8
837-670	12 x 10

*Sized with Bushing

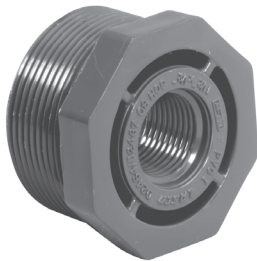
New!
SIZES

REDUCER BUSHING FLUSH STYLE (Spigot x FPT)

Part No.	Nom. Size (inches)
838-052	3/8 x 1/4
838-072	1/2 x 1/4
838-098	3/4 x 1/4
838-101	3/4 x 1/2
838-128*	1 x 1/2
838-130	1 x 1/2
838-131	1 x 3/4
838-166	1 1/4 x 1/2
838-167	1 1/4 x 3/4
838-168	1 1/4 x 1
838-207	1 1/2 x 1/4
838-209	1 1/2 x 1/2
838-210	1 1/2 x 3/4
838-211	1 1/2 x 1
838-212	1 1/2 x 1 1/4
838-247	2 x 1/2
838-248	2 x 3/4
838-249	2 x 1
838-250	2 x 1 1/4



838-251	2 x 1 1/2
838-287*	2 1/2 x 1/2
838-288*	2 1/2 x 3/4
838-290*	2 1/2 x 1 1/4
838-291*	2 1/2 x 1 1/2
838-292	2 1/2 x 2
838-334*	3 x 3/4
838-335*	3 x 1
838-336*	3 x 1 1/4
838-337*	3 x 1 1/2
838-338	3 x 2
838-339	3 x 2 1/2
838-419*	3 x 1 1/2
838-420	4 x 2
838-421*	4 x 2 1/2
838-422	4 x 3
838-528*	6 x 2
838-530*	6 x 3
838-532	6 x 4



REDUCER BUSHING FLUSH STYLE (MPT x FPT)

Part No.	Nom. Size (inches)
839-052	3/8 x 1/4
839-072	1/2 x 1/4
839-073	1/2 x 3/8
839-098	3/4 x 1/4
839-099	3/4 x 3/8
839-101	3/4 x 1/2
839-128	1 x 1/4
839-129	1 x 3/8
839-130	1 x 1/2
839-131	1 x 3/4
839-166	1 1/4 x 1/2
839-167	1 1/4 x 3/4
839-168	1 1/4 x 1
839-209	1 1/2 x 1/2
839-210	1 1/2 x 3/4
839-211	1 1/2 x 1
839-212	1 1/2 x 1 1/4
839-247	2 x 1/2
839-248	2 x 3/4
839-249	2 x 1
839-250	2 x 1 1/4
839-251	2 x 1 1/2
839-292	2 1/2 x 2
839-337	3 x 1 1/2
839-338	3 x 2
839-339	3 x 2 1/2
839-420	4 x 2
839-422	4 x 3

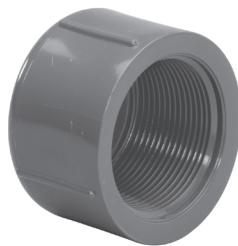


REDUCER BUSHING FLUSH STYLE (MPT x BSP)

Part No.	Nom. Size (inches)
845-249	2 x 1



CAP (Slip)	
Part No.	Nom. Size (inches)
847-002	¼
847-003	⅜
847-005	½
847-007	¾
847-010	1
847-012	1¼
847-015	1½
847-020	2
847-025	2 ½
847-030	3
847-040	4
847-060	6
847-080	8
847-100	10
847-120	12



THREADED CAP (FPT)	
Part No.	Nom. Size (inches)
848-002	¼
848-003	⅜
848-005	½
848-007	¾
848-010	1
848-012	1¼
848-015	1½
848-020	2
848-025	2 ½
848-030	3
848-040	4



PLUG (Spigot)

Part No.	Nom. Size (inches)
849-007	¾
849-010	1
849-012	1¼
849-015	1½
849-020	2



PLUG (MPT)

Part No.	Nom. Size (inches)
850-002	¼
850-003	⅜
850-005	½
850-007	¾
850-010	1
850-012	1¼
850-015	1½
850-020	2
850-025	2½
850-030	3
850-040	4



FLANGE SOLID STYLE (Slip)

Part No.	Nom. Size (inches)
851-005	½
851-007	¾
851-010	1
851-012	1¼
851-015	1½
851-020	2
851-025	2½
851-030	3
851-040	4
851-060	6

See NOTE under "Flange Installation Data"



FLANGE SOLID STYLE (FPT)

Part No.	Nom. Size (inches)
852-005	½
852-007	¾
852-010	1
852-012	1¼
852-015	1½
852-020	2
852-025	2½
852-030	3
852-040	4

See NOTE under "Flange Installation Data"



FLANGE (Blind)

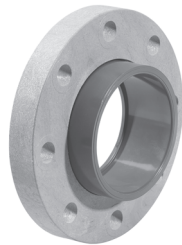
Part No.	Nom. Size (inches)
853-005	½
853-007	¾
853-010	1
853-012	1¼
853-015	1½
853-020	2
853-025	2½
853-030	3
853-040	4
853-060	6
853-080	8

See NOTE under "Flange Installation Data"



FLANGE (Slip)	
Part No.	Nom. Size (inches)
854-005	½
854-007	¾
854-010	1
854-012	1¼
854-015	1½
854-020	2
854-025	2½
854-030FT	3
854-040FT	4
854-050FT	5
854-060FT	6
854-080FT	8
854-100FT	10
854-120FT	12

FT Represents Fibertuff Ring.
See NOTE under "Flange Installation Data"



FLANGE (Spigot)	
Part No.	Nom. Size (inches)
856-005	½
856-007	¾
856-010	1
856-012	1¼
856-015	1½
856-020	2
856-025	2½
856-030FT	3
856-040FT	4
856-050FT	5
856-060FT	6
856-080FT	8
856-100FT	10
856-120FT	12

FT Represents Fibertuff Ring.
See NOTE under "Flange Installation Data"

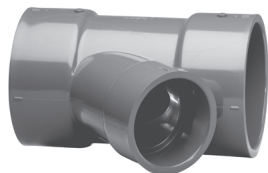


REDUCING TBE NIPPLE (MPT x MPT)	
Part No.	Nom. Size (inches)
882-101	¾ x ½



WYE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
875-020	2
875-040	4
875-060	6
875-080	8



REDUCING WYE (Slip x Slip x Slip)

New!
sizes

Part No.	Nom. Size (inches)
875-247* †	2 x 2 x ½
875-248* †	2 x 2 x ¾
875-249* †	2 x 2 x 1
875-250* †	2 x 2 x 1¼
875-251* †	2 x 2 x 1½
875-335* †	3 x 3 x 1
875-336* †	3 x 3 x 1¼
875-337* †	3 x 3 x 1½
875-338* †	3 x 3 x 2

875-339* †	3 x 3 x 2½
875-420*	4 x 4 x 2
875-422*	4 x 4 x 3
875-528*	6 x 6 x 2
875-530*	6 x 6 x 3
875-532	6 x 6 x 4
875-578*	8 x 8 x 2
875-580*	8 x 8 x 3
875-582	8 x 8 x 4
875-585*	8 x 8 x 6

*Sized with Bushing



UNION O-RING TYPE (Slip x MPT)

Part No.	Nom. Size (inches)
896-005	½
896-007	¾
896-010	1
896-012	1¼
896-015	1½
896-020	2
896-030	3
896-168	1¼ x 1

Pressure rated at 235 p.s.i. at 73°F. Unions are listed as NSF 61.



UNION O-RING TYPE (Slip x Slip)

Part No.	Nom. Size (inches)
897-002	¼
897-003	⅜
897-005	½
897-007	¾
897-010	1
897-012	1¼
897-015	1½
897-020	2
897-030	3
897-040	4

Pressure rated at 235 p.s.i. at 73°F. Unions are listed as NSF 61.



UNION O-RING TYPE (FPT x FPT)	
Part No.	Nom. Size (inches)
898-005	½
898-007	¾
898-010	1
898-012	1¼
898-015	1½
898-020	2
898-030	3
898-040	4

Pressure rated at 235 p.s.i. at 73°F. Unions are listed as NSF 61.



UNION O-RING TYPE (Slip x FPT)	
Part No.	Nom. Size (inches)
899-005	½
899-007	¾
899-010	1
899-012	1¼
899-015	1½
899-020	2

Pressure rated at 235 p.s.i. at 73°F. Unions are listed as NSF 61.



O-RING TYPE (Viton-Current Style)	
Part No.	Nom. Size (inches)
80115	½
80118	¾
80215	1
80221	1¼
80223	1½
80227	2
80235	3



O-RING (Viton-Prior to 2004)	
Part No.	Nom. Size (inches)
80213	½
80216	¾
80222	1
80225	1¼
80227	1½
80231	2
80240	3



REDUCING TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
9801-005	½
9801-007	¾
9801-010	1
9801-012	1¼
9801-015	1½
9801-020	2
9801-025	2½
9801-030	3
9801-040	4
9801-060	6
9801-080	8



REDUCING TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
9801-101	¾ x ¾ x ½
9801-130	1 x 1 x ½
9801-131	1 x 1 x ¾
9801-211	1½ x 1½ x 1
9801-249	2 x 2 x 1
9801-251	2 x 2 x 1½
9801-291	2½ x 2½ x 1½
9801-292	2½ x 2½ x 2
9801-334	3 x 3 x ¾
9801-335	3 x 3 x 1
9801-338	3 x 3 x 2
9801-420	4 x 4 x 2
9801-422	4 x 4 x 3
9801-530	6 x 6 x 3
9801-532	6 x 6 x 4
9801-585	8 x 8 x 6



HOTEL TRANSITION TEE (Slip x Slip x Slip)

Part No.	Nom. Size (inches)
9801-334CTS	3 IPS x 3 IPS x ¾ CTS
9801-335CTS	3 IPS x 3 IPS x 1 CTS

TEES

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SCH 80
CPVC



TEE (Slip x Slip x FPT)	
Part No.	Nom. Size (inches)
9802-005	1/2
9802-007	3/4
9802-010	1



TEE (FPT x FPT x FPT)	
Part No.	Nom. Size (inches)
9805-003	3/8
9805-005	1/2
9805-007	3/4
9805-010	1
9805-012	1 1/4
9805-015	1 1/2
9805-020	2
9805-025	2 1/2
9805-030	3
9805-040	4

ELBOWS



90° ELBOW (Slip x Slip)	
Part No.	Nom. Size (inches)
9806-002	1/4
9806-005	1/2
9806-007	3/4
9806-010	1
9806-012	1 1/4
9806-015	1 1/2
9806-020	2
9806-025	2 1/2
9806-030	3
9806-040	4
9806-060	6
9806-080	8



90° ELBOW (Slip x FPT)

Part No.	Nom. Size (inches)
9807-005	½
9807-007	¾
9807-010	1
9807-012	1¼
9807-015	1½
9807-020	2



90° ELBOW (FPT x FPT)

Part No.	Nom. Size (inches)
9808-003	¾
9808-005	½
9808-007	¾
9808-010	1
9808-012	1¼
9808-015	1½
9808-020	2



45° ELBOW (Slip x Slip)

Part No.	Nom. Size (inches)
9817-002	¼
9817-005	½
9817-007	¾
9817-010	1
9817-012	1¼
9817-015	1½
9817-020	2
9817-025	2½
9817-030	3
9817-040	4
9817-060	6
9817-080	8



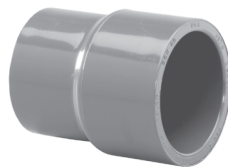
45° ELBOW (FPT x FPT)

Part No.	Nom. Size (inches)
9819-003	¾
9819-005	½
9819-007	¾
9819-010	1
9819-012	1¼
9819-015	1½
9819-020	2



COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
9829-002	¼
9829-005	½
9829-007	¾
9829-010	1
9829-012	1¼
9829-015	1½
9829-020	2
9829-025	2½
9829-030	3
9829-040	4
9829-060	6
9829-080	8



REDUCER COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
9829-101	¾ x ½
9829-130	1 x ½
9829-131	1 x ¾
9829-168	1¼ x 1
9829-212	1½ x 1¼
9829-251	2 x 1½
9829-338	3 x 2
9829-422	4 x 3
9829-530	6 x 3
9829-532	6 x 4
9829-585	8 x 6



COUPLING (FPT x FPT)

Part No.	Nom. Size (inches)
9830-003	¾
9830-005	½
9830-007	¾
9830-010	1
9830-012	1¼
9830-015	1½
9830-020	2



FEMALE ADAPTER (Slip x FPT)

Part No.	Nom. Size (inches)
9835-002	¼
9835-005	½
9835-007	¾
9835-010	1
9835-012	1¼
9835-015	1½
9835-020	2
9835-025	2½
9835-030	3
9835-040	4
9829-585	8 x 6



MALE ADAPTER (MPT x Slip)

Part No.	Nom. Size (inches)
9836-005	½
9836-007	¾
9836-010	1
9836-012	1¼
9836-015	1½
9836-020	2
9836-025	2½
9836-030	3
9836-040	4

BUSHINGS



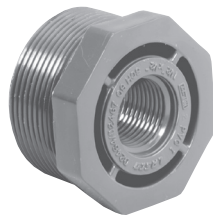
REDUCER BUSHING-FLUSH STYLE (Spigot x Slip)

Part No.	Nom. Size (inches)
9837-052	⅜ x ¼
9837-072	½ x ¼
9837-073	½ x ⅜
9837-101	¾ x ½
9837-130	1 x ½
9837-131	1 x ¾
9837-166	1¼ x ½
9837-167	1¼ x ¾
9837-168	1¼ x 1
9837-209	1½ x ½
9837-210	1½ x ¾
9837-211	1½ x 1
9837-212	1½ x 1¼
9837-247	2 x ½
9837-248	2 x ¾
9837-249	2 x 1
9837-250	2 x 1¼
9837-251	2 x 1½
9837-289	2½ x 1
9837-291	2½ x 1½
9837-292	2½ x 2
9837-337	3 x 1½
9837-338	3 x 2
9837-339	3 x 2½
9837-420	4 x 2
9837-421	4 x 2½
9837-422	4 x 3
9837-532	6 x 4
9837-585	8 x 6



REDUCER BUSHING-FLUSH STYLE (Spigot x FPT)

Part No.	Nom. Size (inches)
9838-052	3/8 x 1/4
9838-072	1/2 x 1/4
9838-073	1/2 x 3/8
9838-101	3/4 x 1/2
9838-130	1 x 1/2
9838-131	1 x 3/4
9838-168	1 1/4 x 1
9838-209	1 1/2 x 1/2
9838-210	1 1/2 x 3/4
9838-211	1 1/2 x 1
9838-212	1 1/2 x 1 1/4
9838-247	2 x 1/2
9838-248	2 x 3/4
9838-249	2 x 1
9838-250	2 x 1 1/4
9838-251	2 x 1 1/2
9838-292	2 1/2 x 2
9838-338	3 x 2
9838-339	3 x 2 1/2
9838-420	4 x 2
9838-422	4 x 3

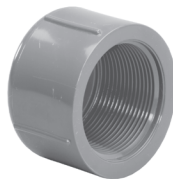


REDUCER BUSHING-FLUSH STYLE (MPT x FPT)

Part No.	Nom. Size (inches)
9839-101	3/4 x 1/2
9839-130	1 x 1/2
9839-131	1 x 3/4
9839-166	1 1/4 x 1/2
9839-167	1 1/4 x 3/4
9839-168	1 1/4 x 1
9839-210	1 1/2 x 3/4
9839-211	1 1/2 x 1
9839-212	1 1/2 x 1 1/4
9839-249	2 x 1
9839-250	2 x 1 1/4
9839-251	2 x 1 1/2
9839-292	2 1/2 x 2
9839-338	3 x 2
9839-420	4 x 2
9839-422	4 x 3



CAP (Slip)	
Part No.	Nom. Size (inches)
9847-005	1/2
9847-007	3/4
9847-010	1
9847-012	1 1/4
9847-015	1 1/2
9847-020	2
9847-025	2 1/2
9847-030	3
9847-040	4
9847-060	6



CAP (Slip)	
Part No.	Nom. Size (inches)
9848-002	1/4
9848-003	3/8
9848-005	1/2
9848-007	3/4
9848-010	1
9848-012	1 1/4
9848-015	1 1/2
9848-020	2
9848-030	3
9848-040	4



PLUG (MPT)	
Part No.	Nom. Size (inches)
9850-002	1/4
9850-005	1/2
9850-007	3/4
9850-010	1
9850-012	1 1/4
9850-015	1 1/2
9850-020	2
9850-030	3
9850-040	4



FLANGE-SOLID STYLE (Slip)	
Part No.	Nom. Size (inches)
9851-005	½
9851-007	¾
9851-010	1
9851-012	1¼
9851-015	1½
9851-020	2
9851-025	2½
9851-030	3
9851-040	4
9851-060	6



FLANGE-SOLID STYLE (FPT)	
Part No.	Nom. Size (inches)
9852-005	½
9852-007	¾
9852-010	1
9852-012	1¼
9852-015	1½
9852-020	2
9852-030	3
9852-040	4



FLANGE-BLIND (Blind)	
Part No.	Nom. Size (inches)
9853-015	1½
9853-020	2
9853-030	3
9853-040	4
9853-060	6
9853-080	8



FLANGE-LOOSE RING (Slip)	
Part No.	Nom. Size (inches)
9854-005	½
9854-007	¾
9854-010	1
9854-012	1¼
9854-015	1½
9854-020	2
9854-025	2½
9854-030FT	3
9854-040FT	4
9854-060FT	6
9854-080FT	8
9854-100FT	10
9854-120FT	12

FT Represents FiberTuff Ring.



FLANGE-LOOSE RING (Spigot)

Part No.	Nom. Size (inches)
9856-010	1
9856-012	1¼
9856-015	1½
9856-020	2
9856-040	4
9856-060	6
9856-080	8



FLANGE-LOOSE RING (Spigot)

Part No.	Nom. Size (inches)
9875-020	2

UNIONS



UNION O-RING TYPE (Slip x Slip)

Part No.	Nom. Size (inches)
9897-002	¼
9897-005	½
9897-007	¾
9897-010	1
9897-012	1¼
9897-015	1½
9897-020	2
9897-025	2½
9897-030	3
9897-040	4



UNION O-RING TYPE (FPT x FPT)

Part No.	Nom. Size (inches)
9898-003	3/8
9898-005	1/2
9898-007	3/4
9898-010	1
9898-012	1 1/4
9898-015	1 1/2
9898-020	2



UNION O-RING TYPE (Slip x FPT)

Part No.	Nom. Size (inches)
9899-005	1/2
9899-007	3/4
9899-010	1
9899-012	1 1/4
9899-015	1 1/2
9899-020	2
9899-030	3



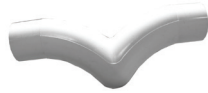
UNION O-RING (Viton-Current Style)

Part No.	Nom. Size (inches)
80115	1/2
80118	3/4
80215	1
80221	1 1/4
80223	1 1/2
80227	2
80235	3



UNION O-RING (Viton-Prior to 2004)

Part No.	Nom. Size (inches)
80115	1/2
80118	3/4
80215	1
80221	1 1/4
80223	1 1/2
80227	2
80235	3



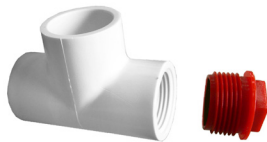
RUNNING TRAP (Slip x Slip)

Part No.	Nom. Size (inches)
HRT-507	¾ (½)
Connection is both ½" slip x ¾" spigot	



P-TRAP (Slip x Slip)

Part No.	Nom. Size (inches)
HPT-507	¾ (½)
Connection is both ½" slip x ¾" spigot	



CLEANOUT TEE (Slip x Plug x Slip)

Part No.	Nom. Size (inches)
H403-005	½
H403-007	¾
Includes Red Poly Plug	



DRAIN PAN (FPT x Nut & Gasket)

Part No.	Nom. Size (inches)
H434-007	¾



DRAIN PAN (Slip x Nut & Gasket)

Part No.	Nom. Size (inches)
H436-007	¾
H436-010	1

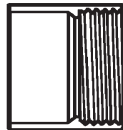


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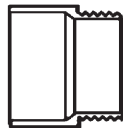
COUPLING (Hub x Hub)

Part No.	Nom. Size (inches)
D100-012	1¼
D100-015	1½
D100-020	2
D100-030	3
D100-040	4
D100-060	6
D100-080	8
D100-100	10
D100-120	12



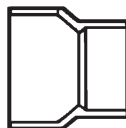
FEMALE ADAPTER (Hub x FPT)

Part No.	Nom. Size (inches)
D101-012	1¼
D101-015	1½
D101-020	2
D101-030	3
D101-040	4
D101-060	6
D101-080	8



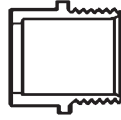
MALE ADAPTER (Hub x MPT)

Part No.	Nom. Size (inches)
D109-012	1¼
D109-015	1½
D109-020	2
D109-030	3
D109-040	4
D109-212	1½ x 1¼



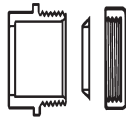
PIPE INCREASER-REDUCER (Hub x Hub)

Part No.	Nom. Size (inches)
D102-251	2 x 1½
D102-337	3 x 1½
D102-338	3 x 2
D102-420	4 x 2
D102-422	4 x 3
D102-532	6 x 4
D102-582	8 x 4
D102-585	8 x 6
D102-626	10 x 6
D102-628	10 x 8
D102-668	12 x 8
D102-670	12 x 10



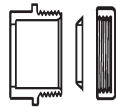
TRAP ADAPTER MALE (Spigot x MPT)

Part No.	Nom. Size (inches)
D103-015	1½
D103-020	2
D103-212	1½ x 1¼



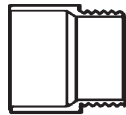
TRAP ADAPTER MALE (Spigot x Slip Joint)

Part No.	Nom. Size (inches)
D103-015	1½
D103-020	2
D103-212	1½ x 1¼



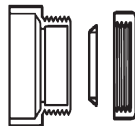
TRAP ADAPTER MALE (Spigot x Slip Joint w/Plastic Nut & Washer)

Part No.	Nom. Size (inches)
D115-015	1½
D115-020	2
D115-212	1½ x 1¼



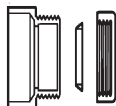
TRAP ADAPTER MALE (Hub x FPT)

Part No.	Nom. Size (inches)
D114-015	1½
D114-020	2
D114-212	1½ x 1¼



TRAP ADAPTER MALE (Spigot x Slip Joint w/Plastic Nut & Washer)

Part No.	Nom. Size (inches)
D104-012	1¼
D104-015	1½
D104-020	2
D104-212	1½ x 1¼



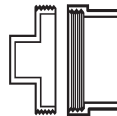
TRAP ADAPTER MALE (Spigot x Slip Joint w/Chrome Nut & Washer)

Part No.	Nom. Size (inches)
D116-015	1½
D116-020	2
D116-212	1½ x 1¼



FITTINGS CLEANOUT ADAPTER (Spigot x FPT)

Part No.	Nom. Size (inches)
D105-012	1/4
D105-015	1/2
D105-020	2
D105-030	3
D105-040	4
D105-060	6



FITTINGS CLEANOUT ADAPTER + C.O. PLUG (Plug x Spigot)

Part No.	Nom. Size (inches)
D106-012	1/4
D106-015	1/2
D106-020	2
D106-030	3
D106-040	4
D106-060	6
D106-080	8



CLEANOUT PLUG RAISED NUT (MPT)

Part No.	Nom. Size (inches)
D106-012	1/4
D106-015	1/2
D106-020	2
D106-030	3
D106-040	4
D106-060	6
D106-080	8



CLEANOUT PLUG FLUSH (MPT)

Part No.	Nom. Size (inches)
D106-012	1/4
D106-015	1/2
D106-020	2
D106-030	3
D106-040	4
D106-060	6
D106-080	8



FLUSH BUSHING (Spigot x Hub)

Part No.	Nom. Size (inches)
D107-212	1½ x 1¼
D107-250	2 x 1¼
D107-251	2 x 1½
D107-337	3 x 1½
D107-338	3 x 2
D107-420	4 x 2
D107-422	4 x 3
D107-532	6 x 4
D107-582	8 x 4
D107-585	8 x 6
D107-623	10 x 3
D107-624	10 x 4
D107-626	10 x 6
D107-628	10 x 8
D107-661	12 x 3
D107-664	12 x 4
D107-666	12 x 6
D107-668	12 x 8
D107-670	12 x 10



FLUSH BUSHING (FPT x Spigot)

Part No.	Nom. Size (inches)
D108-251	2 x 1½



CAP (Hub)

Part No.	Nom. Size (inches)
447-015	1½
447-020	2
447-030	3
447-040	4
447-060	6
447-080	8
D116-100	10
D116-120	12

* Refer to current Sch 40 Price List



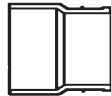
ADAPTER COUPLING (Adapts DWV Hub to S&D Spigot)

Part No.	Nom. Size (inches)
D117-040	4
D117-422	4 x 3



ADAPTER COUPLING (S&D Hub x IPS Spigot)

Part No.	Nom. Size (inches)
D118-030	3
D118-040	4



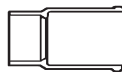
NO-HUB ADAPTER (Hub x Spigot)

Part No.	Nom. Size (inches)
D119-020	2
D119-030	3
D119-040	4



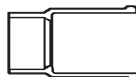
HUB ADAPTER, CAST IRON SOIL PIPE (Hub x Hub)

Part No.	Nom. Size (inches)
D122-020	2
D122-030	3
D122-040	4



HUB ADAPTER, CAST IRON SOIL PIPE (Hub x Spigot)

Part No.	Nom. Size (inches)
D123-020	2
D123-030	3
D123-040	4



HUB ADAPTER, CAST IRON SOIL PIPE INCREASER (Hub x Spigot)

Part No.	Nom. Size (inches)
D123-251	2 x 1½
D123-341	3 x 4



REPAIR COUPLING (Hub x Hub)

Part No.	Nom. Size (inches)
D130-015	1½
D130-020	2
D130-030	3
D130-040	4



TEST CAP, INSERT TYPE (Spigot)

Part No.	Nom. Size (inches)
D131-015	1½
D131-020	2
D131-030	3
D131-040	4



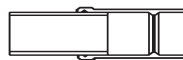
TEST CAP, PIPE (Spigot)

Part No.	Nom. Size (inches)
D132-015	1½
D132-020	2
D132-030	3
D132-040	4



EXPANSION JOINT (Hub x Hub)

Part No.	Nom. Size (inches)
D133-015	1½
D133-020	2
D133-030	3
D133-040	4



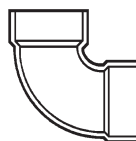
EXPANSION JOINT (Spigot x Hub)

Part No.	Nom. Size (inches)
D133-015	1½
D133-020	2
D133-030	3
D133-040	4



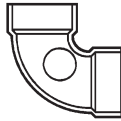
¼ BEND, STREET w/LOW HEEL INLET (Hub x Spigot x Hub)

Part No.	Nom. Size (inches)
D293-338	3 x 2



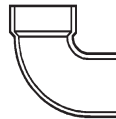
¼ BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D300-012	1¼
D300-015	1½
D300-020	2
D300-030	3
D300-040	4
D300-060	6
D300-080	8
D300-100	10
D300-120	12



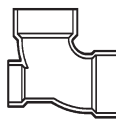
¼ BEND, STREET w/SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D301-337	3 x 1½
D301-338	3 x 2



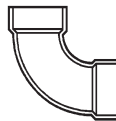
¼ BEND, STREET (Hub x Spigot)

Part No.	Nom. Size (inches)
D302-012	1¼
D302-015	1½
D302-020	2
D302-030	3
D302-040	4
D302-060	6
D302-080	8



¼ BEND w/LOW HEEL INLET (All Hub)

Part No.	Nom. Size (inches)
D303-337	3 x 1½
D303-338	3 x 2
D303-420	4 x 2



LONG SWEEP ¼ BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D304-015	1½
D304-020	2
D304-030	3
D304-040	4
D304-060	6



LONG SWEEP ¼ BEND w/LOW HEEL INLET (All Hub)

Part No.	Nom. Size (inches)
D307-338	3 x 2



LONG SWEEP ¼ BEND, STREET (Hub x Spigot)

Part No.	Nom. Size (inches)
D309-015	1½
D309-020	2
D309-030	3
D309-040	4



LONG SWEEP 1/16 BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D319-015	1½
D319-020	2
D319-030	3
D319-040	4



1/16 BEND, STREET (Hub x Spigot)

Part No.	Nom. Size (inches)
D320-015	1½
D320-020	2
D320-030	3
D320-040	4



1/8 BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D321-015	1½
D321-020	2
D321-030	3
D321-040	4
D321-060	6
D321-080	8
D321-100	10
D321-120	12



1/8 BEND, STREET (Hub x Spigot)

Part No.	Nom. Size (inches)
D323-015	1½
D323-020	2
D323-030	3
D323-040	4
D323-060	6
D323-080	8
D323-100	10
D323-120	12



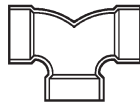
1/16 BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D324-015	1½
D324-020	2
D324-030	3
D324-040	4
D324-060	6
D324-080	8
D324-100	10
D324-120	12



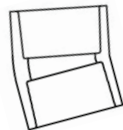
1/16 BEND, STREET (Hub x Spigot)

Part No.	Nom. Size (inches)
D326-015	1½
D326-020	2
D326-030	3
D326-040	4
D326-060	6
D326-080	8



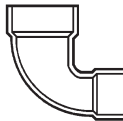
DOUBLE 1/4 BEND (All Hub)

Part No.	Nom. Size (inches)
D327-015	1½
D327-020	2
D327-030	3
D327-241	2 x 1½



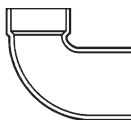
1/32 BEND (Spigot x Hub)

Part No.	Nom. Size (inches)
D328-100	10
D328-120	12



CLOSET BEND, REDUCING (Hub x Hub)

Part No.	Nom. Size (inches)
D329-422	4 x 3



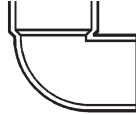
CLOSET BEND, REDUCING (Hub x Spigot)

Part No.	Nom. Size (inches)
D330-341	3 x 4



VENT ELBOW (Hub x Hub)

Part No.	Nom. Size (inches)
D331-015	1½
D331-020	2
D331-030	3
D331-040	4
D331-060	6
D331-080	8
D331-100	10
D331-120	12



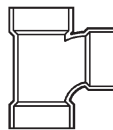
VENT STREET ELBOW (Hub x Spigot)

Part No.	Nom. Size (inches)
D333-015	1½
D333-020	2
D333-030	3
D333-040	4
D333-060	6
D333-080	8
D333-100	10
D333-120	12



SANITARY TEE (All Hub)

Part No.	Nom. Size (inches)
D400-012	1¼
D400-015	1½
D400-020	2
D400-030	3
D400-040	4
D400-060	6
D400-080	8



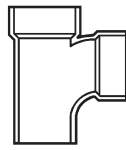
REDUCING SANITARY TEE (All Hub)

Part No.	Nom. Size (inches)
D401-241	2 x 1½ x 1½
D401-242	2 x 1½ x 2
D401-251	2 x 2 x 1½
D401-337	3 x 3 x 1½
D401-338	3 x 3 x 2
D401-420	4 x 4 x 2
D401-422	4 x 4 x 3
D401-532	6 x 6 x 4



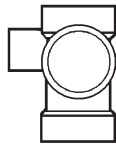
REDUCING SANITARY TEE (Spigot x Hub x Hub)

Part No.	Nom. Size (inches)
D403-015	1½
D403-020	2
D403-030	3
D403-040	4



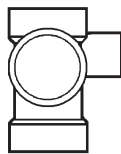
SANITARY REDUCING STREET TEE (Spigot x Hub x Hub)

Part No.	Nom. Size (inches)
D404-241	2 x 1½ x 1½
D404-242	2 x 1½ x 2
D404-251	2 x 2 x 1½
D404-337	3 x 3 x 1½
D404-338	3 x 3 x 2
D404-420	4 x 4 x 2



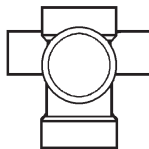
SANITARY TEE w/LEFT SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D416-337	3 x 1½
D416-338	3 x 2
D416-420	4 x 2



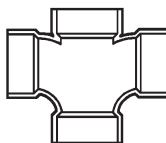
SANITARY TEE w/RIGHT SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D417-337	3 x 1½
D417-338	3 x 2
D417-420	4 x 2



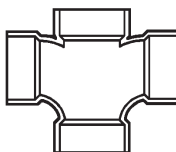
SANITARY TEE w/R&L SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D418-337	3 x 1½
D418-338	3 x 2
D418-420	4 x 2



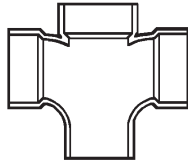
DOUBLE SANITARY TEE (All Hub)

Part No.	Nom. Size (inches)
D428-015	1½
D428-020	2
D428-030	3
D428-040	4



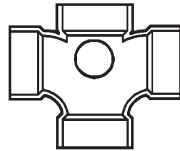
DOUBLE SANITARY REDUCING TEE (All Hub)

Part No.	Nom. Size (inches)
D429-252	2 x 1½
D429-337	3 x 1½
D429-338	3 x 2
D429-420	4 x 2
D429-422	4 x 3



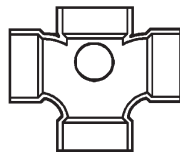
DOUBLE SANITARY STREET TEE (Spigot x Hub x Hub x Hub)

Part No.	Nom. Size (inches)
D431-030	3
D431-251	2 x 1½
D431-338	3 x 3 x 2 x 2



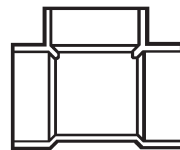
DOUBLE SANITARY TEE w/SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D438-337	3 x 1½
D438-338	3 x 2
D438-420	4 x 2



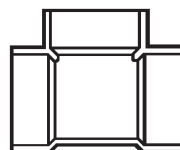
DOUBLE SANITARY TEE w/R&L SIDE INLET (All Hub)

Part No.	Nom. Size (inches)
D439-337	3 x 1½
D439-338	3 x 2
D439-420	4 x 2



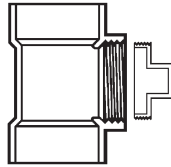
VENT TEE (All Hub)

Part No.	Nom. Size (inches)
D441-015	1½
D441-020	2
D441-030	3
D441-040	4
D441-060	6
D441-080	8
D441-100	10
D441-120	12



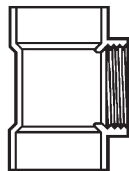
VENT REDUCING TEE (All Hub)

Part No.	Nom. Size (inches)
D441-624	10 x 10 x 4
D441-626	10 x 10 x 6
D441-628	10 x 10 x 8
D441-664	12 x 12 x 4
D441-666	12 x 12 x 6
D441-668	12 x 12 x 8
D441-670	12 x 12 x 10



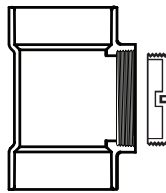
CLEANOUT TEE + C.O. PLUG (Hub x Hub x Plug)

Part No.	Nom. Size (inches)
D443-015	1½
D443-020	2
D443-030	3
D443-040	4
D443-060	6
D443-080	8
D443-628	10 x 8
D443-668	12 x 8



CLEANOUT TEE (Hub x Hub x FPT)

Part No.	Nom. Size (inches)
D445-015	1½
D445-020	2
D445-030	3
D445-040	4
D445-060	6
D445-080	8
D445-628	10 x 8
D445-668	12 x 8



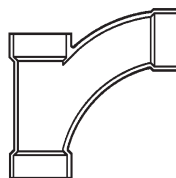
FLUSH CLEANOUT TEE -TEST TEE (Hub x Hub x Plug)

Part No.	Nom. Size (inches)
D445-020X	2
D445-030X	3
D445-040X	4



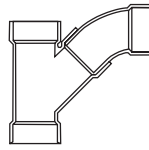
COMBINATION WYE + 1/8 BEND LONG TURN (All Hub-One Piece)

Part No.	Nom. Size (inches)
D448-030	3
D448-040	4



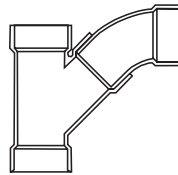
COMBINATION REDUCING WYE + 1/8 BEND LONG TURN (ALL HUB-ONE PIECE)

Part No.	Nom. Size (inches)
D502-241	2 x 1½ x 1½
D502-251	2 x 2 x 1½
D502-337	3 x 1½
D502-338	3 x 2
D502-420	4 x 2
D502-422	4 x 3



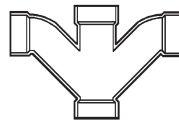
COMBINATION WYE + 1/8 BEND (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D503-015	1½
D503-020	2
D503-030	3
D503-040	4
D503-060	6
D503-080	8
D503-100	10
D503-120	12



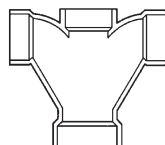
COMBINATION REDUCING WYE + 1/8 BEND (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D504-338	3 x 2
D504-422	4 x 3
D504-532	6 x 4
D504-582	8 x 4
D504-585	8 x 6
D504-624	10 x 10 x 4
D504-626	10 x 10 x 6
D504-628	10 x 10 x 8
D504-664	12 x 12 x 4
D504-666	12 x 12 x 6
D504-668	12 x 12 x 8
D504-670	12 x 12 x 10



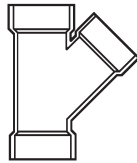
COMBINATION + 1/8 BEND REDUCING (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D507-030	3
D507-040	4
D507-420	4 x 2
D507-422	4 x 3
D504-585	8 x 6



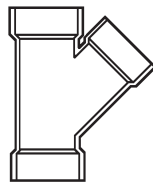
DOUBLE FIXTURE FITTING (All Hub)

Part No.	Nom. Size (inches)
D510-020	2
D510-030	3
D510-241	2 x 1½
D510-329	3 x 2 x 3 x 3



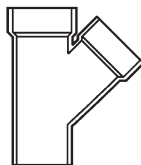
WYE (All Hub)

Part No.	Nom. Size (inches)
D600-015	1½
D600-020	2
D600-030	3
D600-040	4
D600-060	6
D600-080	8
D600-100	10
D600-120	12



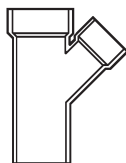
REDUCING WYE (All Hub)

Part No.	Nom. Size (inches)
D601-241	2 x 1½ x 1½
D601-251	2 x 2 x 1½
D601-337	3 x 3 x 1½
D601-338	3 x 3 x 2
D601-420	4 x 4 x 2
D601-422	4 x 4 x 3
D601-530	6 x 6 x 3
D601-532	6 x 6 x 4
D601-582	8 x 8 x 4
D601-585	8 x 8 x 6



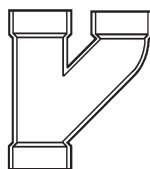
STREET WYE (Spigot x Hub x Hub)

Part No.	Nom. Size (inches)
D602-015	1½
D602-020	2
D602-030	3
D602-040	4



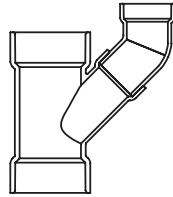
STREET REDUCING WYE (Spigot x Hub x Hub)

Part No.	Nom. Size (inches)
D603-337	3 x 3 x 1½
D603-338	3 x 3 x 2
D603-420	4 x 4 x 2
D603-422	4 x 4 x 3



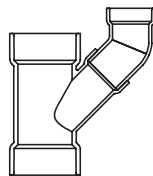
UPRIGHT COMBINATION WYE & 1/8 BEND (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D605-020	2
D605-030	3
D605-100	8
D605-120	10



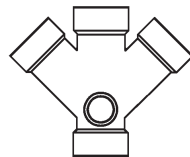
UPRIGHT COMBINATION WYE & 1/8 BEND REDUCING (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D605-624	10 x 10 x 4
D605-626	10 x 10 x 6
D605-628	10 x 10 x 8
D605-664	12 x 12 x 4
D605-666	12 x 12 x 6
D605-668	12 x 12 x 8
D605-670	12 x 12 x 10



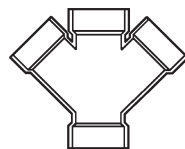
UPRIGHT COMBINATION WYE & 1/8 BEND REDUCING (All Hub-Two Piece)

Part No.	Nom. Size (inches)
D606-251	2 x 2 x 1½
D606-338	3 x 2



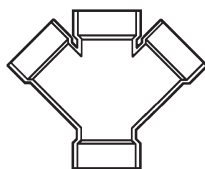
DOUBLE COTTAGE WYE w/2" INLET (All Hub)

Part No.	Nom. Size (inches)
D610-030	3
D610-040	4



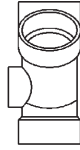
DOUBLE WYE (All Hub)

Part No.	Nom. Size (inches)
D611-015	1½
D611-020	2
D611-030	3
D611-040	4
D611-060	6



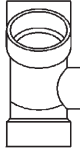
REDUCING DOUBLE EYE (All Hub)

Part No.	Nom. Size (inches)
D612-252	2 x 1½
D612-337	3 x 1½
D612-338	3 x 2
D612-420	4 x 2
D612-422	4 x 3
D612-532	6 x 4



COTTAGE WYE, LH INLET (All Hub)

Part No.	Nom. Size (inches)
D625-030	3
D625-040	4



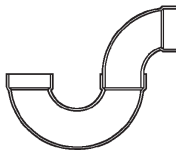
COTTAGE WYE, INLET (All Hub)

Part No.	Nom. Size (inches)
D626-030	3
D626-040	4



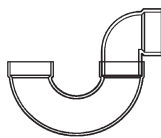
RETURN BEND (Hub x Hub)

Part No.	Nom. Size (inches)
D700-015	1½
D700-020	2
D700-030	3
D700-040	4



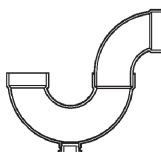
P-TRAP (Hub x Hub)

Part No.	Nom. Size (inches)
D706-015	1½
D706-020	2
D706-030	3
D706-040	4



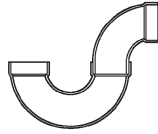
P-TRAP, LOW PROFILE (Hub x Hub)

Part No.	Nom. Size (inches)
D706-016	1½
D706-021	2



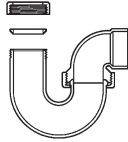
P-TRAP, w/CLEANOUT (Hub x Hub)

Part No.	Nom. Size (inches)
D707-015	1½
D707-020	2



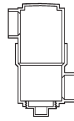
P-TRAP, UNION (Hub x Hub)

Part No.	Nom. Size (inches)
D708-015	1½
D708-020	2



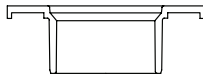
P-TRAP, LA PATTERN (Hub x Slip Joint w/Plastic Nut)

Part No.	Nom. Size (inches)
D708-015	1½
D708-020	2



DRUM TRAP (Plug x Hub x Hub)

Part No.	Nom. Size (inches)
D720-015	3 x 6 x 1½



CLOSET FLANGE (Hub-One Piece)

Part No.	Nom. Size (inches)
D800-040	4
D800-422	4 x 3



CLOSET FLANGE (Spigot-One Piece)

Part No.	Nom. Size (inches)
D801-040	4
D801-422	4 x 3



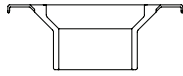
CLOSET FLANGE w/KNOCKOUT (Hub-One Piece)

Part No.	Nom. Size (inches)
D810-422	4 x 3



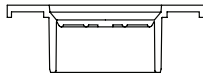
CLOSET FLANGE, ADJUSTABLE w/METAL RING (All Hub)

Part No.	Nom. Size (inches)
D810-422	4 x 3



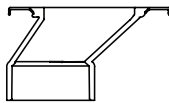
CLOSET FLANGE, ADJUSTABLE w/METAL RING (Hub-one Piece)

Part No.	Nom. Size (inches)
D812-040	4
D812-422	4x3



FLUSH CLOSET FLANGE w/KNOCKOUT (Hub-One Piece)

Part No.	Nom. Size (inches)
D812-040	4
D812-422	4x3



OFFSET CLOSET FLANGE (Hub w/Plastic Ring)

Part No.	Nom. Size (inches)
D822-422	4x3



OFFSET CLOSET FLANGE (Hub w/Metal Ring)

Part No.	Nom. Size (inches)
D823-422	4x3

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TEE (Slip)

Part No.	Nom. Size (inches)
4101-005	1/2
4101-007	3/4
4101-010	1
4101-012	1-1/4
4101-015	1-1/2
4101-020	2



REDUCING TEE (Slip)

Part No.	Nom. Size (inches)
4101-074	1/2 x 1/2 x 3/4
4101-094	3/4 x 1/2 x 1/2
4101-095	3/4 x 1/2 x 3/4
4101-101	3/4 x 3/4 x 1/2
4101-102*	3/4 x 3/4 x 1
4101-120*	1 x 1/2 x 1/2
4101-121*	1 x 1/2 x 3/4
4101-122*	1 x 1/2 x 1
4101-124*	1 x 3/4 x 1/2
4101-125*	1 x 3/4 x 3/4
4101-126*	1 x 3/4 x 1
4101-130	1 x 1 x 1/2
4101-131	1 x 1 x 3/4
4101-158*	1-1/4 x 1 x 1
4101-166*	1-1/4 x 1-1/4 x 1-1/2
4101-167*	1-1/4 x 1-1/4 x 1-3/4
4101-168*	1-1/4 x 1-1/4 x 1
4101-195*	1-1/2 x 1 x 1
4101-209*	1-1/2 x 1-1/2 x 1-1/2
4101-210*	1-1/2 x 1-1/2 x 1-3/4
4101-211*	1-1/2 x 1-1/2 x 1
4101-247*	2 x 2 x 1/2
4101-248*	2 x 2 x 3/4
4101-249	2 x 2 x 1
4101-251*	2 x 2 x 1-1/2

*Fabricated



90° ELBOW (Slip)

Part No.	Nom. Size (inches)
4106-005	1/2
4106-007	3/4
4106-010	1
4106-012	1-1/4
4106-015	1-1/2
4106-020	2
4106-101	3/4 x 1/2



90° STREET ELBOW (Spigot x Slip)

Part No.	Nom. Size (inches)
4109-005	1/2
4109-007	3/4
4109-010	1



45° ELBOW (Slip)

Part No.	Nom. Size (inches)
4117-005	1/2
4117-007	3/4
4117-010	1
4117-012	1-1/4
4117-015	1-1/2
4117-020	2



45° STREET ELBOW (Spigot x Slip)

Part No.	Nom. Size (inches)
4127-005	1/2
4127-007	3/4
4127-010	1



COUPLING (Slip)

Part No.	Nom. Size (inches)
4129-005	1/2
4129-007	3/4
4129-010	1
4129-012	1-1/4
4129-015	1-1/2
4129-020	2



REDUCER COUPLING (Slip x Slip)

Part No.	Nom. Size (inches)
4129-101	3/4 x 1/2
4129-131	1 x 3/4
4129-168	1-1/4 x 1

*Fabricated



THREADED FEMALE ADAPTER SS (FPT x Slip)

Part No.	Nom. Size (inches)
4135-005SS	1/2
4135-007SS	3/4
4135-010SS	1

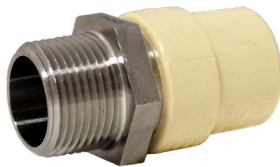
* Suitable for Hot and Cold water applications. 304 Stainless Steel is galvanically compatible with Brass and Copper in potable water plumbing systems.



MALE ADAPTER (MPT x Slip)

Part No.	Nom. Size (inches)
4136-005	1/2
4136-007	3/4
4136-010	1
4136-012	1-1/4
4136-015	1-1/2
4136-020	2

* CPVC threaded fittings are recommended for cold water applications only. 304 Stainless Steel threaded fittings are suitable for Hot and Cold water applications.



THREADED MALE ADAPTER SS (MPT x Slip)

Part No.	Nom. Size (inches)
4136-005SS	1/2
4136-007SS	3/4
4136-010SS	1

* Suitable for Hot and Cold water applications. 304 Stainless Steel is galvanically compatible with Brass and Copper in potable water plumbing systems.



REDUCING MALE ADAPTER (MPT x Slip)

Part No.	Nom. Size (inches)
4136-074	1/2 x 3/4

* Suitable for Hot and Cold water applications. 304 Stainless Steel is galvanically compatible with Brass and Copper in potable water plumbing systems.



REDUCER BUSHING (Spigot x Slip)

Part No.	Nom. Size (inches)
4137-101	3/4 x 1/2
4137-130	1 x 1/2
4137-131	1 x 3/4
4137-166	1-1/4 x 1/2
4137-167	1-1/4 x 3/4
4137-168	1-1/4 x 1
4137-209	1-1/2 x 1/2
4137-210	1-1/2 x 3/4
4137-211	1-1/2 x 1
4137-212	1-1/2 x 1-1/4
4137-247	2 x 1/2
4137-248	2 x 3/4
4137-249	2 x 1
4137-250	2 x 1-1/4
4137-251	2 x 1-1/2



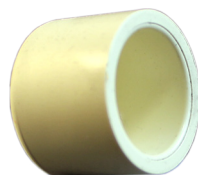
IPS TO CTS TRANSITION BUSHING (Spigot x Slip)

Part No.	Nom. Size (inches)
4140-005	1/2
4140-007	3/4
4140-010	1
4140-012	1-1/4
4140-015	1-1/2
4140-020	2



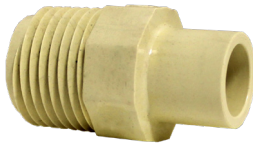
IPS TO CTS TRANSITION BUSHING (Slip x Slip)

Part No.	Nom. Size (inches)
4141-007	3/4
4141-010	1



CAP (Slip)

Part No.	Nom. Size (inches)
4147-005	1/2
4147-007	3/4
4147-010	1
4147-012	1-1/4
4147-015	1-1/2
4147-020	2



STREET MALE ADAPTER (MPT x Spigot)

Part No.	Nom. Size (inches)
4161-005	1/2

* CPVC threaded fittings are recommended for cold water applications only. 304 Stainless Steel threaded fittings are suitable for Hot and Cold water applications.



DROP EAR 90° ELBOW (Slip)

Part No.	Nom. Size (inches)
DE4106-005	1/2



DROP EAR 90° ELBOW SS (FPT x Slip)

Part No.	Nom. Size (inches)
DE4107-005SS	1/2

* Suitable for Hot and Cold water applications. 304 Stainless Steel is galvanically compatible with Brass and Copper in potable water plumbing systems.



BALL VALVE (Slip x Slip)

Part No.	Nom. Size (inches)
V0749ICE	1/2
V0849ICE	3/4
V1049ICE	1
V1449ICE	1-1/4
V1749ICE	1-1/2
V2049ICE	2

CTS-CPVC Ball Valves have discount code VT

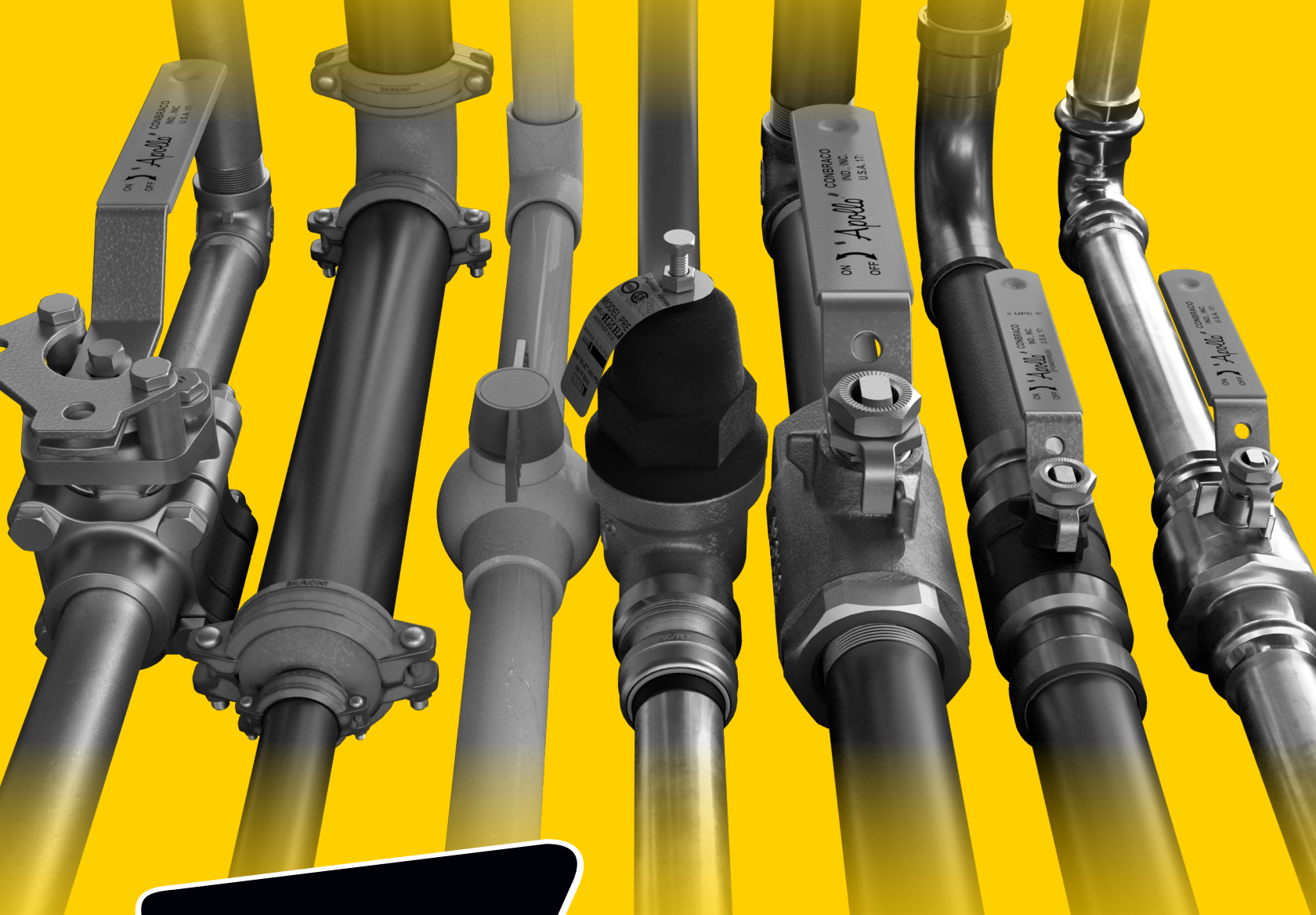


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