

"Apollo"® Press

copper press



catalog

aalberts-ips.us

customer service 704.841.6000

APRFV-CAT-0822



integrated
piping systems

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copper press dielectric union

need a safe and quick way to connect between copper and steel piping systems? we've got you covered. ApolloPress® model 8734 dielectric unions are designed to protect and prevent pipe deterioration associated with galvanic corrosion when transitioning between piping systems with dissimilar metals (copper to steel/galvanized steel). available in sizes $\frac{1}{2}$ " through 2" for press x FPT connections.

for more information, see page 8 & 18



enhanced 2 $\frac{1}{2}$ " - 4" tee & coupling design

it's finally here - ApolloPress® large diameter tees and couplings just received a major upgrade! now available with optimized punch-contour stops, improved splicing technology, reduced laying lengths and tighter cup tolerances to promote clean and professional installations.

for more information, see page 9 & 14



77WCLF copper retainer bronze press ball valve

our proven 77WLF series bronze press ball valves are now offered with integral copper retainers to provide maximum corrosion protection in harsh environments! the 77WCLF series includes popular options such as SS trim, ss locking lever, stem extension and more! now available in sizes $\frac{1}{2}$ " through 2".

for more information, see page 20 & 22

ApolloPress® fittings & valves are offered in sizes ranging from $\frac{1}{2}$ " through 4" and come equipped with an EPDM Sealing element that has Leak Before Press® functionality to ensure safe and confident connections, minimizing the potential for installation error. ApolloPress® products are lead-free, heat and flame free (no hot work permit needed), and can be installed in a variety of applications using the majority of industry accepted press tools. Whether you are starting a new project, or performing a repair on a "wet" system, ApolloPress® has what you need, making our system the clear and comprehensive choice.

operating parameters

ApolloPress® fittings & valves must be installed using ASTM B88 compliant tubing for types K, L, and M hard copper tube sizes $\frac{1}{2}$ " through 4", whereas soft copper tube may be used for sizes $\frac{1}{2}$ " through $1\frac{1}{4}$ ".

- sealing element: **EPDM**
- operating pressure: **300 PSI Max**
- operating temperature: **0°F to 250°F**

features & benefits

- predominantly manufactured in USA
- broadest press fitting & valve product offering (all with lead free options)
- highest pressure rating in the market (300 PSI max)
- deeper cup depths - better seat, tighter seal, straighter runs
- patented Leak Before Press® technology
- patented floating/rotating flanges
- close-turn large diameter elbows for tight spaces (long-turn also available)
- visual press inspection band for large diameter fittings

compliant with

- ASME B16.51
- ICC-ES LC 1002
- Uniform Plumbing Code® (UPC)
- International Plumbing Code® (IPC)
- International Residential Code® (IRC)
- National Standard Plumbing Code (NSPC)
- National Plumbing Code of Canada

approvals & certifications

APPROVALS	FITTINGS	VALVES
IAPMO PS-117	✓	-
IAPMO/ANSI-Z1157	-	✓
ICC-ES PMG-1148	✓	-
NSF/ANSI/CAN-61	✓	✓
NSF/ANSI/CAN-372	✓	✓
CSA T1L-MSE13	✓	-
MSS SP Standards	-	✓
ASSE Standards	-	✓
Directive 2011/65/CE (ROHS)	-	✓
Canadian Registration No. (CRN)	✓	✓
Uniform Plumbing Code (UPC)	✓	✓

approved tool manufacturers*

- Milwaukee®
- Ridgid®
- REMS®
- DeWalt®
- NIBCO® (up to 2")
- Rothenberger®
- Stanley-Virax®

warranty



* PLEASE CONTACT LOCAL APOLLOPRESS® REPRESENTATIVE FOR ADDITIONAL INFORMATION ON APPROVED TOOL & JAW MANUFACTURERS

approved applications

TYPES OF SERVICE	SYSTEM OPERATING CONDITIONS COMMENTS	PRESSURE	TEMPERATURE	EPDM SEALING ELEMENT
FLUIDS AND WATER				
Hot & Cold Potable Water		300PSI	0°F-250°F	✓
Rainwater Gray Water		300PSI	0°F-250°F	✓
Chilled Water	Ethylene Propylene Glycol	300PSI	0°F-250°F	✓
Hydronic Heating	Ethylene Propylene Glycol	300PSI	0°F-250°F	✓
Cooling Water	40-90% Ethylene Glycol or Propylene Glycol Solution	200PSI	32°F-250°F	✓
Low-Pressure Steam		Up to 15PSI	248°F	✓
FUEL, OIL & LUBRICANT				
Ethanol	Pure Grain Alcohol	200PSI	32°F-250°F	✓
GASES				
Compressed Air	Less than .025 PPB	200PSI	32°F-250°F	✓
Oxygen - O ₂ (Non-Medical)		140PSI	up to 140°F	✓
Nitrogen - N ₂		200PSI	32°F-250°F	✓
Carbon Dioxide - CO ₂		200PSI	32°F-250°F	✓
Argon - Ar		200PSI	Ambient	✓
Hydrogen - H ₂		125PSI	0°F-250°F	✓
Vacuum		29.2 in Hg	0°F-160°F	✓

Please contact Apollo product engineering for evaluation and approval of other chemicals that are compatible with EPDM Sealing element

underground installations

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

freezing conditions

ApolloPress® fittings may be installed in ambient temperatures ranging down to 0°F; properly packaged fittings may be stored in temperatures ranging down to -40°F. installed tubing systems exposed to freezing conditions must be protected per state and local code requirements and good installation practice.

standard materials list

large diameter fittings

BODY	UNS C12200 copper
GRAB RING	316/304 Stainless Steel
SPACER RING	Acetal Copolymer
SEALING ELEMENT	EPDM
LUBRICATION	Silicone, NSF/ANSI/CAN-61 Listed

small diameter fittings

BODY	UNS C12200 copper
SEALING ELEMENT	EPDM
LUBRICATION	Silicone, NSF/ANSI/CAN-61 Listed

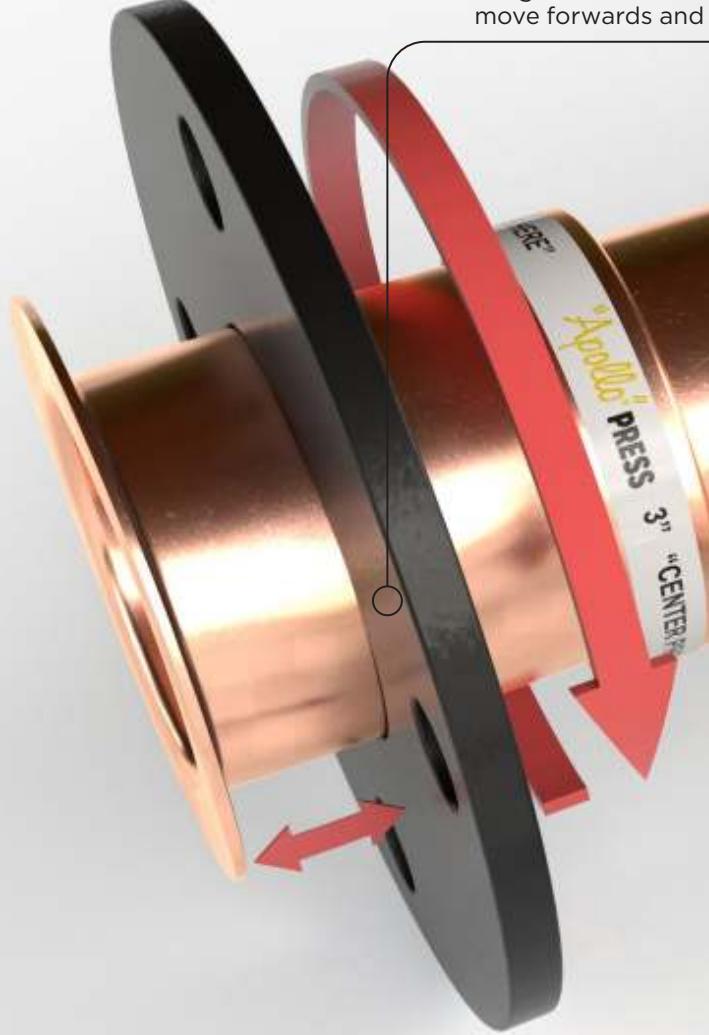
brass fittings

BODY	UNS C27451 Brass
SEALING ELEMENT	EPDM
LUBRICATION	Silicone, NSF/ANSI/CAN-61 Listed

"Apollo"® Press

unique floating flange

- patented design helps to properly align with a stationary surface
 - copper body is trapped in flange
 - flange base can rotate 360° and move forwards and backwards



press valves

- wide assortment of quality american made press valves
- all available in lead free options
- 100% factory tested
- no need for adapters - labor & materials cost savings, shorter lay lengths, and fewer potential leak paths





large diameter elbows

- short and long turn available
- space saving alternative for tight spaces

visual inspection band

- polyester band breaks away when large diameter fittings are pressed

internal components (2-1/2" - 4")

spacer ring

- patented design isolates and protects sealing element from damage during pipe insertion
- built in leak before Press® technology solid stainless steel grip ring
- more circumferential engagement to pipe surface than traditional "toothed" grip ring designs
- superior grip strength to withstand high-pressure applications up to 300 psi

markings & identification

- laser etching includes:
 - certifications
 - traceability code
 - model & size
 - made in USA

leak before press®

- unpressed fittings will visibly leak during low pressure testing
- minimum of three leak paths (120° apart) on ID of sealing element.

New Products!



Copper Press Dielectric Union

Need a safe and quick way to connect between copper and steel piping systems? We've got you covered. ApolloPress® Model 8734 Dielectric Unions are designed to protect and prevent pipe deterioration associated with galvanic corrosion when connecting dissimilar metals, now available in sizes 1/2"- 2".

For more information, see page 18



Connect with Apollo PowerPress®

- Connecting to steel?
We've got you covered there too.
Approved for non-potable use with Apollo PowerPress® Standard Fittings & Valves (EPDM).

Compact & Lightweight Design

- Zinc plated lead-free steel nut & FPT adapter ideal for tight installations.
- Compact adapters with short end-to-end dimensions.

Copper Press Connection

- Maximum corrosion and dezincification resistance.
- Naturally lead-free.

Trapped Thermoplastic Insulator Ring

- Permanently secured insulator eliminates loose and excessive components.
- Optimal insulator and washer thickness for improved dielectric isolation.
- Colored coded Green for identification.
(EPDM Sealing Element)



"Apollo"® Press

new products!



enhanced large diameter tees & couplings

it's finally here - ApolloPress® 2½" - 4" tees and couplings just received a major upgrade. now available with optimized punch-contour stops, improved spacer-ring technology, reduced laying lengths and tighter cup tolerances to promote clean and professional installations.

for more information, see page 14



critical dimensions

- reduced laying lengths
- tighter cup tolerances

double-safety

- Leak Before Press® technology
- visual press identification band

optimized tube stops

- punch-contour stop design
- minimized turbulence
- superior flow characteristics

internal components

- solid 316 SS grab-ring
- improved spacer-ring technology
- EPDM sealing element



"Apollo"® Press

copper press fittings



integrated
piping systems

90° elbow



90° elbow

model 807, 807R

- small diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10075554 ^[1]	½	½	10
10075556 ^[1]	¾	¾	10
10075052 ^[1]	1	1	10
10075078 ^[1]	1¼	1¼	1
10075080 ^[1]	1½	1½	1
10075082 ^[1]	2	2	1

reducing

PART NO.	P1	P2	BAG QTY.
10066101	¾	½	10
10066083	1	¾	5



90° elbow | short radius

model 807C

- large diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10062021	2½	2½	1
10062027	3	3	1
10062032	4	4	1



90° elbow | long radius

model 807L

- large diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10062066	2½	2½	1
10062067	3	3	1
10062069	4	4	1



90° street elbow

model 807-2

- small diameter
- P x FTG

- small diameter
- Press x FTG

PART NO.	P	FTG	BAG QTY.
10075566	½	½	10
10075568	¾	¾	10
10075046	1	1	5
10075072	1¼	1¼	1
10075074	1½	1½	1
10075076	2	2	1



90° street elbow | short radius

model 807C-2

- large diameter
- P x FTG

- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10062007	2½	2½	1
10062012	3	3	1
10062017	4	4	1



90° street elbow | long radius

model 807L-2

- large diameter
- P x FTG

- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10062071	2½	2½	1
10062073	3	3	1
10062074	4	4	1

[1] Supplemental item available (made in Europe). Please refer to the Supplemental Part Number Substitution Guide on page 19.



90° elbow | female

model 8707-3, 8707R-3

- small diameter
- P x FPT
- copper
- EPDM Sealing element

PART NO.	P	FPT	BAG QTY.
10066560	½	½	5
10066561	¾	¾	5
10066562	1	1	1
10066563	1¼	1¼	1
10066564	1½	1½	1
10066565	2	2	1

reducing

PART NO.	P	FPT	BAG QTY.
10066566	½	¾	5
10066567	½	¾	5
10066568	¾	½	5
10066569	1	½	1



90° elbow | drop-ear

model 8707-3-5, 8707R-3

- small diameter
- P x FPT
- copper
- EPDM Sealing element

PART NO.	P	FPT	BAG QTY.
10075366	½	½	10
10075368	¾	¾	5

reducing

PART NO.	P	FPT	BAG QTY.
10075367	½	¾	5

45° elbow



45° elbow

model 806

- small diameter
- P x P
- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10077670 ^[1]	½	½	10
10075062 ^[1]	¾	¾	10
10075064 ^[1]	1	1	5
10075090 ^[1]	1¼	1¼	1
10075092 ^[1]	1½	1½	1
10075094 ^[1]	2	2	1



45° elbow

model 806

- large diameter
- P x P
- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10062052	2½	2½	1
10062057	3	3	1
10062062	4	4	1



45° street elbow

model 806-2

- small diameter
- P x FTG
- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10075054	½	½	10
10075056	¾	¾	10
10075058	1	1	5
10075084	1¼	1¼	1
10075086	1½	1½	1
10075088	2	2	1



45° street elbow

model 806-2

- large diameter
- P x FTG
- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10062037	2½	2½	1
10062042	3	3	1
10062047	4	4	1

[1] supplemental item available (made in Europe), please refer to the supplemental part number substitution guide on page 19.

tees



tee

model 811, 811R, 811BH

- small diameter
- P x P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	P3	BAG QTY.
10077739 ^[1]	½	½	½	10
10077740 ^[1]	¾	¾	¾	10
10077741 ^[1]	1	1	1	5
10077742 ^[1]	1½	1½	1½	1
10077743 ^[1]	1½	1½	1½	1
10077744 ^[1]	2	2	2	1

reducing

PART NO.	P1	P2	P3	BAG QTY.
100777810	½	½	¾	5
10077784 ^[1]	¾	½	½	5
10077785	¾	½	¾	5
10077745 ^[1]	¾	¾	½	10
10066071	¾	¾	1	2
10077786	1	½	¾	2
10077787	1	½	1	2
10077788	1	¾	½	2
10077789	1	¾	¾	5
10077790	1	¾	1	2
10077746 ^[1]	1	1	½	5
10077747 ^[1]	1	1	¾	5
10077791	1½	½	1¼	1
10077792	1½	¾	¾	1
10077793	1½	¾	1	1
10077794	1½	¾	1¼	1
10077795	1½	1	1¼	1
10077796	1½	1	¾	1
10077797	1½	1	1	1
10077748	1½	1¼	½	1
10077749	1½	1¼	¾	1
10077750	1½	1¼	1	1
10066397	1½	¾	1	1
10077798	1½	1	¾	1
10077799	1½	1	1	1
10066081	1½	1	1¼	1
10077800	1½	1	1½	1
10077801	1½	1¼	¾	1
10077802	1½	1¼	1	1
10077803	1½	1¼	1¼	1
10077751	1½	1½	½	1
10077752	1½	1½	¾	1
10077753	1½	1½	1	1
10077754	1½	1½	1¼	1
10066090	1½	1½	2	1
10066197	2	1	1½	1
10066018	2	1	2	1
10077804	2	1¼	1¼	1
10066125	2	1¼	½	1
10066064	2	1¼	2	1
10077805	2	1½	¾	1
10077806	2	1½	1	1
10077807	2	1½	1¼	1
10077808	2	1½	1½	1
10077809	2	1½	2	1
10077755	2	2	½	1
10077756	2	2	¾	1
10077757	2	2	1	1
10077758	2	2	1¼	1
10077759	2	2	1½	1

[1] supplemental item available (made in Europe). please refer to the supplemental part number substitution guide on page 19.



tee

model 811, 811R
 • large diameter
 • P x P x P

- copper
- EPDM Sealing element



PART NO.	P1	P2	P3	BAG QTY.
10077760	2½	2½	2½	1
10077761	3	3	3	1
10077762	4	4	4	1

reducing

PART NO.	P1	P2	P3	BAG QTY.
10077763	2½	2½	½	1
10077764	2½	2½	¾	1
10077765	2½	2½	1	1
10077766	2½	2½	1¼	1
10077767	2½	2½	1½	1
10077768	2½	2½	2	1
10066604	3	2	2	1
10066136	3	2½	2½	1
10077769	3	3	½	1
10077770	3	3	¾	1
10077771	3	3	1	1
10077772	3	3	1¼	1
10077773	3	3	1½	1
10077774	3	3	2	1
10077775	3	3	2½	1
10077776	4	4	½	1
10077777	4	4	¾	1
10077778	4	4	1	1
10077779	4	4	1¼	1
10077780	4	4	1½	1
10077781	4	4	2	1
10077782	4	4	2½	1
10077783	4	4	3	1



tee | female

model 8712, 8712R
 • small diameter
 • P x P x FPT

- copper, lead-free brass
- EPDM Sealing element

PART NO.	P1	P2	FPT	BAG QTY.
10066579	½	½	½	5
10066580	¾	¾	¾	5

reducing

PART NO.	P1	P2	FPT	BAG QTY.
10066581	¾	¾	½	5
10066582	1	1	½	1
10066583	1	1	¾	5
10066584	1¼	1¼	½	1
10066585	1¼	1¼	¾	1
10066586	1½	1½	½	1
10066587	1½	1½	¾	1
10066588	2	2	½	1
10066589	2	2	¾	1

couplings



coupling

model 800
 • small diameter
 • P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10075500 ⁽¹⁾	½	½	10
10075502 ⁽¹⁾	¾	¾	10
10075504 ⁽¹⁾	1	1	5
10077699 ⁽¹⁾	1¼	1¼	1
10077699 ⁽¹⁾	1½	1½	1
10077000 ⁽¹⁾	2	2	1



coupling

model 800
 • large diameter
 • P x p

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10077701	2½	2½	1
10077702	3	3	1
10077703	4	4	1

⁽¹⁾ Supplemental item available (made in Europe). Please refer to the Supplemental Part Number Substitution Guide on page 19.



coupling | no stop

model 801, 801R

- small diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10075513 ⁽¹⁾	½	½	10
10075515 ⁽¹⁾	¾	¾	10
10075517 ⁽¹⁾	1	1	5
10077695 ⁽¹⁾	1¼	1¼	1
10077696 ⁽¹⁾	1½	1½	1
10077697 ⁽¹⁾	2	2	1

reducing

PART NO.	P1	P2	BAG QTY.
10075900	¾	½	10
10075144	1	½	10
10075898	1	¾	10
10066001	1¼	¾	1
10075896	1¼	1	1
10066380	1½	½	1
10066381	1½	¾	5
10066003	1½	1	1
10075128	1½	1¼	1
10066398	2	¾	1
10066005	2	1	1
10066072	2	1¼	1
10075130	2	1½	1



coupling | no stop (extended)

model 801L

- small diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10075030	½	½	10
10075032	¾	¾	10
10075034	1	1	5



coupling | no stop

model 801, 801R

- large diameter
- P x P

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10061932	2½	2½	1
10061937	3	3	1
10061942	4	4	1

reducing

PART NO.	P1	P2	BAG QTY.
10066440	2½	1	1
10066074	2½	2	1
10066446	3	2	1
10066076	3	2½	1
10066447	4	2	1
10066152	4	3	1

fitting reducers



fitting reducer

model 818

- small diameter
- FTG x P

- copper
- EPDM Sealing element

PART NO.	FTG	P	BAG QTY.
10075146	¾	½	10
10075150	1	½	10
10075148	1	¾	10
10075336	1¼	½	5
10075154	1¼	¾	5
10075156	1¼	1	5
10075334	1½	¾	1
10075158	1½	1	1
10075160	1½	1¼	1
10075338	2	½	1
10075340	2	¾	1
10075162	2	1	1
10075152	2	1¼	1
10075164	2	1½	1

⁽¹⁾ Supplemental item available (made in Europe). Please refer to the Supplemental Part Number Substitution Guide on page 19.



fitting reducer

model 818

- large diameter
- FTG x P

- copper
- EPDM sealing element

PART NO.	FTG	P	BAG QTY.
10068001	2½	¾	1
10068002	2½	1	1
10068017	2½	1¼	1
10068004	2½	1½	1
10075165	2½	2	1
10068019	3	¾	1
10068008	3	1¼	1
10068020	3	1½	1
10068010	3	2	1
10057500	3	2½	1
10068022	4	¾	1
10068016	4	2	1
10057503	4	2½	1
10057506	4	3	1

adapters



adapter | female

model 803, 803R

- small diameter
- FPT x P

- lead-free brass
- EPDM sealing element

PART NO.	P	FPT	BAG QTY.
10075750	½	½	10
10075752	¾	¾	10
10075754	1	1	10
10075756	1¼	1¼	1
10075758	1½	1½	1
10075760	2	2	1

reducing

PART NO.	P	FPT	BAG QTY.
10075780	½	¾	10
10075782	½	¾	10
10075784	¾	½	10
10075796	1	½	5
10075798	1	¾	5
10075800	1	1¼	5
10075786	1¼	½	1
10075788	1¼	1	1
10075790	1¼	1½	1
10075792	1½	¾	1
10075794	1½	1¼	1



street adapter | female

model 803-2, 803R-2

- small diameter
- FTG x FPT

- lead-free brass

PART NO.	FTG	FPT	BAG QTY.
10075762	½	½	10
10075768	¾	¾	10
10075772	1	1	10
10075774	1¼	1¼	1
10075776	1½	1½	1
10075778	2	2	1

reducing

PART NO.	FTG	FPT	BAG QTY.
10075764	½	¾	5
10075766	½	¾	5
10075770	¾	½	5
10075804	1	½	10
10075802	1¼	½	1



adapter | male

model 804, 804R

- small diameter
- P x MPT

- lead-free brass
- EPDM sealing element

PART NO.	P	MPT	BAG QTY.
10075806	1/2	1/2	10
10075808	3/4	3/4	10
10075844	1	1	10
10075810	1 1/4	1 1/4	1
10075812	1 1/2	1 1/2	1
10075814	2	2	1

reducing

PART NO.	P	MPT	BAG QTY.
10075836	1/2	3/8	5
10075838	1/2	3/4	10
10075840	3/4	1/2	10
10075842	3/4	1	5
10075854	1	3/4	5
10075856	1	1 1/4	5
10075846	1 1/4	1	1
10075848	1 1/4	1 1/2	1
10075850	1 1/2	1 1/4	1
10075852	1 1/2	2	1
10075858	2	1 1/2	1



adapter | male

model 804

- large diameter
- P x MPT

- copper
- EPDM sealing element

PART NO.	P	MPT	BAG QTY.
10061982	2 1/2	2 1/2	1
10061987	3	3	1
10061992	4	4	1



street adapter | male

model 804-2, 804R-2

- small diameter
- FTG x MPT

- lead-free brass

PART NO.	FTG	MPT	BAG QTY.
10075816	1/2	1/2	10
10075822	3/4	3/4	10
10075826	1	1	10
10075828	1 1/4	1 1/4	1
10075830	1 1/2	1 1/2	1
10075834	2	2	1

reducing

PART NO.	FTG	MPT	BAG QTY.
10075818	1/2	3/8	5
10075820	1/2	3/4	5
10075824	3/4	1/2	5
10075832	1	3/4	10

flange adapters



flange adapter | ANSI class 125

model 8741

- small diameter
- P x flange (BP:4)

- copper
- EPDM sealing element

PART NO.	P	FLG	BAG QTY.
10075702	2	2	1



flange adapter | ANSI class 125

model 8741

- large diameter
- P x flange

- copper
- EPDM sealing element

PART NO.	P	FLG	BAG QTY.
10061761	2 1/2	2 1/2	1
10061767	3	3	1
10061736	4	4	1

Note:

- bolt pattern 2 1/2" & 3" flange = BP:4
- bolt pattern for 4" flange = BP:8



flange adapter | ANSI class 150

model 8771

- large diameter
- P x 4 flange

- copper
- EPDM sealing element

PART NO.	P	FLG	BAG QTY.
10061763	2½	2½	1
10061769	3	3	1
10061738	4	4	1

note:

- bolt pattern 2½" & 3" flange = bp:4
- bolt pattern for 4" flange = bp:8

unions



union

model 8733

- small diameter
- P x P

- lead-free brass
- EPDM sealing element

PART NO.	P	P2	BAG QTY.
10075860	½	½	5
10075862	¾	¾	5
10075864	1	1	5
10075866	1¼	1¼	1
10075868	1½	1½	1
10075870	2	2	1



union | female

model 8733-3

- small diameter
- P x FPT

- lead-free brass
- EPDM sealing element

PART NO.	P	FPT	BAG QTY.
10075872	½	½	5
10075874	¾	¾	5
10075876	1	1	5
10075878	1¼	1¼	1
10075880	1½	1½	1
10075882	2	2	1



union | male

model 8733-4

- small diameter
- P x MPT

- lead-free brass
- EPDM sealing element

PART NO.	P	MPT	BAG QTY.
10075884	½	½	5
10075886	¾	¾	5
10075888	1	1	5
10075890	1¼	1¼	1
10075892	1½	1½	1
10075894	2	2	1



dielectric union | female

model 8734

- small diameter
- P x FPT

- copper
- EPDM sealing element

PART NO.	P	FPT	BAG QTY.
10077914	½	½	1
10077920	¾	¾	1
10077926	1	1	1
10077932	1¼	1¼	1
10077938	1½	1½	1
10077944	2	2	1

caps



tube cap

model 817

- small diameter
- P x Cap

- copper
- EPDM sealing element

PART NO.	P	BAG QTY.
10077850	½	10
10077851	¾	10
10077852	1	5
10075172	1¼	1
10075174	1½	1
10075176	2	1



tube cap

model 817

- large diameter
- P x Cap

- copper
- EPDM sealing element

PART NO.	P	BAG QTY.
10062142	2½	1
10062147	3	1
10062152	4	1

accessories



cross-over

model 836

- small diameter
- P x P

- copper
- EPDM sealing element

PART NO.	P1	P2	BAG QTY.
10075370	½	½	10
10075372	¾	¾	5

supplemental items

note: supplemental items listed below are made in Europe (manufacturer: Aalberts IPS Europe)



90° elbow

model 807

- small diameter
- P x P
- Made In France

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10077676	½	½	10
10077678	¾	¾	10
10077680	1	1	5
10077658	1¼	1¼	1
10077660	1½	1½	1
10077662	2	2	1



45° elbow

model 806

- small diameter
- P x P
- Made In France

- copper
- EPDM Sealing element

PART NO.	P1	P2	BAG QTY.
10077682	½	½	10
10077672	¾	¾	10
10077674	1	1	5
10077652	1¼	1¼	1
10077654	1½	1½	1
10077656	2	2	1



coupling

model 800

- small diameter
- P x P
- Made In France

- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10077692	½	½	10
10077693	¾	¾	10
10077683	1	1	5
10077640	1¼	1¼	1
10077642	1½	1½	1
10077644	2	2	1



coupling | no stop

model 801

- small diameter
- P x P
- Made In France

- copper
- EPDM Sealing element

PART NO.	P	FTG	BAG QTY.
10077691	½	½	10
10077694	¾	¾	10
10077687	1	1	5
10077646	1¼	1¼	1
10077648	1½	1½	1
10077650	2	2	1



tee

model 811, 811R

- small diameter
- P x P
- Made In France & Hungary

- copper
- EPDM Sealing element

PART NO.	P1	P2	P3	BAG QTY.
10017739	½	½	½	10
10017740	¾	¾	¾	5
10017741	1	1	1	5
10017742	1¼	1¼	1¼	1
10017743	1½	1½	1½	1
10017744	2	2	2	1

REDUCING

PART NO.	P1	P2	P3	BAG QTY.
10017784	¾	½	½	5
10017745	¾	¾	½	5
10017746	1	1	½	5
10017747	1	1	¾	5

"Apollo®" Press

new product!

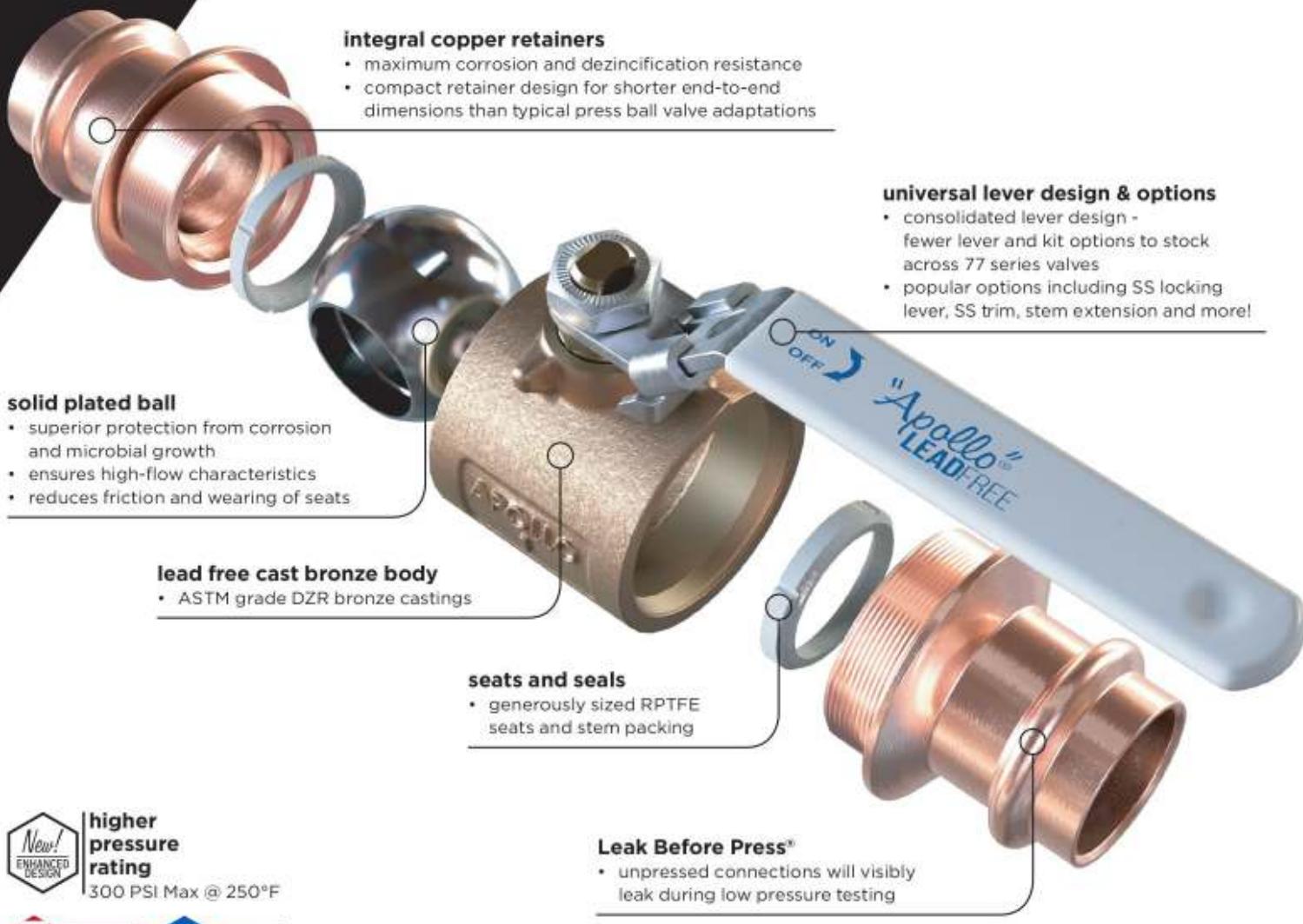


77WCLF copper retainer bronze press ball valve

our proven 77WLF series bronze press ball valves are now available with integral copper retainers to provide maximum corrosion protection in harsh environments. these patent pending valves are 100% factory tested, and carry a 5-year warranty. See p.20 for more information

integral copper retainers

- maximum corrosion and dezincification resistance
- compact retainer design for shorter end-to-end dimensions than typical press ball valve adaptations



higher pressure rating

300 PSI Max @ 250°F



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"Apollo"® Press

press valves



A integrated
aalberts piping systems

ball valves

77WCLF series

lead free copper press end bronze ball valve



performance rating[†]

- maximum operating pressure: 300 PSI
- temperature range: 0°F-250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-114 press connections
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- EU directive 2015/863 (RoHS 3) compliant
- EU regulation (EC) 1907/2006 (REACH) compliant

description

the lead free **ApolloPress® 77WCLF series ball valve** is ideal for installation in potable water systems requiring NSF 61 or lead free* approval. includes Leak Before Press® feature and 300 PSIG maximum working pressure. the 77WCLF features copper retainers for maximum protection against corrosion and dezincification.

features

- full-port flow
- lead free*/corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- 100% factory tested

OPTIONS

- (-04) 2 1/4" stem extension
- (-07) tee handle
- (-10) stainless steel handles & nut
- (-11) therma-seal™ insulating tee handle
- (-27) locking handle
- (-92) standard lever w/ balancing stop
- (-94) 2 1/4" stem ext. & balancing stop
- (-HC) press x 3/4" hose w/ cap & chain
- (77WCLF-140 series) - ss ball & stem

standard materials list

BODY	C89836. Bronze
BALL	C27451, Brass, Chrome Plated
SEAT	Teflon, RPTFE
RETAINER	C12200, Copper
SEALING ELEMENT	EPDM
STEM	C27451, Brass
STEM PACKING	Teflon, RPTFE
PACKING GLAND	C27451, Brass
HANDLE	Plated Steel/Insulated Polyvinyl
STEM NUT	Alloy Steel

77WCLF-HC series

copper press end bronze ball valve with press x hose connection



performance rating

- maximum operating pressure: 300 PSI
- maximum temperature: 200°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 Press connections
- ANSI/ASME B1.20.7 hose thread
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- EU Directive 2015/863 (RoHS 3) compliant
- EU Regulation (EC) 1907/2006 (REACH) compliant

description

the lead free **ApolloPress® 77WCLF-HC series press x hose cap & chain ball valves** feature a 3/4" hose connection with a full-pressure rated heavy brass cap (300 PSI) and stainless steel chain for protection and strength. the 77WCLF-HC is ideal for most plumbing and heating systems, including potable water. the 77WCLF-HC features copper retainers for maximum protection against corrosion and dezincification.

features

- full-port flow
- lead free, corrosion resistant materials (DZR)
- press x 3/4" - 11.5 nh
- adjustable stem packing
- Leak Before Press® technology
- full-pressure rated cap (300 PSI)
- stainless steel chain
- 100% factory tested

options

- (-04) 2 1/4" stem extension
- (-07) tee-handle
- (-10) stainless steel handle and nut
- (-11) therma-seal™ insulating tee handle
- (-27) locking handle
- (-92) balancing stop
- (-94) 2 1/4" stem extension and balancing stop
- (77WCLF-14X-HC series) ss ball and stem

standard materials list

BODY	C89836 Lead Free* Bronze
SEAT	RPTFE
BALL	C27451 Lead Free* Brass Cr. Plated
STEM PACKING	RPTFE
NUT	Corrosion Resistant Plated Steel
STEM	C27451 Lead Free* Brass
PRESS RETAINER	C122000 Copper
RETAINER	C27451 Lead Free* Brass
CAP	C27451 Lead Free* Brass
HANDLE	Plated Steel/Insulated Polyvinyl
GLAND	Brass, ASTM B16, UNS# C36000
SEALING ELEMENT	EPDM
BALL CHAIN	Stainless Steel

77WLF-A series

lead free press end bronze ball valve



performance rating[†]

- maximum operating pressure: 300 PSI
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- EU Directive 2015/863 (RoHS 3) Compliant
- EU Regulation (EC) 1907/2006 (REACH) Compliant

description

the lead free ApolloPress® 77WLF-A series ball valve is ideal for installation in potable water systems requiring NSF 61 or lead free* approval. now with Leak Before Press® feature and 300 PSIG maximum working pressure.

features

- full-port flow
- lead free, corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- 100% factory tested
- **made in USA, ARRA compliant**

options

- (-04) 2 1/4" stem extension
- (-07) tee-handle
- (-10) stainless steel handle and nut
- (-11) therma-seal™ insulating tee handle
- (-27) locking handle
- (-92) standard lever with balancing stop
- (-94) 2 1/4" stem ext. and balancing stop
- (-HC) press x 3/4" hose w/ cap & chain 1/2" & 3/4"
- (77WLF-140-A series) ss ball and stem

standard materials list

BODY	ASTM B584 C89836
SEAT	RPTFE
BALL	UNS C27451 Brass, Chr. Plated
STEM PACKING	RPTFE
NUT	Zinc Plated Steel
STEM	UNS C27451 Brass
RETAINER	UNS C27451 Brass
HANDLE	Plated Steel / Insulated Polyvinyl
GLAND	Brass, ASTM B16, C36000
SEALING ELEMENT	EPDM

77WLF-HCA series

lead free press end bronze ball valve



description

The ApolloPress® 77WLF-HCA Press x Hose Ball Valve is ideal for most plumbing and heating systems, including potable water. Valves feature a 3/4" hose connection with heavy brass cap with heavy duty stainless steel chain to protect the threads. Leak Before Press® feature and 300 psig maximum working pressure.

features

- full-port
- adjustable stem packing
- Leak Before Press® technology
- lead free* brass & bronze materials
- heavy brass cap is full pressure rated
- **made in USA, ARRA compliant**
- 100% factory tested

performance rating[†]

- maximum operating pressure: 300 PSI
- maximum temperature: 200°F

approvals

- MSS SP-110 Ball Valves
- IAPMO/ANSI Z1157 Ball Valves
- IAPMO PS-117 Press Connections
- NSF/ANSI/CAN 61 Water Quality
- NSF/ANSI/CAN 372 Lead Free
- EU Directive 2015/863 (RoHS 3) Compliant
- EU Regulation (EC) 1907/2006 (REACH) Compliant

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) ss ball and stem
- (77W-HC-PR) ApolloPress®

standard materials list

BODY	ASTMB 584C89836
SEAT	RPTFE
BALL	ASTM B16 Brass,Plated
STEM PACKING	Multi-Fil 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
SEALING ELEMENT	EPDM
BALL CHAIN	Stainless Steel

77W-A series

press end bronze ball valve



performance rating[†]

- maximum operating pressure: 300 PSI
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections

description

the ApolloPress® 77W-A series ball valve is ideal for installation in heating, cooling and non-potable plumbing systems. now with Leak Before Press® feature and 300 PSIG maximum working pressure. **not intended for potable water**

features

- full-port flow
- corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- 100% factory tested
- made in USA, ARRA compliant**

options

- (-04) 2 1/4" stem extension
- (-07) tee-handle
- (-10) stainless steel handle and nut
- (-11) therma-seal™ insulating tee handle
- (-27) 304ss locking handle new!
- (-50) 2 1/4" locking extension
- (-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) 316 ss ball & stem

standard materials list

BODY	Cast Bronze C83600
SEAT	RPTFE
BALL	ASTM B16 Brass, Plated or B283, C37700
STEM PACKING	RPTFE
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
SEALING ELEMENT	EPDM

77W-HCA series

bronze ball valve with press x hose connection



description

the ApolloPress® 77W-HCA series press x hose cap & chain ball valves feature a 3/4" hose connection with a full-pressure rated heavy brass cap (300 PSI) and stainless steel chain for protection and strength. the 77w-hca is ideal for installation in heating, cooling, and non-potable plumbing systems. now with Leak Before Press® and 300 PSIG maximum working pressure. **not intended for potable water**.

features

- full-port flow
- corrosion resistant materials (DZR)
- press x 3/4" - 11.5 nh
- adjustable stem packing
- Leak Before Press® technology
- full-pressure rated cap (300 PSI)
- stainless steel chain
- 100% factory tested
- made in USA, ARRA compliant**

options

- (-04) 2-1/4" stem extension
- (-07) tee-handle
- (-10) stainless steel handle and nut
- (-11) therma-seal™ insulating tee handle
- (-27) latch lock lever
- (-92) balancing stop
- (-94) 2-1/4" stem extension and balancing stop
- (77wlf-140-hc series) 316 ss ball & stem

standard materials list

BODY	Cast Bronze C83600
SEAT	Multi-Fill PTFE
BALL	ASTM B16 Brass, Plate d
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
SEALING ELEMENT	EPDM
BALL CHAIN	Stainless Steel

performance rating[†]

- maximum operating pressure: 300 PSI
- maximum temperature: 200°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections
- ANSI/ASME B1.20.7 hose thread

82LF-PR series

lead free bronze 3-piece press end ball valve



performance rating[†]

- maximum operating pressure: 300 PSI
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- IAPMO PS-114 press connections
- EU Directive 2015/863 (RoHS 3) Compliant
- EU regulation (EC) 1907/2006 (REACH) compliant

description

the lead free **Apollo® 82LF series** offers the same rugged features as the standard 82 series with the added advantage of lead free* materials. designed to provide long service life and ease of in-line maintenance. sae grade body bolts are standard.

features

- ASTM B584 bronze body and ends
- lead free
- brass materials
- sae grade 8 body bolts
- adjustable packing nut
- full port flow
- 2½" cs stem extension
- Leak Before Press® technology
- 100% factory tested
- **made in USA, ARRA compliant**

standard materials list

LEVER AND GRIP	Steel, Zinc Plated w/ Vinyl
STEM PACKING	MPTFE
STEM BEARING	RPTFE
BALL	C27451 Lead Free* DZR Brass, Chrome Plated
SEAT (2)	RPTFE
END CAP (2)	C89836 Lead Free* Bronze
PRESS CONNECTORS	DZR Brass
STEM	C27451 Lead Free* DZR Brass
LEVER NUT	Steel, Zinc Plated
BODY BOLT	Steel, Zinc Plated
HEX NUT	Steel, Zinc Plated
BODY	ASTM B584-C89836 Lead Free Bronze
SEALING ELEMENT	EPDM

77VLF series

lead free brass press end ball valve



description

the lead free **ApolloPress® 77VLF series two-piece press ball valve** is ideal for installation in most plumbing and heating systems, including potable water. now with Leak Before Press® feature and 300 PSIG maximum working pressure. offered in sizes ½" through 4" proudly made in the USA.

features

- full-port flow
- lead free corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- sizes ½" - 4"
- 100% factory tested
- **made in USA, ARRA compliant**

standard materials list

BODY	Lead Free Brass, C27451
SEAT	RPTFE
BALL	Chrome Plated Lead Free Brass, C27451; 316 SS (2½"- 4")
STEM PACKING	RPTFE
NUT	Corrosion Resistant Plated Steel
STEM	Lead Free Brass, C27451; 316 SS (2½"- 4")
RETAINER	Lead Free Brass, C27451
HANDLE	Plated Steel, Insulated Polyvinyl
GLAND	Brass, ASTM B16, C36000
SEALING ELEMENT	EPDM
CRIMP RING	316 SS (2½"- 4")
SPACER RING	Nylon (2½"- 4")

performance rating[†]

- maximum operating pressure: 300 PSI
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- EU Directive 2015/863 (RoHS 3) Compliant
- EU Regulation (EC) 1907/2006 (REACH) Compliant

options

- (-01) standard lever handle
- (-04) 2½" stem extension
- (-07) tee handle
- (-11) therma-seal™ insulating tee handle
- (-27) locking handle ss
- (-92) memory stop
- (-94) 2½" extension w/ memory stop
- 77V140 series - ss ball & stem

77V series

brass press end ball valve



performance rating[†]

- maximum operating pressure: 300 PSI (20.68 bar)
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections

description

the ApolloPress® 77V series two-piece press ball valve is ideal for installation in heating, cooling and non-potable plumbing. now with Leak Before Press® feature and 300 PSIG maximum working pressure, offered in sizes $\frac{1}{2}$ " through 4" proudly made in the USA. **not intended for potable water**

features

- full-port flow
- corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- sizes $\frac{1}{2}$ " - 4"
- 100% factory tested
- **made in USA, ARRA compliant**

options

- (-01) standard lever handle
- (-04) 2 $\frac{1}{4}$ " stem extension
- (-07) tee handle
- (-11) therma-seal™ insulating tee handle
- (-27) locking handle ss
- 77v140 series - ss ball & stem
- 77v - large diameter

standard materials list

BODY	Forged Brass, C37700
SEAT	RPTFE
BALL	Brass, ASTM B16, C36000 or B283, C37700 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
SEALING ELEMENT	EPDM
CRIMP RING	316 SS (2 $\frac{1}{2}$ "- 4")
SPACER RING	Nylon (2 $\frac{1}{2}$ "- 4")

94VLF-A series

lead free brass press end ball valve



performance rating[†]

- maximum operating pressure: 250 PSI
- temperature range: 0°F - 250°F

approvals

- MSS SP-110 ball valves
- IAPMO/ANSI Z1157 ball valves
- IAPMO PS-117 press connections
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free

description

the lead free Apollo International™ 94VLF-A series two-piece press ball valve is ideal for installation in most plumbing and heating systems, including potable water.

features

- full-port flow
- corrosion resistant materials (DZR)
- adjustable stem packing
- Leak Before Press® technology
- sizes $\frac{1}{2}$ " - 4"
- 100% factory tested
- 2 year warranty

options

- (-04) 2 $\frac{1}{4}$ " stem extension

standard materials list

BODY	Lead Free Brass (DZR)
RETAINER	Lead Free Brass (DZR)
BALL	1/2"- 1": Lead Free Brass (DZR) (Chr. Pltd) 1-1/4"- 4": Stainless Steel
STEM PACKING	PTFE
HANDLE NUT	Steel, Plated
WASHER	PTFE
STEM	1/2"- 1": Lead Free Brass 1-1/4"- 4": Brass
SEAT	PTFE
HANDLE	Plated Steel / Insulated Polyvinyl
GLAND NUT	Std. Rod Brass
SEALING ELEMENT	EPDM

balancing valves

58A-PR series

brass press end balancing valve



performance rating[†]

- CWP: 300 PSI
- temperature range: 15°F to 300°F (-10°C to 150°C)

approvals

- WRAS

DESCRIPTION

ApolloPress® 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 unique integrated digital readout in the handle allows qualified technicians to easily adjust the valve to achieve a highly accurate flow. valve pressure drop can be read through the valves integrated ¼" measurement ports, and flow calculated from the flow coefficient associated with the numerical setting. the integrated fixed orifice offers greater accuracy than that of a variable orifice. **not intended for potable water**

features

- P/T plugs
- compatible with all flow meters
- easy adjustment and setpoint indicator
- isolated flow shut-off
- non-rising stem
- y pattern body
- positive shut off
- 2 year warranty
- 100% factory tested

options

- npt connection
- solder connection
- press connection[†]
- push connection
- PEX A connection F1960
- PEX B/C connection F1807

standard materials list

HANDLE	Glass Filled PA66 (Red)
BONNET	HPb59-3 Brass
SEALS	EPDM
BODY	CC752S Brass (BS EN 1982) - DZR
STEM	HPb59-3 Brass
TEST POINTS	Brass Body & EPDM Plug
SEAT	Teflon
NOSE	CW602N Brass (BS EN 12164) - DZR
ORIFICE PLATE	HPb59-3 Brass
SEALING ELEMENT	EPDM

check valves

61LF-PR series

lead free bronze in-line check valve



performance rating[†]

- maximum pressure: 300 PSI (20.68 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- canadian registration number OC11218.5C

description

the lead free **ApolloPress® model CVB-PR (61 series) ball-cone® check valves with press connections** offer reliable protection against reverse flow in potable water applications using proven ASTM quality materials made in the USA. valves may be installed in both horizontal and vertical flow with upward flow.

features

- Leak Before Press® technology
- ½ 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**
- 100% factory tested

options

- soft seat (61-500 series)
- 0 PSIG cracking pressure (no spring)
- 5 PSIG cracking pressure
- 10 PSIG cracking pressure
- lead free 0.25% lead max.
- (61-PR series) non lead-free ApolloPress®

standard materials list

BODY	ASTM B584 C89836 Lead Free® Bronze
RETAINER	UNS C27450 Lead Free® Brass
CONNECTOR HOUSING	UNSC27450 Lead Free® Brass
SEALING ELEMENT	EPDM
SPRING	AISI 316 Stainless Steel
BALL CONE CHECK	RPTFE, 15% Glass Filled
STEM	UNS C27450 Lead Free® Brass

61-PR series

in-line check valve



performance rating

- maximum pressure: 300 PSI (20.68 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- canadian registration number OC11218.5C

description

the ApolloPress® 61 series ball-cone® check valves with press connections offer reliable protection against reverse flow in a variety of liquid applications including hot and chilled water / hvac applications using proven ASTM quality materials. may be installed in both horizontal and vertical flow with upward flow. **not intended for potable water**

features

- Leak Before Press® technology
- ½ 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**
- 100% factory tested

standard materials list

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
SEALING ELEMENT	EPDM

61YLF-PR series (163TLF-PR)

lead free bronze swing check valve



description

the lead free ApolloPress® model 163t-PRLF (series 61YLF) swing check with press connectors is a proven combination that provides economical installation and reliable service. these valves are cast, machined, assembled, and tested in south carolina using proven ASTM quality materials.

features

- Leak Before Press® technology
- quick press end connection
- renewable PTFE seat disc
- dezincification resistant
- made in USA, ARRA compliant**
- 100% factory tested

standard materials list

BODY	ASTM B62 Bronze
CAP	ASTM B62 Bronze
CONNECTOR HOUSING	ASTM B16 Brass
SEALING ELEMENT	EPDM
HANGER	304 Stainless Steel or ASTM B62 Bronze
PIN	Stainless Steel
SEAT	PTFE
PLUG	ASTM B16 Brass

performance rating

- maximum pressure: 200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 design & tested
- MSS SP-139, "copper alloy gate, globe, & check valves"
- NSF/ANSI/CAN 372 lead free, 3rd party certified
- CSA B51 CRN OC14667.5

61Y-PR series (163T-PR)

bronze swing check valve



description

the ApolloPress® model 163t-PRLF (series 61YLF) swing check with press connectors is a proven combination that provides economical installation and reliable service. these valves are cast, machined, assembled, and tested in south carolina using proven ASTM quality materials. **not intended for potable water**

features

- Leak Before Press® technology
- quick press end connection
- renewable PTFE seat disc
- dezincification resistant
- **made in USA, ARRA compliant**
- 100% factory tested

performance rating

- maximum pressure: 200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 design and testing
- CRNOC14667.5

standard materials list

BODY	ASTM B62 Bronze
CAP	ASTM B62 Bronze
CONNECTOR HOUSING	ASTM B16 Brass
SEALING ELEMENT	EPDM
HANGER	304 Stainless Steel or ASTM B62 Bronze
PIN	Stainless Steel
SEAT	PTFE
PLUG	ASTM B16 Brass

gate valves

3OLF-PR series (101TLF-PR)

lead free bronze gate valve (rising stem)



description

the lead free ApolloPress® model 101T-PRLF (3OLF series) gate valve is a proven combination that provides economical installation and reliable service for potable water applications. these valves are cast, machined, assembled, and tested in south carolina using proven ASTM quality materials.

features

- ANSI 3rd party certified lead free
- Leak Before Press® technology
- full port flow
- guided solid lead free* bronze disc
- adjustable graphite stem packing
- rising stem
- screw-in bonnet
- rugged malleable iron hand wheel
- back seat protection
- **made in USA, ARRA compliant**
- 100% factory tested

performance rating

- maximum pressure: 200 PSI (13.79 bar) at 100°F
- temperature range: 0° to 250°F

approvals

- MSS SP-80 design & tested
- MSS SP-139, "copper alloy gate, globe, & check valves"
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- CSA B51 CRN OC14667.5

standard materials list

BODY	ASTM B584-C89836 Bronze
BONNET	ASTM B584-C89836 Bronze
CONNECTOR HOUSING	UNS C27451 Brass C27451
SEALING ELEMENT	EPDM
STEM	ASTM B371 C69400 Bronze
DISC	ASTM B584-C89836 Bronze
PACKING NUT	ASTM B16 Brass
PACKING	Grafoil
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

30-PR series (101T-PR)

bronze gate valve (rising stem)



performance rating

- maximum pressure: 200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 - bronze gate, globe, angle & check valves - type 2
- CRN Oc14667.5

description

the **apollo press® model 101T-PR (30 series) class 125 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 rising stem gate valve can reliably be installed in most plumbing and heating systems including building service piping and oem applications. **not intended for potable water**

features

- Leak Before Press® technology
- full port flow
- guided solid lead free* bronze disc
- adjustable graphite stem packing
- rising stem
- screw-in bonnet
- rugged malleable iron hand wheel
- back seat protection
- made in USA, ARRA compliant**
- 100% factory tested

standard materials list

BODY	ASTM B62 -C83600 Bronze
BONNET	ASTM B62 -C83600 Bronze
CONNECTOR HOUSING	ASTM B16 -C36000 Brass
SEALING ELEMENT	EPDM
STEM	ASTM B371 C69400 Bronze
DISC	ASTM B62 -C83600 Bronze
PACKING	Grafoil
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

30LF-PR series (102TLF-PR)

lead free bronze gate valve (non-rising stem)



description

the lead free **ApolloPress® model 102TLF-PR (30LF series) gate valve with press connectors** is a proven combination that provides economical installation and reliable service for potable water applications. these valves are cast, machined, assembled, and tested in south carolina using proven ASTM quality materials.

features

- Leak Before Press® technology
- guided solid bronze disc
- adjustable graphite stem packing
- non-rising stem
- lead free AB1953 certified
- dezincification resistant
- all bronze construction
- 100% factory tested per mss standard
- screw-in bonnet
- rugged malleable iron hand wheel
- back seat protection
- made in USA, ARRA compliant**

standard materials list

BODY	ASTM B584-C89836 Bronze
BONNET	ASTM B584-C89836 Bronze
STEM	ASTM B371 Bronze
CONNECTOR HOUSING	UNS C27451 Brass
SEALING ELEMENT	EPDM
DISC	ASTM B584-C89836 Bronze
PACKING	Grafoil®
PACKING NUT	ASTM B16 Brass
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

performance rating

- maximum pressure: 200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 design & tested
- MSS SP-139, "copper alloy gate, globe, & check valves"
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- CSA B51 CRN OC14667.5

30-PR series (102T-PR)

bronze gate valve (non-rising stem).



performance rating

- maximum pressure: 200 PSI (13.79) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 - bronze gate, globe, angle & check valves - type 1
- CRN 0c14667.5

description

the ApolloPress® model 102T (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 gate valve can reliably be installed in most plumbing and heating systems or building service piping and oem applications. **not intended for potable water**

features

- Leak Before Press® technology
- guided solid bronze disc
- adjustable graphite stem packing
- non-rising stem
- dezincification resistant
- all bronze construction
- 100% factory tested per mss standard
- screw-in bonnet
- rugged malleable iron hand wheel
- back seat protection
- **made in USA, ARRA compliant**

standard materials list

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
SEALING ELEMENT	EPDM
PACKING	Grafoil®
PACKING NUT	ASTM B16 Brass
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

globe valves

33LF-PR series (120TLF-PR)

lead free bronze globe valve



performance rating

- maximum pressure: 200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- MSS SP-80 design & tested
- MSS SP-139, "copper alloy gate, globe, & check valves"
- NSF/ANSI/CAN 61 water quality
- NSF/ANSI/CAN 372 lead free
- CSA B51 CRN 0C14667.5

description

the lead free ApolloPress® model 120T-PRLF (33LF series) globe valve with press connections is a proven combination that provides economical installation and reliable service for potable water applications. these valves are cast, machined, assembled, and tested in south carolina using proven ASTM quality materials.

features

- 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**

standard materials list

BODY	ASTM B584 C89836 Bronze
BONNET	ASTM B584 C89836 Bronze
STEM	ASTM B371 C69400 Bronze
CONNECTOR HOUSING	UNS C27451 Brass C27451
SEALING ELEMENT	EPDM
DISC	PTFE
PACKING NUT	ASTM B16 Brass
PACKING	Grafoil®
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

33-PR series (120T-PR)

bronze globe valve



description

the ApolloPress® model 120T-PR (33 series) globe valve with press connections is a proven combination that provides economical installation and reliable service. the valves are cast, machined, assembled, and tested in south carolina with proven ASTM quality material. the globe valve can reliably be installed in most plumbing and heating systems (or building service piping). **not intended for potable water**

features

- 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 malleable iron hand wheel
- back seat protection
- **made in USA, ARRA compliant**

performance rating

- maximum pressure:
200 PSI (13.79 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

standard materials list

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
SEALING ELEMENT	EPDM
PACKING	Grafoil®
PACKING NUT	ASTM B16 Brass
HAND WHEEL	Malleable Iron
NAMEPLATE	Aluminum

APPROVALS

- MSS SP-80 - bronze gate, globe, angle & check valves - type 1
- CRN OC14667.5

strainers

59LF-PR series

lead free bronze wye-strainer



description

the lead free ApolloPress® 59lf series strainers with press connections are designed to protect potable piping systems 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

- Leak Before Press® technology
- self-aligning screen design
- blow-off ball valve option
- lead free bronze and brass construction
- **made in USA, ARRA compliant**
- 100% factory tested

performance rating

- maximum pressure:
300 PSI (20.68 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

standard materials list

BODY	ASTM B584 C89836 Bronze
CAP	UNS C27450 Brass
CONNECTOR HOUSING	UNS C27450 Brass
SEALING ELEMENT	EPDM
SCREEN	302 Stainless Steel
CAP SEAL (1/2")	Teflon® O-Ring
CAP SEAL (3/4" - 2")	PTFE Gasket

approvals

- NSF/ANSI/CAN 372 - lead free
- CRN OE8959.5.C

59-PR series

bronze WYE strainer



performance rating[†]

- maximum pressure: 300 PSI (20.68 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- CRN OE8959.5C

description

the ApolloPress® 59 series strainers with press connections are designed to protect domestic water 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. **not intended for potable water.**

features

- Leak Before Press® technology
- self-aligning screen design
- blow-off ball valve option
- made in USA, ARRA compliant**
- 100% factory tested

options

- (O1) - 50 mesh (standard ½" models)
- (O1) - 20 mesh (standard ¾" - 2" models)
- (O2) - tapped cap
- (p2) - tapped cap with plug
- (O6) - tapped cap with ball valve
- (E1) - 20 mesh (for ½ " model)
- (B1) - 60 mesh
- (C1) - 80 mesh
- (H1) - 100 mesh
- (59-PR-LF) lead free ApolloPress®

standard materials list

BODY	Cast Bronze, ASTM B584
CAP	Brass, ASTM B16
CONNECTOR HOUSING	ASTM B16 Brass
CONNECTOR O-RING	EPDM
SCREEN	302 Stainless Steel
SEALING ELEMENT	EPDM
GASKET	PTFE

pressure reducing valves

36LF-PR series

lead free bronze pressure reducing valve



performance rating[†]

- maximum pressure: 300 PSI (20.68 bar) non-shock
- temperature range: 0°F - 250°F (-18°C - 121°C)

approvals

- ASSE 1003-2009 - water pressure reducing valves
- CSA B356 - water pressure reducing valves for domestic water supply systems
- NSF/ANSI/CAN 372 lead free

description

the lead free ApolloPress® 36LF series 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
- 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**
- 100% factory tested

options

- (36-PR) ApolloPress®

standard materials list

BODY	ASTM B584 C89836 Bronze
COVER	ASTM B584 C84400 Bronze
DIAPHRAGM	FDA Grade Buna W/ Polyester
SEAT DISC	FDA Grade EPDM
STEM	UNS C27450 Brass
SPRING	Stainless Steel
SEALING ELEMENT	EPDM
CONNECTOR HOUSING	UNS 27450 Brass
CONNECTOR O-RING	FDA Grade EPDM

36-PR series

bronze pressure reducing valve



performance rating[†]

- maximum press fitting pressure: 300 PSI (20.68 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

description

the ApolloPress® 36 series pressure reducing valves with press end connections are designed to protect residential and commercial 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. **not intended for potable water**

features

- Leak Before Press® technology
- corrosion resistant bronze body and bonnet
- integral ss strainer
- balanced piston design
- internal thermal expansion bypass
- high and low pressure range options
- pressure gauge connection option
- made in USA, ARRA compliant**
- 100% factory tested

options

- (36LF-PR) lead free ApolloPress®

standard materials list

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
SEALING ELEMENT	EPDM

36ELF-PR series

lead free bronze pressure reducing valve



performance rating[†]

- maximum press fitting pressure: 300 PSI (20.68 bar)
- maximum temperature: 180°F (82°C)

approvals

- NSF/ANSI/CAN 372 - lead free
- NSF/ANSI/CAN 61 - water quality
- ASSE 1003-2009 - water pressure reducing valves
- CSA B356 - water pressure reducing valves for domestic water supply system

description

the lead free ApolloPress® 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

- Leak Before Press® technology
- balanced piston design
- sealed cage for vault installations
- built-in thermal expansion bypass
- 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 60 or 100 PSI
- high flow / high efficiency design
- made in USA, ARRA compliant**
- 100% factory tested

options

- (36E) - with standard materials for non-potable applications

standard materials list

CONNECTOR HOUSING	Lead Free* Brass, UNS 27450
CONNECTOR O-RING	FDA Grade EPDM
BODY	Lead Free* Bronze, UNS 89836
UNION NUT	BRASS, ASTM B16
TAILPIECE	Lead Free* Brass, UNS C27451
SCREEN	Stainless Steel
CAP	Noryl™
DIAPHRAGM	NSF Grade EPDM
SEAT DISC	NSF Grade EPDM
ADJUSTING SCREW/NUT	Stainless Steel
SPRING	Stainless Steel, ASTM A228
SEALING ELEMENT	EPDM

36CLF-PR series

lead free bronze pressure reducing valve



performance rating[†]

- maximum press fitting pressure: 300 PSI (20.68 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
- NSF/ANSI/CAN 372 - lead free

description

the lead free **ApolloPress® 36CLF 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
- Leak Before Press Technology®
- balanced piston design
- SS adjusting screw and sealed cage standard
- built-in thermal expansion bypass
- easy access to seat disk and strainer
- made in USA, ARRA compliant
- 100% factory tested

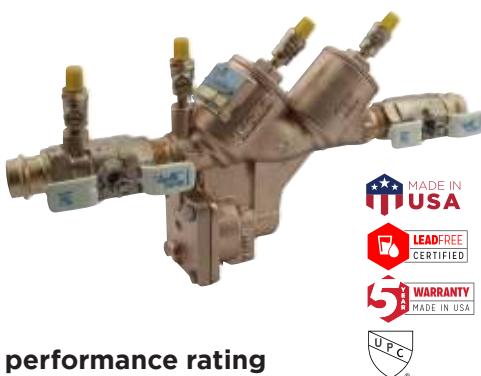
standard materials list

CONNECTOR HOUSING	Lead Free* Brass, UNS 27450
CONNECTOR O-RING	FDA Grade EPDM
BODY	Lead Free* Bronze, UNS C89836
UNION NUT	BRASS, ASTM B16
TAILPIECE	Lead Free* Brass, UNS C27451
SCREEN	Stainless Steel
CAP	Noryl
DIAPHRAGM	NSF Grade EPDM
SEAT DISC	NSF Grade EPDM
ADJUSTING SCREW/NUT	Stainless Steel
SPRING	Stainless Steel, ASTM A228
SEALING ELEMENT	EPDM

backflow preventers

RP4ALF series

reduced pressure backflow preventer with press connections



description

the lead free **ApolloPress® model RP4ALF series reduced pressure backflow preventer** 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 ApolloPress® ball valves with stainless steel handles and trim and Leak Before Press® technology.

features

- Leak Before Press® technology
- low pressure loss
- easily removable modular check valve cartridge
- captured stainless steel check springs
- ApolloPress® 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**
- 100% factory tested

standard materials list

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
SEALING ELEMENT	EPDM

performance rating

- maximum pressure: 175 PSI
- temperature range: 33°F - 180°F

approvals

- ASSE 1013 - horizontal (½"-2")
- CSA B.64.4 - horizontal (½"-2")
- backflow assembly is approved by the foundation for cross-connection control and hydraulic research at the university of southern california. press connections are optional factory installed connectors on each end of the approved assembly. - horizontal (½"-2")

RP4A series

reduced pressure backflow preventer with press connections



description

the ApolloPress® model RP4A series reduced pressure backflow preventer 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 ApolloPress® ball valves with stainless steel handles and trim as standard and Leak Before Press® technology. **not intended for potable water**

performance rating

- maximum pressure: 175 PSI
- temperature range: 33°F - 180°F

approvals

- ASSE 1013 - horizontal (½"-2")
- CSA B.64.4 - horizontal (½"-2")
- backflow assembly is approved by the foundation for cross-connection control and hydraulic research at the university of southern california. press connections are optional factory installed connectors on each end of the approved assembly.
- horizontal (½"-2")

features

- Leak Before Press® technology
- low pressure loss
- easily removable modular check valve cartridge
- captured stainless steel check springs
- ApolloPress® ball valves w/ ss handles nut standard
- top-mounted test cocks for easy testing
- modular relief valve
- no special tools required for servicing
- **made in USA, ARRA compliant**
- 100% factory tested

standard materials list

BODY, CAPS,BALL VALVE SHUTOFFS, TEST COCKS	Cast Bronze C84400 or C89836
CHECK VALVE CARTRIDGES	Glass-Filled PPO
SPRINGS	300 Series Stainless Steel
SEAT DISCS	Chloramine-resistant Silicone
O-RINGS	EPDM

90° ELBOW

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
90° Elbow, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077676	77317	9055455PC	PF02722
90° Elbow, copper, SD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10077678	77022	9055600PC	PF01634
90° Elbow - Reducing, copper, SD, PxP, $\frac{3}{4} \times \frac{1}{2}$	10066101	77325	9055655PC	PF02736
90° Elbow - Reducing, copper, SD, PxP, $1 \times \frac{3}{4}$	10066083	77330		PF02749
90° Elbow, copper, SD, PxP, 1×1	10077680	77027	9055750PC	PF01647
90° Elbow, copper, SD, PxP, $\frac{1}{4} \times \frac{1}{4}$	10075078	77032	9055950PC	PF02084
90° Elbow, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10075080	77037	9056150PC	PF02085
90° Elbow, copper, SD, PxP, 2×2	10077662	77042	9056400PC	PF02086
90° Elbow - Short Radius, copper, LD, PxP, $\frac{1}{2} \times 2\frac{1}{2}$	10062021		9056650PC	
90° Elbow - Short Radius, copper, LD, PxP, 3×3	10062027		9056900PC	
90° Elbow - Short Radius, copper, LD, PxP, 4×4	10062032			
90° Elbow - Long Radius, copper, LD, PxP, $\frac{1}{2} \times 2\frac{1}{2}$	10062066	20623	9079050PC	PF02082
90° Elbow - Long Radius, copper, LD, PxP, 3×3	10062067	20628	9079100PC	PF02092
90° Elbow - Long Radius, copper, LD, PxP, 4×4	10062069	20633	9079200PC	PF02095

P x FTG

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
90° Street Elbow, copper, SD, FTGxP, $\frac{1}{2} \times \frac{1}{2}$	10075566	77347	9059110PC	PF02822
90° Street Elbow, copper, SD, FTGxP, $\frac{3}{4} \times \frac{3}{4}$	10075568	77052	9059150PC	PF01654
90° Street Elbow, copper, SD, FTGxP, 1×1	10075046	77057	9059200PC	PF02344
90° Street Elbow, copper, SD, FTGxP, $\frac{1}{4} \times \frac{1}{4}$	10075072	77062	9059255PC	PF02384
90° Street Elbow, copper, SD, FTGxP, $\frac{1}{2} \times \frac{1}{2}$	10075074	77067	9059305PC	PF02385
90° Street Elbow, copper, SD, FTGxP, 2×2	10075076	77072	9059355PC	PF02386
Close Turn 90° Street Elbow, copper, LD, FTGxP, $2\frac{1}{2} \times 2\frac{1}{2}$	10062007		9059400PC	
Close Turn 90° Street Elbow, copper, LD, FTGxP, 3×3	10062012		9059450PC	
Close Turn 90° Street Elbow, copper, LD, FTGxP, 4×4	10062017		9059550PC	
Long Turn 90° Street Elbow, copper, LD, FTGxP, $2\frac{1}{2} \times 2\frac{1}{2}$	10062071	20638	9059400PC	PF02363
Long Turn 90° Street Elbow, copper, LD, FTGxP, 3×3	10062073	20643	9059450PC	PF02368
Long Turn 90° Street Elbow, copper, LD, FTGxP, 4×4	10062074	20648	9059550PC	PF02395

P x FPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10066560	79525	9082755PC	PF01507
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{8}$	10066566	79520	9082556PC	
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{4}$	10066567	79530	9082570PC	
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{3}{4} \times \frac{1}{2}$	10066568	79535	9082770PC	
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{3}{4} \times \frac{3}{4}$	10066561	79540	9082760PC	PF01532
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $1 \times \frac{1}{2}$	10066569	79545		
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, 1×1	10066562	79550	9082780PC	PF01559
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{4} \times \frac{1}{4}$	10066563	79560	9082800PC	PF01594
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10066564	79565	9082830PC	PF01632
Female 90° Elbow, copper & Lead Free Brass, SD, PxFPT, 2×2	10066565	79570	9082850PC	PF01680

90° elbow | drop-ear

P x FPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Drop Ear 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10075366	79190	B066850PC	PF01508
Drop Ear 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{8}$	10075367	79185		
Drop Ear 90° Elbow, copper & Lead Free Brass, SD, PxFPT, $\frac{3}{4} \times \frac{3}{4}$	10075368	79195	B067000PC	PF02581

45° elbow

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
45° Elbow, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077682	77607	9042800PC	PF03026
45° Elbow, copper, SD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10077672	77023	9042900PC	PF03034
45° Elbow, copper, SD, PxP, 1×1	10077674	77028	9043000PC	PF03044
45° Elbow, copper, SD, PxP, $\frac{1}{4} \times \frac{1}{4}$	10075090	77033	9043100PC	PF03050
45° Elbow, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10075092	77038	9043200PC	PF03055
45° Elbow, copper, SD, PxP, 2×2	10075094	77043	9043300PC	PF03059
45° Elbow, copper, LD, PxP, $\frac{2}{3} \times \frac{2}{3}$	10062052	20653	9043400PC	PF03063
45° Elbow, copper, LD, PxP, 3×3	10062057	20658	9043500PC	PF03067
45° Elbow, copper, LD, PxP, 4×4	10062062	20663	9043700PC	PF03073

P x FTG

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
45° Street Elbow, copper, SD, FTGxP, $\frac{1}{2} \times \frac{1}{2}$	10075054	77637	9046200PC	PF03326
45° Street Elbow, copper, SD, FTGxP, $\frac{3}{4} \times \frac{3}{4}$	10075056	77053	9046300PC	PF03334
45° Street Elbow, copper, SD, FTGxP, 1×1	10075058	77058	9046400PC	PF03344
45° Street Elbow, copper, SD, FTGxP, $\frac{1}{4} \times \frac{1}{4}$	10075084	77063	9046500PC	PF03350
45° Street Elbow, copper, SD, FTGxP, $\frac{1}{2} \times \frac{1}{2}$	10075086	77068	9046600PC	PF03355
45° Street Elbow, copper, LD, FTGxP, 2×2	10075088	77073	9046700PC	PF03359
45° Street Elbow, copper, LD, FTGxP, $\frac{2}{3} \times \frac{2}{3}$	10062037	20668	9046800PC	PF03363
45° Street Elbow, copper, LD, FTGxP, 3×3	10062042	20673	9046900PC	PF03368
45° Street Elbow, copper, LD, FTGxP, 4×4	10062047	20678	9047000PC	PF03373

tee

P x P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Tee, copper, SD, PxPxP, $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{2}$	10077739	77377	9097200PC	PF04006
Tee - Bullhead, copper, SD, PxPxP, $\frac{1}{2} \times \frac{1}{2} \times \frac{3}{4}$	10077810	77582	9097305PC	PF04047
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{3}{4} \times \frac{1}{2} \times \frac{1}{2}$	10077784	77392	9098905PC	PF04043
Tee - Reducing Run, copper, SD, PxPxP, $\frac{3}{4} \times \frac{1}{2} \times \frac{3}{4}$	10077785	77397	9098851PC	PF04041
Tee - Reducing Outlet, copper, SD, PxPxP, $\frac{3}{4} \times \frac{3}{4} \times \frac{1}{2}$	10077745	77402	9098550PC	PF04033
Tee, copper, SD, PxPxP, $\frac{3}{4} \times \frac{3}{4} \times \frac{3}{4}$	10077740	77387	9098401PC	PF04031
Tee - Bullhead, copper, SD, PxPxP, $\frac{3}{4} \times \frac{3}{4} \times 1$	10066071	77407	9098450PC	PF04065
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $1 \times \frac{1}{2} \times \frac{3}{4}$	10077786	22263	9099950PC	PF04062
Tee - Reducing Run, copper, SD, PxPxP, $1 \times \frac{1}{2} \times 1$	10077787	94767	9099905PC	PF04061
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $1 \times \frac{3}{4} \times \frac{1}{2}$	10077788	77417	9099800PC	PF04058
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $1 \times \frac{3}{4} \times \frac{3}{4}$	10077789	77422	9099755PC	PF04056
Tee - Reducing Run, copper, SD, PxPxP, $1 \times \frac{3}{4} \times 1$	10077790	77427	9099705PC	PF04055
Tee - Reducing Outlet, copper, SD, 811, PxPxP, $1 \times 1 \times \frac{1}{2}$	10077746	77432	9099550PC	PF04051
Tee - Reducing Outlet, copper, SD, 811, PxPxP, $1 \times 1 \times \frac{3}{4}$	10077747	77437	9099455PC	PF04049
Tee, copper, SD, PxPxP, $1 \times 1 \times 1$	10077741	77412	9099300PC	PF04048
Tee - Reducing Run, copper, SD, PxPxP, $\frac{1}{2} \times \frac{1}{2} \times \frac{1}{4}$	10077791	22253	9100900PC	PF04083
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times \frac{3}{4} \times \frac{3}{4}$	10077792	22258	9100800PC	PF04080
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times \frac{3}{4} \times 1$	10077793	22268	9100750PC	PF04079
Tee - Reducing Run, copper, SD, PxPxP, $\frac{1}{2} \times \frac{3}{4} \times \frac{1}{4}$	10077794	22248	9100700PC	PF04078
Tee - Reducing Run, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{1}{2}$	10077795	22238	9100600PC	PF04076
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{3}{4}$	10077796	94762	9100555PC	PF04075
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times 1$	10077797	14568	9100505PC	PF04074
Tee - Reducing Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{1}{2}$	10077748	94757	9100305PC	PF04071
Tee - Reducing Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{3}{4}$	10077749	77452	9100255PC	PF04070
Tee - Reducing Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times 1$	10077750	77447	9100200PC	PF04069
Tee, copper, SD, PxPxP, $\frac{1}{2} \times 1 \frac{1}{4} \times \frac{1}{4}$	10077742	77442	9100050PC	PF04068
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \frac{1}{4} \times \frac{1}{4}$	10066397			
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{3}{4}$	10077798	79660	9102055PC	PF04098
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times 1$	10077799	15458	9102005PC	PF04097
Tee - Reducing Run & Outlet, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times \frac{1}{4}$	10066081			
Tee - Reducing Run, copper, SD, PxPxP, $\frac{1}{2} \times 1 \times 1 \frac{1}{2}$	10077800	15463	9101905PC	PF04095

tee

DESCRIPTION	APOLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 1½ x 1¼ x ¾	10077801	22233		PF04093
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 1½ x 1¼ x 1	10077802	15453	9101755PC	PF04092
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 1½ x 1¼ x 1¼	10077803	15483	9101705PC	PF04091
Tee - Reducing Outlet, copper, SD, PxPxP, 1½ x 1½ x ½	10077751	15448	9101450PC	PF04088
Tee - Reducing Outlet, copper, SD, PxPxP, 1½ x 1½ x ¾	10077752	77462	9101400PC	PF04087
Tee - Reducing Outlet, copper, SD, PxPxP, 1½ x 1½ x 1	10077753	77467	9101350PC	PF04086
Tee - Reducing Outlet, copper, SD, PxPxP, 1½ x 1½ x 1¼	10077754	77472	9101305PC	PF04085
Tee, copper, SD, PxPxP, 1½ x 1½ x 1½	10077743	77457	9101150PC	PF04084
Tee - Bullhead, copper, SD, PxPxP, 1½ x 1½ x 2	10066090			
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1 x 1½	10066197			
Tee - Reducing Run, copper, SD, PxPxP, 2 x 1 x 2	10066018		9103705PC	
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1¼ x 1¼	10077804	15518	9103505PC	PF40117
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1¼ x 1½	10066125			
Tee - Reducing Run, copper, SD, PxPxP, 2 x 1¼ x 2	10066064			
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1½ x ¾	10077805	15513	9103305PC	PF40113
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1½ x 1	10077806	15498	9103255PC	PF40112
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1½ x 1¼	10077807	15508	9103205PC	PF40111
Tee - Reducing Run & Outlet, copper, SD, PxPxP, 2 x 1½ x 1½	10077808	15503	9103155PC	PF40110
Tee - Reducing Run, copper, SD, PxPxP, 2 x 1½ x 2	10077809	22228	9104255PC	PF40109
Tee - Reducing Outlet, copper, SD, PxPxP, 2 x 2 x ½	10077755	15538	9103005PC	PF40107
Tee - Reducing Outlet, copper, SD, PxPxP, 2 x 2 x ¾	10077756	94777	9102955PC	PF40106
Tee - Reducing Outlet, copper, SD, PxPxP, 2 x 2 x 1	10077757	94772	9102900PC	PF40105
Tee - Reducing Outlet, copper, SD, PxPxP, 2 x 2 x 1¼	10077758	77487	9102855PC	PF40104
Tee - Reducing Outlet, copper, SD, PxPxP, 2 x 2 x 1½	10077759	77482	9102800PC	PF40103
Tee, copper, SD, PxPxP, 2 x 2 x 2	10077744	77477	9102600PC	PF40102
Tee - Reducing Run & Outlet, copper, LD, PxPxP, 2½ x 2 x 3	10066515			
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x ½	10068042	22303	910490PC	PF40129
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x ¾	10068045	22298	910485PC	PF40128
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x 1	10068048	22293	910480PC	PF40127
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x 1¼	10077766	22288	910475PC	PF40126
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x 1½	10077767	20803	910470PC	PF40125
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 2½ x 2½ x 2	10077768	20688	910465PC	PF40124
Tee, copper, LD, PxPxP, 2½ x 2½ x 2½	10077760	20683	9104450PC	PF40123
Tee - Reducing Run & Outlet, copper, LD, PxPxP, 3 x 2 x 2	10066604	20732	910755PC	PF40164
Tee - Reducing Run & Outlet, copper, LD, PxPxP, 3 x 2½ x 2½	10066136	20749	9107150PC	PF40158
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x ½	10068060	20759	9107050PC	PF40145
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x ¾	10068063	22323	910700PC	PF40146
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x 1	10068066	22308	910695PC	PF40147
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x 1¼	10077772	22313	910690PC	PF40148
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x 1½	10077773	20798	910685PC	PF40149
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 3 x 3 x 2	10077774	20698	910680PC	PF40150
Tee - Reducing Outlet, copper, LD, PxPxP, 3 x 3 x 2½	10077775	20703	9106750PC	PF40151
Tee, copper, LD, PxPxP, 3 x 3 x 3	10077761	20693	9106600PC	PF40152
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x ½	10068078	20788	911265PC	PF40191
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x ¾	10068081	20793	911260PC	PF40192
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x 1	10068084	20794	9112550PC	PF40193
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x 1¼	10077779	20795	911250PC	PF40194
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x 1½	10077780	20808	911245PC	PF40195
Tee - Reducing Outlet, copper, LD w/ SD Outlet, PxPxP, 4 x 4 x 2	10077781	20713	911240PC	PF40196
Tee - Reducing Outlet, copper, LD, PxPxP, 4 x 4 x 2½	10077782	20718	9112350PC	PF40197
Tee - Reducing Outlet, copper, LD, PxPxP, 4 x 4 x 3	10077783	20723	9112300PC	PF40198
Tee, copper, LD, PxPxP, 4 x 4 x 4	10077762	20708	9112150PC	PF40200

P x P x FPT

DESCRIPTION	APOLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, ½ x ½ x ½	10066579	79580	9116470PC	PF01512
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, ¾ x ¾ x ½	10066581	79590	9116502PC	PF01539
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, ¾ x ¾ x ¾	10066580	79595	9116503PC	PF01538
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1 x 1 x ½	10066582	79760	9116505PC	PF01570
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1 x 1 x ¾	10066583	79765	9116516PC	PF01572
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1¼ x 1¼ x ½	10066584	79770	9116525PC	PF01613
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1¼ x 1¼ x ¾	10066585	79775	9116532PC	PF02654
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1½ x 1½ x ½	10066586	79780	9116535PC	PF01645
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 1½ x 1½ x ¾	10066587	79785	9116542PC	PF02673
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 2 x 2 x ½	10066588	79790	9116545PC	PF01699
Tee - Female Outlet Tee, copper & Lead Free Brass, PxPxFPT, 2 x 2 x ¾	10066589	79795	9116555PC	PF02706

coupling

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Coupling with Stop, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077692	78047	9001100PC	PF10145
Coupling with Stop, copper, SD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10077693	78052	9001250PC	PF10146
Coupling with Stop, copper, SD, PxP, 1×1	10077683	78057	9001450PC	PF10147
Coupling with Stop, copper, SD, PxP, $\frac{1}{4} \times \frac{1}{4}$	10077640	78062	9001700PC	PF10148
Coupling with Stop, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077642	78067	9002000PC	PF10149
Coupling with Stop, copper, SD, PxP, 2×2	10077644	78072	9002350PC	PF10150
Coupling with Stop, copper, LD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077701	20728	9002655PC	PF10151
Coupling with Stop, copper, LD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10077702	20733	9003055PC	PF10152
Coupling with Stop, copper, LD, PxP, 4×4	10077703	20738	9003855PC	PF10154

coupling | no stop

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Coupling No Stop, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077691	78172	9020300PC	PF01903
Reducer Coupling, copper, SD, PxP, $\frac{3}{4} \times \frac{1}{2}$	10075900	78147	9001300PC	PF01036
Coupling No Stop, copper, SD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10077694	78177	9020400PC	PF01905
Reducer Coupling, copper, SD, PxP, $1 \times \frac{1}{2}$	10075144	15603	9001555PC	PF01051
Reducer Coupling, copper, SD, PxP, $\frac{1}{2} \times \frac{3}{4}$	10075898	78152	9001500PC	PF01049
Coupling No Stop, copper, SD, PxP, 1×1	10077687	78182	9020500PC	PF01906
Reducer Coupling, copper, SD, PxP, $\frac{1}{4} \times \frac{3}{4}$	10066001	15593	9001805PC	PF01058
Reducer Coupling, copper, SD, PxP, $\frac{1}{4} \times 1$	10075896	78157	9001750PC	PF01056
Coupling No Stop, copper, SD, PxP, $\frac{1}{4} \times \frac{1}{4}$	10077646	78187	9020550PC	PF01907
Reducer Coupling, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10066380			PF01069
Reducer Coupling, copper, SD, PxP, $\frac{1}{2} \times \frac{3}{4}$	10066381	18473	9002155PC	PF01067
Reducer Coupling, copper, SD, PxP, $\frac{1}{2} \times 1$	10066003	15588	9002100PC	PF01065
Reducer Coupling, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{4}$	10075128	78162	9002055PC	PF01064
Coupling No Stop, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10077696	78192	9020600PC	PF01908
Reducer Coupling, copper, SD, PxP, $2 \times \frac{3}{4}$	10066398	18468	9002555PC	PF01077
Reducer Coupling, copper, SD, PxP, 2×1	10066005	15608	9002500PC	PF01075
Reducer Coupling, copper, SD, PxP, $2 \times \frac{1}{4}$	10066072	22328	9002450PC	PF01074
Reducer Coupling, copper, SD, PxP, $2 \times \frac{1}{2}$	10075130	78167	9002400PC	PF01073
Coupling No Stop, copper, SD, PxP, 2×2	10077650	78197	9020650PC	PF01909
Reducer Coupling, copper, LD, 801R, PxP, $2\frac{1}{2} \times 1$	10066440	20685	900285PC	PF01086
Reducer Coupling, copper, LD, 801R, PxP, $2\frac{1}{2} \times 2$	10066074	20700	900270PC	PF01083
Coupling No Stop, copper, LD, PxP, $2\frac{1}{2} \times 2\frac{1}{2}$	10061932	20743	9020700PC	PF01910
Reducer Coupling, copper, LD, 801R, PxP, 3×2	10066446	20710	9003150PC	PF01094
Reducer Coupling, copper, LD, 801R, PxP, $3 \times 2\frac{1}{2}$	10066076	20715	9003100PC	PF01093
Coupling No Stop, copper, LD, PxP, 3×3	10061937	20748	9020750PC	PF01911
Reducer Coupling, copper, LD, 801R, PxP, 4×2	10066447	20720	900405PC	PF10111
Reducer Coupling, copper, LD, 801R, PxP, 4×3	10066152	20730	9003950PC	PF10109
Coupling No Stop, copper, LD, PxP, 4×4	10061942	20753	9020850PC	PF01913

coupling | no stop (extended)

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Coupling No Stop - Extended, copper, SD, PxP, $\frac{1}{2} \times \frac{1}{2}$	10075030	79005	9020305PC	
Coupling No Stop - Extended, copper, SD, PxP, $\frac{3}{4} \times \frac{3}{4}$	10075032	79010	9020405PC	
Coupling No Stop - Extended, copper, SD, PxP, 1×1	10075034	79015	9020505PC	

fitting reducer

FTG x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Fitting Reducer, copper, SD, FTGxP, $\frac{3}{4} \times \frac{1}{2}$	10075146	78077	9008100PC	PF01326
Fitting Reducer, copper, SD, FTGxP, $1 \times \frac{1}{2}$	10075150	78082	9008350PC	PF01339
Fitting Reducer, copper, SD, FTGxP, $1 \times \frac{3}{4}$	10075148	78087	9008300PC	PF01337
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{4} \times \frac{1}{2}$	10075336	22333		PF01347
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{4} \times \frac{3}{4}$	10075154	78092	9008555PC	PF01345
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{4} \times 1$	10075156	78097	9008500PC	PF01343
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{2} \times \frac{3}{4}$	10075334	14543	9008855PC	PF01353
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{2} \times 1$	10075158	78102	9008800PC	PF01351
Fitting Reducer, copper, SD, FTGxP, $\frac{1}{2} \times \frac{1}{4}$	10075160	78107	9008750PC	PF01350
Fitting Reducer, copper, SD, FTGxP, $2 \times \frac{1}{2}$	10075338	79855	9009255PC	
Fitting Reducer, copper, SD, FTGxP, $2 \times \frac{3}{4}$	10075340	79860	9002555PC	
Fitting Reducer, copper, SD, FTGxP, 2×1	10075162	78112	9009150PC	PF01360
Fitting Reducer, copper, SD, FTGxP, $2 \times \frac{1}{4}$	10075152	78117	9009105PC	PF01359
Fitting Reducer, copper, SD, FTGxP, $2 \times \frac{1}{2}$	10075164	78122	9009050PC	PF01358
Fitting Reducer, copper, LD, FTGxP, $\frac{1}{2} \times \frac{3}{4}$	10068001			
Fitting Reducer, copper, LD, FTGxP, $\frac{1}{2} \times 1$	10068002	20814	900950PC	PF01370
Fitting Reducer, copper, LD, FTGxP, $\frac{1}{2} \times \frac{1}{4}$	10068017	20815	900945PC	PF01369
Fitting Reducer, copper, LD, FTGxP, $\frac{1}{2} \times \frac{1}{2}$	10068004	20813	900940PC	PF01368
Fitting Reducer, copper, LD, FTGxP, $\frac{1}{2} \times 2$	10075165	20758	900935PC	PF01367
Fitting Reducer, copper, LD, FTGxP, $3 \times \frac{3}{4}$	10068019			
Fitting Reducer, copper, LD, FTGxP, $3 \times \frac{1}{4}$	10068008	20817	900979PC	PF01379
Fitting Reducer, copper, LD, FTGxP, $3 \times \frac{1}{2}$	10068020	20818	900975PC	PF01378
Fitting Reducer, copper, LD, FTGxP, 3×2	10068010	20763	900970PC	PF01377
Fitting Reducer, copper, LD, FTGxP, $3 \times \frac{2}{3}$	10057500	20768	9009650PC	PF01376
Fitting Reducer, copper, LD, FTGxP, $4 \times \frac{3}{4}$	10068022			
Fitting Reducer, copper, LD, FTGxP, 4×2	10068016	20773	901045PC	PF01389
Fitting Reducer, copper, LD, FTGxP, $4 \times \frac{2}{3}$	10057503	20778	9010400PC	PF01388
Fitting Reducer, copper, LD, FTGxP, 4×3	10057506	20783	9010350PC	PF01387

adapters

P x FPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{8}$	10075780	79295	9024805PC	PF01232
Female Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10075750	79300	9024650PC	PF01231
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{4}$	10075782	79305	9024750PC	PF01230
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{3}{4} \times \frac{1}{2}$	10075784	79310	9025100PC	PF01247
Female Adapter, Lead Free Brass, SD, PxFPT, $\frac{3}{4} \times \frac{3}{4}$	10075752	79315	9024950PC	PF01246
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $1 \times \frac{1}{2}$	10075796	79320	9025375PC	PF01265
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $1 \times \frac{3}{4}$	10075798	79325	9025400PC	PF01264
Female Adapter, Lead Free Brass, SD, PxFPT, 1×1	10075754	79330	9025250PC	PF01263
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $1 \times \frac{1}{4}$	10075800	79335	9025355PC	PF01261
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10075786	79340		
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times 1$	10075788	79345	9025560PC	PF01272
Female Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{4} \times \frac{1}{4}$	10075756	79350	9025550PC	PF01271
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{4} \times \frac{1}{2}$	10075790	79355	9025655PC	PF01270
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{3}{4}$	10075792			
Female Reducing Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{4}$	10075794	79360	9025910PC	PF01280
Female Adapter, Lead Free Brass, SD, PxFPT, $\frac{1}{2} \times \frac{1}{2}$	10075758	79365	9025900PC	PF01279
Female Adapter, Lead Free Brass, SD, PxFPT, 2×2	10075760	79370	9026150PC	PF01287

FTG x FPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{2}$ x $\frac{3}{8}$	10075764	79425	9028405PC	
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{2}$ x $\frac{1}{2}$	10075762	79430	9028305PC	PF015310
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{2}$ x $\frac{3}{4}$	10075766	79435	9028955PC	PF01534
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{3}{4}$ x $\frac{1}{2}$	10075770	79440	9028115PC	PF01547
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{3}{4}$ x $\frac{3}{4}$	10075768	79445	9028555PC	PF01546
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, 1x $\frac{1}{2}$	10075804	79455	9028355PC	
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, 1x 1	10075772	79450	9028755PC	PF01563
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{4}$ x $\frac{1}{2}$	10075802	79460	9028445PC	
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{4}$ x $\frac{1}{4}$	10075774	79465	9029005PC	PF01571
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, $\frac{1}{2}$ x $\frac{1}{2}$	10075776	79470	9029155PC	PF01579
Female Street Adapter, Lead Free Brass, SD, FTGxFPT, 2 x 2	10075778	79475	9029305PC	PF01587

P x MPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x $\frac{3}{8}$	10075836	79210	9030805PC	PF01132
Male Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x $\frac{1}{2}$	10075806	79215	9030600PC	PF01131
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x $\frac{3}{4}$	10075838	79220	9030750PC	PF01130
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{3}{4}$ x $\frac{1}{2}$	10075840	79225	9031200PC	PF01147
Male Adapter, Lead Free Brass, SD, PxMPT, $\frac{3}{4}$ x $\frac{3}{4}$	10075808	79230	9030950PC	PF01146
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{3}{4}$ x 1	10075842	79235		PF01145
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, 1x $\frac{3}{4}$	10075854	79240	9031550PC	PF01164
Male Adapter, Lead Free Brass, SD, PxMPT, 1x 1	10075844	79245	9031350PC	PF01163
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, 1x $\frac{1}{4}$	10075856	79250	9031500PC	PF01162
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{4}$ x 1	10075846	79255	9031850PC	PF01172
Male Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{4}$ x $\frac{1}{4}$	10075810	79260	9031700PC	PF01171
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{4}$ x $\frac{1}{2}$	10075848	79265	9031800PC	PF01170
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x $\frac{1}{4}$	10075850	79270	9032100PC	PF01180
Male Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x $\frac{1}{2}$	10075812	79275	9032000PC	PF01179
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, $\frac{1}{2}$ x 2	10075852	79280		PF01178
Male Reducing Adapter, Lead Free Brass, SD, PxMPT, 2 x $\frac{1}{2}$	10075858	79285		PF01188
Male Adapter, Lead Free Brass, SD, PxMPT, 2 x 2	10075814	79290	9032300PC	PF01187
Male Adapter - International, copper, LD, PxMPT, $\frac{3}{8}$ x $\frac{3}{8}$	10061982	20823	9032650PC	PF01196
Male Adapter - International, copper, LD, PxMPT, 3 x 3	10061987	20828	9032700PC	PF01199
Male Adapter - International, copper, LD, PxMPT, 4 x 4	10061992	20838	9032750PC	PF01150

FTG x MPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Male Reducing Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{1}{2}$ x $\frac{3}{8}$	10075818	79375	9034005PC	
Male Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{1}{2}$ x $\frac{1}{2}$	10075816	79380	9033905PC	PF01431
Male Reducing Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{1}{2}$ x $\frac{3}{4}$	10075820	79385	9033955PC	PF01434
Male Reducing Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{3}{4}$ x $\frac{1}{2}$	10075824	79390	9034105PC	PF01447
Male Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{3}{4}$ x $\frac{3}{4}$	10075822	79395	9034055PC	PF01446
Male Reducing Street Adapter, Lead Free Brass, SD, FTGxM, 1x $\frac{3}{4}$	10075832	79400	9034125PC	PF01464
Male Street Adapter, Lead Free Brass, SD, FTGxM, 1x 1	10075826	79405	9034305PC	PF01463
Male Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{1}{4}$ x $\frac{1}{2}$	10075828	79410	9034405PC	PF01471
Male Street Adapter, Lead Free Brass, SD, FTGxM, $\frac{1}{2}$ x $\frac{1}{2}$	10075830	79415	9034505PC	PF01479
Male Street Adapter, Lead Free Brass, SD, FTGxM, 2 x 2	10075834	79420	9034605PC	PF01487

flange adapter | ANSI class 125

P x FLANGE

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
flange (ANSI #125), copper, SD, PxFLG(BP:4), 2	10075702	79695		PF02933
flange (ANSI #125), copper, LD, PxFLG(BP:4), 2½	10061761			
flange (ANSI #125), copper, LD, PxFLG(BP:4), 3	10061767			
flange (ANSI #125), copper, LD, PxFLG(BP:4), 4	10061736			

flange adapter | ANSI class 150

P x flange

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
flange (ANSI #150), copper, LD, PxFLG(BP:4), 2½	10061763	20853		
flange (ANSI #150), copper, LD, PxFLG(BP:4), 3	10061769	20858		
flange (ANSI #150), copper, LD, PxFLG(BP:4), 4	10061738	20863		

union

P x P

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Union, Lead Free Brass, SD, PxP, ½ x ½	10075860	79125	9256400PC	PF08003
Union, Lead Free Brass, SD, PxP, ¾ x ¾	10075862	79130	9256500PC	PF08004
Union, Lead Free Brass, SD, PxP, 1x1	10075864	79135	9256600PC	PF08005
Union, Lead Free Brass, SD, PxP, 1¼ x 1¼	10075866	79140	9256630PC	PF11205
Union, Lead Free Brass, SD, PxP, 1½ x 1½	10075868	79145	9256640PC	PF11206
Union, Lead Free Brass, SD, PxP, 2 x 2	10075870	79150	9256650PC	PF11207

P x FPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Female Union, Lead Free Brass, SD, PxFPT, ½ x ½	10075872	79700	9256700PC	PF11422
Female Union, Lead Free Brass, SD, PxFPT, ¾ x ¾	10075874	79705	9256710PC	PF11423
Female Union, Lead Free Brass, SD, PxFPT, 1x1	10075876	79710	9256720PC	PF11424
Female Union, Lead Free Brass, SD, PxFPT, 1¼ x 1¼	10075878	79715	9256730PC	PF11425
Female Union, Lead Free Brass, SD, PxFPT, 1½ x 1½	10075880	79720	9256740PC	PF11426
Female Union, Lead Free Brass, SD, PxFPT, 2 x 2	10075882	79725	9256750PC	PF11427

P x MPT

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Male Union, Lead Free Brass, SD, PxMPT, ½ x ½	10075884	79730	9256800PC	PF11210
Male Union, Lead Free Brass, SD, PxMPT, ¾ x ¾	10075886	79735	9256810PC	PF11211
Male Union, Lead Free Brass, SD, PxMPT, 1x1	10075888	79740	9256820PC	PF11212
Male Union, Lead Free Brass, SD, PxMPT, 1¼ x 1¼	10075890	79745	9256830PC	PF11213
Male Union, Lead Free Brass, SD, PxMPT, 1½ x 1½	10075892	79750	9256840PC	PF11214
Male Union, Lead Free Brass, SD, PxMPT, 2 x 2	10075894	79755	9256850PC	PF11215

P x FPT (dielectric union)

DESCRIPTION	APOLLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Dielectric Union, copper, SD, PxFPT, ½ x ½	10077914	79155	H-81102W	PF 11503
Dielectric Union, copper, SD, PxFPT, ¾ x ¾	10077920	79160	H-81103W	PF 11504
Dielectric Union, copper, SD, PxFPT, 1x1	10077926	79165	H-81104W	PF 11505
Dielectric Union, copper, SD, PxFPT, 1¼ x 1¼	10077932	79170		PF 11506
Dielectric Union, copper, SD, PxFPT, 1½ x 1½	10077938	79175		PF 11507
Dielectric Union, copper, SD, PxFPT, 2 x 2	10077944	79180		PF 11508

tube cap

P x CAP

DESCRIPTION	APOLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Tube Cap, copper, SD, PxCAP, 1/2	10077850	77712	9172650PC	PF07007
Tube Cap, copper, SD, PxCAP, 3/4	10077851	77717	9172700PC	PF07009
Tube Cap, copper, SD, PxCAP, 1	10077852	77722	9172750PC	PF07011
Tube Cap, copper, SD, PxCAP, 1 1/4	10075172	77727	9172800PC	PF07012
Tube Cap, copper, SD, PxCAP, 1 1/2	10075174	77732	9172850PC	PF07013
Tube Cap, copper, SD, PxCAP, 2	10075176	77737	9172900PC	PF07014
Tube Cap, copper, LD, PxCAP, 2 1/2	10062142	20833	9172950PC	PF07015
Tube Cap, copper, LD, PxCAP, 3	10062147	20843	9173000PC	PF07016
Tube Cap, copper, LD, PxCAP, 4	10062152	20848	9173100PC	PF07018

cross-over

P x P

DESCRIPTION	APOLOPRESS	VIEGA PROGRESS	NIBCO PRESS	MUELLER STREAMLINE PRS
Cross-Over, copper, SD, PxP, 1/2 x 1/2	10075370	77742	9280250PC	PF02535
Cross-Over, copper, SD, PxP, 3/4 x 3/4	10075372	77747	928035PC	PF02583

WARRANTY AND LIMITATIONS OF LIABILITY

Aalberts integrated piping systems Americas, 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, Aalberts integrated piping systems Americas, Inc. will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Aalberts integrated piping systems Americas, Inc.'s recommendations and standard industry practice, correct such defects by suitable repair or replacement at Aalberts integrated piping systems Americas, Inc.'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: Aalberts integrated piping systems Americas, 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.

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TERMS & CONDITIONS OF SALE

- Payment net 30 days.
- All prices F.O.B. shipping point with freight allowed on orders containing at least: \$3,000 net minimum of ApolloPress fittings / \$6,000 net minimum of ApolloPress valves, to all shipping points within the United States excluding Alaska and Hawaii.
- 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.
- 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.
- 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.

Since the inception in 1975, Aalberts is where technology matters and real progress can be made - humanly, financially and environmentally. At Aalberts, we create mission-critical products surrounding valve and connection technology supporting our brand, "Apollo".

The manufacturing of Consolidated Brass Company (later called Conbraco) began in 1928, in Detroit, Michigan with a focus on ball cocks, air cocks and similar products. In 1955, the manufacturing operation moved to the Carolinas spanning North and South Carolina with 3 facilities. In 2010, Aalberts, a global Dutch company, purchased Conbraco. Today the "Apollo" brand is manufactured under the company name, Aalberts integrated piping systems, in 3 locations throughout South Carolina. Over the last 90 years the product portfolio has continued to grow to encompass ball valves, butterfly valves, safety relief valves, control valves, mixing valves and backflow preventors.

These systems are applicable for key verticals such as residential, commercial, industrial, and utility. Our products are designed and developed by our team of innovators and engineers. Our design services team can assist in helping you determine the best techniques for your application with our products. We are the only company that truly offers customers a complete solution every time that is made and sourced from the same organization.

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