



**Ball Valves**

**Butterfly Valves**

**Automation Products**

**Gate, Globe & Check Valves**

**Pipeline Strainers**

**Backflow Preventers**

**Plumbing and Heating Products**

**Safety Relief Valves**

 **CONBRACO**  
Industries, Inc.

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Final Assembly  
(Distribution Center)



**Matthews**  
Headquarters  
and Assembly  
Plant

## A History of Service and Innovation

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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, North 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 includes ball valves; butterfly valves; gate, globe and check 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.

## Safety And Relief Valves

### 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.



**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 finish. Select sizes available with stainless steel wetted trim. Set pressures to 60 psig @ 312°F. 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. Bronze, satin or polished chrome finish. Set pressures 15 to 160 psig @ 250°F. Available with standard or expanded outlet, sizes 3/4" through 2".



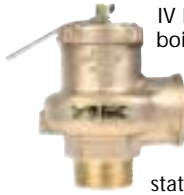
**12 Series** - Medium capacity safety valves protect ASME Section IV low pressure steam heating boilers. Cast bronze, full nozzle design features PTFE faced elastomer soft seating for dependable operation. Set pressures 5 to 15 psig @ 250°F. Sizes 2", 2-1/2" and 3".



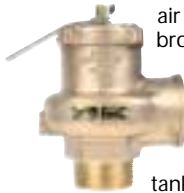
**13 Series** - ASME Section IV bronze safety valves protect small to medium low pressure steam heating boilers. Three design configurations feature top guiding and raised seating area for extended service life. Top and side discharge models. PTFE faced elastomer soft seating for dependable operation. Plain, satin or polished chrome finish. Set pressures 5 to 15 psig @ 250°F. Sizes 3/4" through 1-1/2".



**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".



**14-200-A Series** - Low pressure safety valves for 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 5 to 18 psig @ 325°F. Sizes 2", 2-1/2" and 3".



**14-290 Series** - High capacity 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 6 to 30" Hg @ 325°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 Series** - Non-code liquid relief valves for supply lines, well systems, cold water storage tanks, and agricultural sprayers. Available with factory preset or field adjustable pressure settings. All models feature bronze bodies, stainless steel springs and soft seating. Set pressures to 600 psig @ 200°F. Sizes 1/2" and 3/4".



**16 ARV Series** - Calibrated low cost static overpressure protection for cold water applications. 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".



**16-601 Series** - Thermal expansion valves protect plumbing fixtures and extend water heater life. Compact, lightweight design; no special tools required for installation.





**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".



**18-400 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 175 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. Available with stainless steel wetted trim. Set pressures to 250 psig @ 450°F. Sizes 1-1/2" through 6".

**120 Series** - is identical to 119 Series, but offers stainless steel wetted components.



**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. 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. 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.

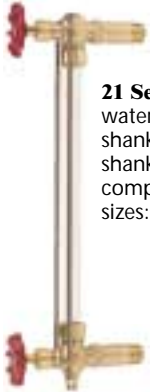


**37 Series** - Brass or bronze vacuum relief valves; max. temperature: 250°F; Max. water pressure: 200 psig. CSA certified. Sizes: 1/2" and 3/4".

## 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".



**21 Series** - Rough bronze water gauges with extended shank; 1-1/4" and 1-3/4" shank lengths; aluminum or composition handle. For pipe sizes: 3/8" and 1/2".



**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".



**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".



**52 Series** - Gas service cocks with choice of "tee", flat, square, or lever head; tested at 35 psig; lubricated for use up to 500°F; wrench operated. Sizes: 1/4" to 1".

## 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".



**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".

## Air And Gas Cocks



**41 Series** - Polished brass, satin brass and chrome finish air cocks; with "tee" handle or lever handle; spring and nut bottom with wide range of connections available.

## Air and Gas Cocks, Mixing Valves

### 35-FV Series

The 35FV Series provides automatic air venting of hot or cold water in distribution systems. The connections conform to ANSI B1.20.1: maximum working temperature of 230°F.



**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".

**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.

## 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

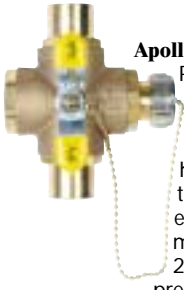
34D ASSE 1016 certified mixing valves are designed to throttle both the hot and cold water inlet supplies to compensate for temperature and pressure fluctuations. The mixed water temperature range is 85°-120°F and will hold a desired temperature within +/- 2°F at all times. The 34D has built in thermal actuator protection and an adjustable temperature limit stop to prevent the valve from exceeding 120°F.



## 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.

## 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.

## Water Pressure Reducing 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".



**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".



**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".

## Vacuum Breakers



**38 Series** - Brass body, for use with cold or hot water to 180°F at 125 psig.

**38P** features a lead-free, high-density thermoplastic body. ASSE/ANSI and CSA approved, and listed with IAPMO. 3/4" standard hose (38-304, 38P) or anti-freeze hose connection (38-404). 38-100 Series atmospheric type vacuum breaker available in sizes 1/4" to 2".



**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.

## Check Valves



**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.



**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.



**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 (85-5-5-5) 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 85-5-5-5 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 & Accessories



**4S-100 Series** - Easy-handling, low head loss top entry 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. Fast in-line maintenance. Diameters from 2-1/2" to 6".



**40-100 Series** - Sizes 1/2" to 2": Bronze body double check valves with Celcon® poppets and stainless steel springs. Sizes 2-1/2" to 10": Fusion epoxy coated ductile iron body; 85-5-5-5 replaceable seats and stainless steel springs. Full USC-FCCCHR, AWWA, ASSE, CSA approvals; and IAPMO listed. UL classified and FM approved models. 2-1/2" to 10": With top entry double check valves, both first and second check valves are designed at an inclined angle upward from horizontal assembly. Easy installation, repair and maintenance. Maximum working pressure: 175 psig; temperatures: 33°F to 180°F. Sizes: 3/4" to 2". Full USC-FCCCHR, AWWA, ASSE, CSA, IAPMO listed, UL classified.



**40-200 Series** - Sizes 1/4" to 2": Bronze body reduced pressure valves with Celcon® poppets and stainless steel springs. USC-FCCCHR, ASSE, CSA approved, 3/4" to 2" are also AWWA, UL classified and IAPMO listed. Sizes 2-1/2" to 10": Fusion epoxy coated ductile iron body; 85-5-5-5 replacement seats and stainless steel springs. Full USC-FCCCHR, AWWA, ASSE, CSA, and FM approvals and IAPMO listed. UL classified. Sizes: 3" to 10".



**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".



**4P-300 Series** - Lead-free in-line and angle dual check valves; high-density thermoplastic body. Supply pressures to 175 psig; water temperatures from 33°F to 180°F. Low head loss, double union joint. Inlet/outlet sizes: 1/2" to 1". ASSE and CSA approvals. Certified to ANSI/NSF-61.



**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".



**40-500 Series** - Bronze body pressure type vacuum breakers with polyethylene float and stainless steel springs. Full USC-FCCCHR, ASSE, and CSA approvals. Sizes: 1/2" to 2".



**4V-500 Series** - 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. Sizes 1/2", 3/4" and 1".



**40-600 Series** - Double check detectors protect against low hazard cross-connection conditions. Detects leaks, unauthorized water use in fire and sprinkler systems. Test cocks for in-line testing. Approved under ASSE 1048, USC's FCCC&HR, FM and UL classified. Removable bronze seats. Working pressures to 175 psig; operating temperatures: 33°F to 140°F. Sizes: 3" to 10".



**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".

#### Special Products/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
- Test kits
- Meter setters

Contact your Conbraco representative for more information.

## 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".

## 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

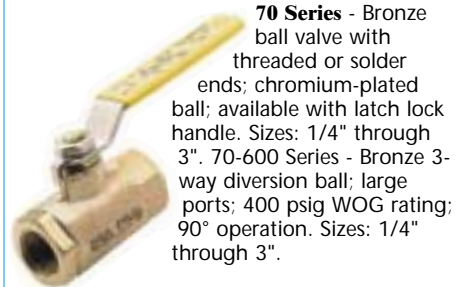
**73A Series:**  
2,000 psig WOG

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.**
- **RPTE seats and seals, stuffing box ring and seal washer.**

## Standard Apollo® Ball Valves



**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; 400 psig WOG rating; 90° operation. Sizes: 1/4" through 3".



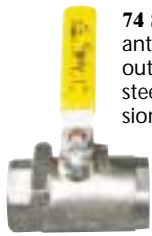
**7K Series** - Bronze full port ball valve with 1/4" NPT tap for drain. Available with lock-closed-only lever. Sizes: 1/4" to 2-1/2".



**71 Series** - Bronze ball valve with mounting pad; deadman spring return handle available. Sizes: 1/4" to 3". (Actuator Ready version: 71-ARX-64.)



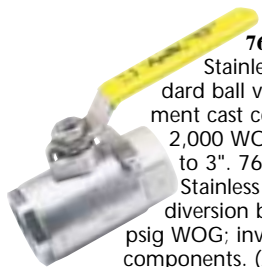
**73A Series** - Forged carbon steel construction, standard port design 2,000 WOG. With actuator mounting pads and raised handle stops. NACE compliant with SS trim. Sizes 1/4" to 2".



**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".



**75 Series** - Bronze pad-lockable ball valve; rated 600 psig WOG; stainless steel lever and nut optional; automatic drain available. Sizes: 1/4" to 2".



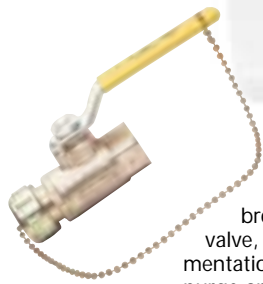
**76 Series** - Stainless steel standard ball valve; investment cast components; 2,000 WOG; Sizes: 1/4" to 3". 76-600 Series - Stainless steel 3-way diversion ball valve; 800 psig WOG; investment cast components. (Actuator Ready version: 76-ARX-64.)



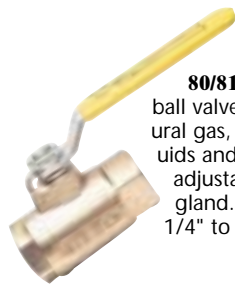
**76-300/400 Series** - Stainless steel ball valve with double union ends; blow-out proof stem; all wetted metallic parts are 316 stainless steel; RPTFE seats and seals; adjustable packing gland; stainless steel lever and nut. Sizes: 1/2" to 2".



**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. (Actuator Ready version: 77-ARX-64.)



**78 Series** - Choose from bronze ball valve with cap and chain, bronze 4" NPT ball valve, bronze instrumentation ball valve, or purge and drain ball valve models; many options available.



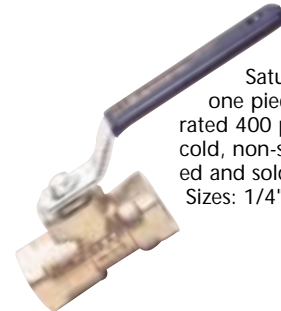
**80/81 Series** - Bronze ball valve for LP gas, natural gas, flammable liquids and heated oil; adjustable packing gland. UL listed; Sizes: 1/4" to 3".



**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.)



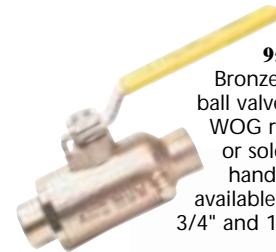
**9A/90 Series** - Saturn® bronze one piece ball valve; UL listed 300 psig (9A rated 600 psig WOG); threaded ends; for fuel, inert gas, flammable liquids; "tee" or lever handles. 90 Series sizes: 1/2" to 2". 9A Series sizes: 1/4" to 2".



**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".



**93 Series** - Saturn® carbon steel uni-body 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".

## 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".

**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-400/401 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".



**452/453 Series** - Stainless steel or carbon steel with stainless steel trim fugitive emissions ball valve; full port; PTFE seat; two sets PTFE Chevron style stem packings; blow-out proof stem design; spring loaded, adjustable packing gland; corrosion resistant; extended bonnet for piping insulation; external connection for negative pressure scrubbing system (or monitoring). Sizes: 1/2" to 6".

**83R Series** - Carbon steel full port three piece ball valve; 1,000 psig CWP; ISO 5211 mounting pad; advanced packing design. Available in threaded, socket weld and butt weld ends. Many options, including -AR actuator ready with live-loading. Sizes: 1/2" to 2".



**85R Series** - Stainless steel regular port three piece ball valve, 1,000 psig CWP; ISO 5211 mounting pad; advanced packing design. Available in threaded and socket weld ends. Many options, including -AR actuator ready with live-loading. Sizes: 3/4" to 2".



**86R Series** - Stainless steel full port three piece ball valve; 1,000 psig CWP; ISO 5211 mounting pad; advanced packing design. Available in threaded, socket weld and butt weld ends. Many options, including -AR actuator ready with live-loading. Sizes: 1/4" to 2".

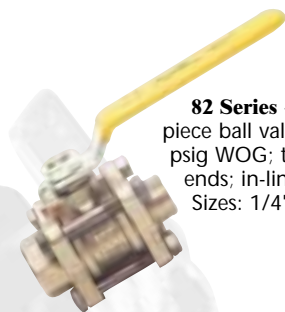
**96 Series** - Saturn® stainless steel uni-body ball valve; WOG rated 1,500 to 2,000 psig; optionally meets API 607 fourth edition fire safe design standards; "tee", round, cam lock or latch lock handles available. Sizes: 1/4" to 2".



### Three Piece Ball Valve Features

- **RPTFE packing, seal and seats**
- **Vinyl grip**
- **Blow-out resistant stem**
- **Adjustable gland**
- **Easy swing-out maintenance**

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



**82/83/86 Series** - Tank bottom valve with stainless steel investment cast flange for corrosion resistance; full port; available in bronze, carbon steel, or stainless steel; can be operated manually or by Apollo pneumatic or electric actuator. Size: 2".





**ISO-Pure** - Pure Bore, ISO 5211 mounting pad, Class 1000 clean room assembly, 25 Ra finish. 316L construction with mill test reports and full traceability. Investment cast 1/2" through 4". Chevron-style live-loaded packing. Cavity fillers. Purge bosses on end caps. Tri-clamp and extended tube ends. Latch lock handle to 3". 15 Ra finish (or better) optional.

## Top Entry Apollo® Ball Valves

### Top Entry Ball Valves

#### Features:

- Sizes 1/2" to 10"
- 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
- Seven body materials
- Nine 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 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 and titanium. Sizes 1/2" to 10".



**Full Port Flanged Series** - In 150, 300 and 600 ANSI Class. Materials: Alloy 20, carbon steel, Hastelloy C, M35-1, nickel, stainless steel and titanium. 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 and titanium.

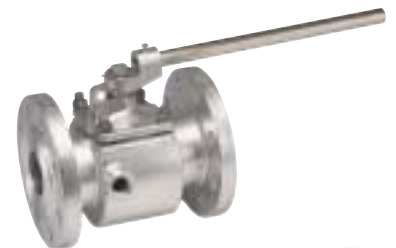


### Fugitive Emissions Bonnet Features

- 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 fluid 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.

## 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.



Top Entry Apollo® Ball Valves

## Apollo® Pneumatic Actuators And Accessories



Apollo® CompacTorque™ actuators are totally manufactured in the USA and feature rack and pinion design. Available in 11 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 50 to 10,500 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 58 lb-in. to 25,000 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.

### 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.



**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.



**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; all electric positioners and fail safe operation.

## RP&C® Forged Steel Valves And Pipeline Strainers



### Class 800 Gate, Globe and Check Valves

Materials of Construction: Body and bonnet: A105N carbon steel, 316/316L stainless steel, F5, or F22 chrome moly. Trim: 12 to 14% chrome, 316 stainless steel, Co-Cr based alloy, and Ni-Cu. End connections: threaded, socket weld, or flanged (Class: 150, 300, or 600). Design per applicable requirements of API 602 and API 591. Can be furnished to meet NACE Spec. MR-01-75. Sizes: 1/4" to 3".



### Swing Check Valves

Innovative swing check design allows for full opening and highest Cv values possible, from 5.1 to 91.6. Available in sizes 1/4" to 2", standard 316 stainless steel swing unit and B7M bolting meets requirements of NACE MR 01-75.



### Class 1500 Gate, Globe and Check Valves

Materials of Construction: Body and bonnet: A105N carbon steel (316/316L stainless steel, A182 and F22 alloy steel. Co-Cr based alloy hard faced trim with optional 316 stainless steel. End connections: threaded (NPT), socket weld, or flanged. Designed to meet ASME/ANSI B16.34 requirements. Sizes: 1/2" to 2".



### Class 1690 and 2690 Y-Pattern Valves

Materials of Construction: Body and bonnet: Forged carbon steel A105, F22 chrome moly, or F91 alloy. Trim: full Co-Cr based alloy. End connections: threaded, socket weld, or butt weld. Sizes: 1/4" to 4".



### Barstock Valves

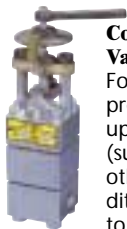
**60 Series** - Carbon steel or stainless steel needle valves; rated 10,000 psig for cold, non-shock service; carbon steel valves are nitrated. Sizes: 1/8" to 1".

### Strainers

Materials of Construction: Body: Cast iron, bronze, carbon steel or stainless steel (Y-type or basket). End connections: threaded, socket weld, or flanged (Class: 125, 150, 250, or 300).



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".



### Continuous Blowdown Valves

For controlling primary pressure drops at pressures up to 1,500 psig in boiler (surface) blowdown or other service throttling conditions. Basic pipe sizes 3/8" to 2" with orifice sizes 5/16" thru 1-1/2".

## Apollo® Butterfly Valves

### 130/132 Series -- 2" to 12" Sanitary and Chemical Design



Apollo® sanitary and chemical butterfly valves feature a two-piece (split body) construction with one-piece 316 stainless steel disc/stem. The disc is also available with Teflon, EPDM or Buna-N coating. The thin profile disc provides an extremely high Cv. Both models are rated at 150 psig (100 psig with a Teflon or elastomer molded disc) and provide bubble-tight shut-off between flanges.

### 130/132 Series -- 1-1/2" to 12" Food/Beverage/Distilling Design



The 316 stainless steel bodies (on wafer-style 130 Model and lug-style 132 Model valves) are perfect for applications requiring sanitary compliance or superior corrosion resistance.

All 130/132 Series valves are available with 316 stainless steel disc/stems in high polished or satin finish. Rated at 150 psig and provide bubble-tight shut-off between flanges.

### 130/132 Series -- 2" to 12" All Purpose Design



Our Apollo® 130 Model All Purpose is the original two-piece body (split body), one-piece disc/stem wafer-style valve designed to deliver maximum open area flow. Its thin-profile disc design provides a higher capacity than contour disc designs, while offering the highest flow coefficient (Cv) available from a butterfly valve. The all purpose design is also available as a companion lug (132 Model). Rated at 150 psig bubble-tight shut-off between flanges.



### 140/142 Series -- 2" to 24" General Purpose/Industrial Design

General purpose and industrial butterfly valve with a one-piece high strength 17-4 PH stainless steel through-shaft design. Rugged construction in a wide choice of materials. Designed for direct mounting of actuators. The 140 Model is a wafer style valve; 142 Model is a companion lug. Both are rated at 150 psig bubble-tight shut-off between flanges.

### 141/143 Series 2" - 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.

For more information contact your nearest Apollo / Conbraco / RP&C distributor:



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