

APOLLOXPRESS® CATALOG

Fittings | Ball Valves | Gate, Globe, Checks & Strainers | Water Pressure Reducing Valves | Backflow Prevention

Made in
USA



Valves available in both **Standard** and **Lead Free** models.



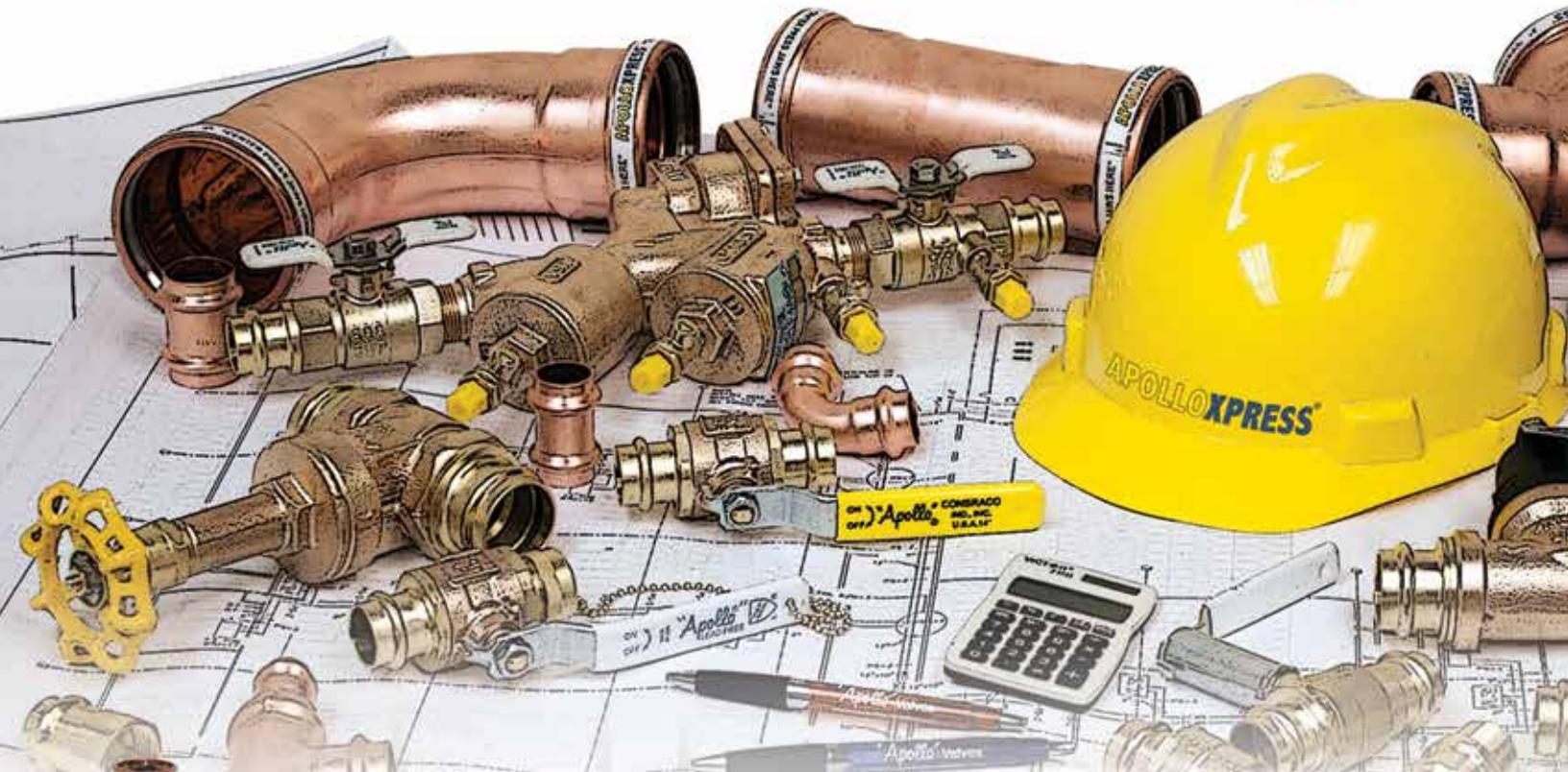
Elkhart Products
Corporation



Your **Single Source Solution** for **Press Technology**

APOLLOXPRESS®

Your **Single Source Solution** for **Press Technology**



LARGE AND SMALL
DIAMETER FITTINGS

Available in Sizes ½" to 4"



BALL VALVES

Available in Sizes ½" to 4"



GATE, GLOBE, CHECKS
and STRAINERS

Available in Sizes ½" to 2"



WATER PRESSURE
REDUCING VALVES

Available in Sizes ½" to 2"



BACKFLOW
PREVENTION

Available in Sizes ½" to 2"

Features & BENEFITS

American Made **Quality** you can **Depend On**.

Mechanical **Leak Before Press®** on small diameter, within a 120 degree turn.

Deepest cup depth on the market.

Short turn elbows for space saving alternatives.

Radial orientation on installation is not necessary on the APOLLOXPRESS® line.

VISUAL and **Mechanical Leak Before Press®** feature on our large diameter fittings.

Patented stainless steel grab ring on large diameter 2½" - 4"

Unique Floating flanges can be put back in place during installation.

One piece **welded construction tees**.

Custom Factory welded by **certified welders**.
Lighter construction.

Height reduction resulting in **smaller envelope**.

100% water tested weld or press.

BIM ready **3D CAD drawings** available.

Made in
USA



Valves available in both **standard**
and **Lead Free** models

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For additional information, submittal sheets and manuals, visit www.elkhartproducts.com





BREAK AWAY BAND

Easily identify unpressed large diameter with our patent pending visual Leak Before Press® break away band. Available only thru APOLLOXPRESS®.

Made in USA

Close Turn Large Diameter Elbow



Floating Flange



Deepest Cup in Industry



Small Diameter Elbow

LEAK BEFORE PRESS®

Made in USA

Single Piece Reducing Tee



BENEFITS OF THE APOLLOXPRESS® SYSTEM



HEAT & FLAME FREE
Reduces fire hazard. No need for heat and open flame.



CLEAN, FAST & SIMPLE
No glues, fluxes, or solder needed. Installs in less than a minute for most sizes.



SINGLE SOURCE
All the press you need, all from one single source.

Lead Free Options | Leak Before Press® | Clean

Made in USA



SMALL DIAMETER FITTINGS

Available in Sizes 1/2" to 2"

Made in USA



BALL VALVES

Available in Sizes 1/2" to 4"

Made in USA



GATE, GLOBE, CHECKS and STRAINERS

Available in Sizes 1/2" to 2"

Gym with Locker Room and Showers

- Ball Valves, RP Backflow Preventer, Pressure Reducing Valves, Gate Valves, Globe Valves, Check Valves, Wye Strainers, Small and Large Diameter Fittings.

Doctor's Office

- RP Backflow Preventer, Spill Resistant Vacuum Breaker, Pressure Reducing Valves, Ball Valves, Gate Valves, Globe Valves, Check Valves, Wye Strainers, Small and Large Diameter Fittings.

Dentist's Office

- RP Backflow Preventer, Spill Resistant Vacuum Breaker, Small and Large Diameter Fittings, Pressure Reducing Valves, Gate Valves, Globe Valves and Check Valves, Wye Strainers.

Spa

- RP Backflow Preventer, Spill Resistant Vacuum Breaker, Small and Large Diameter Fittings, Wye Strainers, Pressure Reducing Valves, Gate Valves, Globe Valves and Check Valves.

Cafe

- Pressure Reducing Valves, RP Backflow Preventer, Spill Resistant Vacuum Breaker, Wye Strainers, Small and Large Diameter Fittings, Gate Valves, Globe Valves and Check Valves.

Boiler Room

- Ball Valves, RP Backflow Preventer, Spill Resistant Vacuum Breaker, Pressure Reducing Valves, Wye Strainers, Small and Large Diameter Fittings, Gate Valves, Globe Valves and Check Valves.

MIXED USE COMMERCIAL BUILDING

Applications for APOLLOPRESS®

and Professional | Pre Lubricated EPDM seals



Made in USA



WATER PRESSURE REDUCING VALVES

Available in Sizes 1/2" to 2"



Made in USA



BACKFLOW PREVENTION

Available in Sizes 1/2" to 2"



Made in USA



LARGE DIAMETER FITTINGS

Available in Sizes 2 1/2" to 4"

APOLLOXPRESS®

For additional information, submittal sheets and manuals, visit www.apollovalves.com

www.apollovalves.com

APOLLO VALVES Customer Service (704) 841-6000





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.

Made in
USA



Available in both **Standard**
and **Lead Free** Models

APOLLOXPRESS®
Your Single Source Solution for Press Technology

77V SERIES

Press End Forged Ball Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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

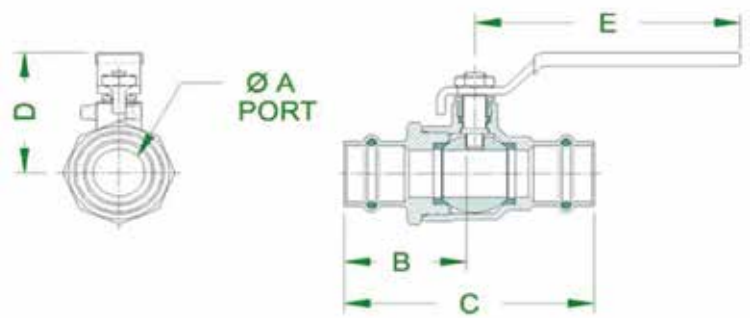
APPROVED APPLICATIONS:

- 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.)
77V10301	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77V10401	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77V10501	1"	1.00	2.20	3.88	2.11	3.86	1.2
77V10601	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77V10701	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77V10801	2"	2.00	3.40	6.57	3.69	7.77	6.0
77V10901	2-1/2"	2.50	4.26	8.04	4.13	7.77	12.0
77V10001	3"	3.00	5.10	9.45	5.03	9.92	19.5
77V10A01	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) Thermo-Seal™ Insulating Tee Handle
- (-27) Locking Handle
- 77V140 Series – SS Ball & Stem



www.apollovalves.com

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For additional information, submittal sheets and manuals, visit www.apollovalves.com

77VLF SERIES

Lead Free Press End Forged Ball Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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:

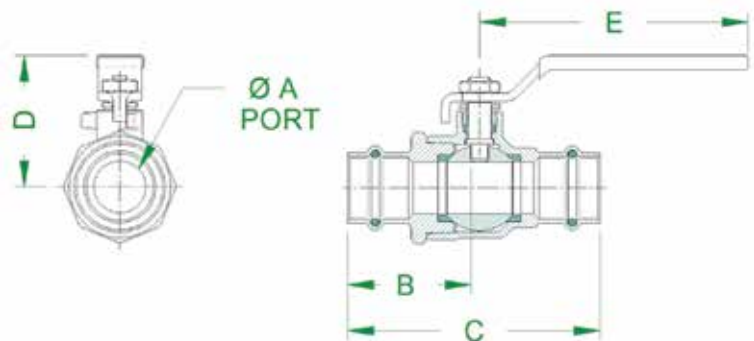
Part Name	Material
Body	Lead Free Brass, C27451
Seat	RPTFE
Ball	Lead Free Brass, C27451 (Plated) (4" - 316 Stainless Steel)
Stem Packing	RPTFE
Nut	Corrosion Resistant Plated Steel
Stem	Lead Free Brass, C27451 (4" - 316 Stainless Steel)
Retainer	Lead Free Brass, C27451
Handle	Plated Steel / Insulated 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 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



DIMENSIONS (IN)

Part Number	Size	A	B	C	D	E	Wt (lbs.)
77VLF10301	1/2"	0.50	1.57	2.89	1.66	2.85	0.4
77VLF10401	3/4"	0.75	1.90	3.63	1.91	3.86	0.9
77VLF10501	1"	1.00	2.20	3.88	2.11	3.86	1.2
77VLF10601	1-1/4"	1.25	2.23	4.22	2.44	4.75	2.3
77VLF10701	1-1/2"	1.50	2.84	5.45	2.91	5.42	3.4
77VLF10801	2"	2.00	3.40	6.57	3.69	7.77	6.0
77VLF10901	2-1/2"	2.50	4.26	8.04	4.13	7.77	12.0
77VLF10001	3"	3.00	5.10	9.45	5.03	9.92	19.5
77VLF14A01	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) Thermo-Seal™ Insulating Tee Handle
- (-27) Locking Handle
- 77VLF140 Series – SS Ball & Stem



For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

77W SERIES

Press End Bronze Ball Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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

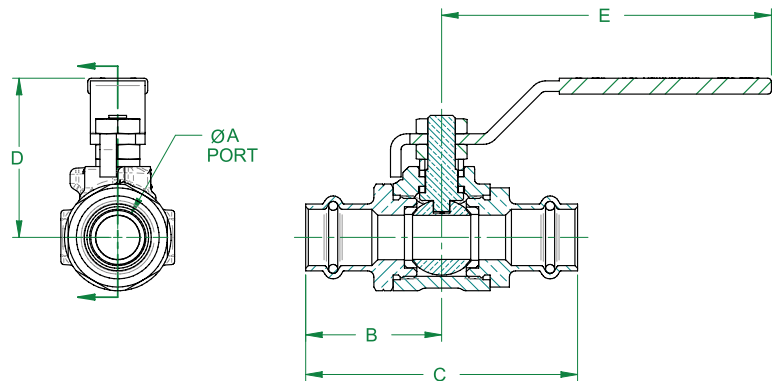
APPROVED APPLICATIONS:

- 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 3/4" Hose w./ Cap & Chain (1/2 & 3/4")
- (77W-140 Series) S.S. Ball and Stem
- (77WLF Series) Lead Free (0.25% Lead Max)



For additional information, submittal sheets and manuals, visit www.apollovalves.com

www.apollovalves.com

APOLLO VALVES Customer Service (704) 841-6000



77WLF SERIES

Lead Free Press End Bronze Ball Valve **APOLLOXPRESS®**

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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:

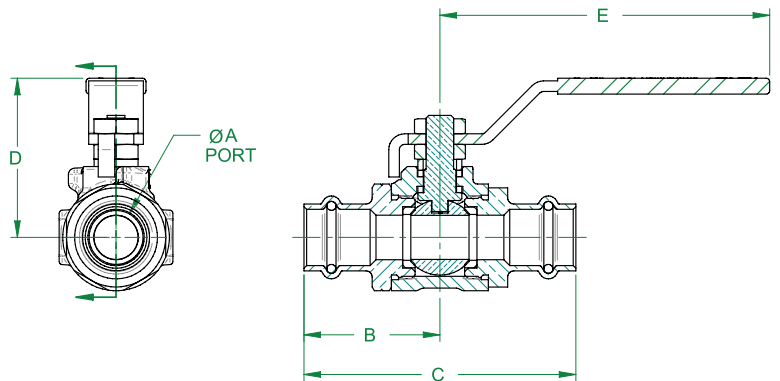
Part Name	Material
Body	ASTM B584 C89836
Seat	Multi-Fill PTFE
Ball	C27451 Brass, Chr. Plated
Stem Packing	Multi-Fill PTFE
Nut	Zinc Plated Steel
Stem	C27451 Brass
Retainer	C27451 Brass
Handle	Plated Steel / Insulated Polyvinyl
Gland	Brass, ASTM B16, C36000
O-Ring	EPDM

* **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 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



DIMENSIONS (IN)

Part Number	Size	A	B	C	D	E	Wt (lbs.)
77WLF10301	1/2"	0.50	1.54	3.08	1.50	3.74	0.61
77WLF10401	3/4"	0.75	1.78	3.55	2.01	4.78	1.09
77WLF10501	1"	1.00	1.93	3.86	2.20	4.78	1.77
77WLF10601	1-1/4"	1.25	2.44	4.87	3.13	7.04	4.27
77WLF10701	1-1/2"	1.50	2.91	5.81	3.10	7.04	4.63
77WLF10801	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



For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

77W-HC SERIES

Ball Valve w/Press X Hose Connection **APOLLOXPRESS®**

DESCRIPTION:

The APOLLOXPRESS® 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

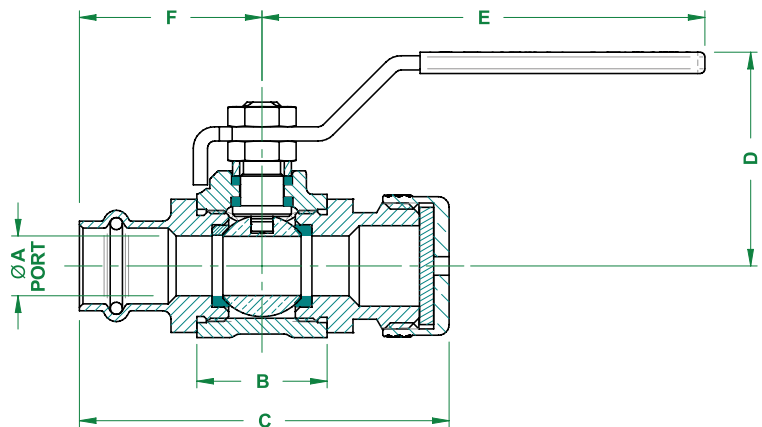
APPROVED APPLICATIONS:

- 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.)
77W103HC	1/2"	0.50	1.54	3.12	1.80	3.74	1.54	0.61
77W104HC	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-140-HC SERIES) S.S. Ball and Stem
- (77WLF-HC SERIES) Lead Free 0.25% Lead Max



For additional information, submittal sheets and manuals, visit www.apollovalves.com



77WLF-HC SERIES

Lead Free Ball Valve w/Press X Hose Connection **APOLLOXPRESS®**

DESCRIPTION:

The APOLLOXPRESS® Lead Free* Press x Hose Cap & Chain bronze ball valves feature a 3/4" 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:

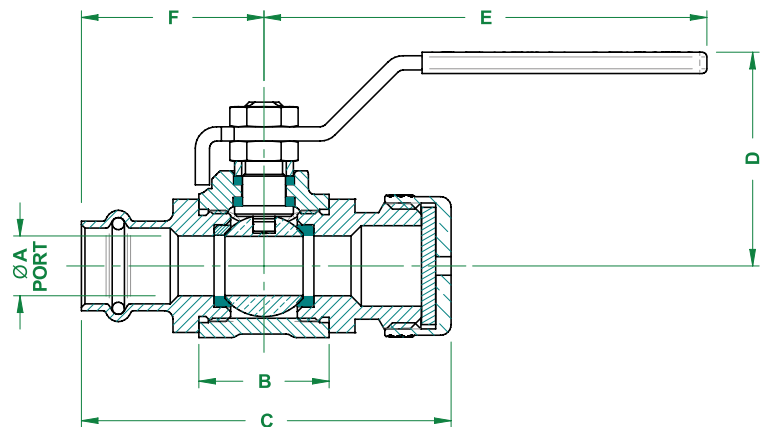
- Water, including Potable Water
- Hydronic Heating (90% glycol max)
- Not compatible with soft annealed copper tubing

* **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)

Part Number	Size	A	B	C	D	E	F	Wt (lbs.)
77WLF103HC	1/2"	0.50	1.54	3.12	1.80	3.74	1.54	0.61
77WLF104HC	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



APOLLOXPRESS®

For additional information, submittal sheets and manuals, visit www.apollovalves.com





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.



Available in both **Standard** and **Lead Free** Models

Gate, Globe, Checks & Strainers

APOLLOXPRESS®
Your Single Source Solution for Press Technology

200 CWP Bronze RS Gate Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® Model 101T-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

† APOLLOXPRESS® 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.

STANDARDS

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

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	Item Number
1/2"	101T12PR	30-003-01PR
3/4"	101T34PR	30-004-01PR
1"	101T1PR	30-005-01PR
1-1/4"	101T114PR	30-006-01PR
1-1/2"	101T112PR	30-007-01PR
2"	101T2PR	30-008-01PR



101T-PRLF

Lead Free 200 CWP Bronze RS Gate Valve

APOLLOXPRESS®

DESCRIPTION:

The Lead Free* APOLLOXPRESS® Model 101T-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 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

† APOLLOXPRESS® 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	Item Number
1/2"	101T12-PRLF	30LF-00301PR
3/4"	101T34-PRLF	30LF-00401PR
1"	101T1-PRLF	30LF-00501PR
1-1/4"	101T114-PRLF	30LF-00601PR
1-1/2"	101T112-PRLF	30LF-00701PR
2"	101T2-PRLF	30LF-00801PR



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

REV. 10-31-14

102T-PR

200 CWP Bronze NRS Gate Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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

† APOLLOXPRESS® 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	Item Number
1/2"	102T12PR	30-033-01PR
3/4"	102T34PR	30-034-01PR
1"	102T1PR	30-035-01PR
1-1/4"	102T114PR	30-036-01PR
1-1/2"	102T112PR	30-037-01PR
2"	102T2PR	30-038-01PR

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



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APOLLO VALVES Customer Service (704) 841-6000



For additional information, submittal sheets and manuals, visit www.apollovalves.com

102T-PRLF

Lead Free 200 CWP Bronze RS Gate Valve

APOLLOXPRESS®

DESCRIPTION:

The Lead Free* APOLLOXPRESS® 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

† APOLLOXPRESS® 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	Item Number
1/2"	102T12-PRLF	30LF-03301PR
3/4"	102T34-PRLF	30LF-03401PR
1"	102T1-PRLF	30LF-03501PR
1-1/4"	102T114-PRLF	30LF-03601PR
1-1/2"	102T112-PRLF	30LF-03701PR
2"	102T2-PRLF	30LF-03801PR

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



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



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REV. 10-31-14

120T-PR

200 CWP Bronze Globe Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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 applications

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

† APOLLOXPRESS® 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	Item Number
1/2"	120T12PR	33-133-01PR
3/4"	120T34PR	33-134-01PR
1"	120T1PR	33-135-01PR
1-1/4"	120T114PR	33-136-01PR
1-1/2"	120T112PR	33-137-01PR
2"	120T2PR	33-138-01PR

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



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For additional information, submittal sheets and manuals, visit www.apollovalves.com

120T-PRLF

Lead Free 200 CWP Bronze Globe Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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

† APOLLOXPRESS® 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	Item Number
1/2"	120T12-PRLF	33LF133-01PR
3/4"	120T34-PRLF	33LF134-01PR
1"	120T11-PRLF	33LF135-01PR
1-1/4"	120T114-PRLF	33LF136-01PR
1-1/2"	120T112-PRLF	33LF137-01PR
2"	120T2-PRLF	33LF138-01PR

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



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



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REV. 10-31-14

163T-PR

200 CWP Bronze Swing Check

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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 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

† APOLLOXPRESS® 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

Not intended for potable water

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	Item Number
1/2"	163T12-PR	61Y203-T1PR
3/4"	163T34-PR	61Y204-T1PR
1"	163T1-PR	61Y205-T1PR
1-1/4"	163T114-PR	61Y206-T1PR
1-1/2"	163T112-PR	61Y207-T1PR
2"	163T2-PR	61Y208-T1PR



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For additional information, submittal sheets and manuals, visit www.apollovalves.com

163T-PRLF

Lead Free 200 CWP Bronze Swing Check **APOLLOXPRESS®**

DESCRIPTION:

The Lead Free* APOLLOXPRESS® 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

† APOLLOXPRESS® 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	Item Number
1/2"	163T12-PRLF	61YLF203-T1PR
3/4"	163T34-PRLF	61YLF204-T1PR
1"	163T1-PRLF	61YLF205-T1PR
1-1/4"	163T114-PRLF	61YLF206-T1PR
1-1/2"	163T112-PRLF	61YLF207-T1PR
2"	163T2-PRLF	61YLF208-T1PR



* 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.

For additional information, submital sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

In-Line Bronze Check Valve

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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

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

† APOLLOXPRESS® 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.

APPROVALS

- Canadian Registration Number OC11218.5C

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

Not intended for potable water

Precautionary Note: Not recommended for use with reciprocating pumps and similar applications, which may induce repetitive 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	Item Number	Size	Length	Wt (lbs)	Flow (Cv)
CVB12PR	6110301PR	1/2"	4.2"	.42	1.4
CVB34PR	6110401PR	3/4"	5.0"	1.0	3.5
CVB1PR	6110501PR	1"	5.8"	1.9	6.0
CVB114PR	6110601PR	1-1/4"	6.7"	3.35	44
CVB112PR	6110701PR	1-1/2"	8.2"	4.6	65
CVB2PR	6110801PR	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)
- OTHER



61LF SERIES

Lead Free Bronze In-Line Check Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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 OC11218.5C
- 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

† APOLLOXPRESS® 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 repetitive 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	Item Number	Size	Length	Wt (lbs)	Flow (Cv)
CVB12PRLF	61LF10301PR	1/2"	4.2"	.42	1.4
CVB34PRLF	61LF10401PR	3/4"	5.0"	1.0	3.5
CVB1PRLF	61LF10501PR	1"	5.8"	1.9	6.0
CVB114PRLF	61LF10601PR	1-1/4"	6.7"	3.35	44
CVB112PRLF	61LF10701PR	1-1/2"	8.2"	4.6	65
CVB2PRLF	61LF10801PR	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.

For additional information, submital sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

Bronze Wye Strainer

DESCRIPTION:

The APOLLOXPRESS® 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 OE8959.5C
- **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

† APOLLOXPRESS® 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

APOLLOXPRESS®



DIMENSIONS (IN)

Model Number	Item Number	Size	Length	Cv	Wt (lbs)
YB-12PR	59-00301PR	1/2"	4.75"	5	1.0
YB-34PR	59-00401PR	3/4"	6.1"	15	2.0
YB-1PR	59-00501PR	1"	7.25"	28	3.0
YB-114PR	59-00601PR	1-1/4"	7.62"	55	3.8
YB-112PR	59-00701PR	1-1/2"	8.25"	70	5.7
YB-2PR	59-00801PR	2"	10.3"	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

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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

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

† APOLLOXPRESS® 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.

APPROVALS

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

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	Item Number	Size	Length	Cv	Wt (lbs)
YB12PRLF	59LF00301PR	1/2"	4.75"	5	1.0
YB34PRLF	59LF00401PR	3/4"	6.1"	15	2.0
YB1PRLF	59LF00501PR	1"	7.25"	28	3.0
YB114PRLF	59LF00601PR	1-1/4"	7.62"	55	3.8
YB112PRLF	59LF00701PR	1-1/2"	8.25"	70	5.7
YB2PRLF	59LF00801PR	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.

For additional information, submital sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

REV. 8/21/14

APOLLOXPRESS®

For additional information, submittal sheets and manuals, visit www.apollovalves.com





Available in Press sizes ½" – 2", four 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.

Made in
USA



Available in both **Standard**
and **Lead Free** Models

Water Pressure Reducing Valves

APOLLOXPRESS®
Your Single Source Solution for Press Technology

36 SERIES

Pressure Reducing Valve

DESCRIPTION:

The APOLLOXPRESS® Model PR-PR (36 Series) Heavy Duty Bronze Pressure Reducing Valves with Press end connections are designed to protect residential and commercial non-potable water distribution systems by controlling excessive pressures. The valves are built for long reliable service with proven ASTM grade materials including a bronze body and cover and integral stainless steel strainer.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Dezincification Resistant Bronze Body and Bonnet
- 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)

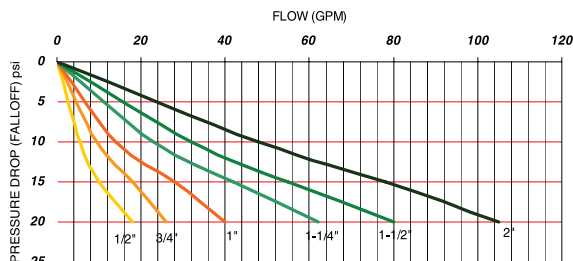
APPROVALS:

- ASSE 1003-2009; "Water Pressure Reducing Valves"
- CSA B356 "Water Pressure Reducing Valves for Domestic Water Supply Systems."

MATERIAL SPECIFICATIONS:

Part Name	Material
Body	Bronze, ASTM B584
Covers	Bronze, ASTM B584
Diaphragm	FDA Grade Buna W/ Polyester
Seat disc	FDA Grade EPDM
Stem	Brass, ASTM B-16
Spring	Stainless Steel
Piston O-Ring	FDA approved Nitrile
Connector Housing	ASTM B16 Brass
Connector O-Ring	FDA grade EPDM

FLOW CHART



Not intended for potable water

APOLLOXPRESS®



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PR12PR	3620301PR	1/2"	5.78"	4.75"	3.1
PR34PR	3620401PR	3/4"	6.09"	4.75"	3.3
PR1PR	3620501PR	1"	6.65"	5.9"	4.1
PR114PR	3620601PR	1-1/4"	7.88"	7.49"	9.0
PR112PR	3620701PR	1-1/2"	8.62"	7.49"	9.0
PR2PR	3620801PR	2"	10.76"	9.76"	21

MODEL NUMBERING SYSTEM

PR	Size	Pressure Gauge	Pressure Range	PR
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Example: PR-12H-PR 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



www.apollovalves.com

APOLLO VALVES Customer Service (704) 841-6000



For additional information, submittal sheets and manuals, visit www.apollovalves.com

36LF SERIES

Lead Free Pressure Reducing Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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)

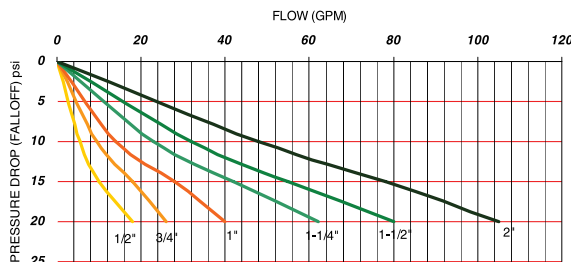
APPROVALS

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

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

FLOW CHART



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PR12PRLF	36LF20301PR	1/2"	5.78"	4.75"	3.1
PR34PRLF	36LF20401PR	3/4"	6.09"	4.75"	3.1
PR1PRLF	36LF20501PR	1"	6.65"	5.9"	4.1
PR114PRLF	36LF20601PR	1-1/4"	7.88"	7.49"	9.0
PR112PRLF	36LF20701PR	1-1/2"	8.62"	7.49"	9.0
PR2PRLF	36LF20801PR	2"	10.76"	9.76"	21.0

MODEL NUMBERING SYSTEM

PR	Size	Pressure Gauge	Pressure Range	PRLF
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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



* **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.

For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

36C SERIES

Pressure Reducing Valve

DESCRIPTION:

The APOLLOXPRESS® Model PRC-PR (36C Series) Pressure Reducing Valves with Press connections are easily installed to protect residential and commercial non-potable water distribution systems by automatically controlling excessive pressure. The dielectric thermoplastic cage provides maximum corrosion resistance. Designed for easy in-line servicing with bottom cleanout and service access.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Balanced Piston Design
- SS Adjusting Screw and Sealed Cage Standard
- Built-in Thermal Expansion By-Pass
- Bottom Access to Seat Disc and Strainer
- **Made in USA**, ARRA Compliant

PERFORMANCE RATING:

- Maximum Press Fitting Pressure: 250 psig non-shock
- Standard Temperature Range: 33°F – 180°F
- Maximum Set Pressure: 125 psig

APPROVALS:

- ASSE 1003-2009; "Water Pressure Reducing Valves"
- CSA B356 "Water pressure reducing valves for domestic water supply systems"

MATERIAL SPECIFICATIONS:

Part Name	Material
Body	Bronze, ASTM B584
Tailpiece	Brass, ASTM B16
Screen	Stainless Steel
Cap	Glass Filled Celcon®
Diaphragm	FDA grade EPDM Reinforced
Seat disc	FDA grade EPDM
Stem / Adj Screw	Brass, ASTM B-16 / Stainless
Spring	Music Wire ASTM 228
O-Rings	FDA grade Nitrile
Connector Housing	ASTM B16 Brass
Connector O-Ring	FDA grade EPDM

Not intended for potable water

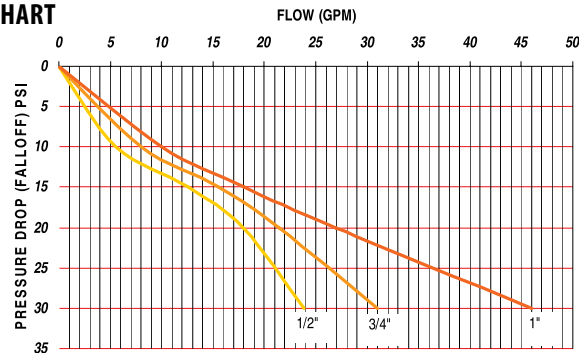
APOLLOXPRESS®



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PRC12PR	36C20301PR	1/2"	5.48"	4.75"	2.1
PRC34PR	36C20401PR	3/4"	5.79"	4.75"	2.3
PRC1PR	36C20501PR	1"	6.16"	4.75"	2.9

FLOW CHART



MODEL NUMBERING SYSTEM

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

SIZE

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

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



For additional information, submittal sheets and manuals, visit www.apollovalves.com



36CLF SERIES

Lead Free Pressure Reducing Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® Model PRC-PRLF (36C Series) Pressure Reducing Valves with Press connections are easily installed to protect residential and commercial potable water distribution systems by automatically controlling excessive pressure. The dielectric thermoplastic cage provides maximum corrosion resistance. Designed for easy in-line servicing with bottom access to seat disc and strainer.

FEATURES:

- ANSI 3rd party Certified Lead-Free*
- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Balanced Piston Design
- SS Adjusting Screw and Sealed Cage Standard
- Built-in Thermal Expansion By-Pass
- Easy Access to Seat Disc and Strainer
- **Made in USA**, ARRA Compliant

APPROVALS

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

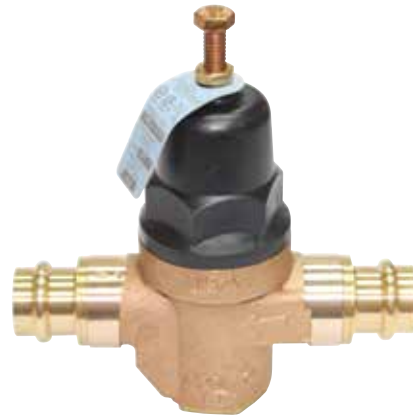
PERFORMANCE RATING:

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

MATERIAL SPECIFICATIONS:

Part Name	Material
Body	C89836 Lead Free* Bronze
Screen	Stainless Steel
Cap	Glass Filled Celcon®
Diaphragm	FDA grade EPDM
Seat disc	FDA grade EPDM
Adjusting Screw & Nut	Stainless Steel
Stem	C27451 Lead Free* Brass
Spring	Music Wire ASTM 228
O-Rings	FDA grade Nitrile
Connector Housing	C27451 Lead Free* Brass
Connector O-Ring	FDA Grade EPDM

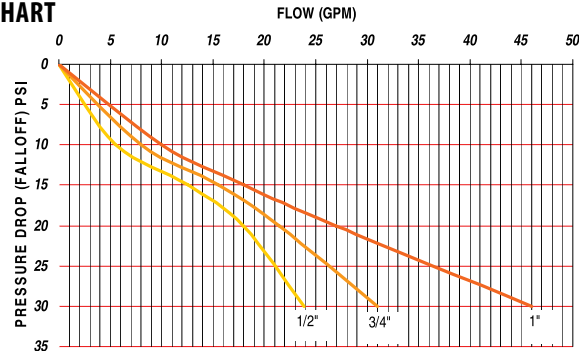
* **LEAD FREE:** The wetted surfaces of this product shall contain no more than 0.25% lead by weighted average. Complies with US Federal Public Law 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PRC12PRLF	36CLF20301PR	1/2"	5.48"	4.75"	2.1
PRC34PRLF	36CLF20401PR	3/4"	5.79"	4.75"	2.3
PRC1PRLF	36CLF20501PR	1"	6.16"	4.75"	2.9

FLOW CHART



MODEL NUMBERING SYSTEM

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

SIZE

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

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



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



www.elkhartproducts.com

ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

36E SERIES

Pressure Reducing Valve

DESCRIPTION:

The APOLLOXPRESS® Model PRE-PR (36E Series) Pressure Reducing Valve with Press connections is easily installed to protect residential and commercial non-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:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- 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 psi or 100 psi
- High flow / high efficiency design
- **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 for domestic water supply systems"

MATERIAL SPECIFICATIONS:

Part Name	Material
Body	UNS C84400 Bronze
Connector Housing	ASTM B16 Brass
Connector O-Ring	NSF grade EPDM
Screen	Stainless Steel
Spring Housing	Glass Filled Celcon®
Diaphragm	FDA grade EPDM Reinforced
Seat Disc	FDA grade EPDM
Adjusting Screw & Nut	Stainless Steel
Cage Seal	Nitrile
Stem	ASTM B16 Brass
Spring	Music Wire ASTM A228
Cartridge O-Rings	FDA grade EPDM

Not intended for potable water

APOLLOXPRESS®



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PRE12PR	36E10301PR	1/2"	5.46"	4.75"	1.5
PRE34PR	36E10401PR	3/4"	5.79"	4.75"	1.7
PRE1PR	36E10501PR	1"	5.91"	4.75"	2.3

MODEL NUMBERING SYSTEM

PRE	Size	Pressure Range	PR
-----	------	----------------	----

Example: PRE-12H-PR 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
- H - 75 - 150 PSIG

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.



36ELF SERIES

Lead Free Pressure Reducing Valve

APOLLOXPRESS®

DESCRIPTION:

The **Lead Free*** APOLLOXPRESS® 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 111-380 and Safe Drinking Water Act. ANSI 3rd party approved and listed.



DIMENSIONS (IN)

Model Number	Order Number	Size	Length	Height from CL	Wt (lbs)
PRE12PRLF	36ELF10301PR	1/2"	5.46"	4.75"	1.5
PRE34PRLF	36ELF10401PR	3/4"	5.79"	4.75"	1.7
PRE1PRLF	36ELF10501PR	1"	5.91"	4.75"	2.3

MODEL NUMBERING SYSTEM

PRE	Size	Pressure Range	PRLF
-----	------	----------------	------

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.



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



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APOLLOXPRESS®

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Balancing Valves

Apollo Model 58A HVAC Balancing Valve combines ball valve flow control simplicity with multi-turn globe valve balance adjustment. The integrated digital position indicator makes technician adjustment quick and easy, leaving no doubt where the valve is set. Valves are DZR brass and **available from ½" to 2" sizes**, NPT, Sweat and Press.

APOLLOXPRESS[®]
Your Single Source Solution for Press Technology

58A SERIES

Balancing Valve

DESCRIPTION:

Apollo Model 58A balance valves are precision engineered and manufactured valves which provide two position hydronic circuit isolation capability and multi-turn throttling adjustment as required for proportional balancing of hydronic systems. The valves unique needle valve adjustment, with integrated digital readout incorporated into the handle allows qualified technicians to have the valve function as a highly accurate variable orifice flow meter. Valve pressure drop can be read through the valves integrated 1/4" measurement ports, and flow calculated from the flow coefficient associated with the numerical setting.

FEATURES:

- P/T plugs
- Compatible with All Flow Meters
- Easy Adjustment and Setpoint Indicator
- Isolated Flow Shut-off
- Reversible Lever

PERFORMANCE RATING:

- Max Pressure: 600 psi (41.3 bar)
- Max Temp: 250°F (121°C)

MATERIAL SPECIFICATIONS:

Part Name	Material
Valve Body	DZR brass CW602N
Ball & Needle	DZR brass CW602N (chrome plated)
Valve Handle	Glass Filled Polyamide
Sealing O-ring	EPDM
Gasket	PTFE
Test Port Seal	EPDM

APPROVED APPLICATIONS:

Hot Water & Chilled Water low temperature hydronic HVAC system adjustment.

Not intended for potable water

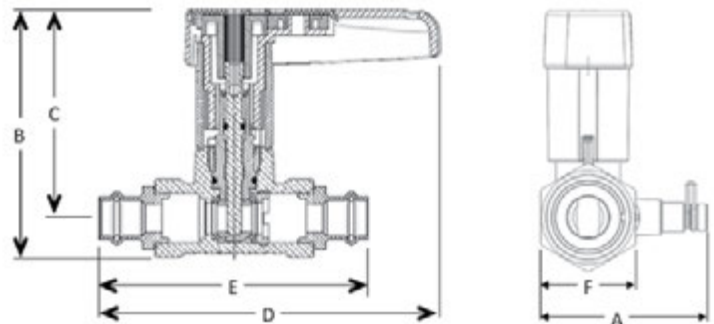
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DIMENSIONS (IN)

Part Number	Size	C _v	A	B	C	D	E	F	Wt (lbs.)
58A103PR	1/2"	1.66	2.7	3.5	3	5	3.9	1.1	1.1
58A104PR	3/4"	4.51	2.9	3.7	3	5.2	4.6	1.34	1.4
58A105PR	1"	8.18	3.2	4	3.2	4.5	5.7	1.61	1.8
58A106PR	1-1/4"	13.89	3.5	5.4	4.3	7.8	6.4	1.97	3.3
58A107PR	1-1/2"	23.9	3.7	5.7	4.4	8.3	7.0	2.24	4.3
58A108PR	2"	33.77	4.2	6.3	4.7	8.8	7.9	2.76	6.0

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



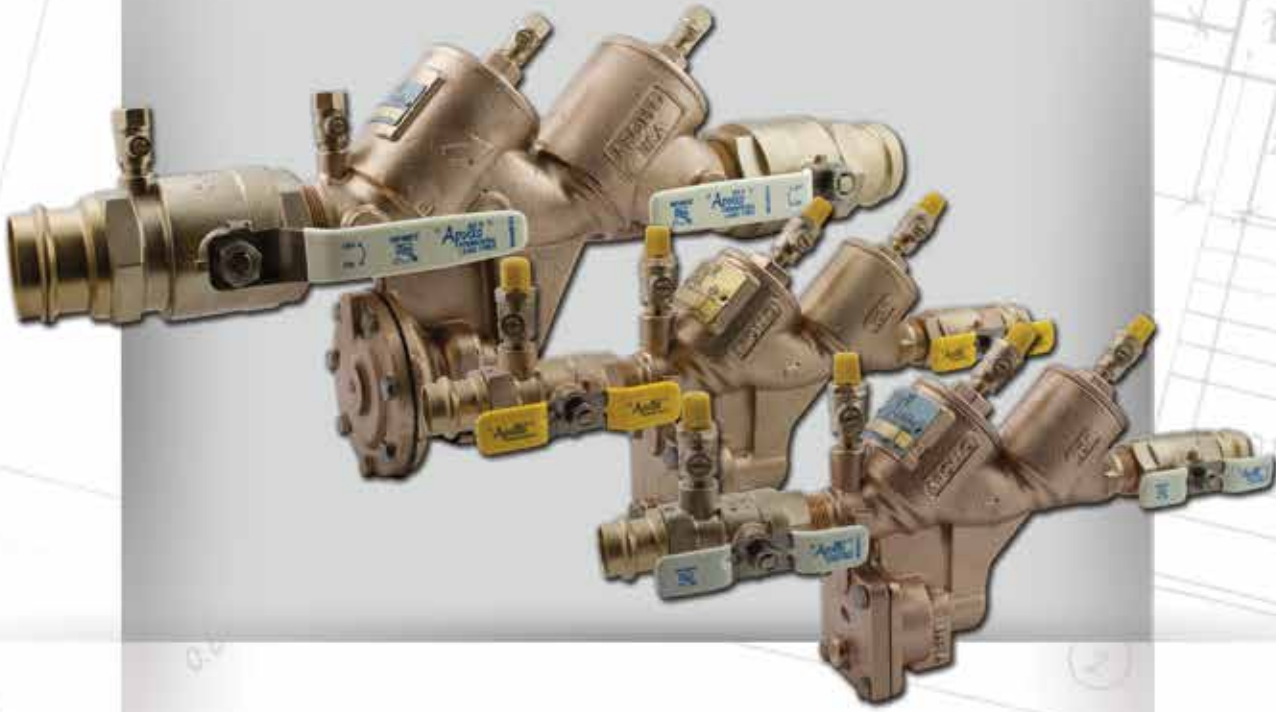
OPTIONS

- Solder Connection (58A-S Series)
- Press Connection (58A-PR Series)
- Push Connection (58A-P Series)



For additional information, submittal sheets and manuals, visit www.apollovalves.com





Backflow Prevention

The 4A Series of Reduced Pressure Principle Backflow Preventers are available in APOLLOXPRESS® 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.

Made in
USA



Available in both **Standard**
and **Lead Free** Models

APOLLOXPRESS®
Your Single Source Solution for Press Technology

RP4A SERIES

Reduced Pressure Valves

DESCRIPTION:

The APOLLOXPRESS® Model RP4A series 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 cartridges provide captured springs, replaceable seats and reversible silicone seat discs. This **Made in America / 5 year factory warranty** assembly features APOLLOXPRESS® ball valves with stainless steel handles and trim as standard and Leak Before Press® technology.

FEATURES:

- Fast, Reliable, Economical Press Installation
- Ridgid® XL Press Tool Compatible
- Leak Before Press® Technology
- Low pressure loss
- Easily removable modular check valve cartridge
- Captured stainless steel check springs
- APOLLOXPRESS® ball valves w/ SS handles & nuts standard
- Top-mounted test cocks for easy testing
- Modular Relief Valve
- 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. APOLLOXPRESS® connections are optional factory installed connectors on each end of the approved assembly. - Horizontal (3/4" & 1")

MATERIAL SPECIFICATIONS:

Part Name	Material
Body, Caps, Ball Valve Shutoffs, Test cocks	Cast Bronze C84400
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")

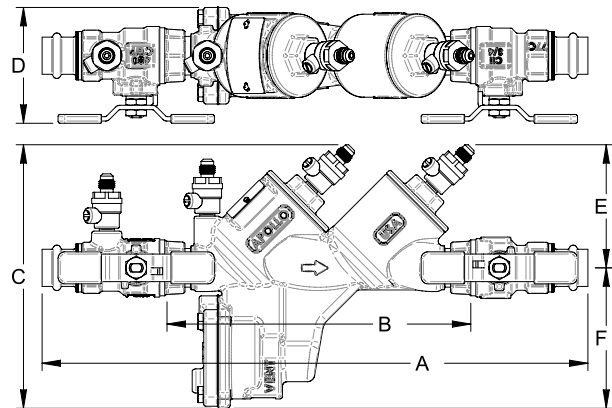
Not intended for potable water

APOLLOXPRESS®



DIMENSIONS (IN)

Part Number	Size	A	B	C	D	E	F	Wt (lbs)
4A203T2FPR	1/2"	13	7-3/8	7-1/8	2-7/8	3-1/4	3-7/8	7.4
4A204T2FPR	3/4"	14-7/8	8-1/2	7-3/8	3-1/8	3-1/2	3-7/8	9.0
4A205T2FPR	1"	16-7/8	9-1/2	8	3-1/4	4	4	13.0
4A206T2PR	1-1/4"	21-1/8	11-3/4	9-7/8	5-1/8	4-1/2	5-3/8	19.1
4A207T2PR	1-1/2"	22	11-5/8	9-7/8	5-1/8	4-1/2	5-3/8	22.5
4A208T2PR	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")		

For additional information, submittal sheets and manuals, visit www.apollovalves.com

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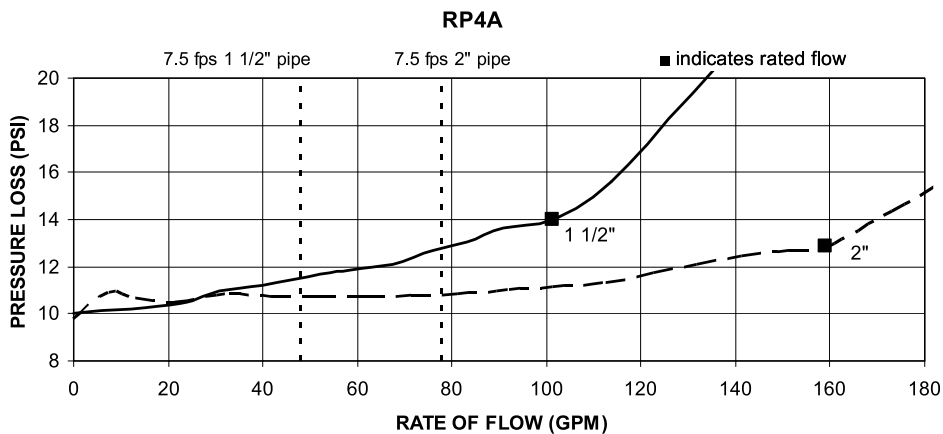
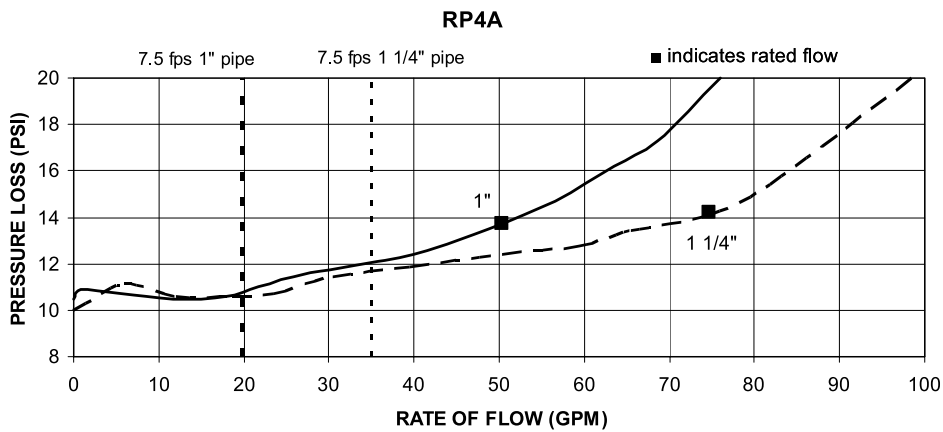
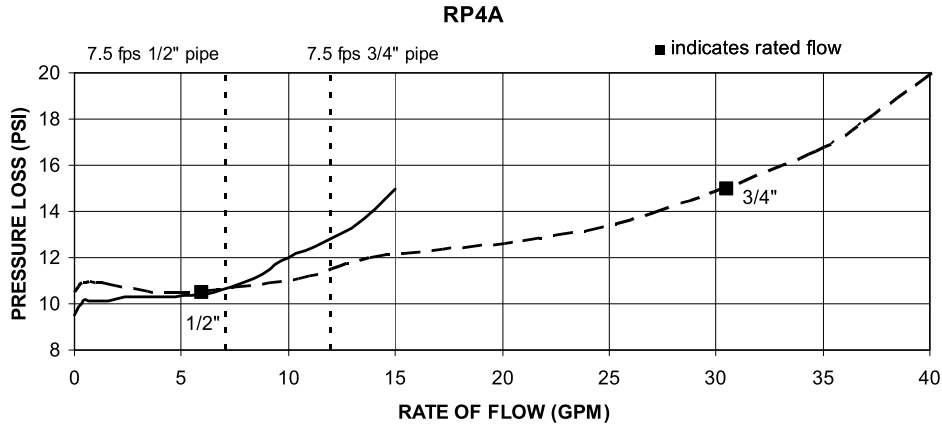
APOLLO VALVES Customer Service (704) 841-6000



Reduced Pressure Valves

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.



For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



RPLF4A SERIES

Lead Free Reduced Pressure Valves

APOLLOXPRESS®

DESCRIPTION:

The APOLLOXPRESS® 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 cartridges provide captured springs, replaceable seats and reversible silicone seat discs. This **Made in America / 5 year factory warranty** assembly features APOLLOXPRESS® 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
- APOLLOXPRESS® 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. APOLLOXPRESS® 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

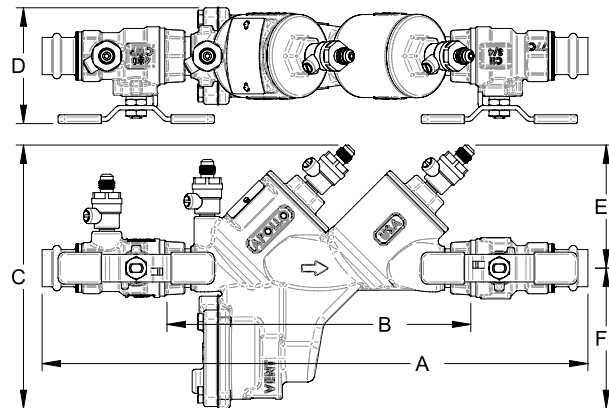
- AGD4A1 (1/2" - 1")
- AGD4A112 (1-1/4" - 1-1/2")
- AGD4A2 (2")

* **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)

Part Number	Size	A	B	C	D	E	F	Wt (lbs)
4ALF203T2FPR	1/2"	13	7-3/8	7-1/8	2-7/8	3-1/4	3-7/8	7.4
4ALF204T2FPR	3/4"	14-7/8	8-1/2	7-3/8	3-1/8	3-1/2	3-7/8	9.0
4ALF205T2FPR	1"	16-7/8	9-1/2	8	3-1/4	4	4	13.0
4ALF206T2PR	1-1/4"	21-1/8	11-3/4	9-7/8	5-1/8	4-1/2	5-3/8	19.1
4ALF207T2PR	1-1/2"	22	11-5/8	9-7/8	5-1/8	4-1/2	5-3/8	22.5
4ALF208T2PR	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")		

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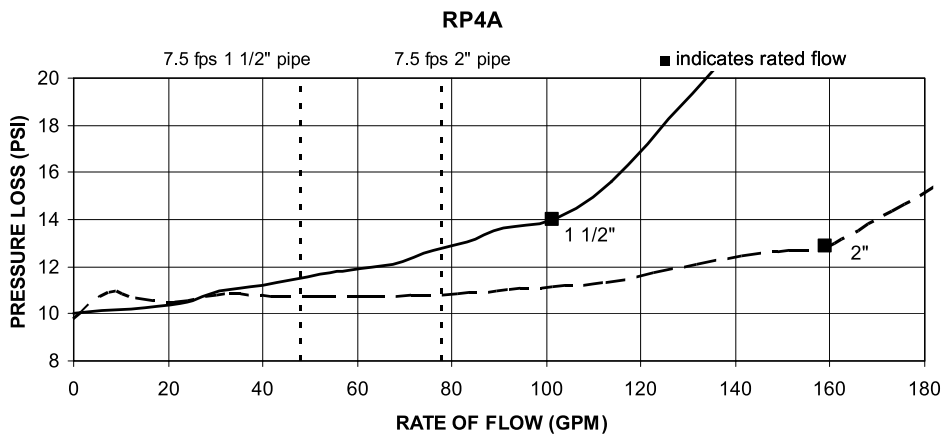
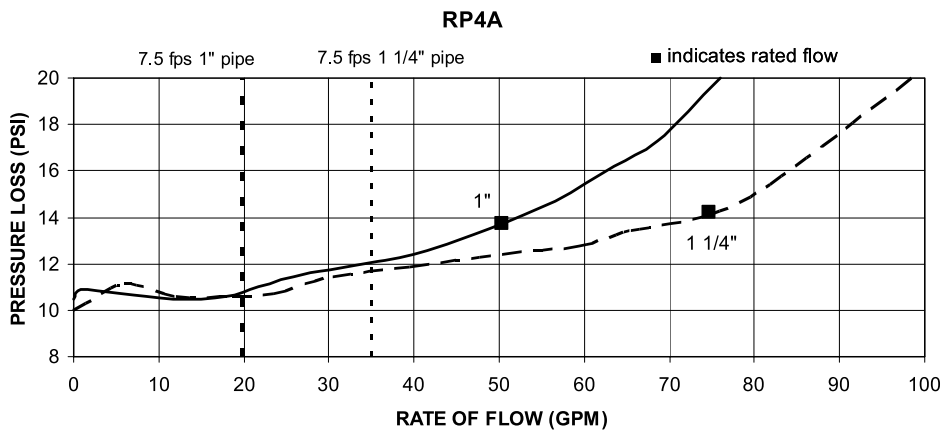
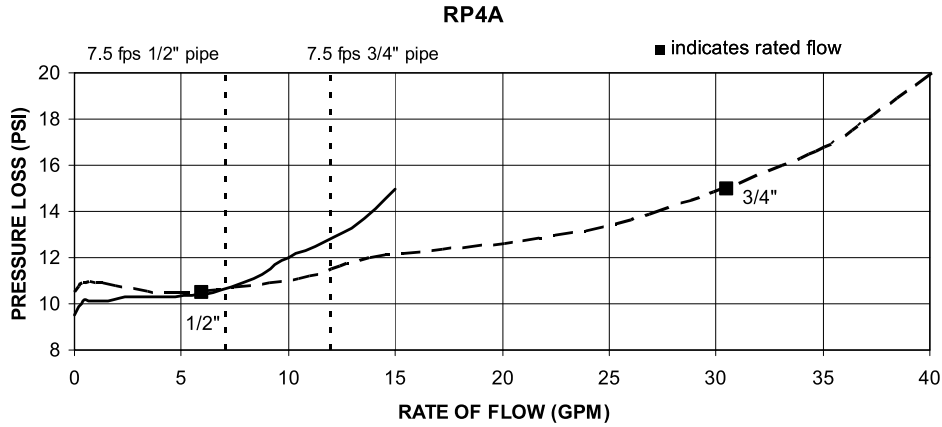
RPLF4A SERIES

Lead Free Reduced Pressure Valves

APOLLOXPRESS®

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.



For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



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APOLLOXPRESS®

For additional information, submittal sheets and manuals, visit www.apollovalves.com





The APOLLOXPRESS® 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.

Made in
USA



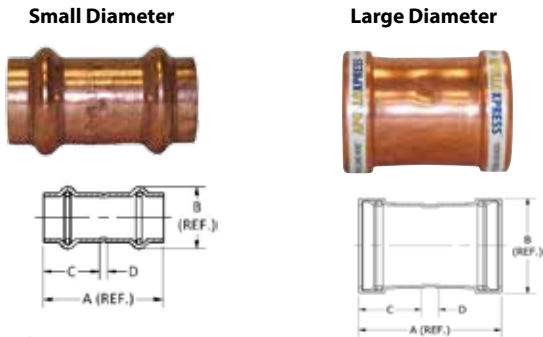
The APOLLOXPRESS® large diameter copper fittings (available in sizes 2 ½" - 4") feature a patented solid cross-section grab ring, creating significant contact with the tube after pressing. The **Leak Before Press®** feature allows water to flow past the sealing element during pressure testing if the 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.

APOLLOXPRESS®

Your Single Source Solution for Press Technology

Small & Large Diameter Fittings

Copper Coupling with Stop



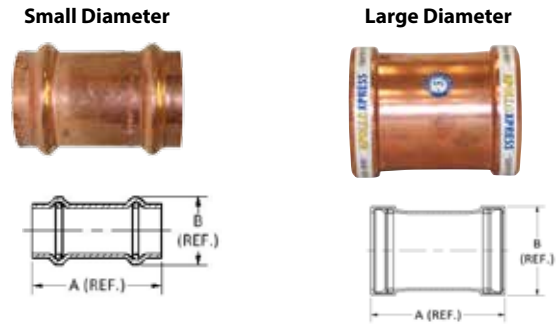
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	Height	Width	Depth
10075500	800 1/2 CxC CPLG W/ ST	1.72	0.95	0.81	0.11	0.95	1.72	0.95
10075502	800 3/4 CxC CPLG W/ ST	1.89	1.24	0.88	0.12	1.24	1.89	1.24
10075504	800 1 CxC CPLG W/ ST	2.06	1.49	0.92	0.23	1.49	2.06	1.49
10075506	800 1 1/4 CxC CPLG W/ ST	2.33	1.75	1.04	0.24	1.75	2.33	1.75
10075508	800 1 1/2 CxC CPLG W/ ST	3.10	2.09	1.43	0.24	2.09	3.10	2.09
10075510	800 2 CxC CPLG W/ ST	3.42	2.56	1.59	0.25	2.56	3.42	2.56
10061947	800 2 1/2 CxC CPLG W/ ST	4.33	3.16	1.90	0.53	3.16	4.33	3.16
10061952	800 3 CxC CPLG W/ ST	4.65	3.68	2.10	0.45	3.68	4.65	3.68
10061957	800 4 CxC CPLG W/ ST	5.53	4.70	2.50	0.53	4.70	5.53	4.70

*Cup Depth (Dim C) Tolerance: Sizes 1/2"-2" +/- .045, Sizes 2-1/2"-4" +/- .015

**Lay-in (Dim D) Tolerance: Sizes 1/2"-3/4" +.07/- .03, Sizes 1"-2" +.09/- .03, Sizes 2-1/2"-3" +.12/- .03, Size 4" +.15/- .03

Copper Coupling without Stop



Dimensions shown in inches

Item No.	Description	A	B	Height	Width	Depth
10075513	801 1/2 CxC CPLG W/O ST	1.72	0.95	0.95	1.72	0.95
10075515	801 3/4 CxC CPLG W/O ST	1.89	1.24	1.24	1.89	1.24
10075517	801 1 CxC CPLG W/O ST	2.07	1.49	1.49	2.07	1.49
10075521	801 1 1/4 CxC CPLG W/O ST	2.33	1.75	1.75	2.33	1.75
10075523	801 1 1/2 CxC CPLG W/O ST	3.10	2.09	2.09	3.10	2.09
10075527	801 2 CxC CPLG W/O ST	3.41	2.56	2.56	3.41	2.56
10061932	801 2 1/2 CxC CPLG W/O ST	4.33	3.16	3.16	4.65	3.16
10061937	801 3 CxC CPLG W/O ST	4.65	3.68	3.68	4.70	3.68
10061942	801 4 CxC CPLG W/O ST	5.53	4.70	4.70	5.53	4.70

Copper Reducer Coupling

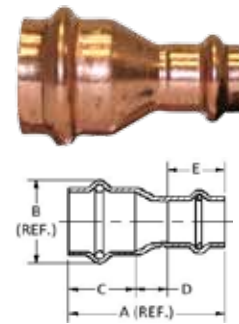
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	Height	Width	Depth
10075900	801R 3/4x1/2 CxC CPLG	2.14	1.24	0.92	0.44	0.79	1.24	2.14	1.24
10075144	801R 1x1/2 CxC CPLG	2.37	1.49	0.93	0.64	0.81	1.49	2.37	1.49
10075898	801R 1x3/4 CxC CPLG	2.30	1.49	0.98	0.39	0.93	1.49	2.30	1.49
10066073	801R 1 1/4x1/2 CxC CPLG	4.27	1.75	1.04	2.38	0.85	1.75	4.27	1.75
10066001	801R 1 1/4x3/4 CxC CPLG	4.13	1.75	1.04	2.24	0.85	1.75	4.13	1.75
10075896	801R 1 1/4x1 CxC CPLG	2.40	1.75	1.06	0.38	0.97	1.75	2.40	1.75
10066380	801R 1 1/2x1/2 CxC CPLG	4.86	2.09	1.43	2.62	0.81	2.09	4.86	2.09
10066381	801R 1 1/2x3/4 CxC CPLG	4.89	2.09	1.43	2.58	0.89	2.09	4.89	2.09
10066003	801R 1 1/2x1 CxC CPLG	4.60	2.09	1.43	2.25	0.93	2.09	4.60	2.09
10075128	801R 1 1/2x1 1/4 CxC CPLG	2.87	2.11	1.20	0.63	1.04	2.11	2.87	2.11
10066082	801R 2x1/2 CxC CPLG	5.86	2.56	1.51	3.43	0.85	2.56	5.86	2.56
10066398	801R 2x3/4 CxC CPLG	5.70	2.56	1.59	3.23	0.89	2.56	5.70	2.56
10066005	801R 2x1 CxC CPLG	5.49	2.56	1.59	2.94	0.97	2.56	5.49	2.56
10066072	801R 2x1 1/4 CxC CPLG	5.18	2.56	1.59	2.55	1.04	2.56	5.18	2.56
10075130	801R 2x1 1/2 CxC CPLG	3.50	2.56	1.40	0.90	1.20	2.56	3.50	2.56
10066440	801R 2 1/2x1 CxC CPLG	6.75	3.16	1.90	3.89	0.97	3.16	6.75	3.16
10066441	801R 2 1/2x1 1/4 CxC CPLG	6.62	3.16	1.90	3.68	1.04	3.16	6.62	3.16
10066442	801R 2 1/2x1 1/2 CxC CPLG	6.72	3.16	1.90	3.45	1.38	3.16	6.72	3.16
10066074	801R 2 1/2x2 CxC CPLG	6.68	3.16	1.90	3.38	1.40	3.16	6.68	3.16
10066444	801R 3x3/4 CxC CPLG	7.48	3.68	2.10	4.55	0.83	3.68	7.48	3.68
10066445	801R 3x1 1/2 CxC CPLG	7.26	3.68	2.10	3.79	1.38	3.68	7.26	3.68
10066446	801R 3x2 CxC CPLG	7.11	3.68	2.10	3.55	1.47	3.68	7.39	3.68
10066076	801R 3x2 1/2 CxC CPLG	7.63	3.68	2.10	3.63	1.90	3.68	7.63	3.68
10066447	801R 4x2 CxC CPLG	8.62	4.70	2.50	4.65	1.47	4.70	8.62	4.70
10066151	801R 4x2 1/2 CxC CPLG	8.90	4.70	2.50	4.50	1.90	4.70	8.90	4.70
10066152	801R 4x3 CxC CPLG	8.93	4.70	2.50	4.33	2.10	4.70	8.93	4.70

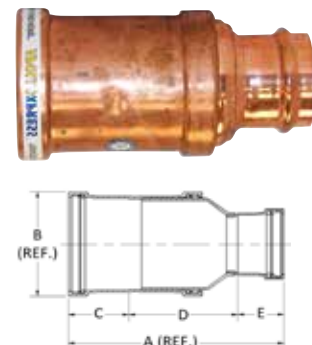
*Cup Depth (Dim C & E) Tolerance: Sizes 1/2"-2" +/- .045, Sizes 2-1/2"-4" +/- .015

**Lay-in (Dim D) Tolerance: Sizes 1/2"-3/4" +.07/- .03, Sizes 1"-2" +.09/- .03, Sizes 2-1/2"-3" +.12/- .03, Size 4" +.15/- .03

Small Diameter



Large Diameter

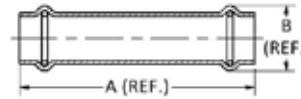


For additional information, submittal sheets and manuals, visit www.apollovalves.com

Copper Extended Length Coupling Without Stop

Dimensions shown in inches

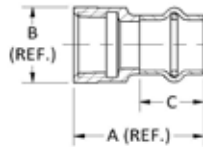
Item No.	Description	A	B	Height	Width	Depth
10075030	801 ½ CXC COUPLING W/O STOP	3.30	0.95	0.95	3.30	0.95
10075032	801 ¾ CXC COUPLING W/O STOP	3.00	1.24	1.24	3.00	1.24
10075034	801 1 CXC COUPLING W/O STOP	3.58	1.49	1.49	3.58	1.49



Lead Free Brass Female Adapter

Female Adapter

Female Reducing Adapter



Dimensions shown in inches

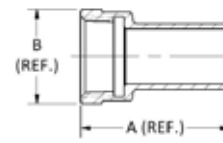
Item No.	Description	A	B	C*	Height	Width	Depth
10075750	803 ½ CxF ADAPT	1.52	1.01	0.76	1.01	1.52	1.01
10075752	803 ¾ CxF ADAPT	1.73	1.25	0.92	1.25	1.73	1.25
10075754	803 1 CxF ADAPT	1.76	1.53	0.92	1.53	1.76	1.53
10075756	803 1¼ CxF ADAPT	1.90	1.93	1.04	1.93	1.90	1.93
10075758	803 1½ CxF ADAPT	2.43	2.20	1.43	2.20	2.43	2.20
10075760	803 2 CxF ADAPT	2.44	2.73	1.59	2.73	2.44	2.73
Female Reducing Adapters							
10075780	803R ½x¾ CxF ADAPT	1.34	0.87	0.76	0.87	1.34	0.87
10075782	803R ½x¾ CxF ADAPT	1.62	1.25	0.76	1.25	1.62	1.25
10075784	803R ¾x1 CxF ADAPT	1.50	1.01	0.92	1.01	1.50	1.01
10075796	803R 1x1½ CxF ADAPT	1.55	1.01	1.03	1.01	1.55	1.01
10075798	803R 1x¾ CxF ADAPT	1.56	1.25	0.92	1.25	1.56	1.25
10075800	803R 1x1¼ CxF ADAPT	1.96	1.93	0.92	1.93	1.96	1.93
10075786	803R 1¼x1 CxF ADAPT	1.79	1.75	1.04	1.75	1.79	1.75
10075788	803R 1¼x1 CxF ADAPT	1.80	1.75	1.04	1.75	1.80	1.75
10075790	803R 1¼x1½ CxF ADAPT	1.98	2.20	1.04	2.20	1.98	2.20
10075792	803R 1½x¾ CxF ADAPT	2.03	2.09	1.43	2.09	2.03	2.09
10075794	803R 1½x1¼ CxF ADAPT	2.19	2.09	1.43	2.09	2.19	2.09

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

Lead Free Brass Female Street Adapter

Female Street Adapter

Female Reducing Street Adapter



Dimensions shown in inches

Item No.	Description	A	B	Height	Width	Depth
10075762	803-2 ½ FTGxF ADAPT	1.71	1.02	1.02	1.71	1.02
10075768	803-2 ¼ FTGxF ADAPT	1.91	1.25	1.25	1.91	1.25
10075772	803-2 1 FTGxF ADAPT	2.03	1.53	1.53	2.03	1.53
10075774	803-2 1¼ FTGxF ADAPT	2.19	1.93	1.93	2.19	1.93
10075776	803-2 1½ FTGxF ADAPT	2.57	2.20	2.20	2.57	2.20
10075778	803-2 2 FTGxF ADAPT	2.78	2.74	2.74	2.78	2.74
Female Reducing Street Adapters						
10075764	803-2 ½x¾ FTGxF ADAPT	1.56	0.87	0.87	1.56	0.87
10075766	803-2 ½x¾ FTGxF ADAPT	1.79	1.26	1.26	1.79	1.26
10075770	803-2 ¾x1 FTGxF ADAPT	1.84	1.02	1.02	1.84	1.02
10075804	803-2 1x1½ FTGxF ADAPT	1.65	1.13	1.13	1.65	1.13
10075802	803-2 1¼x1½ FTGxF ADAPT	1.90	1.38	1.38	1.90	1.38

For additional information, submittal sheets and manuals, visit www.elkhartproducts.com

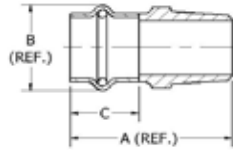


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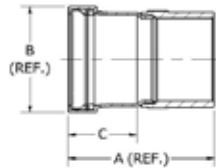
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Male Adapter

Small Diameter



Large Diameter



Reducing Adapter



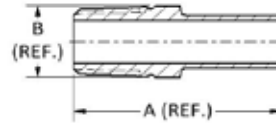
Dimensions shown in inches

Item No.	Description	A	B	C*	Height	Width	Depth
10075806	804 1/2 CxM ADAPT	1.92	0.93	0.76	0.93	1.92	0.93
10075808	804 3/4 CxM ADAPT	2.15	1.26	0.92	1.26	2.15	1.26
10075844	804 1 CxM ADAPT	2.39	1.50	0.92	1.50	2.39	1.50
10075810	804 1 1/4 CxM ADAPT	2.39	1.71	1.04	1.71	2.39	1.71
10075812	804 1 1/2 CxM ADAPT	2.68	2.13	1.43	2.13	2.68	2.13
10075814	804 2 CxM ADAPT	2.97	2.60	1.59	2.60	2.97	2.60
10061982	804 2 1/2 CxM ADAPT	4.11	3.16	1.90	3.16	4.11	3.16
10061987	804 3 CxM ADAPT	4.35	3.68	2.10	3.56	4.35	3.16
10061992	804 4 CxM ADAPT	5.43	4.70	2.50	4.70	5.43	3.16
Male Reducing Adapters							
10075836	804R 1/2x3/8 CxM ADAPT	1.79	0.93	0.76	0.93	1.79	0.93
10075838	804R 1/2x3/4 CxM ADAPT	1.86	1.05	0.76	1.05	1.86	1.05
10075840	804R 3/4x1 CxM ADAPT	2.21	1.26	0.92	1.26	2.21	1.26
10075842	804R 3/4x1 1/2 CxM ADAPT	2.60	1.50	0.92	1.50	2.60	1.50
10075854	804R 1x3/4 CxM ADAPT	2.24	1.50	0.92	1.50	2.24	1.50
10075856	804R 1x1 1/4 CxM ADAPT	2.44	1.71	0.92	1.71	2.44	1.71
10075846	804R 1 1/4x1 CxM ADAPT	2.42	1.71	1.04	1.71	2.42	1.71
10075848	804R 1 1/4x1 1/2 CxM ADAPT	2.62	1.90	1.04	1.90	2.62	1.90
10075850	804R 1 1/2x1 1/4 CxM ADAPT	2.73	2.12	1.43	2.12	2.73	2.12
10075852	804R 1 1/2x2 CxM ADAPT	2.82	2.59	1.43	2.59	2.82	2.59
10075858	804R 2x1 1/2 CxM ADAPT	3.10	2.57	1.59	2.57	3.1	2.57

*Cup Depth (Dim C) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

Lead Free Brass Male Street Adapter

Small Diameter



Reducing Adapter



Dimensions shown in inches

Item No.	Description	A	B	Height	Width	Depth
10075816	804-2 1/2 FTGxM ADAPT	2.23	0.84	0.84	2.23	0.84
10075822	804-2 3/4 FTGxM ADAPT	2.40	1.05	1.05	2.40	1.05
10075826	804-2 1 FTGxM ADAPT	2.72	1.31	1.31	2.72	1.31
10075828	804-2 1 1/4 FTGxM ADAPT	2.82	1.66	1.66	2.82	1.66
10075830	804-2 1 1/2 FTGxM ADAPT	3.27	1.90	1.90	3.27	1.90
10075834	804-2 2 FTGxM ADAPT	3.46	2.37	2.37	3.46	2.37
Male Reducing Street Adapters						
10075818	804-2 1/2x3/8 FTGxM ADAPT	1.99	0.68	0.68	1.99	0.68
10075820	804-2 1/2x3/4 FTGxM ADAPT	2.42	1.05	1.05	2.42	1.05
10075824	804-2 3/4x1 FTGxM ADAPT	2.31	0.98	0.98	2.31	0.98
10075832	804-2 1x3/4 FTGxM ADAPT	2.55	1.32	1.32	2.55	1.32

Copper 45° Elbow

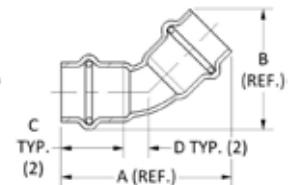
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	Height	Width	Depth
10075060	806 1/2 CxC 45 EL	2.14	1.52	0.78	0.32	1.52	2.14	0.95
10075062	806 3/4 CxC 45 EL	2.62	1.91	0.92	0.41	1.91	2.62	1.24
10075064	806 1 CxC 45 EL	3.10	2.28	0.97	0.59	2.28	3.10	1.49
10075090	806 1 1/4 CxC 45 EL	3.62	2.69	1.09	0.72	2.69	3.62	1.75
10075092	806 1 1/2 CxC 45 EL	4.20	3.16	1.31	0.78	3.16	4.20	2.09
10075094	806 2 CxC 45 EL	5.12	3.88	1.51	1.02	3.73	5.13	2.58
10062052	806 2 1/2 CxC 45 EL	5.89	4.67	1.90	0.91	4.67	5.89	3.16
10062057	806 3 CxC 45 EL	6.58	5.33	2.10	1.00	5.31	6.57	3.68
10062062	806 4 CxC 45 EL	8.10	6.67	2.50	1.28	6.67	8.10	4.70

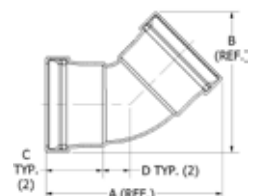
*Cup Depth (Dim C) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

**Lay-in (Dim D) Tolerance : Sizes 1/2"- 3/4" +/- .07/- .03, Sizes 1"- 2" +/- .09/- .03, Sizes 2-1/2"- 3" +/- .12/- .03, Size 4" +/- .15/- .03

Small Diameter



Large Diameter



For additional information, submittal sheets and manuals, visit www.apollovalves.com



Copper 45° Street Elbow

Dimensions shown in inches

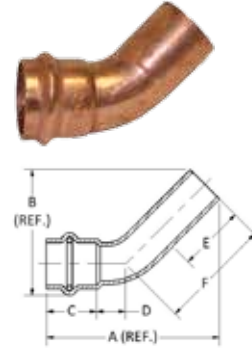
Item No.	Description	A	B	C*	D**	E***	F**	Height	Width	Depth
10075054	806-2 1/2 FTGxC 45 ST EL	2.60	1.89	0.76	0.43	1.00	1.69	1.89	2.60	0.95
10075056	806-2 3/4 FTGxC 45 ST EL	2.96	2.25	0.92	0.41	1.38	1.88	2.25	2.96	1.24
10075058	806-2 1 FTGxC 45 ST EL	3.23	2.33	0.93	0.71	1.16	1.69	2.33	3.23	1.49
10075084	806-2 1 1/4 FTGxC 45 ST EL	3.67	2.73	1.09	0.72	1.19	1.94	2.55	3.61	1.75
10075086	806-2 1 1/2 FTGxC 45 ST EL	4.09	3.06	1.31	0.78	1.16	2.02	3.06	4.09	2.11
10075088	806-2 2 FTGxC 45 ST EL	5.29	3.95	1.59	1.06	1.65	2.72	3.95	5.29	2.55
10062037	806-2 2 1/2 FTGxC 45 EL	5.97	4.74	1.90	0.91	2.09	3.16	4.74	5.97	3.16
10062042	806-2 3 FTGxC 45 EL	6.62	5.36	2.10	1.00	2.25	3.41	5.36	6.62	3.68
10062047	806-2 4 FTGxC 45 EL	8.18	6.74	2.50	1.28	2.63	4.16	6.74	8.18	4.70

*Cup Depth (Dim C) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

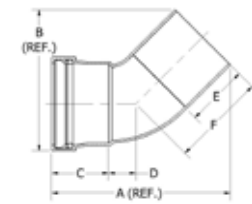
**Lay-in (Dim D&F) Tolerance : Sizes 1/2"- 3/4" +.07/- .03, Sizes 1" - 2" +.09/- .03, Sizes 2-1/2"- 3" +.12/- .03, Size 4" +.15/- .03

***Fit End (Dim E) Tolerance : Sizes 1/2"- 1" +.06/- .00, Sizes 1-1/4"- 2" +.09/- .00, Sizes 2-1/2"- 4" +.12/- .00

Small Diameter



Large Diameter



Copper 90° Elbow

Small Diameter



Large Diameter Close Turn



Large Diameter Close Turn Reducing



Large Diameter Long Turn



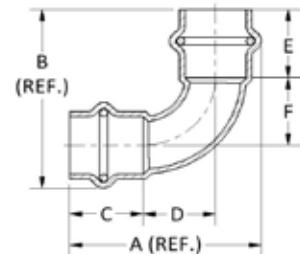
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F**	Height	Width	Depth
10075554	807 1/2 CXC 90 DEG. EL	1.97	1.97	0.76	0.75			1.97	1.97	0.95
10075556	807 3/4 CXC 90 DEG. EL	2.58	2.58	0.93	1.03			2.58	2.58	1.24
10075052	807 1 CxC 90 EL	2.97	2.97	0.92	1.31			2.97	2.97	1.49
10075078	807 1 1/4 CxC 90 EL	3.83	3.83	1.09	1.87			3.83	3.83	1.75
10075080	807 1 1/2 CxC 90 EL	4.37	4.37	1.31	2.02			4.37	4.37	2.11
10075082	807 2 CxC 90 EL	5.35	5.35	1.51	2.56			5.35	5.35	2.58
Reducing Elbow										
10066101	807 3/4x1/2 CxC 90 EL	2.58	3.67	0.93	1.03	0.81	2.25	3.67	2.58	1.24
10066099	807 1x1/2 CxC 90 EL	2.97	4.43	0.92	1.31	0.81	2.88	4.43	2.97	1.49
10066083	807 1x3/4 CxC 90 EL	2.97	4.27	0.92	1.31	0.85	2.68	4.27	2.97	1.49
Close Turn Elbow - Large Diameter Copper										
10062021	807-C 2 1/2 CxC 90 EL	5.23	5.23	1.90	1.75			5.23	5.23	3.16
10062027	807-C 3 CxC 90 EL	5.94	5.94	2.10	2.00			5.95	5.95	3.68
10062032	807-C 4 CxC 90 EL	7.44	7.44	2.50	2.59			7.44	7.44	4.70
Close Turn Reducing Elbow - Large Diameter Copper										
10066460	807 3x2 CxC 90 EL	5.94	8.41	2.10	2.00	1.51	5.07	8.41	5.94	3.68
10066141	807 3x2 1/2 CxC 90 EL	5.94	8.93	2.10	2.00	1.90	5.19	5.94	8.93	3.68
Long Turn Elbow - Large Diameter Copper										
10062066	807-L 2 1/2 CxC 90 EL	6.67	6.67	1.90	3.19			6.67	6.67	3.16
10062067	807-L 3 CxC 90 EL	8.56	8.56	2.10	4.58			8.56	8.56	3.68
10062069	807-L 4 CxC 90 EL	9.75	9.75	2.50	4.90			9.75	9.75	4.70

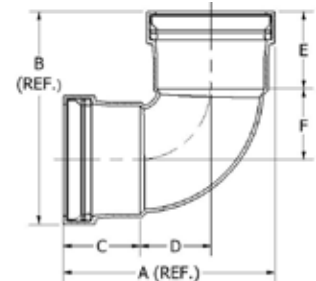
*Cup Depth (Dim C) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

**Lay-in (Dim D&F) Tolerance : Sizes 1/2"- 3/4" +.07/- .03, Sizes 1" - 2" +.09/- .03, Sizes 2-1/2"- 3" +.12/- .03, Size 4" +.15/- .03

Small Diameter



Large Diameter



For additional information, submital sheets and manuals, visit www.elkhartproducts.com



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Copper 90° Street Elbow



Dimensions shown in inches

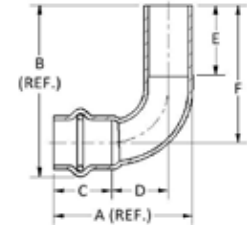
Item No.	Description	A	B	C*	D**	E***	F**	Height	Width	Depth
10075566	807-2 1/2 FTGXC 90 ST EL	1.80	2.38	0.76	0.73	0.97	1.91	2.38	1.80	0.95
10075568	807-2 3/4 FTGXC 90 ST EL	2.37	2.82	0.93	1.01	1.06	2.20	2.82	2.37	1.24
10075046	807-2 1 FTGxC 90 ST EL	2.87	3.56	0.92	1.40	1.13	2.81	3.56	2.87	1.49
10075072	807-2 1 1/4 FTGxC 90 ST EL	3.64	3.85	1.09	1.87	1.19	2.97	3.85	3.64	1.75
10075074	807-2 1 1/2 FTGxC 90 ST EL	4.14	4.40	1.31	2.02	1.36	3.34	4.40	4.14	2.11
10075076	807-2 2 FTGxC 90 ST EL	5.12	5.56	1.51	2.56	1.56	4.27	5.56	5.12	2.58
Close Turn Street Elbow - Large Diameter Copper										
10062007	807-C-2 2 1/2 CxC 90 EL	4.96	5.54	1.90	1.75	2.03	3.96	5.54	4.96	3.16
10062012	807-C-2 3 CxC 90 EL	5.66	6.25	2.10	2.00	2.25	4.41	6.25	5.66	3.68
10062017	807-C-2 4 CxC 90 EL	7.15	7.89	2.50	2.59	2.75	5.54	7.89	7.15	4.70
Long Turn Street Elbow - Large Diameter Copper										
10062071	807-L-2 2 1/2 CxC 90 EL	6.40	6.92	1.90	3.19	2.03	5.34	6.92	6.40	3.16
10062073	807-L-2 3 CxC 90 EL	8.28	8.71	2.10	4.62	2.25	6.87	8.71	8.28	3.68
10062074	807-L-2 4 CxC 90 EL	10.44	10.98	2.50	5.88	2.75	8.63	10.98	10.44	4.70

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

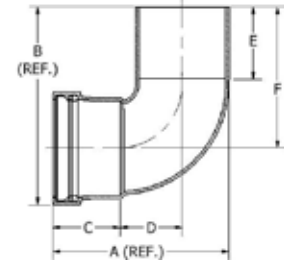
**Lay-in (Dim D&F) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03, Sizes 2-1/2" - 3" +/- .12/- .03, Size 4" +/- .15/- .03

***Fit End (Dim E) Tolerance : Sizes 1/2" - 1" +/- .06/- .00, Sizes 1-1/4" - 2" +/- .09/- .00, Sizes 2-1/2" - 4" +/- .12/- .00

Small Diameter



Large Diameter



Copper & Low Lead Brass 90° Female Elbow

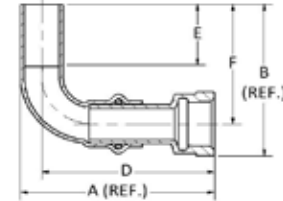


Dimensions shown in inches

Item No.	Description	A	B	D*	E**	F*	Height	Width	Depth
10066578	8707-3-2 1/2 FTGxF 90 EL	2.87	2.42	2.16	0.97	1.91	2.42	2.87	1.02

*Lay-in (Dim D&F) Tolerance : Size 1/2" +/- .07/- .03

**Fit End (Dim E) Tolerance : Sizes 1/2" +/- .06/- .00



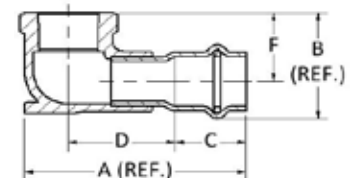
Copper & Low Lead Brass 90° Drop Ear Elbow

Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F**	Height	Width	Depth
10075366	8707-3-5 1/2 CxF 90 DRP EAR EL	2.71	1.35	0.85	1.28	0.88	1.35	2.71	2.12
10075368	8707-3-5 3/4 CxF 90 DRP EAR EL	3.28	1.62	0.89	1.70	1.00	1.62	3.28	2.34
10075369	8707-3-5 1 CxF 90 DRP EAR EL	3.77	1.96	0.97	1.93	1.25	1.96	3.77	2.59
Reducing Drop Ear Elbow									
10075367	8707-3-5 1/2 x 3/4 CxF 90 DRP EAR EL	2.56	1.09	0.85	1.21	0.71	1.09	2.56	1.59

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 1" +/- .045

**Lay-in (Dim D) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Size 1" +/- .09/- .03, (Dim F) : +/- .06



For additional information, submittal sheets and manuals, visit www.apollovalves.com

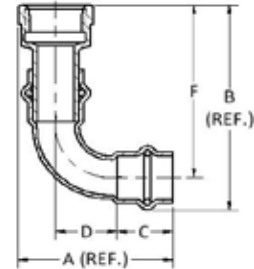
Copper & Low Lead Brass 90° Female Elbow

Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F**	Height	Width	Depth
10066560	8707-3 ½ CxF 90 EL	2.10	3.00	0.76	0.74	2.44	3.00	2.10	1.02
10066561	8707-3 ¾ CxF 90 EL	2.58	3.54	0.93	1.03	2.92	3.54	2.58	1.25
10066562	8707-3 1 CxF 90 EL	2.99	4.07	0.92	1.31	3.33	4.07	2.99	1.53
10066563	8707-3 1¼ CxF 90 EL	3.92	4.91	1.09	1.87	4.04	4.91	3.92	1.93
10066564	8707-3 1½ CxF 90 EL	4.43	5.63	1.31	2.02	4.58	5.63	4.43	2.20
10066565	8707-3 2 CxF 90 EL	5.43	6.60	1.51	2.55	5.32	6.60	5.43	2.74
Reducing Female Elbow									
10066566	8707-3 ½x¾ CxF 90 RED EL	1.97	2.76	0.76	0.74	2.29	2.74	1.97	0.94
10066567	8707-3 ½x¾ CxF 90 RED EL	2.13	2.99	0.76	0.74	2.52	2.99	2.13	1.26
10066568	8707-3 ¾x½ CxF 90 RED EL	2.58	3.47	0.93	1.03	2.85	3.47	2.58	1.24
10066569	8707-3 1x½ CxF 90 RED EL	2.97	3.68	0.92	1.31	2.95	3.68	2.97	1.49

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045

**Lay-in (Dim D&F) Tolerance : Sizes 1/2" - 3/4" +.07/- .03, Sizes 1" - 2" +.09/- .03



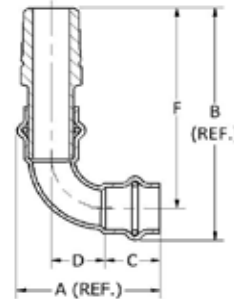
Copper & Low Lead Brass 90° Male Elbow

Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F**	Height	Width	Depth
10066570	8707-4 ½ CxM 90 EL	1.97	3.43	0.76	0.74	2.96	3.43	1.97	0.94
10066571	8707-4 ¾ CxM 90 EL	2.58	4.00	0.93	1.03	3.58	4.00	2.58	1.24
10066572	8707-4 1 CxM 90 EL	2.97	4.76	0.92	1.31	4.02	4.76	2.97	1.49
10066573	8707-4 1¼ CxM 90 EL	3.83	5.54	1.09	1.87	4.67	5.54	3.83	1.75
10066574	8707-4 1½ CxM 90 EL	4.37	6.30	1.31	2.02	5.26	6.30	4.37	2.11
10066575	8707-4 2 CxM 90 EL	5.35	7.25	1.51	2.55	5.97	7.25	5.35	2.58
Reducing Male Elbow									
10066576	8707-4 ½x¾ CxM 90 RED EL	2.03	3.62	0.76	0.74	3.15	3.62	2.03	1.05
10066577	8707-4 ¾x½ CxM 90 RED EL	2.58	3.94	0.93	1.03	3.32	3.94	2.58	1.24

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045

**Lay-in (Dim D&F) Tolerance : Sizes 1/2" - 3/4" +.07/- .03, Sizes 1" - 2" +.09/- .03



For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



Copper Reducing Outlet Tee

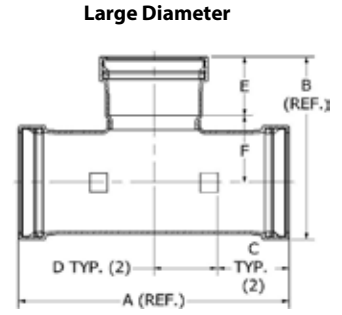
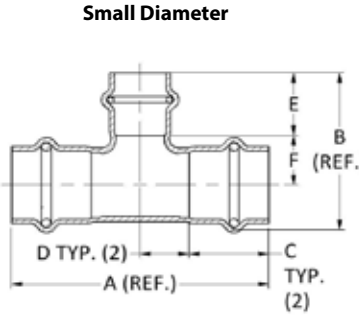
Single Piece



Small Diameter

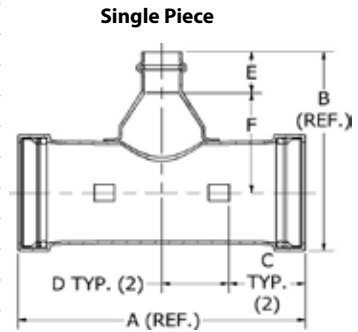


Large Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F**	Height	Width	Depth
10075906	811 3/4x3/4x1/2 CxCxC TEE	3.13	2.07	0.92	0.65	0.76	0.70	2.07	3.13	1.24
10075904	811 1x1x1/2 CxCxC TEE	3.30	2.32	0.93	0.72	0.76	0.82	2.32	3.30	1.49
10075902	811 1x1x3/4 CxCxC TEE	3.67	2.44	0.93	0.86	0.92	0.79	2.44	3.67	1.50
10075106	811 1 1/4x1 1/4x1/2 CxCxC TEE	4.12	3.04	1.09	0.98	0.85	1.44	3.04	4.12	1.75
10075102	811 1 1/4x1 1/4x3/4 CxCxC TEE	4.12	3.16	1.09	0.98	0.89	1.34	3.10	4.12	1.75
10075104	811 1 1/4x1 1/4x1 CxCxC TEE	4.12	3.04	1.09	0.98	0.97	1.20	3.04	4.12	1.75
10066015	811 1 1/2x1 1/2x1/2 CxCxC TEE	4.00	4.22	1.31	0.69	0.81	2.36	4.22	4.00	2.11
10075108	811 1 1/2x1 1/2x3/4 CxCxC TEE	4.00	3.07	1.31	0.69	0.89	1.14	3.07	4.00	2.11
10075110	811 1 1/2x1 1/2x1 CxCxC TEE	4.25	3.16	1.31	0.82	0.97	1.14	3.16	4.25	2.11
10075112	811 1 1/2x1 1/2x1 1/4 CxCxC TEE	4.50	3.28	1.31	0.94	1.09	1.14	3.28	4.50	2.11
10066385	811 2x2x1/2 CxCxC TEE	5.75	6.69	1.51	1.37	0.85	4.56	6.69	5.75	2.58
10075114	811 2x2x3/4 CxCxC TEE	4.39	3.65	1.59	0.61	0.89	1.47	3.65	4.39	2.58
10075116	811 2x2x1 CxCxC TEE	4.75	3.72	1.51	0.87	0.97	1.47	3.72	4.75	2.58
10075118	811 2x2x1 1/4 CxCxC TEE	5.00	3.84	1.51	0.99	1.09	1.46	3.84	5.00	2.58
10075120	811 2x2x1 1/2 CxCxC TEE	5.75	4.35	1.51	1.37	1.31	1.76	4.35	5.75	2.58
10062079	811 3x3x2 1/2 CxCxC TEE	7.95	5.90	2.10	1.88	1.90	2.16	5.90	7.95	3.68
10062078	811 4x4x2 1/2 CxCxC TEE	9.84	6.91	2.50	2.42	1.90	2.66	6.91	9.84	4.70
10062076	811 4x4x3 CxCxC TEE	9.84	7.28	2.50	2.42	2.10	2.83	7.28	9.84	4.70



Single Piece Copper Reducing Outlet Tee

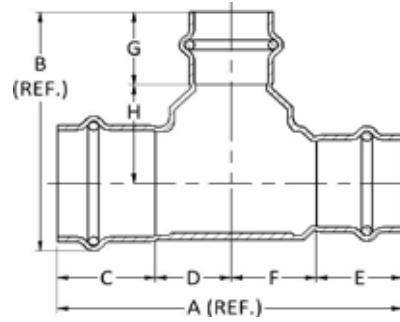
10068042	811R 2 1/2x2 1/2x1 1/2 REDUCED TEE	7.15	5.58	1.90	1.67	0.85	3.12	5.58	7.15	3.16
10068045	811R 2 1/2x2 1/2x3/4 REDUCED TEE	7.15	5.42	1.90	1.67	0.89	2.95	5.42	7.15	3.16
10068048	811R 2 1/2x2 1/2x1 REDUCED TEE	7.15	5.21	1.90	1.67	0.97	2.66	5.21	7.15	3.16
10068051	811R 2 1/2x2 1/2x1 1/4 REDUCED TEE	7.15	4.58	1.90	1.67	1.04	1.96	4.58	7.15	3.16
10068054	811R 2 1/2x2 1/2x1 1/2 REDUCED TEE	7.15	4.83	1.90	1.67	1.43	1.82	4.83	7.15	3.16
10068057	811R 2 1/2x2 1/2x2 REDUCED TEE	7.15	5.08	1.90	1.67	1.59	1.92	5.08	7.15	3.16
10068060	811R 3x3x1 1/2 REDUCED TEE	7.95	6.21	2.10	1.87	0.85	3.53	6.21	7.95	3.68
10068063	811R 3x3x3/4 REDUCED TEE	7.95	6.05	2.10	1.87	0.89	3.33	6.05	7.95	3.68
10068066	811R 3x3x1 REDUCED TEE	7.95	5.84	2.10	1.87	0.97	3.04	5.84	7.95	3.68
10068069	811R 3x3x1 1/4 REDUCED TEE	7.95	5.09	2.10	1.87	1.04	2.21	5.09	7.95	3.68
10068072	811R 3x3x1 1/2 REDUCED TEE	7.95	5.34	2.10	1.87	1.43	2.07	5.34	7.95	3.68
10068075	811R 3x3x2 REDUCED TEE	7.95	5.59	2.10	1.87	1.59	2.17	5.59	7.95	3.68
10068078	811R 4x4x1 1/2 REDUCED TEE	9.84	7.33	2.50	2.42	0.85	4.13	7.33	9.84	4.70
10068081	811R 4x4x3/4 REDUCED TEE	9.84	7.17	2.50	2.42	0.89	3.93	7.17	9.84	4.70
10068084	811R 4x4x1 REDUCED TEE	9.84	6.96	2.50	2.42	0.97	3.64	6.96	9.84	4.70
10068087	811R 4x4x1 1/4 REDUCED TEE	9.84	6.10	2.50	2.42	1.04	2.71	6.10	9.84	4.70
10068090	811R 4x4x1 1/2 REDUCED TEE	9.84	6.35	2.50	2.42	1.43	2.57	6.35	9.84	4.70
10068093	811R 4x4x2 REDUCED TEE	9.84	6.60	2.50	2.42	1.59	2.67	6.60	9.84	4.70

*Cup Depth (Dim C&E) Tolerance: Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

**Lay-in (Dim D&F) Tolerance: Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03, Sizes 2-1/2" - 3" +/- .12/- .03, Size 4" +/- .15/- .03



Copper Reducing Run/Outlet Tee - Small Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F**	G*	H**	Height	Width	Depth
10066590	811 3/4x1/2x1/2 CxCxC TEE	4.25	2.07	0.92	0.65	0.81	1.87	0.76	0.70	2.07	4.25	1.24
10066039	811 3/4x1/2x3/4 CxCxC TEE	4.58	2.17	0.92	0.82	0.81	2.04	0.92	0.64	2.17	4.58	1.24
10066591	811 1x1/2x1/2 CxCxC TEE	4.74	2.32	0.93	0.72	0.81	2.28	0.76	0.82	2.32	4.74	1.50
10066592	811 1x1/2x3/4 CxCxC TEE	5.07	2.44	0.98	0.86	0.81	2.42	0.92	0.79	2.44	5.07	1.50
10066066	811 1x1/2x1 CxCxC TEE	5.30	2.51	0.98	0.98	0.81	2.54	0.98	0.80	2.51	5.30	1.50
10066593	811 1x3/4x1/2 CxCxC TEE	4.59	2.32	0.93	0.72	0.85	2.09	0.76	0.82	2.32	4.59	1.50
10066594	811 1x3/4x3/4 CxCxC TEE	4.91	2.44	0.98	0.86	0.85	2.23	0.92	0.79	2.44	4.91	1.50
10066040	811 1x3/4x1 CxCxC TEE	5.14	2.51	0.98	0.98	0.85	2.35	0.98	0.80	2.51	5.14	1.50
10066102	811 1x3/4x1 1/4 CxCxC TEE	7.04	2.94	0.93	2.45	0.85	2.82	1.09	0.98	2.94	7.04	1.75
10066049	811 1 1/4x1/2x1/2 CxCxC TEE	5.87	3.04	1.09	0.98	0.85	2.96	0.85	1.44	3.04	5.87	1.75
10066080	811 1 1/4x1/2x1 CxCxC TEE	5.50	3.04	1.09	0.98	0.81	2.64	0.97	1.20	3.04	5.50	1.75
10066392	811 1 1/4x1/2x1 1/4 CxCxC TEE	5.86	2.94	1.09	0.98	0.85	2.96	1.09	0.98	2.94	5.86	1.75
10066051	811 1 1/4x3/4x1/2 CxCxC TEE	5.73	3.04	1.09	0.98	0.85	2.82	0.85	1.44	3.04	5.73	1.75
10066052	811 1 1/4x3/4x3/4 CxCxC TEE	5.73	3.10	1.09	0.98	0.85	2.82	0.89	1.34	3.10	5.73	1.75
10066053	811 1 1/4x3/4x1 CxCxC TEE	5.73	3.04	1.09	0.98	0.85	2.82	0.97	1.20	3.04	5.73	1.75
10066054	811 1 1/4x3/4x1 1/4 CxCxC TEE	5.73	2.94	1.09	0.98	0.85	2.82	1.09	0.98	2.94	5.73	1.75
10066044	811 1 1/4x3/4x1 1/2 CxCxC TEE	8.04	3.43	1.04	2.72	0.89	3.40	1.31	1.07	3.43	8.04	1.75
10066055	811 1 1/4x1x1/2 CxCxC TEE	5.44	3.04	1.09	0.98	0.93	2.45	0.85	1.44	3.04	5.44	1.75
10075122	811 1 1/4x1x3/4 CxCxC TEE	4.10	3.10	1.09	0.98	0.97	1.07	0.89	1.34	3.10	4.10	1.75
10075124	811 1 1/4x1x1 CxCxC TEE	4.10	3.04	1.09	0.98	0.97	1.07	1.09	1.20	3.04	4.10	1.75
10066056	811 1 1/4x1x1 1/4 CxCxC TEE	5.44	2.94	1.09	0.98	0.93	2.45	1.09	0.98	2.94	5.44	2.11
10066395	811 1 1/4x1x1 1/2 CxCxC TEE	7.75	3.43	1.04	2.72	0.93	3.07	1.31	1.07	3.43	7.75	2.11
10066394	811 1 1/2x1/2x1 1/4 CxCxC TEE	6.38	3.28	1.31	0.94	0.81	3.33	1.09	1.14	3.28	6.38	2.11
10066009	811 1 1/2x1/2x1 1/2 CxCxC TEE	6.63	3.43	1.31	1.07	0.81	3.45	1.31	2.38	3.43	6.63	2.11
10066195	811 1 1/2x3/4x1/2 CxCxC TEE	5.91	4.22	1.31	0.69	0.89	3.02	0.81	2.36	4.22	5.54	2.11
10066383	811 1 1/2x3/4x3/4 CxCxC TEE	5.91	3.07	1.31	0.69	0.89	3.02	0.89	1.14	3.07	5.91	2.11
10066397	811 1 1/2x3/4x1 CxCxC TEE	6.16	3.16	1.31	0.82	0.89	3.15	0.97	1.14	3.16	6.16	2.11
10066058	811 1 1/2x3/4x1 1/4 CxCxC TEE	5.97	3.28	1.31	0.94	0.85	2.87	1.09	1.14	3.28	5.97	2.11
10066043	811 1 1/2x3/4x1 1/2 CxCxC TEE	6.66	3.43	1.31	1.07	0.89	3.40	1.31	1.07	3.43	6.66	2.11
10066042	811 1 1/2x3/4x2 CxCxC TEE	10.11	4.17	1.31	3.57	0.89	4.35	1.51	1.37	4.17	10.11	2.11
10066011	811 1 1/2x1x3/4 CxCxC TEE	5.62	3.07	1.31	0.69	0.93	2.69	0.89	1.14	3.07	5.62	2.11
10066012	811 1 1/2x1x1 CxCxC TEE	5.87	3.16	1.31	0.82	0.93	2.82	0.97	1.14	3.16	5.87	2.11
10066081	811 1 1/2x1x1 1/4 CxCxC TEE	6.12	3.28	1.31	0.94	0.93	2.94	1.09	1.14	3.28	6.12	2.11
10066013	811 1 1/2x1x1 1/2 CxCxC TEE	6.37	3.43	1.31	1.07	0.93	3.07	1.31	1.07	3.43	6.37	2.11
10066108	811 1 1/2x1x2 CxCxC TEE	9.90	4.17	1.31	3.57	0.97	4.06	1.51	1.37	4.17	9.90	2.11
10066059	811 1 1/2x1 1/4x1/2 CxCxC TEE	5.38	4.22	1.31	0.69	1.04	2.34	0.81	2.36	4.22	5.38	2.11
10066060	811 1 1/2x1 1/4x3/4 CxCxC TEE	5.38	3.07	1.31	0.69	1.04	2.34	0.89	2.02	3.07	5.38	2.11
10066014	811 1 1/2x1 1/4x1 CxCxC TEE	5.63	3.16	1.31	0.82	1.04	2.47	0.97	1.14	3.16	5.63	2.11
10075126	811 1 1/2x1 1/4x1 1/2 CxCxC TEE	4.37	3.26	1.31	0.94	1.09	1.03	1.09	1.14	3.26	4.37	2.11
10066393	811 1 1/2x1 1/4x1 1/2 CxCxC TEE	6.13	3.43	1.31	1.07	1.04	2.72	1.31	1.07	3.43	6.13	2.11
10066109	811 1 1/2x1 1/4x2 CxCxC TEE	9.59	4.17	1.31	3.57	1.04	3.67	1.51	1.37	4.17	9.59	2.58

*Cup Depth (Dim C,E,G) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

**Lay-in (Dim D,F,H) Tolerance : Sizes 1/2" - 3/4" +.07/-.03, Sizes 1" - 2" +.09/-.03, Sizes 2-1/2" - 3" +.12/-.03, Size 4" +.15/-.03

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Copper Reducing Run/Outlet Tee - Small Diameter (cont'd)

Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F**	G*	H**	Height	Width	Depth
10066384	811 2x1/2x2 CxCxC TEE	8.28	4.17	1.51	1.37	0.85	4.56	1.51	1.37	4.17	8.28	2.58
10066121	811 2x3/4x3/4 CxCxC TEE	6.67	3.65	1.51	0.61	0.89	3.59	0.89	1.47	3.65	6.67	2.58
10066092	811 2x3/4x1 1/2 CxCxC TEE	8.11	4.35	1.51	1.37	0.89	4.35	1.31	1.76	4.35	8.11	2.58
10066388	811 2x3/4x2 CxCxC TEE	8.11	4.17	1.51	1.37	0.89	4.35	1.51	1.37	4.17	8.11	2.58
10066079	811 2x1x1 1/2 CxCxC TEE	6.46	4.80	1.59	0.61	0.97	3.30	0.81	2.69	4.80	6.46	2.58
10066062	811 2x1x3/4 CxCxC TEE	6.46	3.65	1.59	0.61	0.97	3.30	0.89	1.47	3.65	6.46	2.58
10066017	811 2x1x1 CxCxC TEE	6.90	3.72	1.51	0.87	0.97	3.56	0.97	1.47	3.72	6.90	2.58
10066126	811 2x1x1 1/4 CxCxC TEE	7.15	3.84	1.51	0.99	0.97	3.68	1.09	1.46	3.84	7.15	2.58
10066197	811 2x1x1 1/2 CxCxC TEE	7.90	4.35	1.51	1.37	0.97	4.06	1.31	1.76	4.35	7.90	2.58
10066018	811 2x1x2 CxCxC TEE	7.90	4.17	1.51	1.37	0.97	4.06	1.51	1.37	4.17	7.90	2.58
10066063	811 2x1 1/4x3/4 CxCxC TEE	6.14	3.65	1.59	0.61	1.04	2.91	0.89	1.47	3.65	6.14	2.58
10066129	811 2x1 1/4x1 CxCxC TEE	6.59	3.71	1.51	0.87	1.04	3.17	0.97	1.47	3.71	6.59	2.58
10066019	811 2x1 1/4x1 1/4 CxCxC TEE	6.84	3.84	1.51	0.99	1.04	3.29	1.09	1.46	3.84	6.84	2.58
10066125	811 2x1 1/4x1 1/2 CxCxC TEE	7.59	4.35	1.51	1.37	1.04	3.67	1.31	1.76	4.35	7.59	2.58
10066064	811 2x1 1/4x2 CxCxC TEE	7.59	4.17	1.51	1.37	1.04	3.67	1.51	1.37	4.17	7.59	2.58
10066065	811 2x1 1/2x1 1/2 CxCxC TEE	6.31	4.80	1.59	0.61	1.31	2.81	0.81	2.69	4.80	6.31	2.58
10066020	811 2x1 1/2x3/4 CxCxC TEE	6.31	3.65	1.59	0.61	1.31	2.81	0.89	1.47	3.65	6.31	2.58
10066021	811 2x1 1/2x1 CxCxC TEE	6.75	3.71	1.51	0.87	1.31	3.07	0.97	1.47	3.71	6.75	2.58
10066022	811 2x1 1/2x1 1/4 CxCxC TEE	7.00	3.84	1.51	0.99	1.31	3.19	1.09	1.46	3.84	7.00	2.58
10066023	811 2x1 1/2x2 CxCxC TEE	7.75	4.35	1.51	1.37	1.31	3.57	1.31	1.76	4.35	7.75	2.58
10066024	811 2x1 1/2x2 CxCxC TEE	7.75	4.17	1.51	1.37	1.31	3.57	1.51	1.37	4.17	7.75	2.58

*Cup Depth (Dim C,E,G) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

**Lay-in (Dim D,F,H) Tolerance : Sizes 1/2" - 3/4" +.07/-.03, Sizes 1" - 2" +.09/-.03, Sizes 2-1/2" - 3" +.12/-.03, Size 4" +.15/-.03

Copper Tee

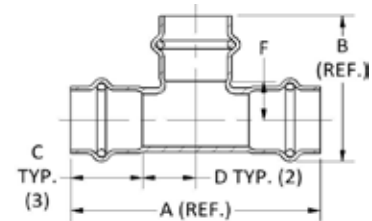
Small Diameter



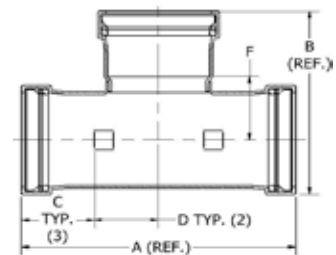
Large Diameter



Small Diameter



Large Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F**	Height	Width	Depth
10075578	811 1/2 CxCxC TEE	3.04	1.78	0.83	0.70	0.49	1.78	3.04	0.95
10075580	811 3/4 CxCxC TEE	3.47	2.17	0.92	0.82	0.64	2.17	3.47	1.24
10075582	811 1 CxCxC TEE	3.90	2.51	0.98	0.98	0.80	2.51	3.90	1.50
10075096	811 1 1/4 CxCxC TEE	4.12	2.94	1.09	0.98	0.98	2.94	4.12	1.75
10075098	811 1 1/2 CxCxC TEE	4.75	3.43	1.31	1.07	1.07	3.43	4.75	2.11
10075100	811 2 CxCxC TEE	5.75	4.17	1.51	1.37	1.37	4.17	5.75	2.58
10057518	811 2 1/2 CXCXC COPPER TEE	7.15	5.33	1.90	1.67	1.85	5.33	7.15	3.16
10062072	811 3 CXCXC COPPER TEE	7.95	6.39	2.10	1.88	2.24	6.40	7.95	3.68
10062077	811 4 CXCXC COPPER TEE	9.84	7.66	2.50	2.41	2.81	7.66	9.84	4.70

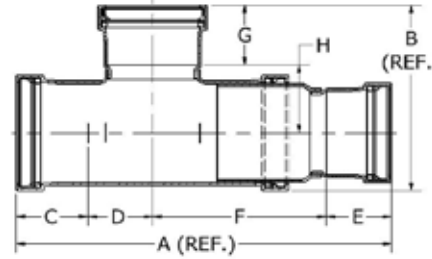
*Cup Depth (Dim C) Tolerance : Sizes 1/2"- 2" +/- .045, Sizes 2-1/2"- 4" +/- .015

**Lay-in (Dim D&F) Tolerance : Sizes 1/2" - 3/4" +.07/-.03, Sizes 1" - 2" +.09/-.03, Sizes 2-1/2" - 3" +.12/-.03, Size 4" +.15/-.03

For additional information, submittal sheets and manuals, visit www.apollovalves.com



Copper Reducing Run/Outlet Tee - Large Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F*	G*	H**	Height	Width	Depth
10066499	811 2x1½x2½ CxCxC TEE	11.99	5.33	1.51	4.53	1.31	4.65	1.90	1.85	5.33	11.99	3.16
10066595	811 2½x¾x2 CxCxC TEE	9.74	5.08	1.90	1.67	0.89	5.29	1.59	1.92	5.08	9.74	3.16
10066502	811 2½x¾x2½ CxCxC TEE	9.74	5.33	1.90	1.67	0.89	5.29	1.90	1.85	5.33	9.74	3.16
10066596	811 2½x1x2 CxCxC TEE	9.55	5.08	1.90	1.67	0.97	5.02	1.59	1.92	5.08	9.55	3.16
10066514	811 2½x1x2½ CxCxC TEE	9.55	5.33	1.90	1.67	0.97	5.02	1.90	1.85	5.33	9.55	3.16
10066504	811 2½x1¼x2½ CxCxC TEE	9.43	5.33	1.90	1.67	1.04	4.81	1.90	1.85	5.33	9.43	3.16
10066597	811 2½x1½x1½ CxCxC TEE	9.52	4.83	1.90	1.67	1.31	4.65	1.43	1.82	4.83	9.52	3.16
10066598	811 2½x1½x2 CxCxC TEE	9.52	5.08	1.90	1.67	1.31	4.65	1.59	1.92	5.08	9.52	3.16
10066507	811 2½x1½x2½ CxCxC TEE	9.52	5.33	1.90	1.67	1.31	4.65	1.90	1.85	5.33	9.52	3.16
10066599	811 2½x2x¾ CxCxC TEE	9.60	5.42	1.90	1.67	1.51	4.52	0.89	2.95	5.42	9.60	3.16
10066600	811 2½x2x1 CxCxC TEE	9.60	5.21	1.90	1.67	1.51	4.52	0.97	2.66	5.21	9.60	3.16
10066601	811 2½x2x1¼ CxCxC TEE	9.60	4.58	1.90	1.67	1.51	4.52	1.04	1.96	4.58	9.60	3.16
10066602	811 2½x2x1½ CxCxC TEE	9.60	4.83	1.90	1.67	1.51	4.52	1.43	1.82	4.83	9.60	3.16
10066603	811 2½x2x2 CxCxC TEE	9.60	5.08	1.90	1.67	1.51	4.52	1.59	1.92	5.08	9.60	3.16
10066174	811 2½x2x2½ CxCxC TEE	9.60	5.33	1.90	1.68	1.51	4.52	1.90	1.85	5.33	9.60	3.16
10066515	811 2½x2x3 CxCxC TEE	13.41	6.18	1.90	5.06	1.51	4.94	2.10	2.24	6.18	13.41	3.68
10066522	811 3x¾x2½ CxCxC TEE	10.77	5.90	2.10	1.88	0.89	5.91	1.90	2.16	5.90	10.77	3.68
10066523	811 3x¾x3 CxCxC TEE	10.77	6.18	2.10	1.88	0.89	5.91	2.10	2.24	6.18	10.77	3.68
10066524	811 3x1x2½ CxCxC TEE	10.58	5.90	2.10	1.88	0.97	5.64	1.90	2.16	5.90	10.58	3.68
10066525	811 3x1x3 CxCxC TEE	10.58	6.18	2.10	1.88	0.97	5.64	2.10	2.24	6.18	10.58	3.68
10066526	811 3x1¼x3 CxCxC TEE	10.45	6.18	2.10	1.87	1.04	5.43	2.10	2.24	6.18	10.45	3.68
10066527	811 3x1½x3 CxCxC TEE	10.55	6.18	2.10	1.87	1.31	5.27	2.10	2.24	6.18	10.55	3.68
10066604	811 3x2x2 CxCxC TEE	10.42	5.59	2.10	1.87	1.51	4.94	1.59	2.17	5.59	10.42	3.68
10066529	811 3x2x2½ CxCxC TEE	10.42	5.90	2.10	1.88	1.51	4.94	1.90	2.16	5.90	10.42	3.68
10066530	811 3x2x3 CxCxC TEE	10.42	6.18	2.10	1.87	1.51	4.94	2.10	2.24	6.18	10.42	3.68
10066605	811 3x2½x2 CxCxC TEE	10.93	5.59	2.10	1.87	1.90	5.06	1.59	2.17	5.59	10.93	3.68
10066136	811R 3X2½X2½ CXXC COPPER TEE	10.93	5.90	2.10	1.88	1.90	5.06	1.90	2.16	5.90	10.93	3.68
10066137	811R 3X2½X3 CXXC COPPER TEE	10.93	6.18	2.10	1.87	1.90	5.06	2.10	2.24	6.18	10.93	3.68
10066538	811 4x1½x3 CxCxC TEE	13.07	7.28	2.50	2.42	1.31	6.84	2.10	2.81	7.28	13.07	4.70
10066539	811 4x2x4 CxCxC TEE	12.96	7.66	2.50	2.42	1.51	6.54	2.50	2.81	7.66	12.96	4.70
10066138	811R 4X2½X4 CXXC COPPER TEE	13.23	7.66	2.50	2.42	1.90	6.41	2.50	2.81	7.66	13.23	4.70
10066606	811 4x3x1½ CxCxC TEE	13.24	6.35	2.50	2.42	2.10	6.23	1.43	2.57	6.35	13.24	4.70
10066607	811 4x3x2 CxCxC TEE	13.24	6.60	2.50	2.42	2.10	6.23	1.59	2.67	6.60	13.24	4.70
10066139	811R 4X3X2½ CXXC COPPER TEE	13.22	6.91	2.50	2.42	2.10	6.20	1.90	2.66	6.91	13.22	4.70
10066096	811 4x3x3 CxCxC TEE	13.22	7.28	2.50	2.42	2.10	6.20	2.10	2.83	7.28	13.22	4.70
10066140	811R 4X3X4 CXXC COPPER TEE	13.24	7.64	2.50	2.42	2.10	6.23	2.50	2.81	7.64	13.24	4.70

*Cup Depth (Dim C,E,G) Tolerance : Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

**Lay-in (Dim D,F,H) Tolerance : Sizes 1/2" - 3/4" +.07/- .03, Sizes 1" - 2" +.09/- .03, Sizes 2-1/2" - 3" +.12/- .03, Size 4" +.15/- .03

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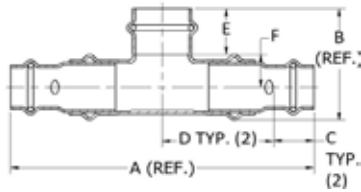
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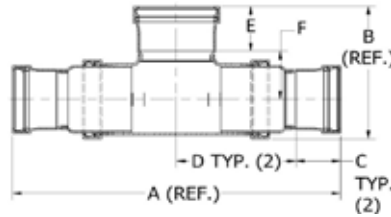
Copper Bullhead Tee



Small Diameter



Large Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E*	F**	Height	Width	Depth
10066070	811 1/2x1/2x3/4 CxCxC BH TEE	5.70	2.17	0.81	2.04	0.92	0.64	2.17	5.70	1.24
10066006	811 1/2x1/2x1 CxCxC BH TEE	6.69	2.51	0.81	2.54	0.98	0.80	2.51	6.69	1.50
10066071	811 3/4x3/4x1 CxCxC BH TEE	6.38	2.51	0.85	2.35	0.98	0.80	2.51	6.38	1.50
10066008	811 1x1x1 1/4 CxCxC BH TEE	6.75	2.94	0.93	2.45	1.09	0.98	2.94	6.75	1.75
10066128	811 1x1x2 CxCxC BH TEE	10.05	4.16	0.97	4.06	1.51	1.37	4.16	10.05	2.58
10066107	811 1 1/4x1 1/4x2 CxCxC BH TEE	9.42	4.16	1.04	3.67	1.51	1.37	4.16	9.42	2.58
10066090	811 1 1/2x1 1/2x2 CxCxC BH TEE	9.75	4.16	1.31	3.57	1.51	1.37	4.16	9.75	2.58
10066550	811 1 1/2x1 1/2x3 CxCxC BH TEE	13.15	6.18	1.31	5.27	2.10	2.24	6.18	13.15	3.68
10066551	811 2x2x3 CxCxC BH TEE	12.89	6.18	1.51	4.94	2.10	2.24	6.18	12.89	3.68
10066135	811 2 1/2x2 1/2x3 CxCxC BH TEE	13.92	6.18	1.90	5.06	2.10	2.24	6.18	13.92	3.68
10066094	811 2 1/2x2 1/2x4 CxCxC BH TEE	16.98	7.66	1.90	6.79	2.50	2.81	7.66	16.98	4.70

*Cup Depth (Dim C&E) Tolerance: Sizes 1/2"-2" +/- .045, Sizes 2-1/2"-4" +/- .015

**Lay-in (Dim D&F) Tolerance: Sizes 1/2"-3/4"+.07/-03, Sizes 1"-2"+.09/-03, Sizes 2-1/2"-3"+.12/-03, Size 4"+.15/-03

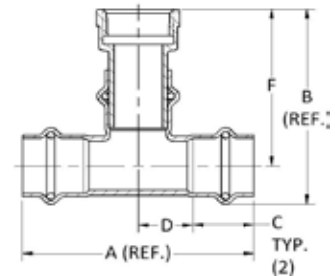
Copper & Low Lead Brass Female Outlet Tee

Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F	Height	Width	Depth
10066579	8712 1/2 CxCxF TEE	3.04	2.65	0.83	0.70	2.18	2.65	3.04	1.01
10066580	8712 3/4 CxCxF TEE	3.47	3.14	0.92	0.82	2.52	3.14	3.47	1.25
Reducing Female Outlet Tee									
10066581	8712 3/4x3/4x1/2 CxCxF TEE	3.13	3.01	0.92	0.65	2.39	3.01	3.13	1.24
10066582	8712 1x1x1/2 CxCxF TEE	3.67	3.35	0.98	0.86	2.61	3.35	3.67	1.48
10066583	8712 1x1x3/4 CxCxF TEE	3.67	3.42	0.98	0.86	2.67	3.42	3.67	1.48
10066584	8712 1 1/4x1 1/4x1/2 CxCxF TEE	4.12	4.04	1.09	0.98	3.16	4.04	4.12	1.75
10066585	8712 1 1/4x1 1/4x3/4 CxCxF TEE	4.12	4.10	1.09	0.98	3.23	4.10	4.12	1.75
10066586	8712 1 1/2x1 1/2x1/2 CxCxF TEE	4.00	4.01	1.31	0.69	2.96	4.01	4.00	2.11
10066587	8712 1 1/2x1 1/2x3/4 CxCxF TEE	4.00	4.08	1.31	0.69	3.02	4.08	4.00	2.11
10066588	8712 2x2x1 1/2 CxCxF TEE	4.39	4.57	1.59	0.61	3.30	4.57	4.39	2.58
10066589	8712 2x2x3/4 CxCxF TEE	4.39	4.64	1.59	0.61	3.36	4.64	4.39	2.58

*Cup Depth (Dim C) Tolerance: Sizes 1/2"-2" +/- .045

**Lay-in (Dim D&F) Tolerance: Sizes 1/2"-3/4"+.07/-03, Sizes 1"-2"+.09/-03



For additional information, submittal sheets and manuals, visit www.apollovalves.com

Copper Tube Cap

Dimensions shown in inches

Item No.	Description	A	B	C*	Height	Width	Depth
10075166	817 ½ TUBE CAP	1.13	0.95	0.85	0.95	1.13	0.95
10075168	817 ¾ TUBE CAP	1.19	1.24	0.89	1.24	1.19	1.24
10075170	817 1 TUBE CAP	1.35	1.49	0.97	1.49	1.35	1.49
10075172	817 1¼ TUBE CAP	1.53	1.75	1.09	1.75	1.53	1.75
10075174	817 1½ TUBE CAP	1.80	2.11	1.22	2.11	1.80	2.11
10075176	817 2 TUBE CAP	2.15	2.58	1.51	2.58	2.15	2.58
10062142	817 2½ COPPER TUBE CAP	3.64	3.16	1.90	3.16	3.64	3.16
10062147	817 3 COPPER TUBE CAP	4.07	3.68	2.10	3.68	4.07	3.68
10062152	817 4 COPPER TUBE CAP	4.96	4.70	2.50	4.70	4.96	4.70

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

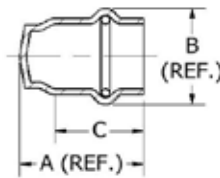


Small Diameter

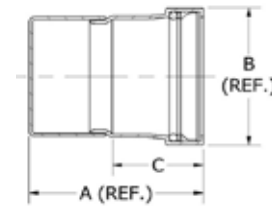


Large Diameter

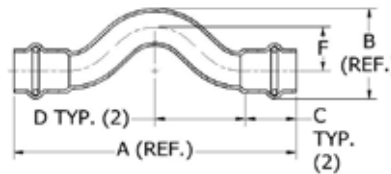
Small Diameter



Large Diameter



Copper Crossover



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	F**	Height	Width	Depth
10075370	836 ½ Cx C CROSSOVER	4.50	1.54	0.81	1.44	0.75	1.54	4.50	0.95
10075372	836 ¾ Cx C CROSSOVER	5.50	2.06	0.84	1.91	1.00	2.06	5.50	1.24

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 3/4" +/- .045

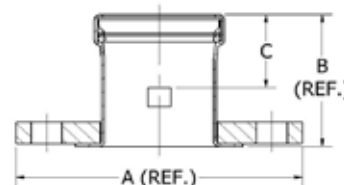
**Lay-in (Dim D&F) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03

Copper Large Diameter Flange

Dimensions shown in inches

Item No.	Description	A	B	C*	Height	Width	Depth
125 Lb.							
10075702	8741 2 Copper 125 lb.	6.00	3.67	1.59	3.67	6.00	6.00
10061761	8741 2½ Copper 125 lb.	7.00	3.62	1.90	3.62	7.00	7.00
10061767	8741 3 Copper 125 lb.	7.50	3.61	2.10	3.61	7.50	7.50
10061736	8741 4 Copper 125 lb.	9.00	3.76	2.50	3.76	9.00	9.00
150 Lb.							
10061763	8771 2½ Copper 150 lb.	7.00	3.62	1.90	3.62	7.00	7.00
10061769	8771 3 Copper 150 lb.	7.50	3.61	2.10	3.61	7.50	7.50
10061738	8771 4 Copper 150 lb.	9.00	3.76	2.50	3.76	9.00	9.00

*Cup Depth (Dim C) Tolerance : Size 2" +/- .045, Sizes 2-1/2" - 4" +/- .015



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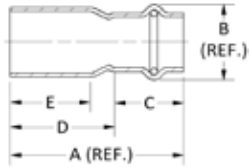


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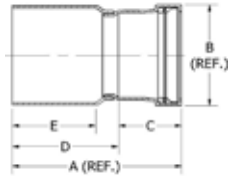
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Copper Fitting Reducer

Small Diameter



Large Diameter



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	E**	Height	Width	Depth
10075146	818 3/4x1/2 FTGxC RED	2.03	0.95	0.81	1.22	0.98	0.95	2.03	0.95
10075150	818 1x1/2 FTGxC RED	2.37	1.25	0.81	1.56	1.10	1.25	2.37	1.25
10075148	818 1x3/4 FTGxC RED	2.22	1.25	0.85	1.37	1.10	1.25	2.22	1.25
10075336	818 1/4x3/4 FTGxC RED	2.83	1.38	0.85	1.98	1.27	1.38	2.83	1.38
10075154	818 1/4x1/2 FTGxC RED	2.69	1.38	0.85	1.84	1.34	1.38	2.69	1.38
10075156	818 1/4x1 FTGxC RED	2.40	1.50	0.91	1.48	1.23	1.50	2.40	1.50
10075332	818 1/2x1/2 FTGxC RED	3.19	1.63	0.81	2.38	1.43	1.63	3.19	1.63
10075334	818 1/2x3/4 FTGxC RED	3.22	1.63	0.89	2.33	1.40	1.63	3.22	1.63
10075158	818 1/2x1 FTGxC RED	2.93	1.63	0.93	2.00	1.53	1.63	2.93	1.63
10075160	818 1/2x1 1/4 FTGxC RED	2.69	1.75	1.04	1.65	1.31	1.75	2.69	1.75
10075338	818 2x1/2 FTGxC RED	4.04	2.13	0.85	3.19	1.83	2.13	4.04	2.13
10075340	818 2x3/4 FTGxC RED	3.87	2.13	0.89	2.99	1.83	2.13	3.87	2.13
10075162	818 2x1 FTGxC RED	3.66	2.13	0.97	2.69	1.83	2.13	3.66	2.13
10075152	818 2x1 1/4 FTGxC RED	3.34	2.13	1.04	2.30	1.60	2.13	3.34	2.13
10075164	818 2x1 1/2 FTGxC RED	3.51	2.13	1.31	2.20	1.77	2.13	3.51	2.13
10068025	818 2 1/2x3/4 FTGxC RED	4.59	2.63	0.85	3.74	2.00	2.63	4.59	2.63
10068001	818 2 1/2x1 FTGxC RED	4.50	2.63	0.89	3.61	2.00	2.63	4.50	2.63
10068002	818 2 1/2x1 1/4 FTGxC RED	4.31	2.63	0.97	3.34	2.00	2.63	4.31	2.63
10068017	818 2 1/2x1 1/2 FTGxC RED	4.18	2.63	1.04	3.14	2.00	2.63	4.18	2.63
10068004	818 2 1/2x1 1/4 FTGxC RED	4.28	2.63	1.31	2.97	2.00	2.63	4.28	2.63
10075165	818 2 1/2x2 FTGxC RED	4.36	2.63	1.51	2.85	2.30	2.63	4.36	2.63
10068005	818 3x1/2 FTGxC RED	5.01	3.13	0.85	4.16	2.27	3.13	5.01	3.13
10068019	818 3x3/4 FTGxC RED	4.92	3.13	0.89	4.03	2.27	3.13	4.92	3.13
10068007	818 3x1 FTGxC RED	4.73	3.13	0.97	3.76	2.27	3.13	4.73	3.13
10068008	818 3x1 1/4 FTGxC RED	4.60	3.13	1.04	3.56	2.27	3.13	4.60	3.13
10068020	818 3x1 1/2 FTGxC RED	4.70	3.13	1.31	3.39	2.27	3.13	4.70	3.13
10068010	818 3x2 FTGxC RED	4.57	3.13	1.51	3.06	2.26	3.13	4.57	3.13
10057500	818 3x2 1/2 FTGxC RED	5.09	3.16	1.90	3.19	2.51	3.16	5.09	3.16
10068011	818 4x1/2 FTGxC RED	6.02	4.13	0.85	5.17	2.80	4.13	6.02	4.13
10068022	818 4x3/4 FTGxC RED	5.93	4.13	0.89	5.04	2.80	4.13	5.93	4.13
10068013	818 4x1 FTGxC RED	5.74	4.13	0.97	4.77	2.80	4.13	5.74	4.13
10068014	818 4x1 1/4 FTGxC RED	5.61	4.13	1.04	4.57	2.80	4.13	5.61	4.13
10068023	818 4x1 1/2 FTGxC RED	5.75	4.13	1.31	4.44	2.80	4.13	5.75	4.13
10068016	818 4x2 FTGxC RED	5.60	4.13	1.51	4.09	2.76	4.13	5.60	4.13
10057503	818 4x2 1/2 FTGxC RED	6.02	4.13	1.90	4.12	2.67	4.13	6.02	4.13
10057506	818 4x3 FTGxC RED	5.90	4.13	2.10	3.81	2.65	4.13	5.90	4.13

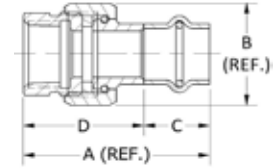
*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045, Sizes 2-1/2" - 4" +/- .015

**Lay-in (Dim D) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03, Sizes 2-1/2" - 3" +/- .12/- .03, Size 4" +/- .15/- .03

***Fit End (Dim E) Tolerance : Sizes 1/2" - 1" +/- .06/- .00, Sizes 1-1/4" - 2" +/- .09/- .00, Sizes 2-1/2" - 4" +/- .12/- .00

APOLLOXPRESS®

Lead Free Brass Female Union



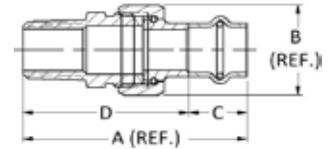
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	Height	Width	Depth
10075872	8733-3 1/2 CxF UNION	2.14	1.25	0.76	1.39	1.25	2.14	1.25
10075874	8733-3 3/4 CxF UNION	2.88	1.52	0.92	1.96	1.52	2.88	1.52
10075876	8733-3 1 CxF UNION	2.88	1.94	0.92	1.96	1.94	2.88	1.94
10075878	8733-3 1 1/4 CxF UNION	3.16	2.19	1.04	2.12	2.19	3.16	2.19
10075880	8733-3 1 1/2 CxF UNION	3.09	2.45	1.43	1.66	2.45	3.09	2.45
10075882	8733-3 2 CxF UNION	3.33	3.12	1.59	1.75	3.12	3.33	3.12

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045

**Lay-in (Dim D) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03

Lead Free Brass Male Union



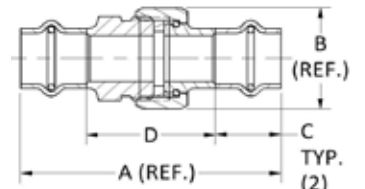
Dimensions shown in inches

Item No.	Description	A	B	C*	D**	Height	Width	Depth
10075884	8733-4 1/2 CxM UNION	2.90	1.26	0.76	2.15	1.26	2.90	1.26
10075886	8733-4 3/4 CxM UNION	3.42	1.52	0.92	2.51	1.52	3.42	1.52
10075888	8733-4 1 CxM UNION	3.74	1.94	0.92	2.83	1.94	3.74	1.94
10075890	8733-4 1 1/4 CxM UNION	3.78	2.19	1.04	2.73	2.19	3.78	2.19
10075892	8733-4 1 1/2 CxM UNION	3.73	2.45	1.43	2.30	2.45	3.73	2.45
10075894	8733-4 2 CxM UNION	4.24	3.12	1.59	2.65	3.12	4.24	3.12

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045

**Lay-in (Dim D) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03

Lead Free Brass Union



Dimensions shown in inches

Item No.	Description	A	B	C*	D**	Height	Width	Depth
10075860	8733 1/2 CxC UNION	2.99	1.26	0.76	1.48	1.26	2.99	1.26
10075862	8733 3/4 CxC UNION	3.69	1.52	0.92	1.86	1.52	3.69	1.52
10075864	8733 1 CxC UNION	3.83	1.94	0.92	2.00	1.94	3.83	1.94
10075866	8733 1 1/4 CxC UNION	3.83	2.19	1.04	1.74	2.19	3.83	2.19
10075868	8733 1 1/2 CxC UNION	3.95	2.45	1.43	1.04	2.45	3.95	2.45
10075870	8733 2 CxC UNION	4.65	3.12	1.59	1.48	3.12	4.65	3.12

*Cup Depth (Dim C) Tolerance : Sizes 1/2" - 2" +/- .045

**Lay-in (Dim D) Tolerance : Sizes 1/2" - 3/4" +/- .07/- .03, Sizes 1" - 2" +/- .09/- .03

For additional information, submittal sheets and manuals, visit www.apollovalves.com





Installation Guide and Pressing Instructions



Note – This installation guide covers the general installation practices for APOLLOXPRESS® 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.

APOLLOXPRESS®
Your Single Source Solution for Press Technology

INSTALLATION GUIDE & PRESSING INSTRUCTIONS

APOLLOXPRESS®

SYSTEM DESCRIPTION

Small Diameter Fittings ½" -2"

APOLLOXPRESS® 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

APOLLOXPRESS® 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

APOLLOXPRESS® 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

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

Applications

APOLLOXPRESS® fittings are ideal for commercial and residential applications and feature an EPDM sealing element making APOLLOXPRESS® 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 AND 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 P1-1205-57
 - 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

APOLLOXPRESS® 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.

For additional information, submittal sheets and manuals, visit www.apollovalves.com



GENERAL INSTALLATION INSTRUCTIONS

Handling

APOLLOXPRESS® 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.

APOLLOXPRESS® 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 APOLLOXPRESS® 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

APOLLOXPRESS® 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

APOLLOXPRESS® 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.

Rotating a Pressed Fitting

After pressing an APOLLOXPRESS® fitting or valve may be rotated once, no more than five degrees and then repressed. Rotating jaw, sling, ring, chain 90 degrees from 1st press is preferred but not necessary.

System Sizing

APOLLOXPRESS® 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 installation APOLLOXPRESS® fittings and valves comply with section 1211.15 - Electrical Bonding and Grounding, of the Uniform Plumbing Code.

Material Compatibility

APOLLOXPRESS® 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 APOLLOXPRESS® 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.



INSTALLATION GUIDE & PRESSING INSTRUCTIONS

APOLLOXPRESS®

MINIMUM SPACING

Between APOLLOXPRESS® 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
1/2"	0"	2"	3/4"
3/4"	0"	2 1/2"	5/8"
1"	0"	3"	5/8"
1 1/4"	1/2"	4"	5/8"
1 1/2"	5/8"		

Between an APOLLOXPRESS® Joint and Existing Solder Joint

The minimum distance when making an APOLLOXPRESS® 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
1/2"	1/4"	2"	3/4"
3/4"	1/4"	2 1/2"	1/4"
1"	7/16"	3"	1/4"
1 1/4"	7/16"	4"	1/4"
1 1/2"	5/8"		

Between an APOLLOXPRESS® Joint and Existing Brazed Joint

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

Tube Dia.	Minimum Distance	Tube Dia.	Minimum Distance
1/2"	1"	2"	4"
3/4"	1 1/2"	2 1/2"	5"
1"	2"	3"	6"
1 1/4"	2 1/2"	4"	8"
1 1/2"	3"		

When Soldering near an APOLLOXPRESS® Joint

Minimum distance is found in the table below. The installer shall take proper precautions to protect and keep cool the APOLLOXPRESS® 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
1/2"	1 1/2"	2"	6"
3/4"	2 1/4"	2 1/2"	7 1/2"
1"	3"	3"	9"
1 1/4"	3 3/4"	4"	12"
1 1/2"	4 1/2"		

When Brazing near an APOLLOXPRESS® Joint

Stay at least 12 inches away from the pressed connection. The installer shall take proper precautions to protect and keep cool the APOLLOXPRESS® 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.

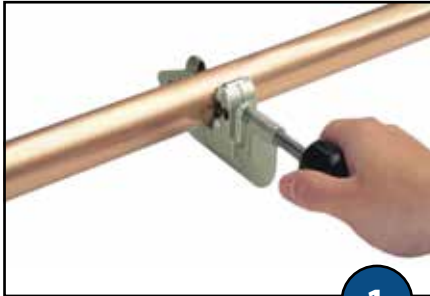
For additional information, submittal sheets and manuals, visit www.apollovalves.com



TOOLS

APOLLOXPRESS® 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	Insertion Depth (in)
1/2"	3/4" (0.75")
3/4"	15/16" (0.94")
1"	15/16" (0.94")
1 1/4"	1-1/16" (1.06")
1 1/2"	1-7/16" (1.44")
2"	1-9/16" (1.56")
2 1/2"	1-7/8" (1.9")
3"	2-1/8" (2.1")
4"	2-1/2" (2.5")

For additional information, submittal sheets and manuals, visit www.elkhartproducts.com



Jaw Pressing Instruction 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 Instruction 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.

For additional information, submittal sheets and manuals, visit www.apollovalves.com

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" APOLLOXPRESS® Valves and Copper/Low-Lead Brass Fittings:

MILWAUKEE:	
<i>M12 Compact Jaws:</i>	
½"	49-16-2450
¾"	49-16-2451
1"	49-16-2452
1 ¼"	49-16-2453
<i>M18 Standard Jaws:</i>	
½"	49-16-2650
¾"	49-16-2651
1"	49-16-2652 ²
1 ¼"	49-16-2653 ²
1 ½"	49-16-2654
2"	49-16-2655

Note 1: Jaws date coded prior to 2/14 could have a potential interference problem with APOLLOXPRESS 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.

NIBCO:	
<i>Standard Jaws:</i>	
½"	PC-10S
¾"	PC-11S
1"	PC-12S
1 ¼"	PC-13S ²
1 ½"	PC-14S
2"	PC-15S

REMS:		
<i>Compact Jaws (Mini Tongs):</i>		
½"	VUS ½"	578566
¾"	VUS ¾"	578568
1"	VUS 1"	578570 ¹
1 ¼"	VUS 1 ¼"	578606
<i>Standard Jaws (Tongs):</i>		
½"	VUS ½"	571770
¾"	VUS ¾"	571775
1"	VUS 1"	571780 ²
1 ¼"	VUS 1 ¼"	571785 ²
1 ½"	VUS 1 ½"	571790
2"	VUS 2"	571795

RIDGID:	
<i>Compact Jaws:</i>	
½"	16958
½"	22768
¾"	16963
¾"	22773
1"	16978
1"	22778
1 ¼"	31228
<i>Standard Jaws:</i>	
½"	76652
½"	21848
¾"	76657
¾"	21853
1"	76662
1"	21858
1 ¼"	76667
1 ¼"	21863
1 ½"	76672
1 ½"	21868
2"	76677
2"	21873

ROTHENBERGER:	
<i>Compact Jaws:</i>	
½"	15031V
¾"	15032V
1"	15033V
<i>Standard Jaws:</i>	
½"	15222X
¾"	15223X
1"	15224X ²
1 ¼"	15225X ²
1 ½"	15226X
2"	15227X

Stanley – Virax:	
<i>Copper Inserts:</i>	
½"	252933
¾"	252934
1"	252935
<i>Copper Jaws:</i>	
½"	253291
¾"	253292
1"	253293
1 ¼"	253294 ²
1 ½"	253295 ²
2"	253296

2½" to 4" APOLLOXPRESS® LD-C Valves and Copper Fittings

MILWAUKEE:	
<i>M18 Standard Jaws:</i>	
2 ½"	49-16-2656
3"	49-16-2657
4"	49-16-2658
Ring Jaw	49-16-2659

REMS:		
<i>Standard Pressing Ring:</i>		
2 ½"	VUSF 2 ½"	572819
3"	VUSF 3"	572820
4"	VUSF 4"	572821
Adapter Tong	Z5	572802

RIDGID:	
<i>Standard Jaws:</i>	
2 ½"	20543
3"	20548
4"	20553
Actuator	21878

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

For additional information, submital sheets and manuals, visit www.elkhartproducts.com



CROSS REFERENCE CHART

APOLLOXPRESS® Valves

Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
200 CWP BRONZE GATE VALVE, RS					
30-003-01-PR	1/2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30-004-01-PR	3/4	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30-005-01-PR	1	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30-006-01-PR	1 1/4	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30-007-01-PR	1 1/2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30-008-01-PR	2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, RS, Press	PF111	n/a	n/a
30LF-003-01-PR	1/2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
30LF-004-01-PR	3/4	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
30LF-005-01-PR	1	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
30LF-006-01-PR	1 1/4	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
30LF-007-01-PR	1 1/2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
30LF-008-01-PR	2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, RS, Press	n/a	n/a	n/a
200 CWP BRONZE GATE VALVE, NRS					
30-033-01-PR	1/2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30-034-01-PR	3/4	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30-035-01-PR	1	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30-036-01-PR	1 1/4	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30-037-01-PR	1 1/2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30-038-01-PR	2	200 CWP Gate, Brz, Threaded Bonnet, Solid Disc, NRS, Press	PF113	n/a	n/a
30LF-033-01-PR	1/2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a
30LF-034-01-PR	3/4	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a
30LF-035-01-PR	1	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a
30LF-036-01-PR	1 1/4	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a
30LF-037-01-PR	1 1/2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a
30LF-038-01-PR	2	200 CWP Gate, LF Brz, Threaded Bonnet, Solid Disc, NRS, Press	n/a	n/a	n/a

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Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
200 CWP BRONZE GLOBE VALVE, PTFE DISC					
33-133-01-PR	1/2	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33-134-01-PR	3/4	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33-135-01-PR	1	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33-136-01-PR	1 1/4	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33-137-01-PR	1 1/2	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33-138-01-PR	2	200 CWP Globe, Brz, Threaded Bonnet, PTFE Disc, Press	PF211Y	n/a	n/a
33LF-133-01-PR	1/2	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
33LF-134-01-PR	3/4	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
33LF-135-01-PR	1	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
33LF-136-01-PR	1 1/4	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
33LF-137-01-PR	1 1/2	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
33LF-138-01-PR	2	200 CWP Globe, LF Brz, Threaded Bonnet, PTFE Disc, Press	n/a	n/a	n/a
WATER PRESSURE REDUCING VALVES, BRONZE					
36E-103-01-PR	1/2	Valve, Press Red, 36E100 Series, Brz, Press	n/a	n/a	n/a
36E-104-01-PR	3/4	Valve, Press Red, 36E100 Series, Brz, Press	n/a	n/a	n/a
36E-105-01-PR	1	Valve, Press Red, 36E100 Series, Brz, Press	n/a	n/a	n/a
36ELF-103-01-PR	1/2	Valve, Press Red, 36E100 Series, LF Brz, Press	n/a	n/a	n/a
36ELF-104-01-PR	3/4	Valve, Press Red, 36E100 Series, LF Brz, Press	n/a	n/a	n/a
36ELF-105-01-PR	1	Valve, Press Red, 36E100 Series, LF Brz, Press	n/a	n/a	n/a
36-203-01-PR	1/2	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36-204-01-PR	3/4	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36-205-01-PR	1	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36-206-01-PR	1 1/4	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36-207-01-PR	1 1/2	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36-208-01-PR	2	Valve, Press Red, 36200 Series, Brz, Press	n/a	n/a	n/a
36LF-203-01-PR	1/2	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a
36LF-204-01-PR	3/4	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a

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APOLLOXPRESS® Valves

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Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
36LF-205-01-PR	1	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a
36LF-206-01-PR	1 1/4	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a
36LF-207-01-PR	1 1/2	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a
36LF-208-01-PR	2	Valve, Press Red, 36200 Series, LF Brz, Press	n/a	n/a	n/a
WYE STRAINER, BRONZE					
59-003-P2-PR	1/2	Strainer, Y, 59 Ser, Brz, 50 mesh. With Plug, Press	PF221-A	n/a	n/a
59-004-P2-PR	3/4	Strainer, Y, 59 Ser, Brz, 20 mesh. With Plug, Press	PF221-A	n/a	n/a
59-005-P2-PR	1	Strainer, Y, 59 Ser, Brz, 20 mesh. With Plug, Press	PF221-A	n/a	n/a
59-006-P2-PR	1 1/4	Strainer, Y, 59 Ser, Brz, 20 mesh. With Plug, Press	PF221-A	n/a	n/a
59-007-P2-PR	1 1/2	Strainer, Y, 59 Ser, Brz, 20 mesh. With Plug, Press	PF221-A	n/a	n/a
59-008-P2-PR	2	Strainer, Y, 59 Ser, Brz, 20 mesh. With Plug, Press	PF221-A	n/a	n/a
59LF-003-P2-PR	1/2	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59LF-004-P2-PR	3/4	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59LF-005-P2-PR	1	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59LF-006-P2-PR	1 1/4	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59LF-007-P2-PR	1 1/2	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59LF-008-P2-PR	2	Strainer, Y, 59 Ser, LF Brz, 50 mesh. With Plug, Press	n/a	n/a	n/a
59-003-01-PR	1/2	Strainer, Y, 59 Ser, Brz, 50 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59-004-01-PR	3/4	Strainer, Y, 59 Ser, Brz, 20 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59-005-01-PR	1	Strainer, Y, 59 Ser, Brz, 20 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59-006-01-PR	1 1/4	Strainer, Y, 59 Ser, Brz, 20 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59-007-01-PR	1 1/2	Strainer, Y, 59 Ser, Brz, 20 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59-008-01-PR	2	Strainer, Y, 59 Ser, Brz, 20 mesh. Plain Cap, Press	PF221-B	n/a	n/a
59LF-003-01-PR	1/2	Strainer, Y, 59 Ser, LF Brz, 50 mesh. Plain Cap, Press	n/a	n/a	n/a
59LF-004-01-PR	3/4	Strainer, Y, 59 Ser, LF Brz, 20 mesh. Plain Cap, Press	n/a	n/a	n/a
59LF-005-01-PR	1	Strainer, Y, 59 Ser, LF Brz, 20 mesh. Plain Cap, Press	n/a	n/a	n/a
59LF-006-01-PR	1 1/4	Strainer, Y, 59 Ser, LF Brz, 20 mesh. Plain Cap, Press	n/a	n/a	n/a
59LF-007-01-PR	1 1/2	Strainer, Y, 59 Ser, LF Brz, 20 mesh. Plain Cap, Press	n/a	n/a	n/a
59LF-008-01-PR	2	Strainer, Y, 59 Ser, LF Brz, 20 mesh. Plain Cap, Press	n/a	n/a	n/a

Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
200 CWP BRONZE SWING CHECK, PTFE DISC					
61Y-203-T1-PR	1/2	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61Y-204-T1-PR	3/4	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61Y-205-T1-PR	1	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61Y-206-T1-PR	1 1/4	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61Y-207-T1-PR	1 1/2	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61Y-208-T1-PR	2	200 CWP Swing Check, Y-Pattern, PTFE Disc, Press	PF413Y	n/a	n/a
61YLF-203-T1-PR	1/2	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
61YLF-204-T1-PR	3/4	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
61YLF-205-T1-PR	1	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
61YLF-206-T1-PR	1 1/4	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
61YLF-207-T1-PR	1 1/2	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
61YLF-208-T1-PR	2	200 CWP Swing Check, LF Brz, Y-Pattern, PTFE Disc, Press	n/a	n/a	n/a
IN-LINE CHECK VALVE, BRONZE, BALL CONE					
61-103-01-PR	1/2	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61-104-01-PR	3/4	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61-105-01-PR	1	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61-106-01-PR	1 1/4	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61-107-01-PR	1 1/2	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61-108-01-PR	2	Vlv, Ball Cone Chk, 61-100 Ser, Brz, Press	n/a	n/a	n/a
61LF-103-01-PR	1/2	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79035
61LF-104-01-PR	3/4	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79040
61LF-105-01-PR	1	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79045
61LF-106-01-PR	1 1/4	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79050
61LF-107-01-PR	1 1/2	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79055
61LF-108-01-PR	2	Vlv, Ball Cone Chk, 61-100 Ser, LF Brz, Press	n/a	2974ZL	79060
BALL VALVES					
77W-103-01	1/2	Ball Valve, Brz, Press End	n/a	n/a	n/a
77W-104-01	3/4	Ball Valve, Brz, Press End	n/a	n/a	n/a
77W-105-01	1	Ball Valve, Brz, Press End	n/a	n/a	n/a

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Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
77W-106-01	1 1/4	Ball Valve, Brz, Press End	PC585-70	n/a	n/a
77W-107-01	1 1/2	Ball Valve, Brz, Press End	PC585-70	n/a	n/a
77W-108-01	2	Ball Valve, Brz, Press End	PC585-70	n/a	n/a
77W-143-01	1/2	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-144-01	3/4	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-145-01	1	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-146-01	1 1/4	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-147-01	1 1/2	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-148-01	2	Ball Valve, Brz, SS Ball & Stem, Press End	PC585-70-66	n/a	n/a
77W-103-HC	1/2	Ball Valve, Brz, Press x Hose Cap & Chain	PC585-70-HC	n/a	n/a
77W-104-HC	3/4	Ball Valve, Brz, Press x Hose Cap & Chain	PC585-70-HC	n/a	n/a
77W-143-HC	1/2	Ball Valve, Brz, SS Ball & Stem, Press x Hose Cap & Chain	PC585-70-66-HC	n/a	n/a
77W-144-HC	3/4	Ball Valve, Brz, SS Ball & Stem, Press x Hose Cap & Chain	PC585-70-66-HC	n/a	n/a
77W-103-11	1/2	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-104-11	3/4	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-105-11	1	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-106-11	1 1/4	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-107-11	1 1/2	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-108-11	2	Ball Valve, Brz, Press End, Therma-Seal™ Handle	PC585-70-NS	n/a	n/a
77W-143-11	1/2	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77W-144-11	3/4	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77W-145-11	1	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77W-146-11	1 1/4	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77W-147-11	1 1/2	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77W-148-11	2	Ball Valve, Brz, SS Trim, Press, Therma-Seal™ Handle	PC585-70-66-NS	n/a	n/a
77WLF-103-01	1/2	Ball Valve, LF Brz, Press End	PC585-80-LF	n/a	n/a
77WLF-104-01	3/4	Ball Valve, LF Brz, Press End	PC585-80-LF	n/a	n/a
77WLF-105-01	1	Ball Valve, LF Brz, Press End	nPC585-80-LFa	n/a	n/a
77WLF-106-01	1 1/4	Ball Valve, LF Brz, Press End	PC585-80-LF	n/a	n/a
77WLF-107-01	1 1/2	Ball Valve, LF Brz, Press End	PC585-80-LF	2970.1ZL	79115

Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
77WLF-108-01	2	Ball Valve, LF Brz, Press End	PC585-80-LF	2970.1ZL	79120
77WLF-143-01	1/2	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	n/a	n/a
77WLF-144-01	3/4	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	n/a	n/a
77WLF-145-01	1	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	n/a	n/a
77WLF-146-01	1 1/4	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	n/a	n/a
77WLF-147-01	1 1/2	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	2970.3ZL	79840
77WLF-148-01	2	Ball Valve, LF Brz, SS Ball & Stem, Press End	PC585-66-LF	2970.3ZL	79845
77WLF-103-HC	1/2	Ball Valve, LF Brz, Press x Hose Cap & Chain	PC585-80-LF-HC	2971.5ZL	79990
77WLF-104-HC	3/4	Ball Valve, LF Brz, Press x Hose Cap & Chain	PC585-80-LF-HC	2971.5ZL	79995
77WLF-103-11	1/2	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77WLF-104-11	3/4	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77WLF-105-11	1	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77WLF-106-11	1 1/4	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77WLF-107-11	1 1/2	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77WLF-108-11	2	Ball Valve, LF Brz, Press End, Therma-Seal™ Handle	PC585-NS-LF	n/a	n/a
77V-103-01	1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24000
77V-104-01	3/4	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24005
77V-105-01	1	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24010
77V-106-01	1-1/4	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24015
77V-107-01	1-1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24020
77V-108-01	2	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	PC585-70	2973	24025
77V-109-01	2-1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	n/a	n/a	n/a
77V-100-01	3	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	n/a	n/a	n/a
77V-10A-01	4	Press End, Forged Brass Ball Valve, RPTFE Seats, Chrome Plated Ball, BRS Stem	n/a	n/a	n/a
77V-143-01	1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a
77V-144-01	3/4	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a
77V-145-01	1	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a
77V-146-01	1-1/4	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a

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Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
77V-147-01	1-1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a
77V-148-01	2	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-70-66	n/a	n/a
77V-149-01	2-1/2	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77V-140-01	3	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77V-14A-01	4	Press End, Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-103-01	1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	n/a	n/a
77VLF-104-01	3/4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	n/a	n/a
77VLF-105-01	1	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	n/a	n/a
77VLF-106-01	1-1/4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	n/a	n/a
77VLF-107-01	1-1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	2970.1ZL	79115
77VLF-108-01	2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, Plated LF Ball & LF BRS Stem	PC585-80-LF	2970.1ZL	79120
77VLF-109-01	2-1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-100-01	3	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-14A-01	4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-143-01	1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	n/a	n/a
77VLF-144-01	3/4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	n/a	n/a
77VLF-145-01	1	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	n/a	n/a
77VLF-146-01	1-1/4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	n/a	n/a
77VLF-147-01	1-1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	2970.3ZL	79840
77VLF-148-01	2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	PC585-66-LF	2970.3ZL	79845
77VLF-149-01	2-1/2	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-140-01	3	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
77VLF-14A-01	4	Press End, Lead Free Forged Brass Ball Valve, RPTFE Seats, SS Ball & Stem	n/a	n/a	n/a
BALANCING VALVES					
58A-103-PR	1/2	Press End, DZR Brass Balance Valve	n/a	n/a	n/a
58A-104-PR	3/4	Press End, DZR Brass Balance Valve	n/a	n/a	n/a
58A-103-PR	1	Press End, DZR Brass Balance Valve	n/a	n/a	n/a
58A-104-PR	1-1/4	Press End, DZR Brass Balance Valve	n/a	n/a	n/a
58A-103-PR	1-1/2	Press End, DZR Brass Balance Valve	n/a	n/a	n/a
58A-104-PR	2	Press End, DZR Brass Balance Valve	n/a	n/a	n/a

Apollo Part Number	Size	Description	NIBCO No.	Viega Model No.	Viega Stock Code
BACKFLOW PREVENTERS, RPZ, BRONZE					
4A-203-T2F-PR	1/2	RP4A, Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4A-204-T2F-PR	3/4	RP4A, Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4A-205-T2F-PR	1	RP4A, Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4A-206-T2-PR	1 1/4	RP4A, Brz, with BV, Press	n/a	n/a	n/a
4A-207-T2-PR	1 1/2	RP4A, Brz, with BV, Press	n/a	n/a	n/a
4A-208-T2-PR	2	RP4A, Brz, with BV, Press	n/a	n/a	n/a
4ALF-203-T2F-PR	1/2	RP4ALF, LF Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4ALF-204-T2F-PR	3/4	RP4ALF, LF Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4ALF-205-T2F-PR	1	RP4ALF, LF Brz, BV, SAE Test Cock, Press	n/a	n/a	n/a
4ALF-206-T2-PR	1 1/4	RP4ALF, LF Brz, with BV, Press	n/a	n/a	n/a
4ALF-207-T2-PR	1 1/2	RP4ALF, LF Brz, with BV, Press	n/a	n/a	n/a
4ALF-208-T2-PR	2	RP4ALF, LF Brz, with BV, Press	n/a	n/a	n/a

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REV. 8/14/14

CROSS REFERENCE CHART

Fittings

APOLLOXPRESS®

XPress Product Number	Description	Viega Cross	NIBCO cross
10075500	800 ½ CxC Copper Coupling with Stop	78047	900110
10075502	800 ¾ CxC Copper Coupling with Stop	78052	9001250
10075504	800 1 CxC Copper Coupling with Stop	78057	900145
10075506	800 1¼ CxC Copper Coupling with Stop	78062	9001700
10075508	800 1½ CxC Copper Coupling with Stop	78067	9002000
10075510	800 2 CxC Copper Coupling with Stop	78072	9002350
10061947	800 2½ CxC Copper Coupling with Stop	20728	900265
10061952	800 3 CxC Copper Coupling with Stop	20733	900305
10061957	800 4 CxC Copper Coupling with Stop	20738	900385
10061932	801 2½ CxC Copper Coupling without Stop	20743	902070
10061937	801 3 CxC Copper Coupling without Stop	20748	902075
10061942	801 4 CxC Copper Coupling without Stop	20753	902085
10075513	801 ½ CXC Copper Coupling without Stop	78172	902030
10075515	801 ¾ CXC Copper Coupling without Stop	78177	902040
10075517	801 1 CXC Copper Coupling without Stop	78182	9020500
10075521	801 1¼ CXC Copper Coupling without Stop	78187	902055
10075523	801 1½ CXC Copper Coupling without Stop	78192	902060
10075527	801 2 CXC Copper Coupling without Stop	78197	9020650
10075030	801 ½ CXC Copper Coupling without Stop - Extended	79005	
10075032	801 ¾ CXC Copper Coupling without Stop - Extended	79010	
10075034	801 1 CXC Copper Coupling without Stop - Extended	79015	
10075900	801R ¾ x ½ CxC Copper Reducer Coupling	78147	900130
10075144	801R 1 x ½ CxC Copper Reducer Coupling	15603	9001550
10075898	801R 1 x ¾ CxC Copper Reducer Coupling	78152	9001500
10066073	801R 1¼ x ½ CxC Copper Reducer Coupling		
10066001	801R 1¼ x ¾ CxC Copper Reducer Coupling	15593	9001800
10075896	801R 1¼ x 1 CxC Copper Reducer Coupling	78157	900175
10066380	801R 1½ x ½ CxC Copper Reducer Coupling		
10066381	801R 1½ x ¾ CxC Copper Reducer Coupling	18473	9002150
10066003	801R 1½ x 1 CxC Copper Reducer Coupling	15588	900210
10075128	801R 1½ x 1¼ CxC Copper Reducer Coupling	78162	9002050
10066082	801R 2 x ½ CxC Copper Reducer Coupling		
10066398	801R 2 x ¾ CxC Copper Reducer Coupling	18468	9002550
10066005	801R 2 x 1 CxC Copper Reducer Coupling	15608	9002500
10066072	801R 2 x 1¼ CxC Copper Reducer Coupling	22328	9002450
10075130	801R 2 x 1½ CxC Copper Reducer Coupling	78167	900240
10066440	801R 2½ x 1 CxC Copper Reducer Coupling	20685	900285
10066441	801R 2½ x 1¼ CxC Copper Reducer Coupling	20690	900280
10066442	801R 2½ x 1½ CxC Copper Reducer Coupling	20695	900275
10066074	801R 2½ x 2 CxC Copper Reducer Coupling	20700	900270
10066444	801R 3 x ¾ CxC Copper Reducer Coupling		
10066445	801R 3 x 1½ CxC Copper Reducer Coupling	20705	900320
10066446	801R 3 x 2 CxC Copper Reducer Coupling	20710	900315
10066076	801R 3 x 2½ CxC Copper Reducer Coupling	20715	900310
10066447	801R 4 x 2 CxC Copper Reducer Coupling	20720	900405
10066151	801R 4 x 2½ CxC Copper Reducer Coupling	20725	900400
10066152	801R 4 x 3 CxC Copper Reducer Coupling	20730	900395
10075750	803 ½ CxF Low Lead Brass Female Adapter	79300	902465
10075752	803 ¾ CxF Low Lead Brass Female Adapter	79315	902495

XPress Product Number	Description	Viega Cross	NIBCO cross
10075754	803 1 CxF Low Lead Brass Female Adapter	79330	902525
10075756	803 1¼ CxF Low Lead Brass Female Adapter	79350	9025550
10075758	803 1½ CxF Low Lead Brass Female Adapter	79365	902590
10075760	803 2 CxF Low Lead Brass Female Adapter	79370	902615
10075750	803 ½ CxF Brass Female Adapter	77892	
10075752	803 ¾ CxF Brass Female Adapter	77907	
10075754	803 1 CxF Brass Female Adapter	77917	
10075756	803 1¼ CxF Brass Female Adapter	77932	
10075758	803 1½ CxF Brass Female Adapter	77947	
10075760	803 2 CxF Brass Female Adapter	77952	
10075780	803R ½ x ¾ CxF Low Lead Brass Female Reducing Adapter	79295	9024800
10075782	803R ½ x ¾ CxF Low Lead Brass Female Reducing Adapter	79305	902475
10075784	803R ¾ x ½ CxF Low Lead Brass Female Reducing Adapter	79310	9025100
10075796	803R 1 x ½ CxF Low Lead Brass Female Reducing Adapter	79320	9025370
10075798	803R 1 x ¾ CxF Low Lead Brass Female Reducing Adapter	79325	902540
10075800	803R 1 x 1¼ CxF Low Lead Brass Female Reducing Adapter	79335	9025350
10075786	803R 1¼ x ½ CxF Low Lead Brass Female Reducing Adapter	79340	
10075788	803R 1¼ x 1 CxF Low Lead Brass Female Reducing Adapter	79345	902556
10075790	803R 1¼ x 1½ CxF Low Lead Brass Female Reducing Adapter	79355	9025650
10075792	803R 1½ x ¾ CxF Low Lead Brass Female Reducing Adapter		9025905
10075794	803R 1½ x 1¼ CxF Low Lead Brass Female Reducing Adapter	79360	902591
10075762	803-2 ½ FTGxF Low Lead Brass Female Street Adapter	79430	
10075768	803-2 ¾ FTGxF Low Lead Brass Female Street Adapter	79445	
10075772	803-2 1 FTGxF Low Lead Brass Female Street Adapter	79450	
10075774	803-2 1¼ FTGxF Low Lead Brass Female Street Adapter	79465	
10075776	803-2 1½ FTGxF Low Lead Brass Female Street Adapter	79470	
10075778	803-2 2 FTGxF Low Lead Brass Female Street Adapter	79475	
10075762	803-2 ½ FTGxF Brass Female Street Adapter	78007	
10075768	803-2 ¾ FTGxF Brass Female Street Adapter	78022	
10075772	803-2 1 FTGxF Brass Female Street Adapter	78027	
10075774	803-2 1¼ FTGxF Brass Female Street Adapter	78032	
10075776	803-2 1½ FTGxF Brass Female Street Adapter	78037	
10075778	803-2 2 FTGxF Brass Female Street Adapter	78042	
10075764	803-2 ½ x ¾ FTGxF Low Lead Brass Female Reducing Street Adapter	79425	
10075766	803-2 ½ x ¾ FTGxF Low Lead Brass Female Reducing Street Adapter	79435	
10075770	803-2 ¾ x ½ FTGxF Low Lead Brass Female Reducing Street Adapter	79440	

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CROSS REFERENCE CHART

Fittings

APOLLOXPRESS®

XPress Product Number	Description	Viega Cross	NIBCO cross
10075804	803-2 1 x 1/2 FTGxF Low Lead Brass Female Reducing Street Adapter	79455	
10075802	803-2 1 1/4 x 1/2 FTGxF Low Lead Brass Female Reducing Street Adapter	79460	
10075806	804 1/2 CxM Low Lead Brass Male Adapter	79215	903060
10075808	804 3/4 CxM Low Lead Brass Male Adapter	79230	9030950
10075844	804 1 CxM Low Lead Brass Male Adapter	79245	9031350
10075810	804 1 1/4 CxM Low Lead Brass Male Adapter	79260	9031700
10075812	804 1 1/2 CxM Low Lead Brass Male Adapter	79275	9032000
10075814	804 2 CxM Low Lead Brass Male Adapter	79290	903230
10075806	804 1/2 CxM Brass Male Adapter	77817	
10075808	804 3/4 CxM Brass Male Adapter	77832	
10075844	804 1 CxM Brass Male Adapter	77842	
10075810	804 1 1/4 CxM Brass Male Adapter	77857	
10075812	804 1 1/2 CxM Brass Male Adapter	77872	
10075814	804 2 CxM Brass Male Adapter	77877	
10061982	804 2 1/2 CxM Copper Male Adapter	20823	903265
10061987	804 3 CxM Copper Male Adapter	20828	903270
10061992	804 4 CxM Copper Male Adapter	20838	903275
10075836	804R 1/2 x 3/8 CxM Low Lead Brass Male Reducing Adapter	79210	9030800
10075838	804R 1/2 x 3/4 CxM Low Lead Brass Male Reducing Adapter	79220	903075
10075840	804R 3/4 x 1/2 CxM Low Lead Brass Male Reducing Adapter	79225	903120
10075842	804R 3/4 x 1 CxM Low Lead Brass Male Reducing Adapter	79235	
10075854	804R 1 x 3/4 CxM Low Lead Brass Male Reducing Adapter	79240	903155
10075856	804R 1 x 1 CxM Low Lead Brass Male Reducing Adapter	79250	903150
10075846	804R 1 1/4 x 1 CxM Low Lead Brass Male Reducing Adapter	79255	903185
10075848	804R 1 1/4 x 1 1/2 CxM Low Lead Brass Male Reducing Adapter	79265	903180
10075850	804R 1 1/2 x 1 1/4 CxM Low Lead Brass Male Reducing Adapter	79270	903210
10075852	804R 1 1/2 x 2 CxM Low Lead Brass Male Reducing Adapter	79280	
10075858	804R 2 x 1 1/2 CxM Low Lead Brass Male Reducing Adapter	79285	
10075816	804-2 1/2 FTGxM Low Lead Brass Male Street Adapter	79380	
10075822	804-2 3/4 FTGxM Low Lead Brass Male Street Adapter	79395	
10075826	804-2 1 FTGxM Low Lead Brass Male Street Adapter	79405	
10075828	804-2 1 1/4 FTGxM Low Lead Brass Male Street Adapter	79410	
10075830	804-2 1 1/2 FTGxM Low Lead Brass Male Street Adapter	79415	
10075834	804-2 2 FTGxM Low Lead Brass Male Street Adapter	79420	
10075816	804-2 1/2 FTGxM Brass Male Street Adapter	77962	
10075822	804-2 3/4 FTGxM Brass Male Street Adapter	77977	
10075826	804-2 1 FTGxM Brass Male Street Adapter	77982	

XPress Product Number	Description	Viega Cross	NIBCO cross
10075828	804-2 1 1/4 FTGxM Brass Male Street Adapter	77987	
10075830	804-2 1 1/2 FTGxM Brass Male Street Adapter	77992	
10075834	804-2 2 FTGxM Brass Male Street Adapter	77997	
10075818	804-2 1/2 x 3/8 FTGxM Low Lead Brass Male Reducing Street Adapter	79375	
10075820	804-2 1/2 x 3/4 FTGxM Low Lead Brass Male Reducing Street Adapter	79385	
10075824	804-2 3/4 x 1/2 FTGxM Low Lead Brass Male Reducing Street Adapter	79390	
10075832	804-2 1 x 3/4 FTGxM Low Lead Brass Male Reducing Street Adapter	79400	
10075060	806 1/2 CxC Copper 45 Elbow	77607	904280
10075062	806 3/4 CxC Copper 45 Elbow	77612	904290
10075064	806 1 CxC Copper 45 Elbow	77617	904300
10075090	806 1 1/4 CxC Copper 45 Elbow	77622	904310
10075092	806 1 1/2 CxC Copper 45 Elbow	77627	9043200
10075094	806 2 CxC Copper 45 Elbow	77632	904330
10062052	806 2 1/2 CxC Copper 45 Elbow	20653	904340
10062057	806 3 CxC Copper 45 Elbow	20658	904350
10062062	806 4 CxC Copper 45 Elbow	20663	904370
10075054	806-2 1/2 FTGxC Copper 45 Street Elbow	77637	904620
10075056	806-2 3/4 FTGxC Copper 45 Street Elbow	77642	904630
10075058	806-2 1 FTGxC Copper 45 Street Elbow	77647	94640
10075084	806-2 1 1/4 FTGxC Copper 45 Street Elbow	77652	904650
10075086	806-2 1 1/2 FTGxC Copper 45 Street Elbow	77657	904660
10075088	806-2 2 FTGxC Copper 45 Street Elbow	77662	904670
10062037	806-2 2 1/2 FTGxC Copper 45 Street Elbow	20668	904680
10062042	806-2 3 FTGxC Copper 45 Street Elbow	20673	904690
10062047	806-2 4 FTGxC Copper 45 Street Elbow	20678	904700
10075554	807 1/2 CxC Copper 90 Elbow	77317	905545
10075556	807 3/4 CxC Copper 90 Elbow	77322	905560
10075052	807 1 CxC Copper 90 Elbow	77327	905575
10075078	807 1 1/4 CxC Copper 90 Elbow	77332	905595
10075080	807 1 1/2 CxC Copper 90 Elbow	77337	905615
10075082	807 2 CxC Copper 90 Elbow	77342	905640
10062021	807-C 2 1/2 CxC Copper Close Turn 90 Elbow		905665
10062027	807-C 3 CxC Copper Close Turn 90 Elbow		905690
10062032	807-C 4 CxC Copper Close Turn 90 Elbow		905720
10062066	807-L 2 1/2 CxC Copper Long Turn 90 Elbow	20623	907905
10062067	807-L 3 CxC Copper Long Turn 90 Elbow	20628	907910
10062069	807-L 4 CxC Copper Long Turn 90 Elbow	20633	907920
10066101	807 3/4 x 1/2 CxC Copper 90 Reducing Elbow	77325	9055650
10066099	807 1 x 1/2 CxC Copper 90 Reducing Elbow		
10066083	807 1 x 3/4 CxC Copper 90 Reducing Elbow	77330	
10066460	807 3 x 2 CxC Copper 90 Reducing Elbow		
10066141	807 3 x 2 1/2 CxC Copper 90 Reducing Elbow		
10075566	807-2 1/2 FTGxC Copper 90 Street Elbow	77347	905910
10075568	807-2 3/4 FTGxC Copper 90 Street Elbow	77352	905915
10075046	807-2 1 FTGxC Copper 90 Street Elbow	77357	905920
10075072	807-2 1 1/4 FTGxC Copper 90 Street Elbow	77362	9059250
10075074	807-2 1 1/2 FTGxC Copper 90 Street Elbow	77367	9059300
10075076	807-2 2 FTGxC Copper 90 Street Elbow	77372	9059350

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CROSS REFERENCE CHART

Fittings

APOLLOXPRESS®

XPress Product Number	Description	Viega Cross	NIBCO cross
10062007	807-C-2 2½ FTGxC Copper Close Turn 90 Street Elbow		905940
10062012	807-C-2 3 FTGxC Copper Close Turn 90 Street Elbow		905945
10062017	807-C-2 4 FTGxC Copper Close Turn 90 Street Elbow		905955
10062071	807-L-2 2½ FTGxC Copper Long Turn 90 Street Elbow	20638	908090
10062073	807-L-2 3 FTGxC Copper Long Turn 90 Street Elbow	20643	908095
10062074	807-L-2 4 FTGxC Copper Long Turn 90 Street Elbow	20648	
10066560	8707-3 ½ CxF Low Lead Brass & Copper Female 90 Elbow	79525	9082750
10066561	8707-3 ¾ CxF Low Lead Brass & Copper Female 90 Elbow	79540	B06415
10066562	8707-3 1 CxF Low Lead Brass & Copper Female 90 Elbow	79550	9082780
10066563	8707-3 1¼ CxF Low Lead Brass & Copper Female 90 Elbow	79560	B06470
10066564	8707-3 1½ CxF Low Lead Brass & Copper Female 90 Elbow	79565	B06505
10066565	8707-3 2 CxF Low Lead Brass & Copper Female 90 Elbow	79570	B06535
10066566	8707-3 ½ x ¾ CxF Low Lead Brass & Copper Female 90 Reducing Elbow	79520	9082550
10066567	8707-3 ½ x ¾ CxF Low Lead Brass & Copper Female 90 Reducing Elbow	79530	9082560
10066568	8707-3 ¾ x ½ CxF Low Lead Brass & Copper Female 90 Reducing Elbow	79535	B06430
10066569	8707-3 1 x ½ CxF Low Lead Brass & Copper Female 90 Reducing Elbow	79545	
10066570	8707-4 ½ CxM Low Lead Brass & Copper Male 90 Elbow	77492	B06990
10066571	8707-4 ¾ CxM Low Lead Brass & Copper Male 90 Elbow	77507	B07015
10066572	8707-4 1 CxM Low Lead Brass & Copper Male 90 Elbow	77512	B07035
10066573	8707-4 1¼ CxM Low Lead Brass & Copper Male 90 Elbow	77517	B07060
10066574	8707-4 1½ CxM Low Lead Brass & Copper Male 90 Elbow	77522	B07090
10066575	8707-4 2 CxM Low Lead Brass & Copper Male 90 Elbow	77527	B07115
10066576	8707-4 ½ x ¾ CxM Low Lead Brass & Copper Male 90 Reducing Elbow	77497	9082600
10066577	8707-4 ¾ x ½ CxM Low Lead Brass & Copper Male 90 Reducing Elbow	77502	B07025
10066578	8707-3-2 ½ FTGXF 90 Female Street Elbow		
10066418	8707-3-2 ½ FTGXF 90 Female Street Elbow		
10075366	8707-3-5 ½ CxF Low Lead Brass Drop Ear 90 Elbow	79190	B066850
10075368	8707-3-5 ¾ CxF Low Lead Brass Drop Ear 90 Elbow	79195	B06700
10075369	8707-3-5 1 CxF Low Lead Brass Drop Ear 90 Elbow		
10075367	8707-3-5 ½ x ¾ CxF Low Lead Brass Reducing Drop Ear 90 Elbow	79185	

XPress Product Number	Description	Viega Cross	NIBCO cross
10075578	811 ½ CxCxC Copper Tee	77377	909720
10075580	811 ¾ CxCxC Copper Tee	77387	909840
10075582	811 1 CxCxC Copper Tee	77412	909930
10075096	811 1¼ CxCxC Copper Tee	77442	910005
10075098	811 1½ CxCxC Copper Tee	77457	910115
10075100	811 2 CxCxC Copper Tee	77477	910260
10075118	811 2½ CxCxC Copper Tee	20683	910445
10062072	811 3 CxCxC Copper Tee	20693	910660
10062077	811 4 CxCxC Copper Tee	20708	911215
10066590	811R ¾ x ½ x ½ CxCxC Copper Reducing Tee	77392	909890
10066039	811R ¾ x ½ x ¾ CxCxC Copper Reducing Tee	77397	909885
10075906	811R ¾ x ¾ x ½ CxCxC Copper Reducing Tee	77402	909855
10066430	811R ¾ x ¾ x ½ CxCxC Copper Reducing Tee	77402	909855
10066591	811R 1 x ½ x ½ CxCxC Copper Reducing Tee		
10066592	811R 1 x ½ x ¾ CxCxC Copper Reducing Tee	22263	
10066066	811R 1 x ½ x 1 CxCxC Copper Reducing Tee	94767	9099900
10066593	811R 1 x ¾ x ½ CxCxC Copper Reducing Tee	77417	909980
10066594	811R 1 x ¾ x ¾ CxCxC Copper Reducing Tee	77422	909975
10066040	811R 1 x ¾ x 1 CxCxC Copper Reducing Tee	77427	9099700
10066102	811R 1 x ¾ x 1¼ CxCxC Copper Reducing Tee		
10075904	811R 1 x 1 x ½ CxCxC Copper Reducing Tee	77432	909955
10066431	811R 1 x 1 x ½ CxCxC Copper Reducing Tee	77432	909955
10075902	811R 1 x 1 x ¾ CxCxC Copper Reducing Tee	77437	909945
10066432	811R 1 x 1 x ¾ CxCxC Copper Reducing Tee	77437	909945
10066049	811R 1¼ x ½ x ½ CxCxC Copper Reducing Tee		
10066080	811R 1¼ x ½ x 1 CxCxC Copper Reducing Tee		
10066392	811R 1¼ x ½ x 1¼ CxCxC Copper Reducing Tee	22253	
10066051	811R 1¼ x ¾ x ½ CxCxC Copper Reducing Tee	22243	900400
10066052	811R 1¼ x ¾ x ¾ CxCxC Copper Reducing Tee	22258	
10066053	811R 1¼ x ¾ x 1 CxCxC Copper Reducing Tee	22268	
10066054	811R 1¼ x ¾ x 1¼ CxCxC Copper Reducing Tee	22248	
10066044	811R 1¼ x ¾ x 1½ CxCxC Copper Reducing Tee		
10066055	811R 1¼ x 1 x ½ CxCxC Copper Reducing Tee	22238	
10075122	811R 1¼ x 1 x ¾ CxCxC Copper Reducing Tee	94762	9100550
10075124	811R 1¼ x 1 x 1 CxCxC Copper Reducing Tee	14568	9100500
10066056	811R 1¼ x 1 x 1¼ CxCxC Copper Reducing Tee		
10066395	811R 1¼ x 1 x 1½ CxCxC Copper Reducing Tee		
10075106	811R 1¼ x 1¼ x ½ CxCxC Copper Reducing Tee	94757	9100300
10075102	811R 1¼ x 1¼ x ¾ CxCxC Copper Reducing Tee	77452	9100250
10075104	811R 1¼ x 1¼ x 1 CxCxC Copper Reducing Tee	77447	910020
10066394	811R 1½ x ½ x 1¼ CxCxC Copper Reducing Tee		
10066009	811R 1½ x ½ x 1½ CxCxC Copper Reducing Tee		9102400
10066195	811R 1½ x ¾ x ½ CxCxC Copper Reducing Tee		
10066383	811R 1½ x ¾ x ¾ CxCxC Copper Reducing Tee		9102300
10066397	811R 1½ x ¾ x 1 CxCxC Copper Reducing Tee		
10066058	811R 1½ x ¾ x 1¼ CxCxC Copper Reducing Tee		
10066043	811R 1½ x ¾ x 1½ CxCxC Copper Reducing Tee		
10066042	811R 1½ x ¾ x 2 CxCxC Copper Reducing Tee		
10066011	811R 1½ x 1 x ¾ CxCxC Copper Reducing Tee	79660	9102050
10066012	811R 1½ x 1 x 1 CxCxC Copper Reducing Tee	15458	9102000
10066081	811R 1½ x 1 x 1¼ CxCxC Copper Reducing Tee		

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CROSS REFERENCE CHART

Fittings

APOLLOXPRESS®

XPress Product Number	Description	Viega Cross	NIBCO cross
10066013	811R 1½ x 1 x 1½ CxCxC Copper Reducing Tee	15463	9101900
10066108	811R 1½ x 1 x 2 CxCxC Copper Reducing Tee		
10066059	811R 1½ x 1¼ x ½ CxCxC Copper Reducing Tee		
10066060	811R 1½ x 1¼ x ¾ CxCxC Copper Reducing Tee	22233	
10066014	811R 1½ x 1¼ x 1 CxCxC Copper Reducing Tee	15453	9101750
10075126	811R 1½ x 1¼ x 1¼ CxCxC Copper Reducing Tee	15483	9101700
10066393	811R 1½ x 1¼ x 1½ CxCxC Copper Reducing Tee		
10066109	811R 1½ x 1¼ x 2 CxCxC Copper Reducing Tee		
10066015	811R 1½ x 1½ x ½ CxCxC Copper Reducing Tee	15448	910145
10075108	811R 1½ x 1½ x ¾ CxCxC Copper Reducing Tee	77462	910140
10075110	811R 1½ x 1½ x 1 CxCxC Copper Reducing Tee	77467	910135
10075112	811R 1½ x 1½ x 1¼ CxCxC Copper Reducing Tee	77472	9101300
10066384	811R 2 x ½ x 2 CxCxC Copper Reducing Tee		9104250
10066121	811R 2 x ¾ x ¾ CxCxC Copper Reducing Tee		
10066092	811R 2 x ¾ x 1 CxCxC Copper Reducing Tee		
10066388	811R 2 x ¾ x 2 CxCxC Copper Reducing Tee		
10066079	811R 2 x 1 x ½ CxCxC Copper Reducing Tee		
10066062	811R 2 x 1 x ¾ CxCxC Copper Reducing Tee		
10066017	811R 2 x 1 x 1 CxCxC Copper Reducing Tee		9103850
10066126	811R 2 x 1 x 1¼ CxCxC Copper Reducing Tee		
10066197	811R 2 x 1 x 1½ CxCxC Copper Reducing Tee		
10066018	811R 2 x 1 x 2 CxCxC Copper Reducing Tee		9103700
10066063	811R 2 x 1¼ x ¾ CxCxC Copper Reducing Tee		
10066129	811R 2 x 1¼ x 1 CxCxC Copper Reducing Tee		
10066019	811R 2 x 1¼ x 1¼ CxCxC Copper Reducing Tee	15518	9103500
10066125	811R 2 x 1¼ x 1½ CxCxC Copper Reducing Tee		
10066064	811R 2 x 1¼ x 2 CxCxC Copper Reducing Tee		
10066065	811R 2 x 1½ x ½ CxCxC Copper Reducing Tee		
10066020	811R 2 x 1½ x ¾ CxCxC Copper Reducing Tee	15513	9103300
10066021	811R 2 x 1½ x 1 CxCxC Copper Reducing Tee	15498	9103250
10066022	811R 2 x 1½ x 1¼ CxCxC Copper Reducing Tee	15508	9103200
10066023	811R 2 x 1½ x 1½ CxCxC Copper Reducing Tee	15503	9103150
10066024	811R 2 x 1½ x 2 CxCxC Copper Reducing Tee	22228	
10066385	811R 2 x 2 x ½ CxCxC Copper Reducing Tee	15538	9103000
10075114	811R 2 x 2 x ¾ CxCxC Copper Reducing Tee	94777	9102950
10075116	811R 2 x 2 x 1 CxCxC Copper Reducing Tee	94772	910290
10075118	811R 2 x 2 x 1¼ CxCxC Copper Reducing Tee	77487	9102850
10075120	811R 2 x 2 x 1½ CxCxC Copper Reducing Tee	77482	910280
10066499	811R 2 x 1½ x 2½ CxCxC Copper Reducing Tee		
10066595	811R 2½ x ¾ x 2 CxCxC Copper Reducing Tee		
10066502	811R 2½ x ¾ x 2½ CxCxC Copper Reducing Tee	20684	910620
10066596	811R 2½ x 1 x 2 CxCxC Copper Reducing Tee		
10066514	811R 2½ x 1 x 2½ CxCxC Copper Reducing Tee	20689	910590
10066504	811R 2½ x 1¼ x 2½ CxCxC Copper Reducing Tee	20694	910540
10066597	811R 2½ x 1½ x 1½ CxCxC Copper Reducing Tee		
10066598	811R 2½ x 1½ x 2 CxCxC Copper Reducing Tee		
10066507	811R 2½ x 1½ x 2½ CxCxC Copper Reducing Tee	20699	910530
10066599	811R 2½ x 2 x ¾ CxCxC Copper Reducing Tee	20704	910520
10066600	811R 2½ x 2 x 1 CxCxC Copper Reducing Tee	20709	910515
10066601	811R 2½ x 2 x 1¼ CxCxC Copper Reducing Tee		910510
10066602	811R 2½ x 2 x 1½ CxCxC Copper Reducing Tee	22283	910505

XPress Product Number	Description	Viega Cross	NIBCO cross
10066603	811R 2½ x 2 x 2 CxCxC Copper Reducing Tee	22278	910500
10066174	811R 2½ x 2 x 2½ CxCxC Copper Reducing Tee	20714	910495
10066515	811R 2½ x 2 x 3 CxCxC Copper Reducing Tee		
10068042	811R 2½ x 2½ x ½ CxCxC Copper Reducing Tee	22303	910490
10068045	811R 2½ x 2½ x ¾ CxCxC Copper Reducing Tee	22298	910485
10068048	811R 2½ x 2½ x 1 CxCxC Copper Reducing Tee	22293	910480
10068051	811R 2½ x 2½ x 1¼ CxCxC Copper Reducing Tee	22288	910475
10068054	811R 2½ x 2½ x 1½ CxCxC Copper Reducing Tee	20803	910470
10068057	811R 2½ x 2½ x 2 CxCxC Copper Reducing Tee	20688	910465
10066522	811R 3 x ¾ x 2½ CxCxC Copper Reducing Tee		
10066523	811R 3 x ¾ x 3 CxCxC Copper Reducing Tee	20719	910885
10066524	811R 3 x 1 x 2½ CxCxC Copper Reducing Tee		
10066525	811R 3 x 1 x 3 CxCxC Copper Reducing Tee	20724	910850
10066526	811R 3 x 1¼ x 3 CxCxC Copper Reducing Tee	20729	910790
10066527	811R 3 x 1½ x 3 CxCxC Copper Reducing Tee	20727	910780
10066604	811R 3 x 2 x 2 CxCxC Copper Reducing Tee	20732	910755
10066529	811R 3 x 2 x 2½ CxCxC Copper Reducing Tee	20734	910750
10066530	811R 3 x 2 x 3 CxCxC Copper Reducing Tee	20793	910745
10066605	811R 3 x 2½ x 2 CxCxC Copper Reducing Tee	20744	910720
10066136	811R 3 x 2½ x 2½ CxCxC Copper Reducing Tee	20749	910715
10066137	811R 3 x 2½ x 3 CxCxC Copper Reducing Tee	20754	910710
10068060	811R 3 x 3 x ½ CxCxC Copper Reducing Tee	20759	910705
10068063	811R 3 x 3 x ¾ CxCxC Copper Reducing Tee	22323	910700
10068066	811R 3 x 3 x 1 CxCxC Copper Reducing Tee	22308	910695
10068069	811R 3 x 3 x 1¼ CxCxC Copper Reducing Tee	22313	910690
10068072	811R 3 x 3 x 1½ CxCxC Copper Reducing Tee	20798	910685
10068075	811R 3 x 3 x 2 CxCxC Copper Reducing Tee	20698	910680
10062079	811R 3 x 3 x 2½ CxCxC Copper Reducing Tee	20703	910675
10066538	811R 4 x 1½ x 3 CxCxC Copper Reducing Tee		
10066539	811R 4 x 2 x 4 CxCxC Copper Reducing Tee		911390
10066138	811R 4 x 2½ x 4 CxCxC Copper Reducing Tee		911350
10066606	811R 4 x 3 x 1½ CxCxC Copper Reducing Tee		
10066607	811R 4 x 3 x 2 CxCxC Copper Reducing Tee	20774	911330
10066139	811R 4 x 3 x 2½ CxCxC Copper Reducing Tee		911325
10066096	811R 4 x 3 x 3 CxCxC Copper Reducing Tee	20784	911320
10066140	811R 4 x 3 x 4 CxCxC Copper Reducing Tee		911310
10068078	811R 4 x 4 x ½ CxCxC Copper Reducing Tee	20788	911265
10068081	811R 4 x 4 x ¾ CxCxC Copper Reducing Tee	20793	911260
10068084	811R 4 x 4 x 1 CxCxC Copper Reducing Tee	20794	911255
10068087	811R 4 x 4 x 1¼ CxCxC Copper Reducing Tee	20795	911250
10068090	811R 4 x 4 x 1½ CxCxC Copper Reducing Tee	20808	600245
10068093	811R 4 x 4 x 2 CxCxC Copper Reducing Tee	20713	911240
10062078	811R 4 x 4 x 2½ CxCxC Copper Reducing Tee	20718	911235
10062076	811R 4 x 4 x 3 CxCxC Copper Reducing Tee	20723	911230
10066070	811BH ½ x ½ x ¾ CxCxC Copper Bullhead Tee	77382	909730
10066006	811BH ½ x ½ x 1 CxCxC Copper Bullhead Tee	15493	9097250
10066071	811BH ¾ x ¾ x 1 CxCxC Copper Bullhead Tee	77407	909845
10066008	811BH 1 x 1 x 1¼ CxCxC Copper Bullhead Tee	15488	9099400
10066128	811BH 1 x 1 x 2 CxCxC Copper Bullhead Tee		
10066107	811BH 1¼ x 1¼ x 2 CxCxC Copper Bullhead Tee		
10066090	811BH 1½ x 1½ x 2 CxCxC Copper Bullhead Tee		

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ELKHART PRODUCTS CORPORATION Customer Service (574) 264-3181

CROSS REFERENCE CHART

Fittings

APOLLOXPRESS®

XPress Product Number	Description	Viega Cross	NIBCO cross
10066550	811BH 1½ x 1½ x 3 CxCxC Copper Bullhead Tee		
10066551	811BH 2 x 2 x 3 CxCxC Copper Bullhead Tee		
10066135	811BH 2½ x 2½ x 3 CxCxC Copper Bullhead Tee		
10066094	811BH 2½ x 2½ x 4 CxCxC Copper Bullhead Tee		
10066579	8712 ½ CxCxF Low Lead Brass & Copper Female Outlet Tee	79580	9116470
10066580	8712 ¾ CxCxF Low Lead Brass & Copper Female Outlet Tee	79595	
10066155	8712 ¾ x ¾ x ¼ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79585	9116500
10066581	8712 ¾ x ¾ x ½ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79590	9116502
10066582	8712 1 x 1 x ½ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79760	9116505
10066583	8712 1 x 1 x ¾ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79765	9116510
10066584	8712 1¼ x 1¼ x ½ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79770	9116520
10066585	8712 1¼ x 1¼ x ¾ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79775	9116530
10066586	8712 1½ x 1½ x ½ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79780	9116535
10066587	8712 1½ x 1½ x ¾ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79785	9116540
10066588	8712 2 x 2 x ½ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79790	B14760
10066589	8712 2 x 2 x ¾ CxCxF Low Lead Brass & Copper Female Outlet Reducing Tee	79795	9116550
10075166	817 ½ Copper Tube Cap	77712	9127650
10075168	817 ¾ Copper Tube Cap	77717	9127270
10075170	817 1 Copper Tube Cap	77722	9127275
10075172	817 1¼ Copper Tube Cap	77727	9127280
10075174	817 1½ Copper Tube Cap	77732	9127285
10075176	817 2 Copper Tube Cap	77737	9127290
10062142	817 2½ Copper Tube Cap	20833	9127295
10062147	817 3 Copper Tube Cap	20843	9127300
10062152	817 4 Copper Tube Cap	20848	9127310
10075146	818 ¾ x ½ FTGxC Copper Fitting Reducer	78077	900810
10075150	818 1 x ½ FTGxC Copper Fitting Reducer	78082	900835
10075148	818 1 x ¾ FTGxC Copper Fitting Reducer	78087	900830
10075336	818 1¼ x ½ FTGxC Copper Fitting Reducer	22333	
10075154	818 1¼ x ¾ FTGxC Copper Fitting Reducer	78092	9008550
10075156	818 1¼ x 1 FTGxC Copper Fitting Reducer	78097	900850
10075332	818 1½ x ½ FTGxC Copper Fitting Reducer	79850	9008900
10075334	818 1½ x ¾ FTGxC Copper Fitting Reducer	14543	9008850
10075158	818 1½ x 1 FTGxC Copper Fitting Reducer	78102	9008800
10075160	818 1½ x 1¼ FTGxC Copper Fitting Reducer	78107	900875
10075338	818 2 x ½ FTGxC Copper Fitting Reducer	79855	9009250
10075340	818 2 x ¾ FTGxC Copper Fitting Reducer	79860	9009200
10075162	818 2 x 1 FTGxC Copper Fitting Reducer	78112	900915
10075152	818 2 x 1¼ FTGxC Copper Fitting Reducer	78117	9009100
10075164	818 2 x 1½ FTGxC Copper Fitting Reducer	78122	900905
10068025	818 2½ x ½ FTGxC Copper Fitting Reducer		
10068001	818 2½ x ¾ FTGxC Copper Fitting Reducer		
10068002	818 2½ x 1 FTGxC Copper Fitting Reducer	20814	

XPress Product Number	Description	Viega Cross	NIBCO cross
10068017	818 2½ x 1¼ FTGxC Copper Fitting Reducer	20815	
10068004	818 2½ x 1½ FTGxC Copper Fitting Reducer	20813	
10075165	818 2½ x 2 FTGxC Copper Fitting Reducer	20758	900935
10068005	818 3 x ½ FTGxC Copper Fitting Reducer		
10068019	818 3 x ¾ FTGxC Copper Fitting Reducer		
10068007	818 3 x 1 FTGxC Copper Fitting Reducer		
10068008	818 3 x 1¼ FTGxC Copper Fitting Reducer	20817	
10068020	818 3 x 1½ FTGxC Copper Fitting Reducer	20818	
10068010	818 3 x 2 FTGxC Copper Fitting Reducer	20763	
10057500	818 3 x 2½ FTGxC Copper Fitting Reducer	20768	900965
10068011	818 4 x ½ FTGxC Copper Fitting Reducer		
10068022	818 4 x ¾ FTGxC Copper Fitting Reducer		
10068013	818 4 x 1 FTGxC Copper Fitting Reducer		
10068014	818 4 x 1¼ FTGxC Copper Fitting Reducer		
10068023	818 4 x 1½ FTGxC Copper Fitting Reducer		
10068016	818 4 x 2 FTGxC Copper Fitting Reducer		
10057503	818 4 x 2½ FTGxC Copper Fitting Reducer	20778	901040
10057506	818 4 x 3 FTGxC Copper Fitting Reducer	20783	901035
10075370	836 ½ CxC Copper Cross Over	77742	928025
10075372	836 ¾ CxC Copper Cross Over	77747	928035
10075860	8733 ½ CxC Low Lead Brass Union	79125	B25540
10075862	8733 ¾ CxC Low Lead Brass Union	79130	9256500
10075864	8733 1 CxC Low Lead Brass Union	79135	9256600
10075866	8733 1¼ CxC Low Lead Brass Union	79140	9256630
10075868	8733 1½ CxC Low Lead Brass Union	79145	9256640
10075870	8733 2 CxC Low Lead Brass Union	79150	9256650
10075860	8733 ½ CxC Brass Union	77667	
10075862	8733 ¾ CxC Brass Union	77672	
10075864	8733 1 CxC Brass Union	77677	
10075866	8733 1¼ CxC Brass Union	77682	
10075868	8733 1½ CxC Brass Union	77687	
10075870	8733 2 CxC Brass Union	77692	
10075872	8733-3 ½ CxF Low Lead Brass Female Union	79700	B25860
10075874	8733-3 ¾ CxF Low Lead Brass Female Union	79705	9256710
10075876	8733-3 1 CxF Low Lead Brass Female Union	79710	B25885
10075878	8733-3 1¼ CxF Low Lead Brass Female Union	79715	B25895
10075880	8733-3 1½ CxF Low Lead Brass Female Union	79720	B25905
10075882	8733-3 2 CxF Low Lead Brass Female Union	79725	B25915
10075884	8733-4 ½ CxM Low Lead Brass Male Union	79730	9256800
10075886	8733-4 ¾ CxM Low Lead Brass Male Union	79735	9256810
10075888	8733-4 1 CxM Low Lead Brass Male Union	79740	9256820
10075890	8733-4 1¼ CxM Low Lead Brass Male Union	79745	B26045
10075892	8733-4 1½ CxM Low Lead Brass Male Union	79750	B26055
10075894	8733-4 2 CxM Low Lead Brass Male Union	79755	9256850
10075702	8741 2 Copper 125 lb. Flange	79695	B305506
10061761	8741 2½ Large Diameter Copper 125 lb. Flange	20853	914555
10061767	8741 3 Large Diameter Copper 125 lb. Flange	20858	914560
10061736	8741 4 Large Diameter Copper 125 lb. Flange	20863	914570
10061763	8771 2½ Large Diameter Copper 150 lb. Flange		
10061769	8771 3 Large Diameter Copper 150 lb. Flange		
10061738	8771 4 Large Diameter Copper 150 lb. Flange		

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Terms & Conditions/Warranty Information

APOLLOEXPRESS®

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.

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.

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	Mid South Marketing, Inc.	VA/MD/Washington DC/WV-East	michael.uecker@msmsales1.com	804-213-3801	804-213-3802
	Midwest Spec	Southern OH, KY	rvsales@mwspec.com	800-755-7732	513-353-1589
	Pro Marketing, Inc.	NC/SC/TN-East	sales@promarketinginc.net	864-578-4334	864-578-4889
	Spirit Group	FL (except Panhandle)	info@spiritgroupinc.com	407-291-6035	407-299-0378
	Tim Morales & Associates, Inc.	AL/LA/FL Panhandle	sales@timmorales.com	251-602-8333	251-602-8339
	White Wolf Group	GA	info@whitewolfgroupinc.com	800-401-4870	888-908-9372
NORTHEAST	NORTHEAST REGION REPS				
	Conroy & Griese Sales, Inc.	NY-East/NJ-North	iezzi52@aol.com	856-429-2660	856-429-2230
	Layden Company	NY-Upstate/PA-East/DE/NJ-South	joejr@laydencompany.com	610-363-6657	877-529-3361
	Midwest Spec	Northern OH, Western PA, WV	glsales@mwspec.com	330-538-0406	330-538-0410
	Urell, Inc.	MA/New England States	apollo@urell.com	617-923-9500	617-926-9414
	V.E. Sales Co., Inc.	MI (Except Upper Peninsula)	tomv@vesalesinc.com	586-774-7760	586-774-1490
CENTRAL	CENTRAL REGION REPS				
	Big Rivers Marketing LLC	KS except Northeast	trosner@bigriversllc.com	800-727-3057	816-214-9017
	New Tech Marketing	Northern-IL/WI-East/IN/MI-UP/IA-River Counties	sales@new-techmarketing.com	630-378-4300	630-378-0343
	New Tech Marketing	MO/Southern IL/Northeast Kansas	ntm112@aol.com	618-394-0329	618-394-0427
	NSC Marketing Group Inc.	OK	nsc_tulsa@sbcglobal.net	918-627-5340	918-664-1408
	PEPCO Sales & Marketing	TX	is@pepcosales.com	972-823-8700	972-823-8717
	Southern Marketing Group	MS/TN-West/AR/Bowie Cty.-TX	SMG49@bellsouth.net	901-547-0042	901-547-0035
NORTHWEST	NORTHWEST REGION REPS				
	FourMation Sales	MN/ND/SD/WI-West	ryan@fourmationsales.com	763-420-6900	763-420-6993
	Gordon & Associates	WA, OR, AK, Northern counties ID, HI	laura@gordonandassoc.com	360-566-1470	360-566-1478
	Marshall-Rodeno Heartland	NE/IA (Except River Counties)	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706
SOUTHWEST	SOUTHWEST REGION REPS				
	Elmco Duddy	CA - South	tduddy@elmcoduddy.com	626-333-9942	626-855-4811
	HC Fletcher	CA - North	apollosales@hcfletcher.com	800-432-7047	949-660-9072
	Marshall-Rodeno Associated	ID-SE, NV-NE, UT, CO, MT, NM	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706
	Southwest Valves	CA (Waterworks)	c.burell@southwestvalve.com	559-261-2703	559-261-2711
	Southwestern Industrial Sales Co.	AZ, Nevada (except NE)	sales@sw-ind.com	480-458-5838	480-458-5843
CANADA	CANADA REPS				
	Barclay Sales Ltd.	British Columbia	jblair@barclaysales.com	604-945-1010	604-945-3030
	Conbraco Industries, Canada	178 Pennsylvania Ave., Unit 1, Concord, Ontario L4K 4B1	conbraco.canada@conbraco.com	905-761-6161	905-761-6666
	D & M Mechanical Sales	Ontario/East	don@dandmsales.ca	613-384-7084	613-384-3407
	Dynamic Agencies, Ltd.	Saskatchewan	doug.dynamicage@sasktel.net	306-343-1901	306-343-1901
	J. Levandier Sales, Inc.	NS, NB, PE & NL	vickie@jlevandiersales.com	506-858-1615	506-858-1084
	Kern Industries, Ltd.	Alberta-North	colin@kernind.com	780-451-2056	780-454-6687
	Kern Industries Calgary, Ltd.	Alberta-South	customerservice.calgary@kernindustries.ca	403-730-7791	403-239-8179
	Key to the North Sales Agency, Inc.	Ontario-North	office@keytothenorth.net	705-690-7301	
	Task Controls, Inc.	Ontario-South	infotoronto@taskcontrols.com	416-291-3004	416-754-3481
	Tom Beggs Agencies Ltd.	Manitoba/NW Ontario	tba@mymts.net	204-953-1900	204-774-6915
	Ventes Techniques Nimatec, Inc.	Quebec	nimatec@nimatec.com	450-691-9427	450-691-4949
IRRIGATION ONLY	IRRIGATION REPS				
	Active Sales Northwest, Inc.	OR, WA, Western ID	stevek@activesalesnw.com	541-726-0320	541-726-1148
	Biz Sales Company	OH, KY, MI, IN, parts of WI	dzavelson@bizpvf.com	216-595-2888	216-595-2899
	Blake Bradbury	TX - Southern, LA, MS - Southern	bbradbury@lascofittings.com	713-594-5603	
	Brandon Nairn	TX - Northern	bnairn@lascofittings.com	972-333-1855	
	Burnley & Associates	DC, PA, DE, VA, MD, and WV	kerryb@burnleyassociates.com	610-842-7381	
	Fourmation Sales	MN/ND/SD/WI-West	dean@fourmationsales.com	763-262-4700	763-262-4740
	Gentile & Associates	CA, HI, NV, Mexico	tgentile@gentileandassociates.com	951-461-0942	951-461-1643
	John Hart	FL	jhart@lascofittings.com	772-595-7773	
	Marel Enterprises	NH, ME, CT, RI, NY	marelenterprise@gmail.com	631-271-1718	631-427-8558
	Marsh & Moore	GA	jaustin@marshmoore.com	352-321-7499	904-827-8795
	Marshall-Rodeno Associates	CO, WY, MT, ID-SE, UT, NV-NE, NE, IA	dnaylor@marshallrodeno.com	303-575-6701	303-575-6706
	NSC Marketing Group Inc.	OK	nsc_tulsa@sbcglobal.net	918-627-5340	918-664-1408
	Pro Marketing, Inc.	NC/SC/TN-East	sales@promarketinginc.net	864-578-4334	864-578-4889
	Ryan Schuler	MO, KS, AR, IL, WI, TN - West & Middle, MS - North	rschuler@lascofittings.com	502-468-0384	
	Tim Morales & Associates, Inc.	AL	sales@timmorales.com	251-602-8333	251-602-8339
		VPC Sales	AZ, NV	chudson@vpcsales.com	661-257-3923

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	AGENCY	AREAS COVERED	EMAIL	PHONE	FAX
SOUTHEAST REGION REPS					
SOUTHEAST	Harry Eklof & Associates, Inc.	District of Columbia, MD	info@harryeklof.com	301-772-1700	301-772-7347
	Harry Eklof & Associates, Inc.	VA		804-266-0079	804-266-0280
	Harry Eklof & Associates, Inc.	Southern NJ, Eastern PA, DE		856-439-9801	856-439-9799
	Pro Marketing, Inc.	NC, SC, Eastern TN	sales@promarketinginc.net	864-578-4334	864-578-4889
	White Wolf Group, Inc.	GA	info@whitewolfgroupinc.com	800-401-4870	888-908-9372
	Spirit Group, Inc.	FL, except panhandle	info@spiritgroupinc.com	407-291-6035	407-299-0378
	Tim Morales & Associates, Inc.	AL and FL panhandle	sales@timmorales.com	251-602-8333	251-602-8339
SOUTHERN REGION REPS					
SOUTHERN	BWC (Barbot, Woolf, Canale)	LA	chuck@bwc.com	504-734-0229	504-734-3711
	Southern Marketing Group	AR, MS, TN	SMG49@bellsouth.net	901-547-0042	901-547-0035
	Hugh M. Cunningham Inc.	OK, TX except El Paso	team2@hughcunningham.com	972-888-3800	972-888-3838
MIDWESTERN REGION REPS					
MIDWESTERN	V.E. Sales Company, Inc.	MI except upper peninsula	tomv@vesalesinc.com	586-774-7760	586-774-1490
	Duiven-McGuire, Inc.	Northern IL	duimcg@aol.com	630-543-3540	630-543-3556
	FourMation Sales	MN/ND/SD	ryan@fourmationsales.com	763-420-6900	763-420-6993
	Big Rivers Marketing, LLC	IA, KS, MO, NE, & Southern IL	trosner@bigriversmarketingllc.com	636-530-9853	636-530-6996
	P-M & Associates, Inc.	IN, KY	plumbinfo@p-massoc.com	317-849-5274	317-849-5271
	Midwest Spec	OH, WV, Western PA	glsales@mwspec.com	800-298-0401	330-538-0410
NORTHEAST REGION REPS					
NORTHEAST	Goodman Sales Company	Northern NH, Staten Island, Ulster, Orange, Rockland and Sullivan counties in NY	orders@goodmansales.com	201-997-2900	201-997-8370
	Urell, Inc.	CT, ME, MA, NH, RI, VT, Upstate NY except Westchester, Putnam, Dutchess, Columbia, Ulster, Orange, Sullivan and Rockland counties	info@urell.com	617-923-9500	617-926-9414
	Platsky Company, Inc.	Metropolitan NY, Long Island & Columbia counties	orders@platsky.com	516-333-9292	516-333-9446
WESTERN REGION REPS					
WESTERN	R.K.R. Corporation	MT, ID, WY, UT, CO, NM & El Paso, TX	orders@rkrnet.com	303-321-7610	303-399-9420
	G.T. Gordon & Associates, Inc.	WA, OR, AK	kenn@gordonandassoc.com	877-566-1470	360-566-1478
	Howard C. Fletcher Company	AZ, CA, NV, HI	hcforders@hcfletcher.com	949-660-0200	949-660-9072

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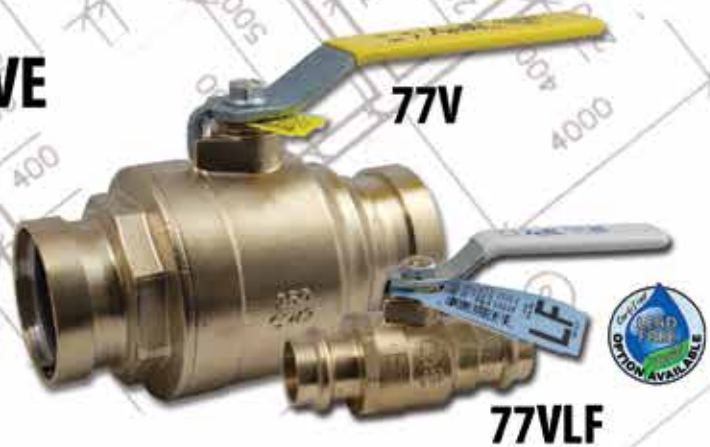
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