

MADE IN THE USA

"Apollo" Valves



Ball Valves

Butterfly Valves

Automation Products

Pipeline Strainers

Backflow Preventers

Plumbing and Heating Products

Safety Relief Valves

ALL PRODUCTS BROCHURE

A History Of Service And Innovation

"Apollo" Valves

Now in its eighth decade, Conbraco Industries, Inc. is a leading manufacturer of flow control products for U.S. and international markets. The company is based in Matthews, NC.

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 includes ball valves; butterfly valves; backflow prevention devices; ground key cocks for gas, air, gasoline, steam and water; safety relief valves; water gauges; pipeline strainers; vacuum breakers; valve actuators and more.

Conbraco's vertically integrated manufacturing ensures a consistency of production, testing, quality and availability. It's your assurance that Conbraco flow control products will deliver long-term performance advantages. All Conbraco plants are registered to ISO 9001 quality standards.

The Conbraco line continues to expand — with new products, designs and advanced materials — to better serve the needs of our customers in chemical processing, pulp and paper, petroleum, residential and commercial plumbing and heating, manufacturing and other markets.

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PAGELAND
BRONZE FOUNDRY AND
MANUFACTURING PLANT



CONWAY
STEEL FOUNDRY AND
MANUFACTURING PLANT



PAGELAND
FINAL ASSEMBLY
(DISTRIBUTION CENTER)



MATTHEWS
HEADQUARTERS

Safety And Relief Valves For Steam, Air And Gas

10-100, 10-200, 10-300, 10-400

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 to 60 psig @ 250°F. Sizes 3/4" and 1", male and female inlet connections.



14-200 SERIES

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".



10-512/10-322

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".



14-400 SERIES

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".



16 SERIES

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. Not intended for steam service. pressure settings. Bronze bodies, stainless steel springs and soft seating. Standard pressure settings from 50-175 psi. Sizes 1/2" and 3/4".



10-600

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" through 2".



14-600 SERIES

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".



16-503, 16-504 SERIES

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, fire protection systems. Preset at 100 psig. Adjustable in 25 psig increments from 50 to 175 psig. Bronze body. Inlet sizes 1/2" to 3/4". Outlet Size: 1/2".



12 SERIES

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".



15 SERIES

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 elastomer 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".



16-501 SERIES

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. 125 psig standard set pressure; adjustable by-pass relief valve available. Size 1/2".



Safety And Relief Valves For Steam, Air And Gas

17 SERIES

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

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 to 175 psig @ 210°F. Sizes 1/2" and 3/4".



18-500 SERIES

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. Stainless steel springs and thermostats. Choice of element lengths. Set pressures to 150 psig @ 210°F. Sizes 3/4" through 2".



29 SERIES

Compact OEM-style bronze safety valves for steam, air/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, 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 ring control for repeatable performance and extended service life. Stainless steel wetted trim standard. Set pressures to 250 psig @ 450°F. Sizes 1-1/2" through 6".



MODEL DPL

Cast iron drip pan elbows connect to the discharge outlet of steam service safety valves to safely direct the steam discharge and condensate 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.



19 SERIES

Bronze high-capacity safety valves for steam, 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".



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 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 900 psig @ 422°F. Sizes 1/2" through 2".



530 SERIES/540 SERIES

High-performance industrial safety relief valves feature carbon steel or all stainless steel 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 includes elastomer O-ring or PCTFE soft seating and cryogenic preparation. Set pressures to 900 psig @ 800°F. Sizes 1/2" through 2".



35 SERIES

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



37 SERIES

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



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".

24 SERIES



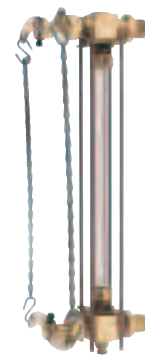
Rough bronze direct reading water gauges; ASME automatic or non-automatic models available; also available with chain lever; ball valve drain. Sizes: 1/2" and 3/4".

21 SERIES



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

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".

23 SERIES



Stainless steel direct reading water gauges; max. working pressure: 500 psig (subject to limitation of gauge glass); aluminum or composition wheel; non-automatic, automatic, ASME automatic and expansion tank models. Sizes: 1/2" and 3/4".

Boiler Drains

31 SERIES



Rough bronze drain valves for water heaters or heating boilers; pressure rated over 100 psig. Shank lengths 5/8" to 3-1/2". Pipe sizes: 1/2" and 3/4".

Water Gauges, Boiler Drains, Air And Gas Cocks

Air And Gas Cocks

41 SERIES



Polished and satin brass air cocks; with "tee" handle or lever handle; spring and nut bottom with wide range of connections available.

94 MBV SERIES:



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. Meets ANSI B1.20.1. Rated to 600 psig at 100°F. Operating temperatures from -40°F to 300°F. Sizes 1/8" and 1/4".

Air And Gas Cocks, Mixing Valves

54 SERIES

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

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.



GB-15, GB-16 SERIES

These gas appliance ball valves are designed for natural gas, manufactured and mixed gas, liquefied petroleum gases and LP gas-air mixture applications. They comply with the latest editions of ANSI, CSA, and UL published standards.



GB-10 SERIES

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

UL and CSA design-certified manual shut-off ball valves for many fuel types; for up to 5 psig. Standard female x female threaded connection. Sizes: 1/2" to 2".



Mixing Valves

34A-34H SERIES

Thermostatic Mixing Valves. 34A Series ASSE 1017 certified 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 provides added protection of thermostat and cross connection control.



34B SERIES

Scald Protection Mixing Valves. 34B Series ASSE 1016 certified mixing valves are designed to be used for individual fixtures for flow as high as 11 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 +/-3°F at all times. The 34B also has an adjustable temperature limit stop to prevent the valve from being set above 120°F.



34C SERIES

Commercial High-Capacity Mixing Valves. 34C 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 SERIES

"Point of Use" Mini-Mixer Thermostatic Valves. 34D ASSE 1016 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 +/- 2°F at all times. The 34D has built in thermal actuator protection and an adjustable temperature limit stop to prevent the valve from exceeding 120°F.



34HL SERIES

Multiple-Fixture Mixing Valve. Fully ASSE 1069 compliant, the 34HL Series protects against scalding and thermal shock by providing ±5° output temperature control for multiple fixtures in commercial and institutional settings. Patented design eliminates "dead-zones." Complete assembly, no external components. 100% U.S.-made.



Specialty Valves

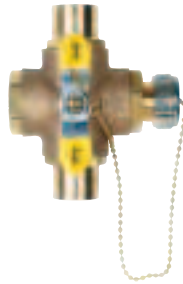
35-FC SERIES

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



APOLLO® PBS SERIES

Purge, balance and shut-off valve; has solid brass "can't lose" plug and chain; hose thread connection for blow off and easy purging; maximum temperature: 250°F; maximum pressure: 50 psig.



58 SERIES

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



78-RV SERIES

Water heater shutoff/thermal expansion control valves provide both water heater shutoff and thermal expansion protection. The 78-RV combination valves are offered in three pressure settings, 125, 100 and 80 psig. Available in 3/4" and 1" sizes with sweat and threaded connections.



Specialty Valves, Expansion Tanks

Expansion Tanks

16-XT SERIES

Expansion tanks for hydronic water heating. Rugged steel construction, flexible diaphragm. Pre-charge pressure: 12 psig; charge pressure: 30 psig; max. pressure: 150 psig; max. temperature: 210°F.



40-XT SERIES

Potable water expansion tanks for direct-fired hot water heaters and supply tanks (gas, oil and electric). Easy in-line installation; field-adjustable pre-charge pressure. Supply pressures from 40 to 120 psig; for system volumes up to 120 gallons.



Pressure Reducing Valves, Vacuum Breakers, Check Valves

Water Pressure Reducing Valves

Check Valves

36 SERIES

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; 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".



61, 62 SERIES

Ball cone check valves in bronze (to 3") and 316 stainless steel (to 2"). Reinforced 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.



Vacuum Breakers

38-100 SERIES

Economical, lightweight and compact protection against back-siphonage and low hazard cross connections. Meets ASSE and CSA standards; listed with IAPMO. 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".



36C SERIES

Compact and corrosion-resistant. Supply pressures up to 400 psig; built-in by-pass halts 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 union or FNPT union connections available. Sizes: 1/2" to 1".



61-500/62-500 SERIES

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.



38-502 SERIES

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.



36H SERIES

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



61-700 SERIES

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.



Y Strainers

59 SERIES

Cast bronze body with 304 stainless steel screen; 400 psig rating; wide variety of mesh screens available; optional blow-out plug tapping. Sizes: 1/8" to 4".



59-300 SERIES

Compact corrosion-resistant bronze sweat end Y-strainers with stainless steel screens.

Minimal wall thickness assures high-strength solder joints; pressures to 400 psig. Sizes: 1/2" to 2".



59-V SERIES

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 WOG and 125 psig at 400°F WSP. Sizes: 1/8" and 1/4" NPT.



Backflow Preventers And Accessories

4D-100 SERIES

The Defender double check valve gives you short lay length, low head loss and the durability of stainless steel in a totally lead-free assembly. Get big protection in a small package against lead and unwanted backflow with the Apollo Defender.

Maximum working pressure to 175 psig; operating temperatures from 33-140°F. Sizes 2-1/2" to 10".



4S-100 SERIES (MODEL DC)

Easy-handling, low head loss top entry double check valve assemblies for fire sprinklers and irrigation systems. Body and cover: FDA approved epoxy coated ductile iron. Meets ASSE 1015, AWWA C-510, and CSA B64.5; IAPMO listed, UL Classified and FM Approved. USC-FCCC&HR Approved. Fast in-line maintenance. Sizes from 2-1/2" to 10".



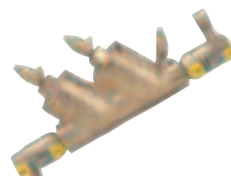
4SG-100 SERIES

Double Check Valves in sizes 2 1/2" - 8". 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. Grooved body connections for ease of installation.



40-100 SERIES

Sizes 1/2" to 2": Bronze body double check valves with Celcon® poppets and stainless steel springs. Full USC-FCCC&HR, AWWA, ASSE, CSA approvals; and IAPMO listed. UL classified and FM approved models.



Y Strainers, Backflow Preventers And Accessories

4D-200 SERIES

Defender reduced pressure principle backflow preventers provide lead-free protection against back-pressure or back-siphonage in a minimum space. Patented stainless steel modular checks help reduce lay length and simplify maintenance. Maximum working pressure 175 psig; operating temperatures from 33 to 140°F. Sizes 2-1/2" to 10".



40-200 SERIES

Sizes 1/4" to 2": Bronze body reduced pressure valves with Celcon® poppets and stainless steel springs. USC-FCCC&HR, ASSE, CSA approved, 3/4" to 2" are also AWWA, UL classified and IAPMO listed.



40-200 SERIES

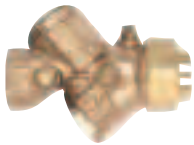
Sizes 2-1/2" to 10": Fusion epoxy coated ductile iron body; 85-5-5 replacement seats and stainless steel springs. Full USC-FCCC&HR, AWWA, ASSE, CSA, and FM approvals and IAPMO listed. UL classified.



Backflow Preventers And Accessories

40-300 SERIES

Bronze dual check valves with Celcon® poppets and stainless steel springs; in-line testable and repairable; wide range of inlet/outlet connection combinations available. ASSE and CSA approvals. Sizes: 1/2" to 1".



4N-300 SERIES

New Apollo® Valve 4N-300 Series dual checks. Tested and certified ASSE and CSA, designed especially to meet the growing needs of water systems supplying new suburban residential communities and neighborhoods. Sizes 3/8" to 1"; Bronze body valves with Noryl® and acetal components and stainless steel springs.



40-400 SERIES

Bronze body continuous pressure valves with Noryl® poppets and stainless steel springs. ASSE and CSA approvals. Sizes: 1/2" and 3/4".



4V-500 SERIES

Pressure vacuum breaker protects irrigation systems from freeze damage.



Designed with plastic float and integral relief valve for freeze resistance; Apollo® ball valves standard. Max. working pressure: 150 psig. Full USC-FCCC&HR, ASSE, and CSA approvals. Sizes 1/2" to 2".

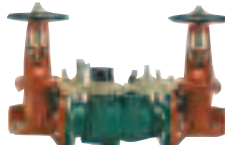
4W-500 SERIES

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 with continuous pressure where water discharge could cause problems. Full USC-FCCC&HR, ASSE, and CSA approvals. Sizes: 1/4" to 1/2" Noryl Body.



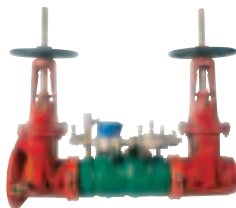
4S-600 SERIES MODEL DCDA)

Epoxy coated ductile iron model DCDA. Designed to provide double check protection against cross-connection of non-potable (non-hazardous) water into the safe drinking water system; and at the same time offers precise monitoring capability to detect leakage or unauthorized use of water from fire or automatic sprinkler systems. Sizes 2-1/2" to 10".



4SG-600 SERIES

Double Check Detector Assembly in sizes 2 1/2" – 8". Light-weight with grooved body connections for ease of installation in fire or automatic sprinkler systems. Provides precise monitoring capability to detect leakage or unauthorized water usage. Available shut-offs: monitored butterfly valves with supervisory switch and resilient-seated gate valves.



40-700 SERIES

Protects against hazardous cross-connections. Detects unauthorized use of water in fire and sprinkler systems.



Internal sensing passage. Working pressures to 175 psig; operating temperatures: 33°F to 140°F. Approved under ASSE 1047, FM, UL Classified, USC's FCCC&HR. Sizes: 3" to 10".

4C-100 SERIES

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. IAPMO approved. Sizes 1/4" and 3/8".



BACKFLOW TEST KIT

Apollo® three and five-valve test kits are lightweight and portable. They come equipped with a gauge, hoses and all required fittings in a protective molded plastic case. For DCV, RPZ, DVB and SVB backflow preventers.



Special Products And Accessories

Conbraco supplements its standard flow-control line with a broad selection of specialty products, including:

- Gauge glass for liquid level gauges
- Guard rods for liquid level gauges
- Replacement parts
- Meter setters

Contact your Conbraco representative for more information.

Standard Ball Valve Ratings

Bronze Valves: 600 psig CWP, Cold, Non-shock.
(Exceptions: 3-way and Saturn valves)

Stainless Steel Valves (76 & 96 Series):
1/4" through 1": 2,000 psig CWP
1-1/4" through 2": 1,500 psig CWP

Carbon Steel Valves (89 and 93 Series):
1/4" through 1": 2,000 psig WOG, 1-1/4" through 2": 1,500 psig WOG Cold, Non-shock

73A Series: 1/4" through 1": 2,000 psig WOG, 1-1/4" through 2": 1,500 psig WOG Cold, Non-shock

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

Standard Ball Valve Design Features

- Steel or 304 stainless steel handle with hole for tagging.
- Blow-out resistant stem.
- Body: Bronze, stainless steel, carbon steel (barstock, cast or forged), Alloy 20 and nickel.
- Ball: Chrome plated bronze or carbon steel, stainless steel, Alloy 20 and nickel.
- RPTFE seats and seals, stuffing box ring and seal washer.

Standard Apollo® Ball Valves

32 SERIES



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

71 SERIES



Bronze ball valve with mounting pad; deadman spring return handle available. Sizes: 1/4" to 3".

76 SERIES



Stainless steel standard ball valve; investment cast components; 2,000 WOG to 1", 1,000 WOG 1-1/2" to 3"; Sizes: 1/4" to 3". 76-600 Series - Stainless steel 3-way diversion ball valve; 800 psig WOG; investment cast components.

76F SERIES



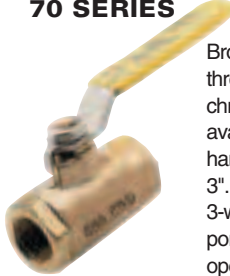
Economy stainless steel full port valve, 1000# CWP rating. Threaded ends, blowout proof stem, investment cast body, 316 SS components, including stainless handle. RPTFE seats and long-life MPTFE packing. Sizes 1/4" to 2".

73A SERIES



Forged carbon steel construction, standard port design 2,000 WOG to 1". 7,500 WOG 1-1/4" to 2". With actuator mounting pads and raised handle stops. NACE compliant with SS trim. Sizes 1/4" to 2".

70 SERIES



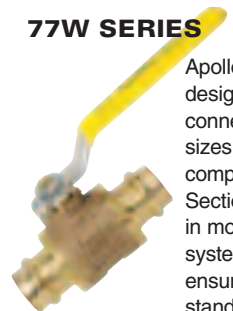
Bronze ball valve with threaded or solder ends; chromium-plated ball; available with latch lock handle. Sizes: 1/4" through 3". 70-600 Series - Bronze 3-way diversion ball; large ports; 600 WOG rating; 90° operation. Sizes: 1/4" - 3".

77C SERIES



Full-port bronze ball valve with solid chrome-plated ball for better flow characteristics. U.S.-made cast bronze body and end-cap. NPT and ANSI B16.18 solder end connections available. Sizes 1/4" to 2". 77C-AO tubular extensions.

77W SERIES



Apollo-Press® ball valves are designed for direct mechanical connection to copper tubing in sizes 1/2" - 2". The 77W complies with ANSI/NSF 61 Section 8 and can be installed in most plumbing and heating systems. The press connection ensures easy installation with standard crimping tools.

74 SERIES



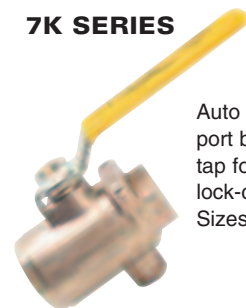
Chemical resistant nickel ball valve; blow-out resistant stem; stainless steel lever and nut; precision investment cast components. Sizes: 1/2" to 2".

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 and seals; adjustable packing gland; stainless steel lever and nut. Sizes: 1/2" to 2".

7K SERIES



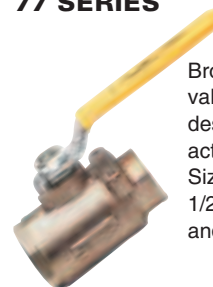
Auto Draining; bronze full-port ball valve with 1/4" NPT tap for drain. Available with lock-closed-only lever. Sizes: 1/4" to 2-1/2".

75 SERIES



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

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.

Standard Apollo® Ball Valves

78 SERIES

Choose from bronze ball valve with solid brass cap and chain, bronze 4" NPT ball valve, bronze instrumentation ball valve, or purge and drain ball valve models; many options available.

80/81 SERIES

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

89 SERIES

Carbon steel ball valve with threaded ends; 1,500 and 2,000 psig WOG; easy actuator mounting. Sizes 1/4" to 3". (Actuator Ready version: 89-ARX-64.)

9A/90 SERIES

Saturn® bronze one piece ball valve; UL listed 300 psig (9A rated 600 psig WOG); threaded ends; for fuel, inert gas, flammable liquids; "tee" or lever handles. 90 Series sizes: 1/2" to 2". 9A Series sizes: 1/4" to 2".

91 SERIES

Saturn® bronze one piece ball valve; rated 400 psig for WOG cold, non-shock; threaded and solder ends. Sizes: 1/4" to 2".

92-100 SERIES

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

93 SERIES

Saturn® carbon steel unibody ball valve; WOG rated 1,500 to 2,000 psig, cold, non-shock; optionally meets API 607 fourth edition fire safe standards. Sizes: 1/4" to 2".

95 SERIES

Bronze stop and drain ball valve; 400 psig WOG rating; threaded or solder ends; many handle options available. Sizes: 1/2", 3/4" and 1".

96 SERIES

Saturn® stainless steel unibody ball valve; WOG rated 1,500 to 2,000 psig; optionally meets API 607 fourth edition fire safe design standards; "tee", round, cam lock or latch lock handles available. Sizes: 1/4" to 2".

Three Piece Ball Valve

82 SERIES

Bronze three piece full-port ball valve; rated 600 psig WOG; threaded or solder ends; in-line maintenance. Sizes: 1/4" through 4".

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

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.

86B SERIES

Stainless steel, full-port three piece ball valve, class 600; ASME B16.34, (all sizes), ISO 5211 mounting pad, enclosed B8M fasteners, 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.

Apollo® AR™ Ball Valves

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 2,000 psig or to 450°F, or to 250 psig saturated steam. (Bronze rated to 600 psig.)

71-AR SERIES



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

76-AR SERIES



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

77-AR SERIES



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

89-AR SERIES



Carbon steel standard port ball valve; investment cast components; ISO mounting pad; advanced live-loaded packing design; latch lock handle available. Sizes 1/4" to 3".

Heavy-Duty Apollo® Ball Valves

- Blow-out proof stem
- Field repairable
- RPTFE seats and stuffing box rings
- Meets WW-V-35C federal standards
- Fire safe designs available
- Expanded pressure ranges
- High-performance alloys

72 SERIES



Carbon steel high pressure ball valve; rated 3,000 psig. Sizes 1/4" to 2". Pressure is body rating.

87A SERIES



Stainless steel Class 150 and 300 flanged valve; regular or full-port; ISO 5211 actuator mounting pad. Sizes: 1/2" to 12".

88A SERIES



Carbon steel Class 150 and 300 flanged valve; regular or full-port; ISO 5211 actuator mounting pad. Sizes: 1/2" to 12".

Specialty Valves

399/87A-400/401R SERIES

Alloy 20 two piece, three piece, and Class 150 flanged ball valves; reinforced seats and seals; options available. Two piece sizes: 1/4" to 2". Three piece sizes: 1/2" to 2". Flanged sizes: 1/2" to 4".

AR Ball Valves, Specialty Valves, Top Entry Valves

Top Entry Apollo® Ball Valves

Features:

- Sizes 1/2" to 12"
- Temperatures - 150°F to +1,000°F
- ANSI Pressure Class 150, 300, 600
- High vacuum to 1,500 psig
- 16 seating materials, four different configurations
- High-strength encapsulated metal seat holders
- 11 body materials
- 11 ball and stem materials
- Six end configurations
- Standard bonnets, extended bonnets and fugitive emissions bonnets - all interchangeable

BUTT WELD SERIES



Available in ANSI 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.

FLANGED SERIES



In 150, 300 and 600 ANSI Class. Materials: Alloy 20, carbon steel, Hastelloy C, M35-1, nickel, stainless steel, titanium and others upon request. Sizes 1/2" to 10".

Top Entry Apollo® Ball Valves, Apollo Actuators

FULL-PORT FLANGED SERIES



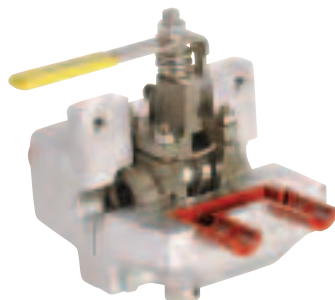
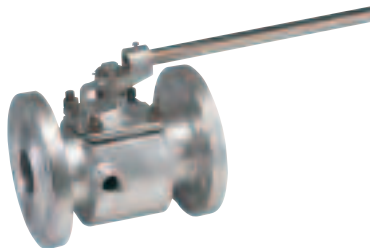
In 150, 300 and 600 ANSI Class. Materials: Alloy 20, carbon steel, Hastelloy C, M35-1, nickel, stainless steel, titanium and others upon request. Sizes 1/2" to 6".

NPT AND SOCKET WELD SERIES



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

Steam Jacketed Top Entry Valves



Conbraco's Apollo® Top Entry Ball Valves are ideally suited for jacketed applications. The top entry concept allows for continued access to stem packings and valve internals for ease of maintenance without disturbing the jacket itself or removing the valve from the pipeline.

Apollo® Pneumatic Actuators And Accessories

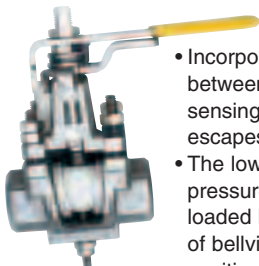


Apollo® CompacTorque™ actuators are totally manufactured in the USA and feature rack and pinion design. Available in 10 sizes to complement torque requirements of most Conbraco valves. Both spring return and double acting versions are available. Spring return torque ratings at 80 psig are from 64 to 4248 lb-in. Patented Universal Shaft Adapters make it easy for direct mount to Apollo butterfly valves.



Double acting torque ratings at 80 psig range from 60 lb-in. to 10,396 lb-in. Apollo® CompacTorque™ actuators feature ISO 5211 interface dimensions and NAMUR solenoid and accessory interface dimensions. Conbraco also supplies pre-engineered stainless steel valve/actuator mounting kits for all valves equipped for automation.

Fugitive Emissions Bonnet Features



- Incorporates a monitoring port between two packing sets enabling sensing of toxic leakage before it escapes to the atmosphere.
- The lower packing stack is pressure activated as well as live loaded by an internal spring. Use of bellville washers will insure a positive load to both the upper and lower packing, providing a longer cycle life.

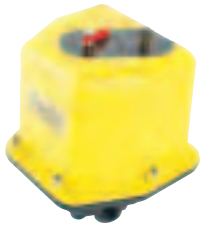
- The monitoring port can be pressurized with an inert media to a value in excess of internal valve pressure insuring zero leakage to the atmosphere. Also, a low pressure gauge can be fitted here or it can be used as a sniff port.

Accessories

- Mechanical and electronic position indicating switches (various NEMA enclosure ratings).
- Pneumatic positioners: single acting, double acting, and I to P.
- Position transmitters (4-20 mA, 0-1000 OHMS).
- Solenoid valves (multiple voltages, AC or DC, various electrical ratings).
- Air filter regulators.

Apollo® Electric Actuators

AE SERIES



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

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.

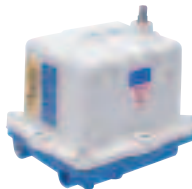
APOLLO® "ACUTORQUE" STAINLESS STEEL ACTUATOR



The 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 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.

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.



Pipeline Strainers, Apollo® Butterfly Valves

Apollo® Butterfly Valves

141/143 SERIES 2" TO 24"



General Purpose/Economy Design

For use in industrial and HVAC/mechanical markets. The 141 Model is a wafer style valve; the 143 Model is a companion lug. Both are rated at 200 psig bubble-tight shut-off between flanges. They feature an extended neck length to provide a minimum 2" clearance between valve top plate and pipe flange. 141/143 Series meet MSS SP-67 and API 609 specifications.

Pipeline Strainers

STRAINERS

Materials of Construction: Body: Cast iron, bronze, carbon steel or stainless steel (Y-type).



End connections: threaded, socket weld, or flanged (Class: 125 or 250). Screen options: 304 stainless steel standard with optional brass, Ni-Cu, or 316 stainless steel. Screen openings available from 100 mesh to 1/2" diameter perforations. Sizes: 1/4" to 18".

For more information contact your nearest Apollo / Conbraco / Distributor:



"Apollo" Valves

Conbraco Industries, Inc.

P.O. Box 247

Matthews, NC 28106

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