

# ALL PRODUCTS CATALOG

## 2015



- Ball Valves
- Butterfly Valves
- Gate, Globe and Check Valves
- APOLLOXPRESS®
- Automation Products
- Pipeline Strainers
- Backflow Preventers
- Plumbing & Heating Products
- Safety Relief Valves





# A history of Quality, Service and Innovation

Now in its ninth decade, Conbraco Industries, Inc. is a leading manufacturer of fl w control products for U.S. and international markets. The company's headquarters is based in Matthews, North Carolina with manufacturing plants and foundries located in Pageland and Conway, South Carolina.

Conbraco has a history of new product development and innovation that dates back to the company's inception in 1928. Today, the Conbraco line of products is marketed under the "Apollo Valves" brand and includes: ball valves, butterfly valves, backfl w prevention devices, water pressure reducing valves, mixing valves, safety relief valves, water gauges, strainers, actuation and APOLLOXPRESS® products.

Conbraco's vertically integrated manufacturing ensures a consistency of production, testing, quality and availability. You can be assured that Conbraco fl w control products will deliver long term reliability. All manufacturing facilities are ISO 9001:2008 certifie .

The Conbraco line continues to expand with new products, designs and advanced materials to better serve the needs of our customers. Markets served include: chemical processing, pulp and paper, petroleum, residential and commercial plumbing and heating, OEM, irrigation, water works, and fi e protection.



**PAGELAND, SC**  
Bronze Foundry and Manufacturing Plant



**PAGELAND, SC**  
Final Assembly and Distribution Center



**CONWAY, SC**  
Steel Foundry and Manufacturing Plant



**MATTHEWS, NC**  
Corporate Headquarters



**3D CAD Revit Models**

www.apollovalves.com

**available formats:  
revit, dwg, par, & sat**

Drawings also available for **LEAD FREE** models.

Throughout this catalog, products that have a Lead Free\* option will be identified with this log .



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

\*\* Any imported products are clearly identified as "Apollo International™" or "Conbraco™ International".

Conbraco Industries offers a wide range of Apollo® products for potable and non-potable applications. When the use of lead free valves is required by code, specification or legislation, it is the sole responsibility of our customers to ensure that only lead free Apollo® products are installed in systems intended for potable water service. Further information related to our product offering and the **U.S. Safe Drinking Water Act (SDWA)** is available by contacting Conbraco Customer Service.

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# ALL PRODUCTS CATALOG

## Two Piece and Unibody Ball Valves – Bronze/Brass

### FEATURES:

- Steel or 304 stainless steel handle with hole for tagging.
- Blow-out resistant stem.
- RPTFE seats and seals, stuffing box ring and seal washer.
- 71-AR, 76-AR, 77-AR, 77C-100, 77C-200, 77CLF-100, 77CLF-200, 77D-14X, 77W, 77WLF and 89-AR have MPTFE as standard

Note: Seat material determines practical working pressures. Pressures referenced are body ratings.

### 32 SERIES



Standard port economy bronze ball valve. Blow-out proof stem design. Adjustable packing gland. 400 psig CWP, cold non-shock. 125 psig saturated steam. Vacuum service to 29"Hg. Sizes: 1/4" to 2". Available with threaded ends.

400 CWP

### 70/70LF SERIES



Standard port threaded bronze ball valve. This Apollo valve is the most widely used and trusted bronze ball valve in the industry. It features blowout-proof stem, RPTFE seats and stuffing box ring and chromium-plated ball. 70LF features EZ-Solder™ bronze and NSF/ANSI 61 and NSF/ANSI 372 approvals. Sizes: 1/4" to 4".



600 CWP

### 70-HC/70LF-HC SERIES



Cap & chain valve with 3/4 inch hose connection, heavy brass cap and reverse handle. Ideally suited for direct connections to hoses. Valve features a securely attached cover with chain which prevents damage to hose threads. Sizes: 1/2" to 1", NPT and Solder.

600 CWP



### 71 SERIES



Bronze ball valve with mounting pad; spring return handle available as model 71-500. Sizes: 3/4" to 3".

600 CWP

### 75 SERIES



Bronze padlockable ball valve; rated 600 psig CWP; stainless steel lever and nut optional. Automatic drain available. Sizes: 1/4" to 2".

600 CWP

### 77 SERIES



Bronze full port ball valve with mounting pad; designed for easy actuator mounting. Sizes: 1/4" through 2-1/2". Available in NPT and SAE threads. Also available with solder connections - no mounting pads.

600 CWP

### 77C/77CLF SERIES



Full port "Contractor Series" cast bronze ball valve with solid chrome-plated ball for superior flow characteristics. NPT and solder end connections available. 77CLF features EZ-Solder™ bronze and NSF/ANSI 61 and NSF/ANSI 372 approvals. Sizes: 1/4" to 2-1/2".

600 CWP



### 77F/77FLF SERIES



Full port forged brass ball valves for a wide range of plumbing and heating applications. Reliable operation with maximum economy. Available with both NPT and solder end connections. The 77FLF Lead-Free version is ANSI 3rd party certified Lead Free and ideal for installation in potable water systems. All are Made in USA, ARRA compliant, and carry most pertinent agency approvals. Sizes: 1/4" to 4".

600 CWP



# ALL PRODUCTS CATALOG

## Two Piece and Unibody Ball Valves – Bronze/Brass

### 77V/77VLF SERIES



The APOLLOXPRESS® 77V Series Press forged brass ball valve is ideal for installation in most HVAC systems. Features Leak Before Press® with a 250 psig max. working pressure. Complies with ARRA, IAPMO IGC-157 Ball Valves, & Directive 2002/95/CE (RoHS). The 77VLF is NSF/ANSI 61 and NSF/ANSI 372 certified and approved for potable water. All valves 100% factory tested and Made in USA. Sizes: 1/2" to 4".

### 77W/77WLF SERIES



APOLLOXPRESS® cast bronze ball valves are designed for direct mechanical connection to copper tubing in sizes 1/2"-2". The 77WLF complies with NSF/ANSI 61 and NSF/ANSI 372 and is ideal for plumbing and heating systems. The press connections ensure easy installation with standard crimping tools. Rated 250 CWP, now with Leak Before Press® feature. 250 CWP

### 9A SERIES



Bronze Uni-Body Heavy Pattern Ball Valve. Compact design with adjustable packing gland. Sizes: 1/4" to 2".

600 CWP/150 SWP

### 90 SERIES



Compact bronze unibody ball valve that's UL listed at 400 psig CWP for inert gases and flammable liquids. Also ideal for general purpose applications. Sizes: 1/2" to 2".



400 CWP

## Special Application Valves

### 7K SERIES



Auto Draining; bronze full port ball valve with 1/4" NPT tap for drain. Available with lock-closed-only lever. Sizes: 1/4" to 2-1/2".

### 7K SV & 77K SV



Full port bronze Secure Vent™ valves. Ideal for automatic venting of compressed air for powering tools and equipment when the valve is in the closed position. Live loaded seats on upstream side. Sizes: 1/4" - 2" with a variety of handles.

### 77G-UL SERIES



77G-UL Series ball valve is a UL and CSA listed fuel shut off valve approved for a variety of flammable gasses and liquids. Bronze body, premium multi-fill MPTFE seats and stem packing. "Solid Ball" design for true full port flow. Sizes: 1/2" to 1" NPT.

### 80 SERIES



Bronze ball valve for LP gas, natural gas, flammable liquids and heated oil. Adjustable packing gland, UL listed. Sizes: 1/4" to 3".

### GB-10 SERIES – MODEL GBV



CSA design-certified manual shut-off ball valves for many fuel types for up to 5 psig. Capacities: 300,000 to 1.1 million BTu/hour. Standard female x female threaded connection. Sizes: 3/8" to 1".

### GB-50 SERIES – MODEL GBVB



UL and CSA design-certified manual gas shut-off ball valves for many fuel types for up to 5 psig. Standard female threaded connections. Available with single or dual tapped gas ports. Sizes: 1/2" to 2".

# ALL PRODUCTS CATALOG

## Two Piece and Unibody Ball Valves – Carbon Steel / Stainless Steel / Alloys

### RATINGS

#### CARBON STEEL VALVES (73A, 89, 92 & 93 SERIES):

1/4" through 1": 2000 psig CWP, Non-shock  
 1.25" through 2": 1500 psig CWP, Non-shock  
 2.5" and 3": 1000 psig (89 Series only)

### 73A SERIES



Forged carbon steel construction, standard port design. RPTFE seats standard with raised handle stops. NACE compliant with SS trim. Sizes 1/4" to 2".

28 options available.

### 89 SERIES



Carbon steel ball valve with threaded ends; MPTFE seats standard; easy actuator mounting. Sizes 1/4" to 3". (Actuator Ready version: 89-ARX-64)

30 options available.

### 92-100 SERIES



Compact bar stock steel unibody ball valve. Certified fire safe with graphite packing; RPTFE seats, blowout-proof stem design. Sizes 1/4" to 2".

23 options available.

### 93 SERIES



Carbon steel unibody ball valve; RPTFE seats; cold, non-shock. Optional meets API 607 fire safe standards. Sizes 1/4" to 2".

13 options available.

### RATINGS

#### STAINLESS STEEL VALVES (76 & 96 SERIES):

1/4" through 1": 2000 psig CWP  
 1.25" through 2": 1500 psig CWP  
 2.5" and 3": 1000 psig CWP (76 Series only)

**76F-A SERIES:**  
 1000 psig CWP

### 76-300/400 SERIES



Stainless steel ball valve with double union ends; blow-out proof stem, all wetted metallic parts are 316 stainless steel. RPTFE seats, adjustable packing gland and stainless steel lever and nut. Sizes 1/2" to 2".

29 options available.

### 76F-A SERIES



Stainless steel full port valve. Threaded ends, blowout proof stem, investment cast body, 316 SS components, including stainless handle. RPTFE seats and long life MPTFE packing. NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified. Sizes 1/4" to 2".

20 options available

### 96 SERIES



Stainless steel unibody ball valve; RPTFE seats; optional meets API 607 fire safe design standards; available with "tee", round, and cam lock handles.

18 options available.

# ALL PRODUCTS CATALOG

## Two Piece and Unibody Ball Valves – Carbon Steel / Stainless Steel / Alloys

### 74 SERIES



Chemical resistant nickel ball valve, RPTFE seats, blow-out resistant stem, stainless steel ever and nut and precision investment cast components. 800 psig CWP. Sizes 1/2" to 2".

23 options available.

### 76 SERIES



Stainless steel standard ball valve; investment cast components. RPTFE seats. Sizes 1/4" to 3". 76-600 Series - Stainless steel 3-way diversion ball valve; 800 psig WOG, investment cast components. NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.

29 options available.

### 399/87A-400



Alloy 20 two piece, three piece, and Class 150 flanged ball valves. Reinforced seats; many other options available. Two piece sizes 1/4" to 2". Three piece sizes 1/2"-2". Flanged sizes 1/2" to 4".

30 options available.

## Apollo® AR™ Ball Valves

### APOLLO AR™ BALL VALVE RATINGS

Apollo AR actuator ready ball valves feature an ISO 5211-style mounting pad with no handle to throw away. They are made for high cycle applications, and like all Apollo valves, the bodies are cast to the highest metallurgical standards for long service life.

They are available in stainless steel, carbon steel and bronze. They feature a live loaded multi-stacked "V"-ring stem packing. All models come standard with a stainless steel ball and stem, and multifill seats, seals and packing rated up to 2000 psig or to 450°F, or to 250 psig saturated steam.

### 71-AR SERIES



Bronze standard port ball valve with threaded ends, ISO mounting pad, and advanced live loaded packing design. Latch lock handle available. Sizes 3/4" to 3".

600 CWP

### 76-AR SERIES



Stainless steel standard port ball valve. Investment cast components; ISO mounting pad and advanced live loaded packing design. Latch lock handle available. Sizes 1/4" to 3".

See page 6 for CWP.

### 77-AR SERIES



Bronze full port ball valve with threaded ends. ISO mounting pad and advanced live loaded packing design. Latch lock handle available. Sizes 1/4" to 2".

600 CWP

### 77D SERIES



Full port bronze ball valve with an integral ISO 5211 mounting pad. Double o-ring stem seal and MPTFE seats and bearings. Sizes 1/2" to 2" with standard stainless steel ball and stem.

600 CWP

### 89-AR SERIES



Carbon steel standard port ball valve. Investment cast components, ISO mounting pad and advanced live loaded packing design. Latch lock handle available. Sizes 1/4" to 3".

See page 6 for CWP.

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## High Pressure Two Piece

- Blow-out proof stem
- RPTFE seats
- Meets WW-V-35C federal standards
- Fire safe by design w/graphite packing
- Expanded pressure ranges
- High performance alloys

### 72 SERIES



Carbon steel high pressure ball valve. RPTFE seats. Rated 3000 psig. Sizes 1/4" to 2".

16 options available.

## Apollo International™ Ball Valves

### 6PLF SERIES



The Apollo International™, 6PLF Series Class 125 cast iron ball valve offers premium features including FDA epoxy coating, stainless steel ball and stem construction, NSF/ANSI 61 approval and NSF/ANSI 372 certified Lead Free. A compact and cost effective alternative to conventional cast iron gate valves, the 6PLF ball valve is ideal for both potable water and general HVAC applications. Sizes: 2" to 10". 200 CWP/125 SWP

### 94A SERIES



Apollo International™ forged brass full port ball valve in thread and sweat connections. An economical valve that is available in 1/4" to 4" in NPT and 1/2" to 4" in sweat connections. Rated at 600 psig cold working pressure 1/4"-2" and 400 psig 2-1/2"-4". CSA, UL, MSS SP-110, and FM ratings.

600 & 400 CWP



### 94ALF-A SERIES



Apollo International™ forged lead free brass full port ball valve in thread and sweat connections. An economical valve that is available in 1/4" to 4" in NPT and 1/2" to 4" in sweat connections. Rated at 600 psig cold working pressure 1/4"-2" and 400 psig 2-1/2"-4". NSF/ANSI 61-8, NSF/ANSI 372 lead free, MSS SP-110, CSA, UL, IAMPO and FM ratings. 600 & 400 CWP

### 94 MBV SERIES



Apollo International™ mini ball valve. Competitive, conventional port valves, constructed of heavy-duty forged brass, with 100% Teflon seats and gland follower with double Viton o-rings to prevent stem leakage. Reversible handle for tight space applications. CSA 1/2 psig and ASME 2 and 5 psig gas ratings. Operating temperatures from -40°F to 300°F. Sizes: 1/8" and 1/4". 600 CWP



### 94XLF SERIES



The Apollo® International 94XLF PEX Lead Free DZR forged brass ball valves combine reliable operation with maximum economy. Ideal for plumbing and heating applications including potable water. Valves are ANSI 3rd party Lead Free certified and listed to NSF/ANSI 14, NSF/ANSI 61 and NSF/ANSI 372.

### 95ALF SERIES



Apollo International™ Lead Free forged brass full port stop and waste ball valve. Available in 1/2" to 1" threaded and sweat connections. This valve features a side drain ideal for plumbing or hydronic heating systems. NSF/ANSI 61-8 and NSF/ANSI 372 Lead Free certified.

600 CWP



# ALL PRODUCTS CATALOG

## ASME Flanged Valves

### 87A-100 SERIES



Stainless steel ASME Class 150 flanged valve. Regular port, ISO 5211 actuator mounting pad. Sizes 1-1/2" to 10".

87A-100 Sizes 1-1/2" to 4" are NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.

23 options available.

### 87A-200 SERIES



Stainless steel ASME Class 150 flanged valve. Full port, ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

87A-200 Sizes 1/2" to 4" are NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.

23 options available.

### 87A-700 SERIES



Stainless steel ASME Class 300 flanged valve. Regular port, ISO 5211 actuator mounting pad. Sizes 1/2" to 10".

87A-700 Sizes 1/2" to 4" are NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.

23 options available.

### 87A-900 SERIES



Stainless steel ASME Class 300 flanged valve. Full port, ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

87A-900 Sizes 1/2" to 4" are NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.

23 options available.

### 87A-400 SERIES



Alloy 20 ASME Class 150 flanged valve. Regular port, ISO 5211 actuator mounting pad. Sizes 1-1/2" to 10".

23 options available.

### 87A-500 SERIES



Alloy 20 ASME Class 150 flanged valve. Full port, ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

23 options available.

### 87A-600 SERIES



Alloy 20 ASME Class 300 flanged valve. Full port, ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

23 options available.

### 87A-800 SERIES



Alloy 20 ASME Class 300 flanged valve. Regular port, ISO 5211 actuator mounting pad. Sizes 1-1/2" to 10".

23 options available.

### 87B-100 SERIES



Stainless steel ASME Class 150 flanged valve. Regular port; ISO 5211 actuator mounting pad. Sizes 3" to 10".

25 options available.

#### NOTE:

Other alloys such as Hastelloy, Duplex & Super Duplex, Nickel & Nickel-Copper Alloys, and Titanium are available upon request. For full list of features, standard compliance, and certifications; see technical data sheets.

# ALL PRODUCTS CATALOG

## ASME Flanged Valves

### 88A-100 SERIES



Carbon steel ASME Class 150 flanged valve. Regular port; ISO 5211 actuator mounting pad. Sizes 1/2" to 10".

25 options available.

### 88A-200 SERIES



Carbon steel ASME Class 150 flanged valve. Full port; ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

25 options available.

### 88A-700 SERIES



Carbon steel ASME Class 300 flanged valve. Regular port; ISO 5211 actuator mounting pad. Sizes 1/2" to 10".

25 options available.

### 88A-900 SERIES



Carbon steel ASME Class 300 flanged valve. Full port; ISO 5211 actuator mounting pad. Sizes 1/2" to 12".

25 options available.

### 88B-100 SERIES



Carbon steel ASME Class 150 flanged valve. Regular port; ISO 5211 actuator mounting pad. Sizes 3" to 10".

25 options available.

### 87A-F00 SERIES



Apollo® 87A-F Series stainless steel ASME Class 600 flange ball valves are available in sizes 1" to 8" (DN25 to DN200). Other alloys such as Alloy 20, Hastelloy, Duplex & Super Duplex, Nickel & Nickel-Copper Alloys, and Titanium are available upon request. For full list of features, standard compliance, & certifications, see technical data sheets.

### 88A-F00 SERIES



Apollo® 88A-F Series stainless steel ASME Class 600 flange ball valves are available in sizes 1" to 8" (DN25 to DN200). Other alloys such as Alloy 20, Hastelloy, Duplex & Super Duplex, Nickel & Nickel-Copper Alloys, and Titanium are available upon request. For full list of features, standard compliance, & certifications, see technical data sheets.

### 88L-F40 SERIES



Apollo® 88L-F Series low temp carbon steel ASME Class 600 flange ball valves are available in sizes 1" to 8" (DN25 to DN200). Other alloys such as Alloy 20, Hastelloy, Duplex & Super Duplex, Nickel & Nickel-Copper Alloys, and Titanium are available upon request. For full list of features, standard compliance, & certifications, see technical data sheets.

# ALL PRODUCTS CATALOG

## Three Piece Ball Valves

### 82/82LF SERIES



Bronze three piece full port ball valve; rated 600 psig CWP (1/4" - 2-1/2"), 400 psig CWP (3" & 6"); threaded, solder and brazed tube ends. In-line serviceable. Model 82LF features "EZ-Solder" bronze suitable for solders with melting temperatures < 500° F.



### 82-200/ 82LF-200 & 82-240/82LF-240 SERIES



Three piece full port valve with brazed tubing. This valve is useful in pharmaceutical, medical gas and pneumatic applications as well as water service where valves should not be disassembled prior to soldering or brazing.



### 83A SERIES



Carbon steel, full port three piece ball valve. 1500 psig CWP; stainless ball and stem, ISO 5211 mounting pad, stainless enclosed fasteners and topworks. Multi-piece V-ring packing, gland plate style packing adjustment and lockable. Available with threaded, socket weld and butt weld ends. Sizes 3/8" to 2". Limited options.

### 83B SERIES (ASME B16.34 DESIGN)



Carbon steel, full port three piece ball valve. Class 600 (all sizes): stainless ball & stem, ASME B16.34, ISO 5211 mounting pad, enclosed B8M fasteners, stainless topworks, multi-piece V-ring packing. Gland plate style packing adjustment, static grounding, spiral gaskets and lockable. Available with threaded, socket weld and butt weld ends. Sizes 3/8" to 2". Numerous options including live-loading or tested to API 607 5th edition.

### 86A SERIES



Stainless steel, full port three piece ball valve. 1500 psig CWP, ISO 5211 mounting pad, enclosed fasteners, multi-piece V-ring packing, gland plate style packing adjustment and lockable. Available with threaded, socket weld and butt weld ends. Sizes 3/8" to 2". Limited options. NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.



### 86B SERIES (ASME B16.34 DESIGN)



Stainless steel, full port three piece ball valve. Class 600; ASME B16.34, (all sizes), ISO 5211 mounting pad, enclosed B8M fasteners, stainless topworks, multi-piece V-ring packing. Gland plate style packing adjustment, static grounding, spiral gaskets and lockable. Available with threaded, socket weld and butt weld ends. Sizes 3/8" to 2". Numerous options including live-loading or tested to API 607 5th edition. NSF/ANSI 61 and NSF/ANSI 372 Lead Free certified.



# ALL PRODUCTS CATALOG

## Top Entry Apollo® Ball Valves

- Sizes 1/2" to 12" (DN 15 to DN 300)
- Temperatures - 150°F to 1,000°F (-101°C to 538°C)
- ASME Pressure Class 150, 300, 600
- 18 seating materials, four different designs
- High strength encapsulated metal seat holders
- 15 body materials
- 11 ball and stem materials
- 7 end configurations
- ISO 5211 Top Flange of bonnet

### FLANGED SERIES



In 150, 300 and 600 ASME Class. Materials: Alloy 20, carbon steel, Hastelloy C, M35-1, nickel, stainless steel, titanium and others upon request. Sizes 1/2" to 12".

### BUTT WELD SERIES



Available in ASME Class 300 to 8" and Class 600 to 6" size. Schedule 10, 40 and some 80 pipe ends offered. A full range of body, seat and seal materials are available.

### NPT AND SOCKET WELD SERIES



Available in 300 ASME Class sizes 1/4" to 3"; and 600 ASME Class 1/4" to 2". Materials: Alloy 20, carbon steel, Hastelloy C, M35-1, nickel, stainless steel, titanium and others upon request. Full port available in 300 ASME class sizes 1" to 2" and 600 ASME class sizes 1" and 1-1/2".

### STEAM JACKETED TOP ENTRY VALVES



Apollo Top Entry ball valves are ideally suited for jacketed applications. The top entry concept allows for continued access to stem packing and valve internals for ease of maintenance without disturbing the jacket itself or removing the valve from the pipeline.

## Metal Seated, Globe Pattern, Vee-Tip, Needle Valves

### 60B-1 (STEEL) AND 60B-7 (STAINLESS) SERIES



Apollo Needle Valves, with Integral metal-to-metal seat design, are ideally suited for use in instrumentation lines, sampling lines and flow control applications. Also available in an angled design 60B-2 (steel) and 60B-8 (stainless steel) Series. Sizes: 1/4" to 1".

10,000 CWP

### 60A-1 (STEEL) AND 60A-7 (STAINLESS) SERIES



Apollo Needle Valves, with Integral metal-to-metal seat design, are ideally suited for use in instrumentation lines, sampling lines and flow control applications. Meets the requirements of MSS SP-99 and MSS SP-105. Sizes: 1/4" to 1".

5,000 CWP

# ALL PRODUCTS CATALOG

## Apollo International™ Double Offset High Performance Butterfly Valves

### 215/230/260



#### NOW AVAILABLE!

Soft Seat and Fire-Safe Seat

2" - 24" Class 150 (215 L/W)

2" - 24" Class 300 (230 L/W)

3" - 12" Class 600 (260 L/W)

Carbon and Stainless Steel Models Available

Lug and Wafer styles available. ASME B16.10

Face to Face, ASME B16.5 Flange Drilling, and

API 609. For full list of standard compliance and certifications, see HPBFV technical data sheets.

**NEW**

## Resilient Seat Butterfly Valves - Assembled & Tested in USA

### LD/WD 145 (ASSEMBLED & TESTED IN USA)



General purpose ductile iron design for use in plumbing, industrial and HVAC/mechanical markets. The WD145 Model is a wafer style valve; the LD145 Model is a lug style. Both styles are rated at 200 psig bubble-tight shut off. LD/WD 145 Series meet MSS SP-67 and API 609 specifications. Lug and Wafer sizes 2" to 12". Assembled and tested in the USA. NSF/ANSI 372 certified Lead Free.

**NEW**

## Apollo International™ Resilient Seat Butterfly Valves

### LD/WD 141



General purpose ductile iron design for use in plumbing, industrial and HVAC/mechanical markets. The WD141 Model is a wafer style valve; the LD141 Model is a lug style. Both styles are rated at 200 psig bubble-tight shut off. LD/WD 141 Series meet MSS SP-67 and API 609 specifications. Lug sizes 2" to 24". Wafer sizes 2" to 12". NSF/ANSI 372 certified Lead Free.

**LEAD FREE**

### LC149



The Apollo® LC149 Contractor Grade Series Cast Iron Butterfly Valves are ideal for use in plumbing, industrial and HVAC/Mechanical applications. The LC149 Series is a lug style valve designed to be economical yet full featured. Features bronze disc and EPDM seats. Lug sizes 2" to 12". NSF/ANSI 372 certified Lead Free.

**LEAD FREE**

# ALL PRODUCTS CATALOG

## Gate, Globe & Check Valves

### 30/30LF SERIES



Made in the USA. Class 125, 150, 300 and 200 CWP bronze gate valves meet MSS SP-80. Thread and union bonnet, rising and non-rising stem. Irrigation and lead free models available. Sizes 1/4" through 3", NPT and solder. New Class 300 and SS seat option. 30LF also meets MSS SP-139 requirements.

### 33/33LF SERIES



Made in the USA. Class 125, 150, 300 and 200 CWP bronze globe valves meet MSS SP-80. Thread and union bonnet, bronze and PTFE seat options. Lead free models available. Sizes 1/4" through 3", NPT and solder. New Class 300 and SS disc and seat ring option. 33LF also meets MSS SP-139 requirements.

### 61Y/61YLF SERIES



The Apollo Model 61Y Swing Check provides a cost effective "made in the USA" alternative to globally sourced check valves. These valves are cast, machined, assembled, and tested in South Carolina. Bronze and PTFE seat models. Class 125, 150, 300 and 200 CWP models. Lead free option. Sizes 1/4" through 3" NPT and solder. 61YLF also meets MSS SP-139 requirements.

### 610 & 611 SERIES



The Apollo International™ Models 610F and 611F Flanged 125 Class Cast Iron Gate valve provides full flow capabilities. The Apollo Gate valve can reliably be installed in most plumbing and heating systems (or building service piping). MSS SP-70 Sizes 2" through 24".

### 620 & 621 SERIES



The Apollo International™ Models 620F & 621F Flanged 250 Class Cast Iron Gate valve provides full flow capabilities. The Apollo Gate valve can reliably be installed in most plumbing and heating systems (or building service piping). MSS SP-70 Sizes 2" through 12".

### 711 & 721 SERIES



The Apollo International™ Models 711F & 721F Flanged 125 & 250 Class Cast Iron Globe valve provides efficient throttling capabilities. The Apollo Globe valve can reliably be installed in most plumbing and heating systems (or building service piping). MSS SP-85 Sizes 2" through 10".

### 910 & 920 SERIES



The Apollo International™ Models 910F & 920F Flanged Cast Iron Swing Check valve provides full flow capabilities. It provides reliable and economical protection against reverse flow. The Apollo Swing Check valve can reliably be installed in most plumbing and heating systems (or building service piping). MSS SP-71 Sizes 2" through 20".

### 910W SERIES



The Apollo International™ Model 910WB and Model 910WE Cast Iron Wafer Check valves provide full flow capabilities. They provide reliable and economical protection against reverse flow. These Apollo Wafer Check valves can reliably be installed in most plumbing and heating systems (or building service piping). Sizes 2" through 24".

### 61-700 SERIES – MODEL CV



Ideally suited for all OEM applications where space is a premium. Excellent for use on water and air. They feature a bubble tight soft seat design with a very light loaded stainless steel spring

### 61/61LF, 62 SERIES – MODEL CVS, CVB



Ball cone check valves in bronze (to 3") and 316 stainless steel (to 2"). Reinforced PTFE ball cone check provides excellent chemical and corrosion resistance and requires no radial alignment. Standard connection for bronze is FNPT (to 3"), male x female (to 2"). For stainless steel, FNPT only.

# ALL PRODUCTS CATALOG

## Gate, Globe & Check Valves

### 61-500/62-500 SERIES – MODEL CVBE, CVSE



Bronze check valves with standard EPR or optional Nitrile seat for bubble tight shut off to 2". Stainless steel check valves with fluorocarbon seat to 1". Optional 5 and 10 psig cracking pressure through size 1". Standard connection for bronze is FNPT, bronze sweat connection available to 1", for stainless steel FNPT only.



## APOLLOXPRESS®

# APOLLOXPRESS®

### THE APOLLOXPRESS® ADVANTAGE

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

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

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

### 77V/77VLF SERIES



The APOLLOXPRESS® 77V Series Press forged brass ball valve is ideal for installation in most HVAC heating systems. This valve features Leak Before Press® with a 250 psig maximum working pressure. The 77V complies with ARRA, IAPMO IGC-157 Ball Valves, and Directive 2011/65/CE (RoHS). The Lead Free 77VLF is also NSF/ANSI 61 and NSF/ANSI 372 certified and approved for potable water. All valves are 100% factory tested and Made in USA. Sizes: 1/2" - 4".



### 77W/77WLF SERIES



The APOLLOXPRESS® 77W Series Press end cast bronze ball valve is ideal for installation in most HVAC heating systems. The 77WLF complies with NSF/ANSI 61 and NSF/ANSI 372 lead free certified and approved for potable water. Now with Leak Before Press® feature and 250 psig maximum working pressure. Sizes: 1/2" - 2".



### 77W-HC/77WLF-HC SERIES



The APOLLOXPRESS® 77W-HC Press x Hose ball valve is available in sizes 1/2" - 3/4". Valves feature a 3/4" hose connection with heavy brass cap to protect the threads. The 77W-HC is ideal for most HVAC heating systems. The 77WLF-HC is NSF/ANSI 61 and NSF/ANSI 372 lead free certified and approved for potable water. Now with Leak Before Press® feature and 250 psig maximum working pressure.



### 30-PR/30LF-PR SERIES



The APOLLOXPRESS® 200 CWP Bronze Gate with press connections is a proven combination that provides economical installation and reliable service. Available in RS or NRS configuration. These valves are cast, machined, assembled, and tested in South Carolina with proven ASTM quality materials. The Apollo Gate valve can reliably be installed in most plumbing and heating systems or building service piping and OEM applications. 30LF is suitable for potable water.



# ALL PRODUCTS CATALOG

## APOLLOXPRESS®

### 33-PR/33LF-PR SERIES



The APOLLOXPRESS® Model 120T-PR (33 Series) 200 CWP Bronze Globe valve with press connections is a proven combination that provides economical installation and reliable service. The valves are cast, machined, assembled, and tested in South Carolina with proven ASTM quality material. The Apollo Globe valve can reliably be installed in most plumbing and heating systems (or building service piping). Lead free option available.

### 61Y-PR/61YLF-PR SERIES



The APOLLOXPRESS® Model 163T-PR (61Y Series) 200 CWP Bronze Swing Check valve 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. Lead free option available.

### 61-PR/61LF-PR SERIES



The APOLLOXPRESS® Model CVB-PR (61 Series) BALL-CONE® In-Line 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. Lead free option available.

### 36C-PR/36CLF-PR SERIES



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

### 36E-PR/36ELF-PR SERIES



The APOLLOXPRESS® Model PRE-PR (36E Series) Pressure Reducing Valve with Press connections is easily installed to protect residential and commercial 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. Lead free option available.

### 36-PR/36LF-PR SERIES



The APOLLOXPRESS® Model PR-PR (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. Lead free option available.

### 59-PR/59LF-PR SERIES



The APOLLOXPRESS® Model YB-PR (59 Series) Bronze Wye Strainers with quick 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. Lead free option available.

### RPLF4A-PR SERIES



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



# ALL PRODUCTS CATALOG

## APOLLOXPRESS®

### SMALL DIAMETER FITTINGS



The APOLLOXPRESS® small diameter fittings (1/2" - 2") feature copper-body construction for most configurations. The lead-free design offers a Leak Before Press® feature. The forward lip aids in the alignment of the copper tube during insertion, reducing the risk of o-ring damage. These fittings are approved for underground applications and are ideal for service and repair. Pre-lubricated, they are fast and simple to install. **Made in the USA.**

### LARGE DIAMETER FITTINGS



The APOLLOXPRESS® large diameter copper fittings (2-1/2" - 4") feature a patented solid cross-section grab ring, creating significant contact with the tube after pressing. The Leak Before Press® feature allows water to flow past the sealing element during pressure testing if the fitting has not been pressed. Last, but certainly not least, we've added a visual element: if the break-away band is still on the fitting, it needs to be checked. **Made in the USA.**

## Apollo Pneumatic Actuators

Apollo actuators feature ISO 5211 interface dimensions and NAMUR solenoid and accessory interface dimensions. Apollo also supplies pre-engineered stainless steel valve/actuator mounting kits for all Apollo valves equipped for automation. Available in 12 sizes to complement torque requirements, with both spring return and double acting versions available.



Spring return torque ratings are from 39 lb-in. to 31,097 lb-in. Double acting torque ratings from 109 lb-in. to 60,623 lb-in.

### APOLLO "ACUTORQUE"



Apollo AcuTorque actuator is manufactured with an integral internal air manifold. Valve interface dimensions are ISO 5211 standard. The solenoid mounting pad and slotted shaft are manufactured to NAMUR dimensional standards. For applications not requiring a direct mount solenoid valve, ports are NPT threaded. Investment cast steel body and unique drive pinion make the AcuTorque an excellent choice for tough applications. Torque outputs from 21 to 20,929 lb-in.

## Apollo Electric Actuators

### AE SERIES



Electric actuators; torque output 200 to 1,000 lb-in, NEMA 4 & 4X (water tight and corrosion resistant) enclosures. Thru shaft manual override. Reversing motors in 24, 115, 220 VAC and 12 and 24 VDC. CSA listed.

### CS/CL SERIES



Industrial quality reversing motor design electric actuator. Operating torques from 150 to 3,000 lb-in; AC and DC motors, extended duty cycles; NEMA 4 and 7 enclosures.

### LB SERIES



Electric actuators; torque output: 300 to 54,000 lb-in; on/off or modulating control available. 115 VAC 50/60 Hz single phase. 220/440 VAC - 50/60 Hz three phase

# ALL PRODUCTS CATALOG

## APOLLOPUSH® AND TECTITE™



NEW

## APOLLOPUSH®

Popular Apollo pressure reducing valves, strainers and checks now available with proven APOLLOPUSH® TECTITE™ direct connectors. Available in both standard and lead free models.

## TECTITE™

Proven TECTITE™ push-fit technology provides fast and simple “push to connect” installation. Available in sizes 1/4” - 2”. NSF/ANSI 61 Certified Lead Free.

### TECTITE™ – SMALL & LARGE DIAMETER PUSH FITTINGS



TECTITE™ is a full line of removable/ reusable lead free brass push fittings available in 1/4” - 2”. Quickly and easily join copper, CPVC and PEX tubing. No special installation tools required. Approved for use in underground applications, as manufactured joints and behind walls without access panels. NSF/ANSI 61 Certified Lead Free.

### APOLLOPUSH® VALVES

- 36ELF-P** Push Pressure Reducing Valve. Sizes: 1/2” to 1”.
- 59LF-P** Bronze Push Y-Strainer. Sizes: 1/2” to 1”.
- 78LF-RV-P** Water Heater Isolation & Thermal Expansion relief valve. Size: 3/4” with 1/4” discharge.
- 61LF-P** Push Inline Check Valve. Sizes: 1/2” to 1”.



### WATER HEATER CONNECTORS, IPS ADAPTERS, & VENT CAPS



100% Corrugated SS Water Heater Connectors equipped with LF DZR brass TECTITE™ connection. Sizes: 12”, 15”, 18”, 21” Also available with ball valve attached.

Smoothly convert from CTS to IPS tube using the TECTITE™ IPS transition adapter. IPS (SCHD 40/SCHD 80 only) Sizes 1/2” - 1”.

Caps with drain/vent are the perfect reusable solution for system bleeding and testing applications. Available in 1/2” and 3/4”.

## Backflow Preventers

### 4A/4ALF-100 SERIES – MODEL DC-4A /DCLF-4A



Bronze body Double Check assembly with top access check valves and test cocks. Features captured spring cartridges and shutoffs with stainless steel trim. Horizontal and vertical installation approvals. Sizes: 1/2”-2”.



### 4A/4ALF-200 SERIES – MODEL RP-4A/RPLF-4A



Bronze body Reduced Pressure principle backflow assembly with top access check valves and test cocks. Features captured spring cartridges and shutoffs with stainless steel handles and trim. Horizontal installation approvals. Sizes: 1/2”-2”.



### 4ALF-100 SERIES – MODEL DCLF-4A



Double Check Valves in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and short lay length. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and NRS gate valves. Horizontal and vertical installation approvals.



### 4ALF-200 SERIES – MODEL RPLF-4A



Reduced Pressure Principle Backflow Preventers in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and short lay length. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and NRS gate valves. Horizontal installation approvals.



# ALL PRODUCTS CATALOG

## Backflow Preventers

### 4AnLF-100 SERIES – MODEL DCLF-4An



Double Check Valves in an “n” flow pattern in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA-Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and small footprint. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and NRS gate valves. Vertical up/vertical down installation approvals.



### 4AnLF-200 SERIES – MODEL RPLF-4An



Reduced Pressure Principle Backflow Preventers in “n” and vertical up flow patterns in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA-Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and small footprint. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and NRS gate valves. Vertical up/vertical down and vertical up/vertical up installation approvals.



### 4ALF-600 SERIES – MODEL DCDALF-4A



Double Check Detector Assemblies in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA-Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and short lay length. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and Post Indicator gate valves. Horizontal and vertical installation approvals.



### 4ALF-700 SERIES – MODEL RPDALF-4A



Reduced Pressure Detector Assemblies in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and short lay length. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and Post Indicator gate valves. Horizontal installation approvals.



### 4AnLF-600 SERIES – MODEL DCDALF-4An



Double Check Detector Assemblies in “n” flow pattern in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA-Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and small footprint. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and Post Indicator gate valves. Vertical up/vertical down installation approvals.



### 4AnLF-700 SERIES – MODEL RPDALF-4An



Reduced Pressure Detector Assemblies in “n” and vertical up flow patterns in sizes 2-1/2”-12”. Stainless steel bodies 2-1/2”-8”, FDA Approved epoxy-coated ductile iron 10” and 12”. Patented TriForce™ checks in all sizes for low head loss and small footprint. Available shutoffs: monitored butterfly valves with supervisory switch, OS&Y and Post Indicator gate valves. Vertical up/vertical down and vertical up/vertical up installation approvals.



### 4A/4ALF-100 SERIES – MODEL DC 4A/DCLF 4A



Bronze body Double Check assembly with Apollo® Slow-Close, gear-operated, full-port ball valves with integral supervisory switches. Features top access check valves and testcocks, and utilizes captured spring cartridges for ease of maintenance. Horizontal and Vertical Up installation approvals. Sizes 1 1/2” and 2” in non-lead free and lead free. (RP's available in same sizes and features for Horizontal approvals.)



### 4A/4ALF-600 SERIES – MODEL DCDA2 4A/DCDA2LF 4ALF



Bronze body Double Check Detector assembly with Apollo® Slow-Close, gear-operated, full-port ball valves with integral supervisory switches. Horizontal and Vertical Up installation approvals. Sizes 1 1/2” and 2” in non-lead free and lead free. (RPDA2's available in same sizes and features for Horizontal approvals.)



### 4SGLF-100 & 4SG-100 SERIES – MODEL DCLF-4SG & DC-4SG



Double Check Valves in sizes 2-1/2”-10”. Light weight, short lay length, low head loss, with individual access to the check valves. FDA approved epoxy-coated ductile iron. Available shut-offs: monitored butterfly valves with supervisory switch, OS&Y and NRS gate valves. Horizontal and vertical installation approvals. Lead Free 2-1/2” to 6” only.



### 4SG-600 SERIES – MODEL DCDA 4SG



Double Check Detector Assembly in sizes 2-1/2”-10”. Light weight for ease of installation in fire or automatic sprinkler systems. Provides precise monitoring capability to unauthorized water usage. Available shut-offs: monitored butterfly valves with supervisory switch, Post Indicator, and resilient seated OS&Y gate valves. Vertical and horizontal approvals.

# ALL PRODUCTS CATALOG

## Backflow Preventers

### 4A/4ALF-500 SERIES – MODEL PVB 4A/PVBLF 4A



Bronze body Pressure Vacuum Breaker with internal freeze relief valve and captured spring cartridge. Features shutoffs with stainless steel handles and trim. Vertical up/horizontal installation approvals. Sizes: 1/2"-2". Lead Free available in sizes 3/4" and 1" only.



### 4W/4WLF-500 SERIES – MODEL SVB 4W/SVBLF 4W



Spill-resistant pressure Vacuum Breaker (SVB) is designed to prevent contamination of potable water due to back-siphonage and is ideally suited for indoor and OEM applications supplied w/continuous pressure where water discharge could cause problems. Horizontal installation approvals. Sizes: 1/4" to 1/2" Noryl® body.



### 38/38LF SERIES – MODEL AVB1



Atmospheric Vacuum Breakers provide economical, lightweight and compact protection against back-siphonage and low hazard cross connections. Meets ASSE and CSA standards; listed with IAMPO. For hot and cold water service up to 212°F at 125 psig for 1" and up to 180°F at 125 psig for 1/4"-2".



### 40-400 SERIES – MODEL DCAP



Bronze body Dual Check with Atmospheric Port. Noryl® poppets and stainless steel springs. ASSE and CSA approvals. Sizes: 1/2" and 3/4".



### 4N/4NLF-300 SERIES – MODEL DUC4N/DUCLF4N



Bronze body Dual Check with two captured spring cartridges. ASSE and CSA approved for residential backflow protection at the water meter. Multiple connection combinations. Sizes: 3/8"-1".



### MODEL DUC-4FP



Bronze body Dual Check with two captured spring cartridges. ASSE, CSA approved and UL classified for residential fire sprinkler systems. Sizes: 1", 1-1/4".

### DUC 40/DUCLF 40 SERIES



The Apollo Series DUC 40 Dual Check Valve prevents backflow by either backpressure or back-siphonage resulting from a cross-connection between potable water lines and substances that are objectionable, but not health-hazards.



### 4C-100 SERIES – MODEL CBBP



ASSE 1022 approved Carbonated Beverage Backflow Preventer. Protects against copper poisoning by preventing carbonated water from being drawn into copper pipes. All wetted components are non-toxic, corrosion resistant, and approved for use with potable water. Suitable for supply pressures to 150 psig and water temperatures from 33° to 130°F. CSA certified to NSF61 and IAPMO approved. Sizes: 1/4" and 3/8".

### 38-502 SERIES – MODEL LFBV



Lab Faucet Vacuum Breakers for potable water backflow protection for lab faucets, community sinks, beauty salons, barber shops. ASSE, CSA approved; IAPMO listed. Brass body, polished chrome plating, stainless steel internal parts. 3/8" FNPT standard; 1/4" optional. Adapters simplify installation.



### HBV2 SERIES



Apollo's HBV Hose Connection Vacuum Breakers are designed to prevent cross-connection caused by back-siphonage. They consist of a single check valve with atmospheric vacuum breaker vent. They feature a break-away set-screw for tamper-proof protection. They are not suitable for continuous pressure applications.

# ALL PRODUCTS CATALOG

## Backflow Preventers

### HBVAF2 SERIES



The Apollo Series HBVB Anti-Freeze Hose Connection Vacuum Breaker is especially designed to prevent back-siphonage on wall and yard hydrants. It features a break-away set-screw for tamper-proof protection and automatic drain for protection against freezing conditions when hose is removed. It is not suitable for continuous pressure applications.

### HBDUC SERIES



The Apollo Series Hose Bibb Dual Check is designed to provide an in-line testable hose connection that will prevent backflow due to back-siphonage or low head back-pressure. Each device consists of two independent checks, forced loaded in the closed position with an atmospheric vent between the checks. Threaded for hose connection at both the inlet and outlet with a break-away set screw on the inlet for tamper proof installations.

### TKF TEST KIT FITTING



Brass fitting which installs onto Backflow Preventer Test Cocks by hand. No tools required. No Teflon® tape to deal with. Provides quicker testing. Sets of three fittings with o-rings for 1/4" SAE connections to the test kits. Packaged in a reclosable plastic bag.

### FPV/FPVLF SERIES



The Apollo Series FPV Freeze Protection Valve protects backflow preventers from freezing when installed in accordance with manufacturer's instructions. All internal parts of the Freeze Protection Valve are replaceable. IAPMO listed.



### TK3 TEST KIT



These are three-valve test kits used for testing all DCV, RPZ, PVB & SVB backflow preventers. Differential pressure type with a dual scale of 0-15 psid/0-100kPa differential pressure range with a  $\pm 0.2$  psig (Descending) accuracy. Maximum working pressure 200 psig.

### TK5 TEST KIT



This is a five-valve test kit used for testing all DCV, RPZ, PVB & SVB backflow preventers. The five valve test kit is similar to the three valve kit except it has two additional valves that make it possible to bleed lines without disconnecting hoses.

## Hydronic Balance Valves

### MODEL 58A



Apollo Model 58A balance valves are precision engineered and manufactured valves which provide two position hydronic circuit isolation capability and multi-turn throttling adjustment as required for proportional balancing of hydronic systems. Unique ten turn needle valve adjustment, with integrated digital readout. The valve features a dezincification resistant brass body with PTFE seals. Available in 1/2" - 2" NPT, Sweat and APOLLOXPRESS® fittings.

# ALL PRODUCTS CATALOG

## Water Pressure Reducing Valves

### 36/36LF SERIES – MODEL PR



All bronze construction. Supply pressures to 300 psig; standard outlet range 25 to 75 psig; other pressures available. Max working temperature of 180°F. Bronze body, replaceable cartridge, built in by-pass and high-capacity stainless steel strainer. Many end connection options, union pipe end standard. Meets ASSE, CSA and ANSI standards and is listed with IAPMO. Sizes: 1/2" to 2".

### 36C/36CLF SERIES – MODEL PRC



Compact and corrosion-resistant. Supply pressures up to 400 psig; built in by-pass relieves excessive pressure buildup. Working temperatures to 180°F, 50 psig standard factory setting; easy screw adjustment. Meets ASSE, CSA and ANSI standards and is listed with IAPMO. FNPT, sweat union, PEX, PUSH, APOLLOXPRESS® or FNPT union connections available. Sizes: 1/2" to 1".

### 36H/36HLF SERIES – MODEL PRH



All bronze/SS super capacity pressure reducing valves for commercial and institutional applications. Complies with ASSE and CSA standards and is listed with IAPMO. Bottom clean out plug for easy in-line servicing; NPT connections standard. Flanged connection option available on 2-1/2" and 3" sizes. Strainers optional. Sizes: 1/2" to 3".

### A127 SERIES



Apollo control valves are ideal for a wide range of commercial and industrial applications, wherever the flow, pressure or level of liquids needs to be controlled. Hydraulically operated diaphragm main valve automatically controls non-corrosive, non-abrasive fluids by means of a wide range of pilots.

### 35 SERIES – MODEL FF



Bronze feed water pressure regulators; individually set at 15 psig; adjusts from 10 to 25 psig; fast fill feature; high capacity, screw in bonnet and in-line stainless steel strainer. 210°F max. temperature, max. pressure: 100 psig, 1/2" union threaded, threaded, solder union, or press connections.

### 36E/36ELF SERIES – MODEL PRE



Economy, compact and corrosion-resistant. Supply pressures up to 400 psig; built in by-pass relieves excessive pressure buildup. Working temperatures to 180°F, 50 psig standard factory setting; easy screw adjustment. Meets ASSE, CSA and ANSI standards and is listed with IAPMO. FNPT, sweat union, PEX, PUSH, APOLLOXPRESS® or FNPT union connections available. Sizes: 1/2" to 2".

## Vacuum Relief Valve

### 37 SERIES – MODEL VR



Brass or bronze vacuum relief valves. Max temperature: 250°F, max. water pressure: 200 psig. CSA certified. Sizes 1/2" and 3/4".

# ALL PRODUCTS CATALOG

## Thermostatic Mixing Valves

### 34A/34ALF SERIES – MODEL MVA



Thermostatic Mixing Valves. 34A Series ASSE 1017 certified Point of Source mixing valves are designed for hot water distribution systems; 34H Series are designed for radiant heat applications, to provide better control of hot water supply. Numbered indicator control allows easy setup and fingertip control. Available in low or high temperature range options depending on application. Integrated check valves and strainers provide added protection against cross flow & foreign particles. Thermostat over temperature protection.



### 34B/34BLF SERIES – MODEL MVB



Scald Protection Mixing Valves. 34B Series Dual ASSE 1017 and 1070 certified Point of Use/Source mixing valves are designed to be used for single or multiple fixtures requiring flow rates as high as 17 GPM. These valves use a thermostatic element that senses outlet temperature and will compensate for fluctuating inlet temperature and pressure. The mixed water temperature range is 85°-120°F and will hold a desired temperature within  $\pm 3^\circ\text{F}$ . The 34B also has an adjustable temperature limit stop to prevent the valve from being set above 120°F.



### 34C/34CLF SERIES – MODEL MVC



Commercial High-Capacity Mixing Valves. 34C/34CLF Series ASSE 1017 listed, high-capacity mixing valves are thermostatically controlled regulating valves designed for use in large commercial potable and non-potable hot water systems. Simple adjustment of water temperature from 90°-140°F or 130°-180°F.



### 34D/34DLF SERIES – MODEL MVD



"Point of Use" Mini-Mixer Thermostatic Valves. 34D/34DLF ASSE 1070 certified mixing valves are designed to throttle both the hot and cold water inlet supplies to compensate for temperature and pressure fluctuations. The mixed water temperature range is 85°-120°F and will hold a desired temperature within  $\pm 2^\circ\text{F}$ . The 34D/34DLF has built in check valves, thermal actuator protection and an adjustable temperature limit stop to prevent the valve from exceeding 120°. Available with cold water by-pass option.



### 34E/34ELF SERIES – MODEL MVE



Apollo 34E/34ELF emergency mixing valves are designed to control the cold and hot water temperature to deliver tepid water at a predetermined temperature to emergency eyewash/face wash fixtures. Provides precise temperature and flow control in the event of cold water, hot water, and thermostatic element failures. Made in the USA. ASSE 1071 listed and meets ANSI/ISEA Z358.1.



### 34HL SERIES – MODEL MVHL



Multiple-Fixture Hi-Lo Mixing Valve. Fully ASSE 1069 and 1017 compliant, the 34HL Series protects against scalding and thermal shock by providing  $\pm 5^\circ$  output temperature control for multiple fixtures in commercial and institutional settings. Patented design eliminates "dead-zones." Made in USA.

### 34-200 SERIES – MODEL TV



Apollo 34-200 economy thermostatic mixing valve provides non-ASSE extension of water heater capacity and hot water temperature control in hydronic heating systems. Available in low or high temperature options for floor or baseboard applications. Made in the USA. Solder sizes 1/2" and 3/4".

# ALL PRODUCTS CATALOG

## Safety & Relief Valves

### 10-100,200,300,400 SERIES – MODEL RVW10



Brass/bronze safety relief valves protect ASME Section IV hot water heating boilers and hydronic heating systems. High-capacity design features corrosion resistant construction. Brass, satin or polished chrome finishes available. Set pressures 20-80 psig @250°F. Sizes 3/4" male and female inlet connections.

### 10-512,10-322 SERIES – MODEL RVS



Compact ASME Section VIII steam service safety valves feature stainless steel springs and elastomer soft seating for dependable operation. Standard equipment on steam sterilizers, cookers and kettles. Brass, satin or polished chrome finishes. 1/2" model available with stainless steel wetted trim. Set pressures to 60 psig @ 312°F. Sizes 1/2" and 3/4".

### 10-600 SERIES – MODEL RVW60



Heavy-duty bronze safety relief valves protect ASME Section IV hot water heating boilers and hydronic heating systems. High-capacity design features corrosion-resistant construction, isolating diaphragm and elastomer soft seats. Set pressures 15 to 160 psig @ 250°F. Available with standard or expanded outlet, sizes 3/4" -2".

### 12 SERIES – MODEL RVS12



Medium capacity safety valves protect ASME Section IV low pressure steam heating boilers. Cast bronze, full nozzle design features PTFE faced elastomer soft seating for dependable operation. Set pressures 5 to 15 psig @ 250°F. Sizes 2", 2-1/2" and 3". ASME Section IV certified. 15 psi only.

### 14-200 SERIES – MODEL RVS14



High-capacity safety valves for ASME Section IV low pressure steam heating boilers. One piece cast bronze body features top guided design, chrome-plated seat and PTFE-faced soft seat. Optional test gag available permits hydrostatic testing. Set pressures 5 to 15 psig @ 250°F. Sizes 2", 2-1/2" and 3". ASME Section IV certified. 15 psi only.

### 14-400 SERIES – MODEL RVA14



High volume air relief valves designed for low pressure non-code air and gas service. Rugged bronze construction features elastomer soft seating and Teflon coated discs for dependable operation. Used to protect low pressure compressors and tanks, high-volume blowers, and pneumatic conveying systems. Pressure settings from 4 to 22 psig @ 400°F. Sizes 2", 2-1/2" and 3".

### 14-600 SERIES – MODEL RVV14



High-volume vacuum relief valves feature one piece cast bronze bodies, Teflon coated discs and elastomer soft seating to provide accurate and dependable operation. Relief settings from 8 to 30" Hg @ 400°F. Sizes 2", 2-1/2", and 3".

### 15 SERIES – MODEL RVA15



OEM style brass barstock safety valves for air and gas service. ASME Section VIII certified. Used to protect air compressors, receivers, and instrument air systems. Stainless steel springs and viton soft seating provide superior seat tightness and vibration resistance. Set pressures to 250 psig @325°F. Sizes 1/4", 3/8", 1/2", 3/4" and 1".

### 16/16LF SERIES – MODEL RVW16



Economical relief valves for general purpose non-code overpressure protection and bypass relief applications. Applications include liquid bypass or thermal expansion relief of well pumps, tanks, fire protection systems and all types of water or liquid piping systems. Bronze bodies, stainless steel springs and soft seating. Standard pressure settings from 50-175 psi. Sizes 1/2" and 3/4".

### 16-501/16LF SERIES – MODEL RVW16



Adjustable relief valves protect equipment by providing low volume liquid relief or bypass control. Excess volume may be discharged back to the low pressure source. Ideal for agricultural sprayers and simple commercial or industrial pressurized systems. Adjustable 50-250 psi or 250-600 psi. Size 1/2". Seats: Nitrile or PTFE.



# ALL PRODUCTS CATALOG

## Safety & Relief Valves

### 16-503,504/16LF SERIES – MODEL RVW16



Calibrated pressure relief valve allows for in-line pressure adjustments without the need for pressure gauge. Provides static overpressure protection for liquid filled systems such as well pumps, tanks, and fire protection systems. Preset at 100 psig. Adjustable in 25 psig increments from 50 to 175 psig. Bronze body, inlet sizes 1/2"-3/4". Outlet size: 1/2".

### 17 SERIES – MODEL RVW17



Bronze pressure-only relief valves protect plumbing systems, storage tanks and tankless coil water heaters from excessive pressure. CSA certified design conforms to HUD/FHA requirements. 3/4" model is ASME Section IV certified from 75-150 psig. Stainless steel springs and elastomer soft seats are standard. Set pressures to 160 psig @ 250°F. Sizes 1/2" and 3/4".

### 18C-400 SERIES – MODEL TPR



Residential T&P relief valves protect hot water heaters from excessive pressure and temperatures. CSA certified design conforms to HUD/FHA requirements. 3/4" model is ASME Section IV certified at 125 and 150 psig settings. Choice of element lengths. Available with extended body length to suit water heaters with extra thick insulation. Set pressures 125 or 150 psig @ 210°F. Sizes 1/2" and 3/4".

### 18C-500 SERIES – MODEL TPC



High-capacity commercial T&P relief valves protect hot water heaters from excessive pressure and temperatures. CSA certified design conforms to ASME Section IV and ANSI Z21.22 requirements. Corrosion resistant all bronze body, isolating diaphragm and screw-in cage that eliminates rusting steel screws. SS springs and thermostats. Choice of element lengths. Set pressures 125 or 150 psig @ 210°F. Sizes 3/4" through 2".

### 19 SERIES



Bronze high capacity safety valves for steam or air/gas service. ASME Section I and VIII certified. Protects steam boilers, pressure vessels and pressure piping systems. Standard features include stainless steel springs, tapped drain connections and Teflon soft seat for superior performance. Metal to metal seating and stainless steel trim options available. Set pressures to 300 psig @ 422°F. Sizes 1/2" through 2-1/2".

### 29 SERIES



Compact OEM-style bronze safety valves for steam, air/non-hazardous gas service. ASME Section I and VIII certified for use on steam boilers, sterilizers, pressure vessels and cookers. Standard features include stainless steel springs, tapped drain connections and patented Teflon soft seat for superior seat tightness. Optional stainless steel wetted trim. Set pressures to 200 psig @ 406°F. Sizes 3/8" through 1-1/4".

### 119 SERIES



High capacity cast iron flanged safety valves for steam or air/gas service. ASME Section I and VIII certified. Used to protect steam boilers, pressure vessels and pressure piping systems. Rugged top-guided design features flat lapped metal seating and two control rings for repeatable performance and extended service life. Stainless steel wetted trim standard sizes. Sizes 1-1/2" through 6" NPT and flanged. Set pressure to 250 psig.

### 510/520 SERIES



High performance bronze safety relief valves are ASME Section VIII certified for steam, air/gas and liquid service. Rugged top-guided full nozzle design features flat lapped metal seating, self aligning disc insert and a lower control ring for exceptional performance and durability. Available with a choice of brass or stainless steel trim. Wide range of options includes elastomer O-ring or PCTFE soft seating and cryogenic preparation. Set pressures to 1200 psig @ 422°F. Sizes 1/2" through 2".

# ALL PRODUCTS CATALOG

## Safety & Relief Valves

### 530/540 SERIES



High performance industrial safety relief valves feature carbon steel (530) or all stainless steel (540) construction. ASME Section VIII certified for steam, air/gas and liquid service. Rugged top-guided full nozzle design features flat lapped metal seating, self aligning disc insert and a lower control ring for exceptional performance and durability. Wide range of options include elastomer O-ring, metal to metal, PCTFE and cryogenic preparation (excluding Model 530). Set pressures to 1200 psig @ 800°F. Sizes 1/2" through 2".

### DPE SERIES



Cast iron drip pan elbows connect to the discharge outlet of steam service safety valves to safely direct the steam discharge and condensation away from the valve. Isolates the valve from piping stresses which can adversely affect valve performance. Sizes 3/4" through 8", threaded and flanged connections. Apollo International™

## WYE Strainers

### 59/59LF SERIES – MODEL YB



Cast bronze body with 304 stainless steel screen; 400 CWP psig rating; wide variety of mesh screens available. Optional blow-out plug tapping. Sizes: 1/8" to 4". UL listed models available in sizes 1/8" to 1/2". New 59-400 Series is female x male NPT (3/4" & 1" only).

### 59/59LF-300 SERIES – MODEL YBS



Compact corrosion resistant bronze solder end Y-strainers with stainless steel screens. Generous socket wall thickness assures high strength solder joints. Pressures to 400 CWP psig. Sizes: 1/2" to 3".

### 59-V SERIES – MODEL YVB



Ideal for OEM applications where space is a premium. Corrosion resistant body and cleanout cap with standard 50 mesh stainless steel screen. Other screen sizes available. Rated 400 psig at 210°F CWP and 125 psig at 350°F WSP. Sizes: 1/4" NPT.

### 61203 SERIES – MODEL YSS



Cast CF8M stainless steel body with 304 stainless steel screen. Rated at 600 psig for 1124°F steam and 1440 psig for CWP. Screen cover is NPT tapped for blow-off connection. Sizes 1/2" to 1".

# ALL PRODUCTS CATALOG

## Apollo International Strainers

### MODEL YCT



Class 250 FNPT cast iron body with 304 stainless steel screen. Rated 250 psig at 406°F steam and 400 psig at 150°F CWP. Screen cover is NPT tapped for blow-off connection. Sizes 1/4" to 3" NPT.

### MODEL 125YF



Flanged cast iron bodies with 304 stainless steel screens. ANSI Class 125. Sizes from 2" to 16" and pressure ratings to 150 psig. Screen cover has a tapped and plugged blow-off connection. Optional FDA grade epoxy coating.

### 61202 SERIES – MODEL YCS



FNPT cast carbon steel body with 304 stainless steel screen. Rated at 600 psig at 839°F steam and 1480 psig at 100°F CWP. Screen cover is NPT tapped for blow-off connection.

## Water Gauges

### 20 SERIES



Rough bronze water gauges; aluminum or composition wheel, needle drain valve in lower arm, ball checks (optional) prevent operator scalding in case of glass breakage. Chain lever and expansion tank models available. Sizes: 3/8", 1/2", and 3/4".

### 21 SERIES



Rough bronze water gauges; with extended shank; 1-3/4" shank length; aluminum or composition handle. For 1/2" pipe size.

### 23 SERIES



Stainless steel direct reading water gauges. Max. working pressure: 500 psig (subject to limitation of gauge glass), aluminum or composition wheel, stainless steel ball valve drain in lower arm. Non-automatic, automatic, ASME automatic and expansion tank models. Sizes: 1/2" and 3/4".

### 24 SERIES



Rough bronze direct reading water gauges. ASME automatic or non-automatic models available; also available with chain lever; ball valve drain. Sizes: 1/2" and 3/4".

### 25 SERIES



Polished bronze and chrome plated water gauges. Aluminum or composition wheel, needle drain valve in lower arm, non-automatic and automatic models, chain lever available. Sizes: 3/8" to 3/4".

#### **Pressure Ratings:**

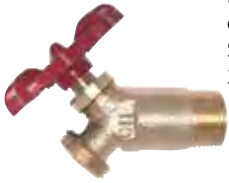
*Pressure ratings vary by models and are subject to limitations of the valve body, gauge glass and packing materials. Refer to Water Gauge Catalog PHBRWGA for detailed information.*

**Custom OEM configurations available.**  
Contact customer service for details.

# ALL PRODUCTS CATALOG

## Drain Valves

### 31 SERIES – MODEL BD



Rough bronze drain valves for water heaters or heating boilers. Pressure rated to 200 psig. Shank lengths 5/8" to 3". Pipe sizes: 1/2" and 3/4". In a variety of styles.

### 35-200 SERIES – MODEL HB



Compression bibb faucet features heavy pattern with large flow path. Solid bronze construction. Both models have 3/4" hose connection. Aluminum handwheel. Made in USA.

### 35-300 SERIES – MODEL BD



Apollo International™ ball valve bibb faucet features heavy pattern with large opening. Ideal for boiler and water heater drains, general liquid dispensing and drainage. The new 45° spout design allows for easier hose connection access. Chrome plated finish; sizes 1/2" and 3/4". Pressure rating 200 psig liquid. Maximum temperature 250°F.

## Air and Gas Cocks

### 41 SERIES – MODEL AC



Brass air cocks with "tee" handle or lever handle. Spring and nut bottom with a wide range of connections available.

### 54 SERIES – MODEL GCA



Gas hose-end shut-off valves. 1/8" NPT or standard tube sizes. Capacity: 56,500 Btu/hour. Pipe sizes: 3/8" to 3/4".

### 56 SERIES – MODEL GCP



Pilot gas cocks. 1/2 psig for 32°F to 125°F service. CSA design certified. 1/8" MNPT x various 1/4" tube connections.

### 51GF SERIES – MODEL GB-15



These Apollo International™ gas appliance ball valves are designed for natural gas, manufactured and mixed gas, liquefied petroleum gasses and LP gas-air mixture applications. They comply with the latest editions of ANSI, CSA, and UL published standards. Sizes: 1/2" and 3/4" FNPT.



# ALL PRODUCTS CATALOG

## Expansion Tanks

### 16-XT SERIES – MODEL EXT



Conbraco non-potable expansion tanks help maintain balanced pressure throughout a hot water heating system by absorbing thermal expansion. Pre-pressurized, they're designed to prevent system damage and unnecessary discharges by relief valves and ensure long, trouble-free system life.

### 40-XT SERIES – MODEL EXTP



Designed to protect potable water supply systems, appliances and piping from the hazards of thermal expansion, such as premature water heater failure. Installs easily on direct fired gas, oil and electric hot water heaters and storage tanks. Their pre-pressurized steel design includes an expansion membrane that stops any contact between the water and air in the tank. Made in the USA.



## Specialty Valves

### 35-FC SERIES – MODEL FCV SERIES



Bronze body flow check provides positive gravity shut-off in hydronic systems. Convenient override permits continuous circulation or drainage when required. Available with NPT, sweat or press connections, NPT models are both angle and horizontal checks. Expansion tank may be installed on the angle check. Maximum temperature is 250°F. Maximum pressure is 125 psig.

### 58 SERIES – MODEL HCB



Balancing valves for hydronic flow control; 150 psig rating. Copper tube sizes: 1/2" and 3/4".

### 78 RV/78LF RV SERIES – MODEL EXV



Water heater shutoff/thermal expansion control valves provide both water heater shutoff and code required thermal expansion protection. The 78-RV combination valves are offered in three pressure settings, 125, 100 and 80 psig. Available in 3/4" size with sweat, threaded and pex connections. Various relief valve connections available. CSA and IAPMO listed.



### 78-600 SERIES – MODEL PBS



Purge, balance and shut-off valve, has solid brass "can't lose" cap and chain. Hose thread connection for blow off and easy purging, maximum temperature: 250°F, maximum pressure: 600 psig WOG/CWP in open position.

### 78LF RV SERIES – APOLLOPUSH®



patent pending



The Lead Free APOLLOPUSH™ 78LF-RV Series Combination Water Heater Isolation Valve/IAPMO approved Thermal Expansion Relief Device solves two Code requirements. Proven TECTITE™ push-fit technology provides fast and simple "push to connect" installation. It is the ideal alternative to expansion tanks in residential plumbing systems. Made in the USA, featuring Lead Free dezincification resistant brass materials.



# ALL PRODUCTS CATALOG

## WARRANTY AND LIMITATIONS OF LIABILITY

Conbraco Industries, Inc. 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 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 this warranty appear within **FIVE** years after the date of the initial delivery to our initial purchaser, Conbraco will, upon written notification thereof and substantiation that the goods have been stored, installed, maintained and operated in accordance with Conbraco's recommendations and standard industry practice, correct such defects by suitable repair or replacement at Conbraco's own expense.

**APOLLO INTERNATIONAL PRODUCTS:** Conbraco Industries, Inc. warrants its International products, to its initial purchaser only, that its international 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 a period of **TWO** years from the date of delivery to you, our initial purchaser.

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

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





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[www.mmcontrol.com/conbraco.php/relocator](http://www.mmcontrol.com/conbraco.php/relocator)

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