



- BALL VALVES
- AUTOMATION & CONTROLS
- BACKFLOW PREVENTERS
- BUTTERFLY VALVES
- FORGED STEEL VALVES



 **CONBRACO®**

- SAFETY RELIEF VALVES
- STRAINERS
- PLUMBING & HEATING PRODUCTS
- INLINE CHECK VALVES

**plumbing and
heating products**

Marking Seven Decades Of Dedication To The Plumbing And Heating Industry

Look around Conbraco and you'll see our commitment to serving the plumbing and heating industry is as strong today as it was seven decades ago when we filled our first order.

As the industry has grown, so has our lineup. Today, we're designing and producing more than 120 distinct products under the Conbraco, Apollo®, RP&C® and Apollo International brand names.

From our nearly 1.5 million square feet of ISO 9001 certified space, we're turning out world-class safety and shut-off valves, relief valves, backflow preventers, strainers, pressure reducers and accessories. Plus the most comprehensive line of U.S. made ball valves.

It's a product selection so complete, our customers can enjoy single-source convenience and accountability on products that meet or exceed stringent ASME, UL, CSA, AWWA, ASSE and IAPMO quality and performance standards. With fast deliveries from stocked regional inventories coordinated by our network of more than 2,000 distributors.

We're investing in the future, too. Our \$20 million foundry complex in Pageland, SC is among the most advanced casting facilities in the world. By combining continuous-casting technology, backup systems and process controls, the foundry produces brass, bronze and specialty castings with unmatched efficiency, consistency and speed.

Count on Conbraco for high-performance products at highly competitive prices.



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All products, services and systems will be constantly improved to enhance our recognition for leadership and excellence by our customers and our industry. This requires that we clearly determine our customers' requirements and consistently meet or exceed those requirements.



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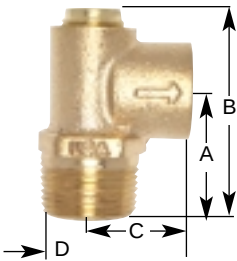
Pressure Relief Valves

16 Series

Pressure Relief Valves

Pressure relief valves relieve excess pressure in cold water storage tanks and water supply lines.

- Bronze body
- Standard pressure settings from 50 to 175 psig
- Stainless steel spring
- **16-200** Series for pressure relief only, less lever, silicone seat
- **16-300** Series for temperature relief with 210°F fusible plug and pressure relief with lift lever, nitrile seat
- **16-400** Series for temperature relief with 210°F fusible plug and pressure relief, less lever, nitrile seat



16-200



16-300

No.	Size	Wt./100 (lbs)	A (in.)	B(in.)	C(in.)	D(in.)
16-201	1/2 M x 3/8 F	36	1-13/32	2-1/8	1	1/2
16-202	1/2 M x 1/2 F	33	1-13/32	2-1/8	1	1/2
16-203	3/4 M x 1/2 F	37.5	1-13/32	2-1/2	1	5/8
16-301	1/2 M x 3/8 F	37.5	1-13/32	2-1/2	1	7/8
16-302	1/2 M x 1/2 F	37.5	1-13/32	2-1/2	1	7/8
16-401	1/2 M x 3/8 F	37.5	1-13/32	2-1/8	1	1/2
16-402	1/2 M x 1/2 F	34.4	1-13/32	2-1/8	1	1/2

Note: When ordering, specify pressure by adding the two digit key number after the product number as follows: 50 PSIG: -01; 75 PSIG: -02; 100 PSIG: -03; 125 PSIG: -04; 150 PSIG: -05; 175 PSIG: -06

16-501 Series



By-Pass Relief Valve

Protects equipment by allowing excess volume to be discharged to storage tank or back to the source. Ideal for agricultural sprayers and simple process systems. "T" handle facilitates adjustment.

- 1/2" size for low volume relief or by-pass control
- Adjustable pressure setting

No.	Size	Wt./each	Relief Range	Seat Material
16-501-01	1/2 M x 1/2 F	.621	0 - 250	Nitrile
16-501-02	1/2 M x 1/2 F	.610	250 - 600	Nitrile
16-501-25	1/2 M x 1/2 F	.621	0 - 250	PTFE
16-501-60	1/2 M x 1/2 F	.610	300 - 600	PTFE

16-601 Series



Thermal Expansion Relief Valve

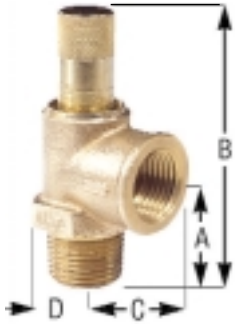
Protects plumbing fixtures and extends water heater life by relieving excess pressure caused by thermal expansion. Installs fast without special tools or shutting off the water.

- Bronze body construction
- Compact, lightweight, corrosion resistant
- Stainless steel puncher, spring, clamp
- U.S. Patent No. 5,241,981

No.	Set Pressure (PSIG)	Wt./each (lbs)
16-601-02	75	0.5
16-601-E6	85	0.5
16-601-03	100	0.5
16-601-04	125	0.5

Pressure Relief Valves

16-ARV Series



Calibrated Pressure Relief Valves

Calibrated valves for easy pressure adjustments without a gauge. Factory preset at 100 psig; accommodates pressures from 50 to 175 psig, marked in 25 psi increments.

- For cold water applications
- Inlet sizes: 1/2" or 3/4" NPT, both with 1/2" NPT outlet
- Cast bronze body, brass disc and cap
- Stainless steel spring
- Silicone rubber seat and EPDM rubber cap seal

No.	Size	Wt./100 (lbs)	A (in.)	B(in.)	C(in.)	D(in.)
16-503-01 1/2 ARV	1/2 M x 1/2 F	37	1-9/32	3-7/16	1	9/16
16-504-01 3/4 ARV	3/4 M x 1/2 F	38	1-9/32	3-7/16	1	9/16

Temperature and Pressure Relief Valves

18-402X Series



Extended Shank Water Heater T&P Relief Valves

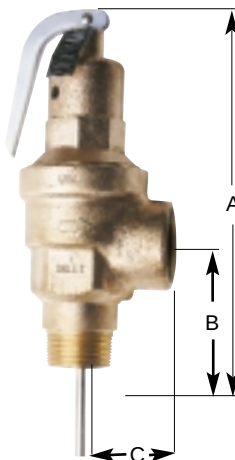
Relief valves with an extended body length (2") for protection of water heaters with extra insulation. Unique non-metallic coating resists galvanic and electromechanical corrosion. **CSA** design certified at all settings. **ASME Section IV** rated at 125 psig and 150 psig settings.

- Meets HUD/FHA requirements
- Cast bronze body, stainless steel spring
- Rated to 210°F maximum
- ASME capacity certified to 450,000 BTU/HR.
- Zinc-plated lever standard
- CRN #0G2663.1C registered in all Canadian provinces and territories



No.	Size	Element Length	Wt./100 (lbs)	Pressure PSIG	CSA Capacity Rating BTU/HR
18-402X-02	3/4 M x 3/4 F	3	64.4	75	100,000
18-402X-15	3/4 M x 3/4 F	3	64.4	100	100,000
18-402X-39	3/4 M x 3/4 F	3	64.4	125	100,000
18-402X-38	3/4 M x 3/4 F	3	64.4	150	100,000
18-402X-40	3/4 M x 3/4 F	3	64.4	175	100,000

18-500 Series



Corrosion Resistant Commercial T&P Valves

Diaphragm type high capacity **CSA** design certified; **ASME Section IV** certified to 150 psig; **ANSI Z21.22** certified to 150 psig. Corrosion resistant with all bronze body and screw-in cage. Eliminates rusting steel screws. Stainless steel springs and thermostats.

- Available in set pressures of 75, 100, 125 and 150 psig
- The 3/4" valve can be supplied with 3", 5" or 8" thermostats
- Valves 1" and larger available with 4" and 8" thermostats
- 3" element is CSA capacity certified at 185,000 BTU/HR.
- CRN #0G2663.1C registered in all Canadian provinces and territories



No.	Connection	A(in.)	B(in.)	C(in.)	Wt./100 (lbs)	CSA Cap. Rating BTU/HR	*ASME Rating BTU/HR
18-511	3/4M x 3/4F	4.67	1.85	1.38	106.7	205000	1601000
18-512	3/4F x 3/4F	4.67	1.85	1.38	106.7	205000	1601000
18-521	1M x 1F	6.63	2.32	1.93	287.3	765000	4200000
18-522	1F x 1F	6.63	2.32	1.93	284.1	765000	4200000
18-531	1-1/4 M x 1-1/4 F	6.63	2.32	1.93	337.2	850000	4586000
18-532	1-1/4 F x 1-1/4 F	6.63	2.32	1.93	322.4	850000	4586000
18-541	1-1/2M x 1-1/2F	9.69	3.34	2.50	819.6	1300000	7763000
18-542	1-1/2F x 1-1/2F	9.69	3.34	2.50	841.7	1300000	7763000
18-551	2M x 2F	9.69	3.34	2.63	860.1	1400000	9262000
18-552	2F x 2F	9.69	3.34	2.63	874.1	1400000	9262000

* National Board certified capacity at 150 PSIG per ASME Section IV-Heating Boilers; specify number, thermostat length and set pressure when ordering. EX: 18-511-3-150

Vacuum Relief Valves

37 Series



37-100



37-200



37-302

Vacuum Relief Valves for Water Heater Protection

Automatically vents a system if a vacuum should occur. Prevents siphoning of the water from the system and collapse of a tank. Design certified by **CSA** in accordance with **ANSI Z21.22**. Also suitable for low pressure (15 psig maximum) steam service.

- Maximum temperature: 250°F
- Rated for water pressures to 200 psig
- Model 37-100 bronze body (silicone rubber seat) or Model 37-200 brass body (EPDM rubber seat)
- Auto-vacuum relief at less than 1/2" vacuum
- Venting capacity as measured in cfm of air @ 2" mercury (vacuum)

No.	Size(in.)	Venting Capacity	Wt./100 (lbs)
37-101	1/2	14 CFM	66.0
37-102	3/4	19 CFM	67.5
37-201	1/2	15 CFM	30.4
37-202	3/4	16 CFM	32.4
37-302	3/4	14 CFM	17.0

Suffix key: Satin Brass - 01; Satin Chrome - 02

**NOTE: This valve is not designed for anti-siphon backflow prevention. To prevent back-siphonage of polluted water into a potable water system, choose from Conbraco's line of backflow preventers.*

Water Heater Accessories

Water Heater Drain Valves

Special packing seal for easy turns and leak-proof operation. Wheel options: zinc-plated steel, chrome finished steel and red-painted aluminum. Models 31-401, 31-600, 31-700 & 31-900 comply with **CSA** requirements.

- Maximum temperature: 250°F
- Pressure rated to over 100 psig
- Brass packing nut

Wheel Options: Specify wheel type by using the following two digit key number following the product number: 01 - steel, 04 - aluminum, 07 - polished chrome, 10 - tee, 13 - slotted stem

31-200 & 31-500 Series



31-202-04

90-Degree Drain Valves

For deluxe water heaters, low pressure boilers.

- All cast bronze bodies
- **31-200** Series heavy pattern, 3/4" MNPT inlet, aluminum wheel only
- **31-500** Series standard pattern, 1/2" NPT, three wheel types available (01 - steel, 04 - aluminum, 07 - polished chrome). I.D. NPT of thread machined for 1/2 copper pipe

No.	Shank Length(in.)	Wt./100 (lbs)
31-202-04	5/8	43.0
31-212-04	15/16	46.5
31-501-04	5/8	31.0

Water Heater Accessories

31-401 Series



31-401-07

Combination Tee & Drain Valve

Permits supplying and draining of water through a single tank tapping; meets **CSA** requirements.

- All cast bronze bodies
- Wheel options
- Pressures to 100 psig; temperatures to 250°F
- 3/4" FNPT inlet x 3/4" male hose end x 3/4" FNPT side outlet

No.	Description	Wt./100 (lbs)
31-401-01	Steel Handle	62.0
31-401-07	Chrome Handle	62.0

31-800 Series



31-801-04

Female Inlet Drain 1/8" NPT Side Outlet

Side outlet can be used to feed other systems.

- All cast bronze bodies
- Ideal design for adding pressure gauge

No.	Female Thread	Wt./100 (lbs)
31-801	Standard Hose	35.0
31-802	3/4 NPT	35.0

31-600, 31-700 & 31-900 Series



31-600 series

Angled Body Water Heater Drain Valves

Models with 3/4" MNPT inlet (**31-600**); 1/2" or 3/4" FNPT inlet (**31-700**); 1/2" MNPT inlet (**31-900**).

- All cast bronze bodies
- Meet **CSA** requirements
- Various shank lengths available
- Pressure rating in excess of 100 psig
- All of our drains are equipped with Conbraco packing
- seal assuring easy turning stem and leakproof drain
- Drains are furnished with zinc plated steel, chrome finished steel or red painted aluminum wheels
- Maximum temperature 250°F

No.	Inlet	Shank Length	Wt./100 (lbs)
31-600	3/4 MNPT	5/8	27.3
31-601	3/4 MNPT	3/4	36.0
31-602	3/4 MNPT	1	35.0
31-604	3/4 MNPT	1-1/4	43.0
31-606	3/4 MNPT	1-1/2	49.5
31-607	3/4 MNPT	1-3/4	48.0
31-608	3/4 MNPT	2	52.0
31-609	3/4 MNPT	2-1/4	52.0
31-610	3/4 MNPT	2-1/2	57.2
31-611	3/4 MNPT	2-3/4	60.0
31-612	3/4 MNPT	3	66.3
31-900	1/2 MNPT	5/8	34.0
31-700	1/2 FNPT	3/4	39.0
31-701	3/4 FNPT	3/4	37.0



31-900 series



31-700 series

Water Heater Accessories

40-XT Series

Expansion Tanks for Potable Systems

Designed to protect closed 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.

- Ideal for use in dorms, apartments, office buildings and hospitals
- Maximum working pressure: 150 psig
- 100 percent non-metallic noncorrosive water reservoir
- Field-adjustable pre-charge
- Compatible with most standard water heaters and storage tanks



No.	Capacity (gal.)	Exp. Vol. (gal.)	Connection	A(in.)	B(in.)	Net Wt. (lbs)
40-XT1-01	2.11	1.40	3/4 NPT	10.88	8.00	5.5
40-XT3-01	4.76	3.17	3/4 NPT	13.75	10.75	8.1
40-XT5-01	6.34	4.22	3/4 NPT	15.88	12.00	9.7
40-XT7-01	13.21	8.82	3/4 NPT	20.00	15.00	23.4

78-RV Series

Bronze Water Heater Shut-Off Valve with Thermal Expansion Control Valve

Thermal expansion protection and water heater shut-off in a single, simple installation. Space-saving and less costly alternative to large expansion tanks for avoiding potential hazards in closed systems

- Sweat and threaded connections available
- Corrosion-resistant all-bronze body
- Chrome-plated ball
- Stainless steel fasteners and springs
- Bubble-tight shut-off
- 3/4" listed with IAPMO
- Now available in 1" size
- Control valve's hose barb fitting, 1/2" pex fitting, compression fitting or 1/2" combination sweat/thread fitting makes discharge piping assembly easy
- Expansion control valve taps into side of shut-off valve
- Listed with SBCCI PST & ESI



Sweat No.	Threaded No.	Control Valve Drain Outlet	Size(in.)	Setting
78-304-RV	78-404-RV	hose barb	3/4	125 psig
78-314-RV	78-414-RV	hose barb	3/4	100 psig
78-324-RV	78-424-RV	hose barb	3/4	80 psig
78-305-RV	78-405-RV	pex fitting	3/4	125 psig
78-315-RV	78-415-RV	pex fitting	3/4	100 psig
78-325-RV	78-425-RV	pex fitting	3/4	80 psig
78-306-RV	78-406-RV	compression fitting	3/4	125 psig
78-316-RV	78-416-RV	compression fitting	3/4	100 psig
78-326-RV	78-426-RV	compression fitting	3/4	80 psig
78-307-RV	78-407-RV	1/2" combo swt./thd. fitting	3/4	125 psig
78-317-RV	78-417-RV	1/2" combo swt./thd. fitting	3/4	100 psig
78-327-RV	78-427-RV	1/2" combo swt./thd. fitting	3/4	80 psig
78-504-RV	78-604-RV	hose barb	1	125 psig
78-514-RV	78-614-RV	hose barb	1	100 psig
78-524-RV	78-624-RV	hose barb	1	80 psig
78-505-RV	78-605-RV	pex fitting	1	125 psig
78-515-RV	78-615-RV	pex fitting	1	100 psig
78-525-RV	78-625-RV	pex fitting	1	80 psig
78-506-RV	78-606-RV	compression fitting	1	125 psig
78-516-RV	78-616-RV	compression fitting	1	100 psig
78-526-RV	78-626-RV	compression fitting	1	80 psig
78-507-RV	78-607-RV	1/2" combo swt./thd. fitting	1	125 psig
78-517-RV	78-617-RV	1/2" combo swt./thd. fitting	1	100 psig
78-527-RV	78-627-RV	1/2" combo swt./thd. fitting	1	80 psig

Hydronic Heating Specialties

16-XT Series

Expansion Tanks for Hydronic Systems

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.

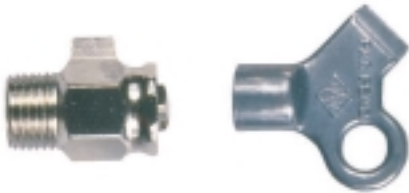
- Welded steel construction
- Rugged flexible diaphragm
- Pre-charged at 12 psig
- Compact design saves energy and space
- Glycol compatible
- Maximum working pressure: 150 psig
- Ideal for peak use systems such as car washes, processing plants, hotels/motels, commercial laundries



No.	Capacity (gal.)	Exp. Vol. (gal.)	Connection	A(in.)	B(in.)	Net Wt. (lbs)
16-XT1-01	2.11	1.77	1/2 NPT	10.88	8.00	5.5
16-XT3-01	4.76	3.99	1/2 NPT	13.75	10.75	8.1
16-XT5-01	6.34	5.31	1/2 NPT	15.88	12.00	9.7
16-XT7-01	13.21	11.06	1/2 NPT	20.00	15.00	23.4

27 Series

Radiator Air Valve



No.	Size	Wt./100 (lbs)
27-202-02	1/8	2
H-2404-00	Key only	.9

35 Series

All Bronze Feed Water Pressure Regulator

Available in 1/2" union threaded, threaded and solder union configurations. Purge lever/fast fill feature. Cartridge replaceable in-line.

- No cage screws
- Individually set at 15 psig - Adjustable 10 to 25 psig
- Temperatures to 210°F
- High capacity
- SS strainer, in-line, standard
- Choice of inlet connections



No.	Size	Ht.	Length	Wt./100 (lbs)
35-503-01	1/2 Union Threaded	5-1/4	4-5/16	255
35-603-01	1/2 Threaded	5-1/4	3-1/2	225
35-703-01	1/2 Solder Union	5-1/4	3-3/16	232

35-6A3 & 35-6H3 Series

All Bronze Combination Backflow Preventer & Feed Water Regulator

Positive protection against backflow when supply pressure falls below system pressure.

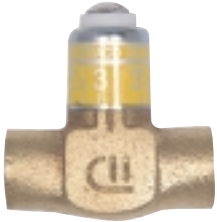
- Designed for continuous pressure, hot or cold water service



No.	Size	Ht.	Length	Wt./100 (lbs)
35-6A3-BF	1/2 Union NPT x NPT	5-1/4	8-1/2	450
35-6H3-BF	1/2 Solder Union x NPT	5-1/4	8-1/2	440

Hydronic Heating Specialties

35-403 Series



Multi-Orifice Control Valve

Provides flow control on tankless heaters; for delivery of 2-1/2, 3, 3-1/2, and 4 GPM. Easy adjustment.

- Maximum temperature: 250°F
- Maximum pressure: 150 psig

No.	Size	Ht.	Length	Wt./100 (lbs)
35-403-01	1/2 Solder	2.11	2.00	42.8

TV Series



Mixing Valves

Designed to provide extension of water heater capacity and hot water temperature control. For residential applications. Numbered indicator control allows easy setup and fingertip control. Available in low or high temperature options depending on application.

- Low temperature range (100°-130°F)
- High temperature range (110°-150°F)
- Stainless steel spring and rings
- Bronze body
- Thermoplastic shuttle assembly
- Thread or solder connections

Size(in.)	Connection	Low Temp. 100°-130°	High Temp 110°-150°	Wt./100 (lbs)
1/2	Solder	35-203-L1	35-203-01	88
3/4	Solder	35-204-L1	35-204-01	101
1/2	Threaded	35-205-L1	35-205-01	88/99.5
3/4	Threaded	35-206-L1	35-206-01	113

Repair Kits add (-RK) suffix to corresponding part no.

'Apollo' 34 A & 34H Series



Thermostatic Mixing Valves

34A Series are ASSE 1017 certified mixing valves 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.

- Low temperature range (85°-120°F)
- High temperature range (120°-180°F)
- Stainless steel spring
- Bronze body
- Thermoplastic shuttle assembly
- Supply pressures to 125 psig
- Union threaded or solder connections
- Integrated check
- High flow capacity
- Broad temperature range
- Cold water failure protection

Size	Connection	Low Temp. 85°-140°	High Temp 120°-180°
1/2	Sweat	34A-103-01	34H-103-01
1/2	Thread	34A-103-02	34H-103-02
3/4	Sweat	34A-104-01	34H-104-01
3/4	Thread	34A-104-02	34H-104-02
1	Sweat	34A-105-01	34H-105-01
1	Thread	34A-105-02	34H-105-02
1/2	Sweat/Check	34A-113-01	34H-113-01
1/2	Thread/Check	34A-113-02	34H-113-02
3/4	Sweat/Check	34A-114-01	34H-114-01
3/4	Thread/Check	34A-114-02	34H-114-02
1	Sweat/Check	34A-115-01	34H-115-01
1	Thread/Check	34A-115-02	34H-115-02

Hydronic Heating Specialties

'Apollo' 34B Series



Scald Protection Mixing Valves

34B Series ASSE 1016 certified mixing valves are designed to be used for individual or multiple 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° or -3°F at all times. The 34B also has an adjustable temperature limit stop to prevent the valve from being set above 120°F.

- Low temperature range (85°-120°F)
- Stainless steel spring
- Bronze body
- Thermoplastic shuttle assembly
- Threaded or solder connections
- Integrated checks
- Cold water failure protection
- Built in temperature limit stop
- Supply pressures to 125 psig



Size	Connection	Low Temp. 85°-120°
1/2	Sweat	34B-103-01
1/2	Thread	34B-103-02
3/4	Sweat	34B-104-01
3/4	Thread	34B-104-02
1	Sweat	34B-105-01
1	Thread	34B-105-02
1/2	Sweat/Check	34B-113-01
1/2	Thread/Check	34B-113-02
3/4	Sweat/Check	34B-114-01
3/4	Thread/Check	34B-114-02
1	Sweat/Check	34B-115-01
1	Thread/Check	34B-115-02

'Apollo' 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.

- Sizes: 3/4", 1", 1-1/4", 1-1/2", 2"
- Low temp range (90°-140°F)
- High temp range (130°-180°F)
- Threaded connections
- Installs easily on heating source
- Patented design for easy in-line maintenance
- Supply pressures to 150 psig
- U. S. Patent No. 6,328,219



Size(in.)	Low Temp.* 90°-140° F	High Temp. 130°-180° F
3/4	34C-104-01	34C-104-H1
1	34C-105-01	34C-105-H1
1-1/4	34C-106-01	34C-106-H1
1-1/2	34C-107-01	34C-107-H1
2	34C-108-01	34C-108-H1

*ASSE 1017 Certified

Hydronic Heating Specialties

'Apollo' 34D Series



**34D Double Outlet
'Point Of Use' Mini Mixer**

"Point of Use" Mini-Mixer

34D Series ASSE 1016 certified, "point of use" mixing valves are designed to sense and maintain preset outlet temperature compensating for fluctuations in hot and cold water temperatures and pressures. The mixed water temperature range is 85°F to 120°F and will hold a desired temperature within a $\pm 3^\circ\text{F}$ at all times. The 34D also has an adjustable temperature limit stop to prevent the valve from being set above 120°F.

- Corrosion Resistant
- Compression and FIP connections
- Easy maintenance
- Consistent outlet temperature with changing inlet conditions
- Elevated temperature thermal element protection
- ASSE 1016 approved
- Nickel plate option
- Saves energy by extending hot water supply
- Tamper resistant
- Scald protection
- Integrated check valves



Single Outlet No.	Size(in.) Inlet x Outlet	Finish
34D-111-01	3/8 COMP. x 3/8 COMP.	Bronze
34D-111-08	3/8 COMP. x 3/8 COMP.	Chrome Plated
34D-112-01	3/8 COMP. x 1/2 FIP	Bronze
34D-112-08	3/8 COMP. x 1/2 FIP	Chrome Plated
34D-122-01	1/2 FIP x 1/2 FIP	Bronze
34D-122-08	1/2 FIP x 1/2 FIP	Chrome Plated

35FC Series



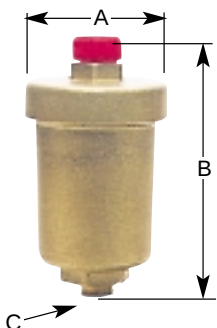
All Bronze Hydronic Flow Check Valve

The flow check shall be designed to provide positive shut-off when water service is interrupted.

- Corrosion Resistant
- Wear Resistant Metal to Metal Seat
- Replaceable Seat Assembly
- By-Pass Option
- Sweat or Thread Connection Available
- Designed For Easy Maintenance
- Suitable For Hot or Cold Water Service
- Maximum Working Pressure 50 psig. For 3/4" - 1-1/4" 125 psig For 1-1/2" - 2"
- Maximum Operating Temperature 250°F

No.	Size(in.)	Connection	Wt./100 (lbs)
35-FC4-01	3/4	NPT	233
35-FC5-01	1	NPT	261
35-FC6-01	1-1/4	NPT	502
35-FC7-01	1-1/2	NPT	867
35-FC8-01	2	NPT	1220
35-FC4-02	3/4	Sweat	112
35-FC5-02	1	Sweat	155

35FV Series



Automatic Air Vent

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.

- Sizes 1/8" (35FV001) and 1/4" (35FV101)
- Corrosion resistant
- Variety of pipe end connections
- Designed for easy maintenance
- Purges air from hydronic systems
- Suitable for use with glycol systems

No.	A(in.)	B(in.)	C(in.)
35FV001	1.50	3.00	1/8 NPT
35FV101	1.85	3.20	1/4 NPT



78-300-FV

Ball Valve with Automatic Air Vent

The 35FV001 can be installed with an Apollo ball valve in a typical hydronic distribution system. To order specify P/N# **78300FV**.

Hydronic Heating Specialties

57 Series



Globe Valves

Globe valves offer a 200 psig rating and aluminum wheel handle.

No.	Size(in.)	Wt./100 (lbs)
57-001-01	1/4 NPT x 1/4 NPT	28.0
57-002-01	3/8 NPT x 3/8 NPT	37.1

58 Series



Balancing Valves

Provide dependable hydronic control; for use with 1/2" and 3/4" copper water piping. Pressure rated to 150 psig.

No.	Size	Cv	Wt./100 (lbs)
58-003-01	1/2 Solder	4	30.0
58-004-01	3/4 Solder	14	53.4

78-668 Series



Bronze Purge, Balance & Shut-off Valve

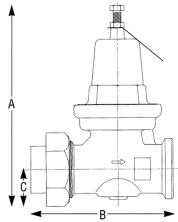
Straight-through flow; all brass cover and chain prevent accidental system drainage. Hose thread connection for disposal of drained media

No.	Size	Wt./100 (lbs)
78-668-01	3/4"	206
78-668-02	1"	359
78-671-01*	3/4"	198

**Available with screwdriver slotted stainless steel stem.*

Pressure Reducing Valves

36 Series



Specify pressure by using the following two digit key number following product number:

- 01 Standard (25 to 75 psig)
- G1 Standard with 1/4" NPT gauge tapping
- P1 Standard with 1/4" NPT gauge tapping and gauge (W-7793-00) in box
- 02 Low Pressure Range (10 to 35 psig)
- G2 Low Pressure with 1/4" NPT gauge tapping
- P2 Low Pressure with 1/4" NPT gauge tapping and gauge (W-7793-00) in box
- 03 High Pressure Range (75 to 125 psig)
- G3 High Pressure with 1/4" NPT gauge tapping
- P3 High Pressure with 1/4" NPT gauge tapping and gauge (W-7793-00) in box

Water Pressure Reducing Valves

Controls high water pressure and problem fluctuations. Reduces supply pressures up to 300 psig to more functional range. Factory set at 50 psig; adjusts with turn of a bolt.

- No cage screws
- Meets **ASSE** and **CSA** standards; listed with **IAPMO**
- Built-in by-pass, high-capacity strainer
- Replaceable cartridge
- Comes standard with union pipe end
- Corrosion resistant
- Available in sizes from 1/2" to 2"
- **36-100** Series pipe thread union inlet x FNPT outlet
- **36-200** Series FNPT inlet x FNPT outlet
- **36-300** Series solder-joint union inlet x FNPT outlet
- **36-400** Series pipe thread union inlet x union outlet
- **36-500** Series solder-joint union x union outlet
- **36-800** Series less unions
- **36-900** Series double union pex x pex
- **36-9C4** Series double union NPT x pex

36-100 & 36-300 Series							Wt./100 (lbs)
Pipe Thread Union x FNPT	Solder Joint Union x FNPT	Size(in.)	A(in.)	B(in.)	C(in.)		
36-103	36-303	1/2	6-1/8	4-5/8	1		350
36-104	36-304	3/4	6-1/8	4-5/8	1		340
36-105	36-305	1	6-1/2	5-1/8	1-1/8		450
36-106	36-306	1-1/4	8-5/8	6-3/8	1-3/8		1020
36-107	36-307	1-1/2	8-5/8	6-5/8	1-3/8		1045
36-108	36-308	2	11-3/4	8-7/16	1-13/16		2250
36-200 Series							Wt./100 (lbs)
Double Union NPT x NPT	Double Union Solder x Solder	Size(in.)	A(in.)	B(in.)	C(in.)		
36-203	36-503	1/2	6-1/8	5-13/16	1		311
36-204	36-504	3/4	6-1/8	5-13/16	1		305
36-205	36-505	1	6-1/2	6-1/2	1-1/8		415
36-206	36-506	1-1/4	8-5/8	7-11/16	1-3/8		910
36-207	36-507	1-1/2	8-5/8	8	1-3/8		909
36-208	36-508	2	11-3/4	10-1/16	1-13/16		1880
36-400 & 36-500 Series							Wt./100 (lbs)
Double Union NPT x NPT	Double Union Solder x Solder	Size(in.)	A(in.)	B(in.)	C(in.)		
36-403	36-503	1/2	6-1/8	5-13/16	1		389
36-404	36-504	3/4	6-1/8	5-13/16	1		372
36-405	36-505	1	6-1/2	6-1/2	1-1/8		495
36-406	36-506	1-1/4	8-5/8	7-11/16	1-3/8		1090
36-407	36-507	1-1/2	8-5/8	8	1-3/8		1183
36-408	36-508	2	11-3/4	10-1/16	1-13/16		2472
36-800 Series							Wt./100 (lbs)
Double Union NPT x NPT	Double Union Solder x Solder	Size(in.)	A(in.)	B(in.)	C(in.)		
36-806	36-506	1-1/4	8-5/8	5-13/16	1-3/8		910
36-900 & 36-9C4 Series							Wt./100 (lbs)
Double Union NPT x NPT	Double Union Solder x Solder	Size(in.)	A(in.)	B(in.)	C(in.)		
36-904	36-504	3/4	6-1/8	5-13/16	1		372
36-9C4	36-504	3/4	6-1/8	5-13/16	1		372

Jump Kits

36 Series

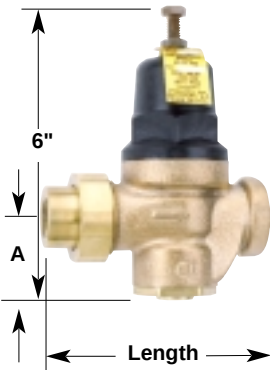
Same rough end dimensions as a PRV but used as a spacer to flush system.



No.	Size(in.)	Description
36-406-JK	1-1/4	for 36-406 Series (threaded)
36-506-JK	1-1/4	for 36-506 Series (solder)

Pressure Reducing Valves

36C Series



OPTIONS TO ABOVE

Gauge tapping

Gauge tapping & gauge
#W-7793-00 (0-160 psig) in the box

Stainless Steel adjusting
screw & nut, and sealed cage

LP range (low pressure) 10-35 psig

HP range (high pressure) 75-125 psig

SUFFIX

-GT

-GG

-SS

-LP

-HP

Compact Corrosion Resistant Pressure Reducing Valves

Handles supply pressures up to 400 psig; working temperatures to 180°F. All-bronze body, corrosion resistant cage, stainless steel strainer and seat. Meets **ASSE** and **CSA** standards; listed with **IAPMO**.

- **36C-U2P**: Double union/pex inlet x pex outlet
- **36C-EMT**: 90° meter thread union inlet x NPT outlet
- **36C-LU**: Less unions
- **36C**: NPT threaded inlet x NPT outlet
- **36C-U**: NPT threaded union inlet x NPT outlet
- **36C-US**: Sweat union inlet x NPT outlet
- **36C-U2T**: Double union/threaded inlet x threaded outlet
- **36C-U2S**: Double union/sweat inlet x sweat outlet
- **36C-UM**: Meter thread union inlet x NPT outlet
- **36C-U2P**: Pex union x pex union

Model No.	Part No.	Size(in.)	Length (in.)	A(in.)	Wt./100 (lbs)
NPT Threaded Inlet x Outlet					
1/2" 36C	36C-203	1/2	3-1/2	1-5/8	200
3/4" 36C	36C-204	3/4	3-1/2	1-5/8	200
1" 36C	36C-205-01	1	3-3/4	1-1/2	225
NPT Threaded Union Inlet x NPT Outlet					
1/2" 36C-U	36C-103	1/2	4-13/32	1-5/8	240
3/4" 36C-U	36C-104	3/4	4-13/32	1-5/8	240
1" 36C-U	36C-105	1	4-3/4	1-1/2	270
Sweat Union Inlet x NPT Outlet					
1/2" 36C-US	36C-303	1/2	4-13/32	1-5/8	240
3/4" 36C-US	36C-304	3/4	4-3/4	1-5/8	240
1" 36C-US	36C-305	1	4-13/32	1-1/2	270
Double Union/Threaded Inlet x Threaded Inlet					
1/2" 36C-U2T	36C-403	1/2	5-3/8	1-5/8	280
3/4" 36C-U2T	36C-404	3/4	5-3/8	1-5/8	280
1" 36C-U2T	36C-405	1	5-7/8	1-1/2	310
Double Union/Sweat Inlet x Sweat Outlet					
1/2" 36C-U2S	36C-503	1/2	5-3/8	1-5/8	280
3/4" 36C-U2S	36C-504	3/4	5-3/8	1-5/8	280
1" 36C-U2S	36C-505	1	5-7/8	1-1/2	310
Meter Thread Union Inlet x NPT Outlet					
1/2" 36C-UM	36C-603	1/2	4-13/32	1-5/8	240
3/4" 36C-UM	36C-604	3/4	4-13/32	1-5/8	240
1" 36C-UM	36C-605	1	4-3/4	1-1/2	270
90° Meter Thread Union Inlet x NPT Outlet					
3/4" 36C-EMT	36C-704	1 x 3/4	9-5/8	1-5/8	400
1" 36C-EMT	36C-705	1 x 1	13-7/16	1-1/2	580
Less Unions					
3/4" 36C-LU	36C-804	3/4	3-1/2	1-5/8	211
1" 36C-LU	36C-805	1	3-3/4	1-1/2	218
Double Union/Pex Inlet x Pex Outlet					
1/2" 36C-U2P	36C-903	1/2	5-3/8	1-5/8	280
3/4" 36C-U2P	36C-904	3/4	5-3/8	1-5/8	280

Jump Kits

36C Series

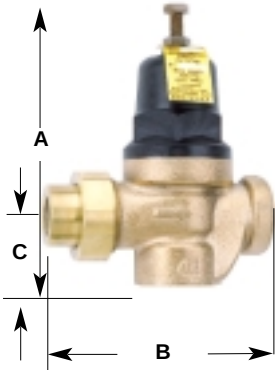
Same rough end dimensions as a PRV but used as a spacer to flush system.



No.	Size(in.)	Description
36C-404-JK	3/4	for 36C-404 (threaded)
36C-504-JK	3/4	for 36C-504 (solder)
36C-405-JK	1	for 36C-405 (threaded)
36C-505-JK	1	for 36C-505 (solder)

Pressure Reducing Valves

36 A Series



Pressure Reducing Valves

Handles supply pressures up to 400 psig; working temperatures to 180°F. All-bronze body, corrosion resistant cage, stainless steel strainer and seat. Meets **ASSE** and **CSA** standards; listed with **IAPMO**.

No.	Size(in.)	A(in.)	B(in.)	C(in.)	Wt./100 (lbs)
36A-103	1/2	6-1/8	4-3/16	1-11/16	200
36A-104	3/4	6-1/8	4-7/16	1-11/16	200
36A-105	1	6-1/8	4-13/16	1-5/8	225
36A-203	1/2	6-1/8	3-1/2	1-11/16	240
36A-204	3/4	6-1/8	3-1/2	1-11/16	240
36A-205	1	6-1/8	3-3/4	1-5/6	270
36A-303	1/2	6-1/8	4-7/16	1-11/16	240
36A-304	3/4	6-1/8	4-7/16	1-11/16	240
36A-305	1	6-1/8	4-13/16	1-5/8	280
36A-403	1/2	6-1/8	5-3/8	1-11/16	280
36A-404	3/4	6-1/8	5-3/8	1-11/16	280
36A-405	1	6-1/8	5-7/8	1-5/8	310
36A-503	1/2	6-1/8	5-3/8	1-11/16	240
36A-504	3/4	6-1/8	5-3/8	1-11/16	240
36A-505	1	6-1/8	5-7/8	1-5/8	280

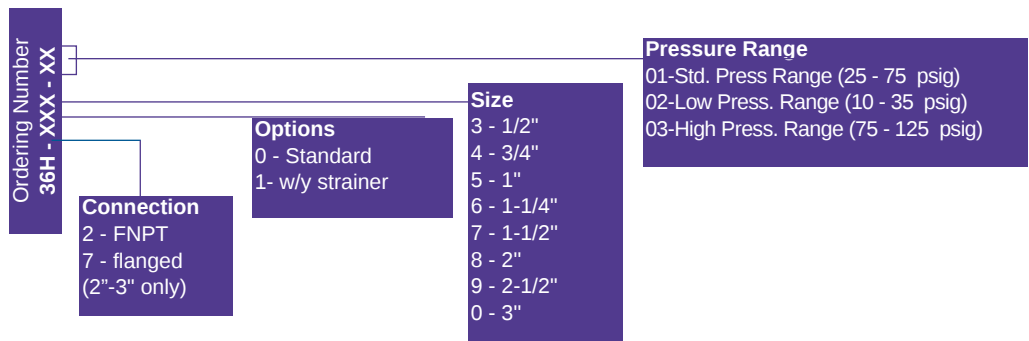
36 H Series



Super Capacity All Bronze Pressure Reducing Valves

Super capacity all-bronze water pressure reducing valve with optional rugged Y strainer for commercial and light industrial applications. Controls supply pressures up to 400 psig.

- Designed to meet **ASSE** and **CSA** standards; listed with **IAPMO**
- Large yoke-type design aids flow and reduces resistance
- Initial pressure up to 400 psig
- Maximum temperature 180°F
- Integral by-pass relief protects against thermal expansion
- Bronze body and cage, stainless steel replaceable seat
- Sizes: 1/2", 3/4", 1", 1-1/4", 1-1/2", 2", 2-1/2" & 3" NPT - threads (inlet and outlet): 2", 2-1/2" and 3" offered in 150 lb. flange
- Bottom access for easy in-line repair
- Sealed case
- Stainless steel bolts, adjustment screws and spring



W-8078-00 Series

3/4" Hose Thread Pressure Gauges

- Hose connection pressure gauge with high pressure memory indicator used for testing water pressure.
- Temp. range: 50°F to 130°F.



No.	Pressure Range	Wt./100 (lbs)
W-8078-00	0-300 psig	46.0

Vacuum Breakers

38-100 Series



Atmospheric Type Vacuum Breakers

Economical protection against backsiphonage and low hazard cross connections. For hot and cold water service up to 212°F at 125 psig for 1/4" - 1"; and up to 180°F at 125 psig for 1-1/4" - 2".

- Compact and lightweight
- Heat resistant silicone seat disc
- Easy to maintain and corrosion resistant
- Meets **ASSE & CSA** standards; listed with **IAPMO**
- Finishes: Rough brass (-01); polished brass *(-04), rough chrome *(-03), or polished chrome *(-06)

No.	NPT Size(in.)	Wt./100 (lbs)
38-105	1	174.0
38-106	1-1/4	316.0
38-107	1-1/2	289.0
38-108	2	369.0

*38-105 only

38-200 Series



38-200

Atmospheric Type Vacuum Breakers (Forged Body)

Economical protection against backsiphonage and low hazard cross connections. For hot and cold water service up to 212°F at 125 psig for 1/4" - 3/4".

- Compact and lightweight
- Heat resistant silicone seat disc
- Easy to maintain and corrosion resistant
- Meets **ASSE & CSA** standards; listed with **IAPMO**
- Finishes: Rough brass (-01); rough chrome *(-03), or polished chrome *(-06)
- Add HT to end of part number for high temperature (212°F)

No.	NPT Size(in.)	Wt./100 (lbs)
38-201	1/4	51
38-202	3/8	47
38-203	1/2	55
38-204	3/4	80

38-300 Series



38-304-02



38P

3/4" Hose Connection Vacuum Breakers

The Conbraco Series 38-304 and 38P Hose Connection Vacuum Breakers are designed to prevent cross connection caused by backsiphonage. They consist of a single check with an atmospheric vacuum breaker vent. They feature a break-away set-screw for tamper-proof protection. They are not suitable for continuous pressure applications.

- Meets **ASSE & CSA** standards; listed with **IAPMO**
- Maximum working pressure 125 psig
- Maximum temperature 180° F

No.	Finish	Wt./100 (lbs)
38-304-AS*	Satin Brass	6.8
38-304-CS*	Satin Chrome	6.8
38-304-02 (Field Testable)	Satin Brass	16.8
38P	High Density Thermoplastic	7.0

Note: 38P shipped in 25 pcs/bag. *Shipped in 12 pcs/box

Vacuum Breakers

38-400 Series



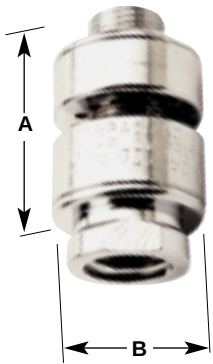
3/4" Anti-Freeze Hose Connection Vacuum Breakers

The Conbraco Series 38-404 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 manual drain for protection against freezing conditions. It is not suitable for continuous pressure applications.

- Meets **ASSE & CSA** standards; **IAPMO** listed
- Maximum temperature 180°F
- Maximum working pressure 125 psig

No.	Finish	Wt./100 (lbs)
38-404-01	Satin Brass	37
38-404-03	Satin Chrome	37

38-502 Series



Laboratory Faucet Vacuum Breakers

Backflow protection for potable water using two independently acting soft-seated checks. Reversible inlet/outlet adapters make installation easy on lab faucets, community sinks, beauty salons and barber shops.

- **ASSE, CSA** approved; **IAPMO** listed
- Stainless steel internal components
- 3/8" FNPT standard; 1/4" optional
- Brass body, polished chrome plating

No.	Inlet	Outlet	A(in.)	B(in.)
38-502-01	3/8" MNPSM	3/8" FNPT	2.33	1.24
38-502-02	3/8" FNPT	3/8" FNPT	2.34	1.24
38-502-03	3/8" FNPT	3/8" MNPSM	2.33	1.24
38-502-CP2	1/4" FNPT	1/4" FNPT	2.34	1.24
38-502-CP3	3/8" FNPT	3/8" FNPT	2.34	1.24

Backflow Preventers

4C-100 Series



Carbonated Beverage Backflow Preventer

Available with 1/4" and 3/8" flare end connections, Conbraco 4C-100 Carbonated Beverage Backflow Preventers (CBBPs) offer permanent protection against copper poisoning in carbonated beverage dispensing lines. Approved to **ASSE 1022**, they feature two independently acting check valves and an integral strainer at the inlet. They install permanently on the water supply line. In case of backflow, a diaphragm seat on the first check lifts and directs flow through an atmospheric port between the two check valves.

- Temperature range: 33°F to 130°F
- Maximum supply pressures to 150 psig
- Special acetyl body and end caps
- PVC/Stainless steel 100 mesh strainer
- All wetted areas are non-toxic and corrosion resistant

No.	Size
4C-101-01	1/4"
4C-102-01	3/8"

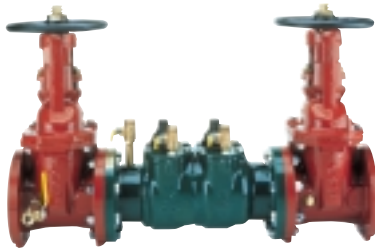
Backflow Preventers

DC Series

Double Check Valve Assemblies

Top entry assemblies dramatically reduce lay length, weight and head loss compared to same size conventional models. **Standards: ASSE 1015, AWWA C-510, CSA B64.5, UL Classified, FM Approved and listed with IAPMO; USC** for 2-1/2" to 6" sizes.

- Body/cover: FDA approved epoxy coated ductile iron
- Perfect for fire protection sprinklers and irrigation systems
- Diameters from 2-1/2" to 10"
- Maximum working pressure 175 psig
- Temperature rated 33°F to 140°F
- Modular design makes repairs simple
- Easy in-line maintenance



Ordering Number 45-1XX-0XU	w/Elbows		1-less gate valves
			2-w/NRS gate valves
			3-w/OS&Y gate valves
	Sizes 9 - 2-1/2" 0 - 3" A - 4" C - 6" E - 8" G - 10"		5-w/Epoxy coated ball valves (2-1/2" - 6")
			6-w/OS&Y gate valve on inlet, NRS gate valve w/post plate and nut on outlet
0-Standard 1-w/Y-strainer (shipped Loose)			

40-100 Series

Double Check Valve Assemblies

Bronze body (1/2" to 2") and epoxy-coated ductile iron body (2-1/2" to 10"). Replaceable seats and discs for easy maintenance.

- Approved under **ASSE, AWWA, CSA, FM** (2-1/2" to 10"), **USC's FCCC&HR, UL** classified (3/4" to 10") and listed with **IAPMO**
- Temperature Range: 33°F to 180°F for 1/2" to 2", 33°F to 140°F for 2-1/2" to 10"
- Working pressures up to 175 psig
- Economical, durable, easy to install, maintain and repair
- Low head loss
- Corrosion resistant



No.	Size(in.)
40-103	1/2
40-104	3/4
40-105	1
40-106	1-1/4
40-107	1-1/2
40-108	2

No.	Size(in.)
40-109	2-1/2
40-100	3
40-10A	4
40-10C	6
40-10E	8
40-10G	10

Double Check Valve Assembly Sizes 3/4" to 2" (1/2" uses 0 instead of "A")

Suffix	Description
-A1	less ball valves
-A2	with ball valves
-A4	with union end ball valves

Top Entry Double Check Valve Assembly – Sizes 3/4" to 2"

Suffix	Description
-A1T	less ball valves
-A2T	with ball valves
-FP2	for UL classified service – Sizes 3/4" to 2"

Top Entry 99T Double Check Valve Assembly

Suffix	Description
-99T	with ball valves and test cocks accessible on top
-TC2	with SAE threaded test cock (3/4" & 1")*

Double Check Valve Assembly Sizes 2-1/2" to 10"

Suffix	Description
-01	less gate valves
-02	with NRS gate valves
-03	with OS&Y gate valves
-05	with flanged ball valves (2-1/2" to 6")*
-06	with OS & Y gate valves on inlet, NRS gate valves with post plate and nut on outlet (4" to 10")

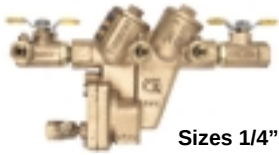
* Contact factory for latest approval status.

Backflow Preventers

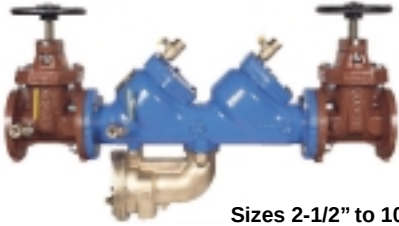
40-200 Series

Reduced Pressure Principle Valves

Protects against backpressure and backsiphonage. Sizes from 1/4" to 10". Features low head loss; Apollo® ball valves standard up to 2".



Sizes 1/4" to 2"



Sizes 2-1/2" to 10"

- Approved under **ASSE, AWWA, CSA, FM** (2-1/2" to 10"), **USC's FCCC&HR, UL** classified (3/4" to 2" & 3" to 10") and listed with **IAPMO**
- Internal sensing passage

- Economical and corrosion resistant
- In-line servicing
- Easy to install, maintain and repair
- Low head loss

No.	Size(in.)
40-201	1/4
40-202	3/8
40-203	1/2
40-204	3/4
40-205	1
40-206	1-1/4
40-207	1-1/2

No.	Size(in.)
40-208	2
40-209	2-1/2
40-200	3
40-20A	4
40-20C	6
40-20E	8
40-20G	10

Reduced Pressure Principle Valves – Sizes 1/4" to 2"

Suffix	Description
-A1	less ball valves
-A2	with ball valves
-A4	with union end ball valves
-TC2	with SAE threaded test cocks (3/4" and 1" only)
-99T	with ball valves and test cocks accessible on top*

Sizes 3/4" to 10"

-A2U	Inlet flow up, outlet flow down
-A2Z	Inlet flow up, outlet flow up

Stainless Steel Reduced Pressure Backflow Preventer – Sizes 1/4" to 1"

Suffix	Description
-A1S	less ball valves
-A2S	with ball valves

Reduced Pressure Principle Valves – Sizes 2-1/2" to 10"

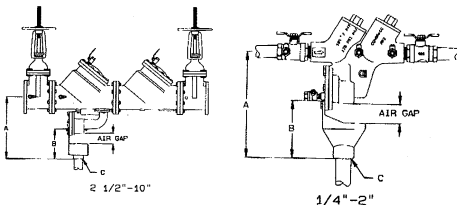
Suffix	Description
-01	less gate valves
-02	with NRS gate valves
-03	with OS&Y gate valves
-05	with flanged ball valves (2-1/2" to 6")
-99T*	with ball valves and test cocks accessible on top

*Note: Applicable to 1/4" to 2" sizes only.

* Contact factory for latest approval status.

Air Gap Drain

Funnels minor relief valve discharges on 40-200 Series (RPZ)



AGD Model No.	R.P. Size(in.)	A(in.)	B(in.)	C(in.)	Wt./100 (lbs)
40-200-XA	1/4, 3/8, 1/2	8-7/16	5	1 NPT	230
40-200-X1	3/4 - 1	9-1/2	5-1/8	1 NPT	340
40-200-X1	1-1/4 - 2	11-1/4	5-1/8	1 NPT	340
40-200-X2	2-1/2 - 3	19	9-7/8	2 NPT	1100
40-200-X2	4	20	9-7/8	2 NPT	1100
40-200-X2	6	21	9-7/8	2 NPT	1100
40-200-X3	8	22-11/16	12-11/16	3 NPT	1245
40-200-X3	10	25-11/16	12-11/16	3 NPT	1245

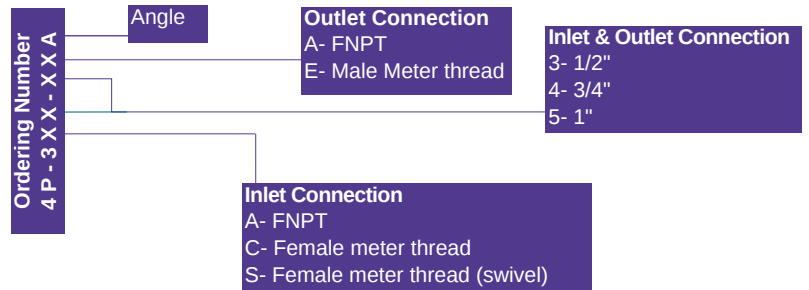
Backflow Preventers

4P-300 Series

100% Lead Free In Line Dual Check Valve

Series 4P-300 is designed to prevent cross connection of non-potable water (low hazard) into the potable drinking water systems. It is a compact and economical device. It consists of two independently acting, spring-loaded check valves in a lead-free high density thermoplastic body. It is suitable for supply pressure up to 175 psig; water temperature from 33° to 180°F.

- Approved under **ASSE & CSA**
- Tested and certified to **ANSI/NSF-61**
- Double union joint for ease of installation and removal for testing or repair
- Low head loss
- Independently acting check valves
- Corrosion resistant
- Replaceable seats
- Various inlet and outlet connection combinations to fit your needs

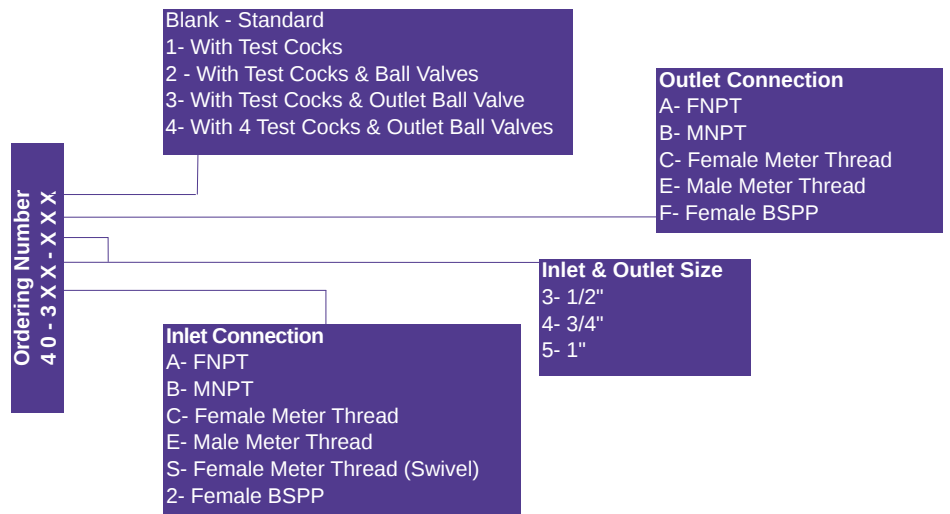


40-300 Series

Dual Check Valve

Prevents cross connections of non-potable, low hazard water into the potable drinking water system. In-line testable and maintainable. Compact and lightweight.

- Approved under **ASSE & CSA**
- Sizes: 1/2", 3/4", 1"
- Working pressure to 175 psig
- Many inlet/outlet connection combinations available
- Corrosion resistant
- Independently acting check valves
- Easy to install, maintain and repair
- Operating temperature 33°F to 180°F



Backflow Preventers

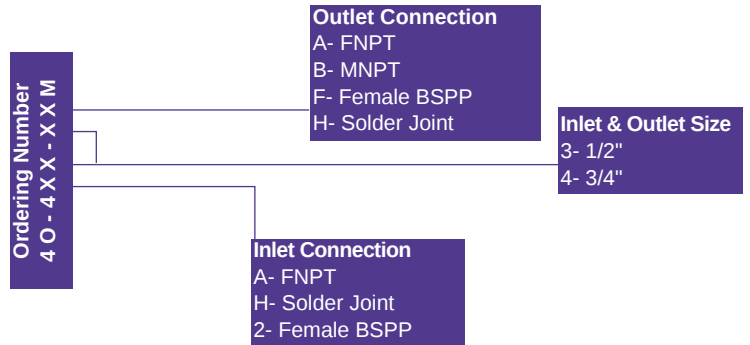
40-400 Series



Continuous Pressure Backflow Preventer

Protects residential and commercial water supply lines from backsiphonage or back-pressure of non-potable substances. Suitable for hot or cold water service. Low head loss.

- Approved under **ASSE & CSA**
- Maximum working pressure: 175 psig
- Independently acting check valves
- Sizes 1/2" and 3/4"
- Corrosion resistant
- Economical
- Durable
- Easy to install, maintain and repair
- Operating temperature: 33°F to 210°F



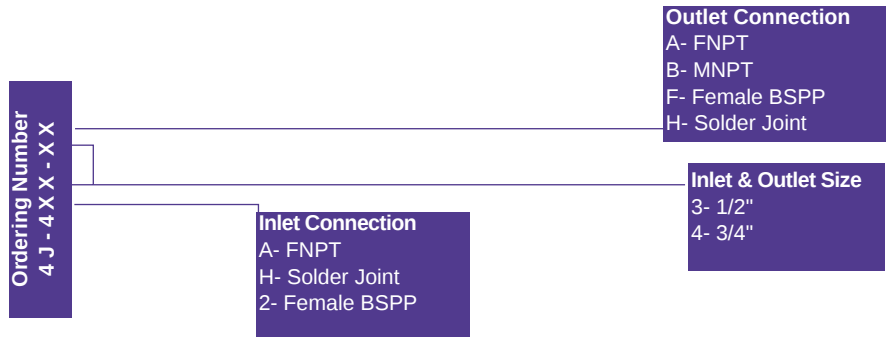
4J-400 Series



Continuous Pressure Backflow Preventer-Compact Design

Protects from back-siphonage and back-pressure. Suitable for pressure up to 175 psig and water temperature from 33° to 210°F.

- Corrosion resistant
- Independently acting check valves
- Ease of repair and installation
- Maximum working pressure 175 psig
- Operating temperature 175 psig
- **ASSE 1012 and CSA B64.3** approved
- Sizes 1/2" and 3/4"



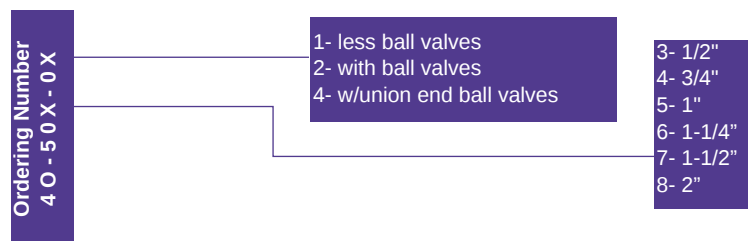
40-500 Series



Pressure Type Vacuum Breaker

Designed for use in continuous pressure potable water systems. Includes spring-loaded float disc and independent check valve.

- Sizes from 1/2" to 2"
- Approved under **ASSE, CSA & USC's FCCC&HR**
- Working pressure to 150 psig
- Apollo ball valves standard
- Easy to install, maintain and repair
- Corrosion resistant, economical and durable
- Operating temperature 33°F to 210°F



Backflow Preventers

4V-500 Series



Freeze Resistant Vacuum Breakers

Protects and enhances the performance of irrigation systems in even the coldest conditions. Designed with plastic float and integral relief valve that vents automatically. Bottom test cock assures easy draining.

- Replaceable check valve cartridge
- Apollo® ball valves standard
- 150 psig maximum working pressure
- Temperature range 32°F to 180°F
- **ASSE 1020** and **CSA B64.1.2** approved

Ordering Number
4V - 50 X - 0 X

1- less ball valves
2- with ball valves
4- w/union end ball valves

3- 1/2"
4- 3/4"
5- 1"

4W-500 Series



Spill Resistant Vacuum Breakers

The spill-resistant pressure vacuum breaker (SVB) is designed to prevent contamination of potable water due to back-siphonage and ideally suited for indoor and OEM applications supplied with continuous pressure.

- Corrosion resistant
- In-line flow
- Integral shut-off valves
- Designed for easy maintenance
- Low head loss
- Economical
- Maximum working pressure 150 PSIG
- Operating temperature range 33°F-180°F
- Approved under ASSE 1056.

No.	Size
4W-501-02	1/4"
4W-502-02	3/8"
4W-503-02	1/2"

40-600 Series



Double Check Detector Assembly

Double check protection against low hazard cross-connection conditions. Detects leakage or unauthorized use of water from fire or sprinkler systems.

- Approved under **ASSE 1048, FM & USC's FCCC&HR, UL Classified**
- Sizes: 3" to 10"
- Test cocks for in-line testing
- Removable bronze seats (mainline)
- Working pressure 175 psig
- Operating temperatures 33°F to 140°F

Ordering Number
40 - 60 X - X X

1- less gate valves
3- with OS&Y gate valves
6- with OS&Y gate valves on inlet,
NRS gate valves with post plate and
nut on outlet (4" to 10")

0- 3" E- 8"
A- 4" G- 10"
C- 6"

C- with meter in cubic feet
E- with meter in gallons
G- less water meter

Backflow Preventers

40-700 Series

Reduced Pressure Detector Assembly

Protection against hazardous cross-connection. Detects leakage or unauthorized use of water from fire or sprinkler systems.

- Approved under **ASSE 1047, FM, UL Classified, USC's FCCC&HR**
- Internal sensing passage
- Sizes: 3" to 10"
- Removable bronze seats (mainline)
- Working pressure 175 psig
- Operating temperatures 33°F to 140°F



Ordering Number
40-700 X - XX

1- less gate valves
3- with OS&Y gate valves

C- with meter in cubic feet
E- with meter in gallons
G- less water meter

0- 3"
A- 4"
C- 6"
E- 8"
G- 10"

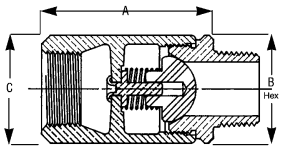
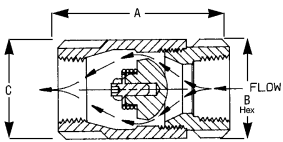
In-Line Check Valves

61-100, 61-200 & 62-100 Series

Ball-Cone® Check Valves

Patented design (U.S. Pat. No. 4,172,465) with reinforced ball-cone check and stainless steel springs, these valves offer exceptional resistance to chemicals and corrosion. No radial alignment is needed.

- 1/2" psi opening pressure
- Bronze sizes from 1/4" to 3"; stainless steel sizes 1/4" to 2"
- Tight shut-off with liquid media
- 125 psig steam rating
- Straight-through design minimizes flow changes
- See PRECAUTIONARY NOTE
- See OPTIONS below



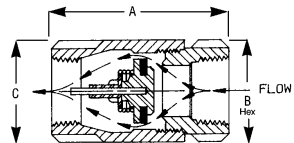
Bronze FNPT x FNPT	Bronze MNPT x FNPT	SS Ball Cone FNPT x FNPT	Size(in.)	A(in.)	B(in.)	C(in.)	61 Series Wt./100	62 Series Wt./100
61-101	61-201	62-101	1/4	2-1/16	1-1/8	1-1/8	38.0	38.3
61-102	61-202	62-102	3/8	2-1/8	1-1/8	1-1/8	38.0	37.3
61-103	61-203	62-103	1/2	2-5/16	1-1/8	1-1/8	38.0	36.3
61-104	61-204	62-104	3/4	2-7/8	1-3/8	1-1/2	75.0	76.6
61-105	61-205	62-105	1	3-1/2	1-3/4	1-15/16	145.0	145.0
61-106	61-206	62-106	1-1/4	4-3/16	2-1/8	2-3/8	275.0	237.5
61-107	61-207	62-107	1-1/2	4-15/16	2-1/2	2-13/16	394.0	381.3
61-108	61-208	62-108	2	6	3	3-11/16	630.0	636.0
61-109	-	-	2-1/2	7	3-1/2	4-1/2	1400.0	-
61-100	-	-	3	8-1/8	4-1/8	5-5/16	1665.0	-

Options Available On Request Suffix
 - 5 psig opening pressure -E05
 - 10 psig opening pressure -E10
 - Light spring
 (for light spring replace 0 in fourth digit with 2)
 - Oxygen clean -57
 - Nitrile seat -31
 (soft seat checks only)

Pressure Temperature Ratings	
Degrees (F)	PSIG
-20 to 100	400
200	200
250	160
275	150
300	140
325	130
353	125

In-Line Check Valves

61-500 & 62-500 Series



Soft Seat Check Valves

Fabricated with stainless steel springs and elastomeric seats. No radial alignment is needed. Exceptional resistance to chemicals and corrosion. Spring is fully shielded from flow.

- Bronze sizes: 1/4" to 2"
- Stainless steel sizes: 1/4" to 1"
- Bubble-tight shutoff, ideally suited for gaseous service
- Straight-through design minimizes flow changes
- NPT threaded; 400 psig WOG
- Retainer is notched for easy identification
- Check is spring loaded for fast seating action; approximate opening pressure 1/2 psi
- See "PRECAUTIONARY NOTE"

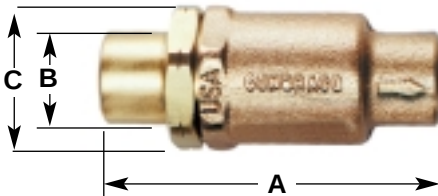
Bronze FNPT x FNPT	SS Ball Cone FNPT x FNPT	Size(in.)	A(in.)	B(in.)	C(in.)	61 Series Wt./100	62 Series Wt./100
61-501	62-501	1/4	2 5/16	1-1/8	1-1/8	38	38
61-502	62-502	3/8	2 5/16	1-1/8	1-1/8	38	38
61-503	62-503	1/2	2 5/16	1-1/8	1-1/8	38	38
61-504	62-504	3/4	2 7/8	1-3/8	1-1/2	75	75
61-505	62-505	1	3 1/2	1-3/4	1-15/16	145	150
61-506	-	1-1/4	4-3/16	2-1/8	2-3/8	275	-
61-507	-	1-1/2	4-15/16	2-1/2	2-13/16	394	-
61-508	-	2	6	3	3-11/16	630	-

61-600 Series

Solder End Soft Seat Check Valves

All bronze with stainless steel springs and elastomeric seats. No radial alignment is needed. Exceptional resistance to corrosion. Spring fully shielded from flow.

- Sizes: 1/2" to 2"
- Bubble-tight shutoff, ideally suited for gaseous service
- Straight-through design minimizes flow changes
- Solder end; 400 psig WOG
- Check is spring loaded for fast seating action; approximate opening pressure 1/2 psi
- See "PRECAUTIONARY NOTE"
- Retainer is notched for easy identification



No.	Size(in.)	A(in.)	B(in.)	C(in.)	Wt./100 (lbs)
61-603	1/2	2.75	1.12	1.25	138
61-604	3/4	3.68	1.20	1.62	175
61-605	1	4.50	1.93	2.12	145
61-606	1-1/4	6.11	2.13	2.38	330
61-607	1-1/2	6.87	2.50	2.81	610
61-608	2	7.46	3.38	3.75	1010

61-700 Series

Brass NPT "Mini" Check Valves

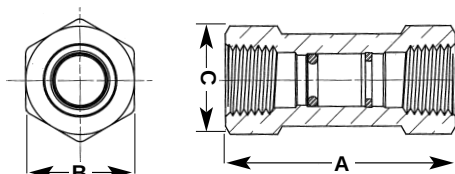
Ideally suited for all OEM applications where space is a premium. Excellent for use on water and air. They feature a bubble-tight soft seat design with a very light loaded stainless steel spring.



No.	Size(in.)	A(in.)	B(in.)	C(in.)	Wt./100 (lbs)
61-701-01	1/4"	1.72	.81	.92	22
61-702-01	3/8"	1.79	.93	1.05	29
61-703-01	1/2"	2.02	1.06	1.17	38
61-704-01	3/4"	2.50	1.25	1.40	54
61-705-01	1"	2.95	1.62	1.76	110

Precautionary Note

Not recommended for use with reciprocating pumps and similar applications which may induce repetitive vibrations. Low flow rates which do not fully open the valve, may result in undesirable noise and premature valve failure. Upstream flow disturbances, which create turbulence, may also result in rapid wear. Therefore, it is recommended that a minimum of 10 diameters of straight pipe be provided between the check valve and any upstream flow disturbances such as pumps, control valves, elbows, etc.



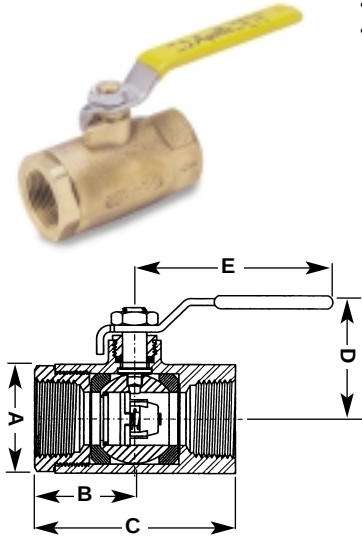
In-Line Check Valves

70-100-BC Series

Unidirectional Ball Valve with Integral Check

Rugged ball valve for all water systems not exceeding 250 psig. Combination positive shut-off valve with bubble-tight check capability; perfect where space savings is required.

- Ideal for O.E.M. applications
- FNPT threaded connections
- Sizes 1/2" to 2"
- Lever handle standard
- Rated 250 psig
- Adjustable packing gland



No.	Size(in.)	A(in.)	B(in.)	C(in.)	D(in.)	E(in.)	Wt. Ea. (lbs)
70-103-BC	1/2	.42	1.11	2.22	1.80	3.87	.63
70-104-BC	3/4	.45	1.50	3.00	2.12	4.87	1.33
70-105-BC	1	.59	1.68	3.37	2.25	4.87	1.77
70-106-BC	1-1/4	.75	2.00	4.00	2.73	5.50	3.29
70-107-BC	1-1/2	1.02	2.14	4.31	3.09	8.00	4.63
70-108-BC	2	1.27	2.35	4.68	3.28	8.00	6.01

Suffix	Option
-02	Static Grounded
-03	1-1/4" Stem Extension
-04	2-1/4" Stem Extension
-07	Tee Handle
-08	90° Reversed Stem

Suffix	Option
-10	SS Lever and Nut
-15	Round Handle
-17	Rough Chrome Plating
-27	Latch Lock Lever
-32	SS Tee Handle and Nut
-45	Less Lever and Nut

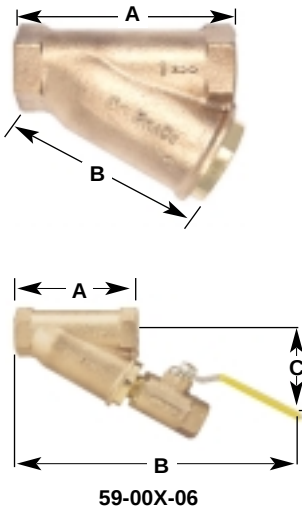
Pipeline Strainers

59 Series

Bronze NPT "Y" Strainers

Lightweight, compact protection against foreign particles. Corrosion-resistant bronze body and stainless steel screens. Operating pressures to 400 psig.

- Sizes: 1/8" to 4"
- Self-aligning screen makes cleaning easy
- Small sizes ideal for O.E.M. applications
- Rated 400 psig at 150°F WOG
- Optional tapped caps available (less plug)
- Optional mesh screens available upon request
- Sizes 1/8" to 1/2" available as UL® recognized component (Made from 85-5-5-5 bronze)



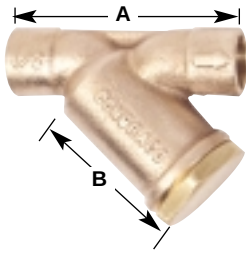
No.	Size(in.)	A(in.)	B(in.)	C(in.)	Screen Area(in. ²)	Tapped Cap/NPT Suffix (-02)	Wt./100 (lbs)
59-000-01	1/8	2	1-1/4	-	1.38	1/8	44.5
59-001-01	1/4	2	1-3/4	-	1.38	1/8	42.5
59-002-01	3/8	2-11/16	2	-	3.19	1/4	78.6
59-003-01	1/2	2-11/16	2	-	3.19	1/4	75.1
59-004-01	3/4	3-7/8	3-1/4	-	8.18	1/2	185
59-005-01	1	4-3/4	4	-	12.9	3/4	276
59-006-01	1-1/4	5-1/8	4-1/4	-	16.2	3/4	358
59-007-01	1-1/2	5-3/4	5	-	22.8	1	541
59-008-01	2	6-3/4	6	-	32.7	1-1/4	747
59-009-01	2-1/2	7-15/16	5-7/8	-	47.3	1-1/4	1130
59-010-01	3	9-1/8	6-7/8	-	64.8	1-1/2	1580
59-011-01	4	11-15/16	10-1/8	-	115	1-1/2	3070
59-003-06	1/2	2-11/16	3-3/4	6-61/64	3.19	-	138
59-004-06	3/4	3-13/16	2-15/16	8-31/32	8.18	-	246
59-005-06	1	4-3/4	3-5/8	11	12.9	-	417
59-006-06	1-1/4	5-1/8	3-15/16	11-1/2	16.2	-	499
59-007-06	1-1/2	5-3/4	4-13/32	12-27/64	22.8	-	720
59-008-06	2	6-25/32	4-21/32	13-25/32	32.7	-	1091

Standard Screen Size	Screen Opening
1/8 to 1/2	50 Mesh
3/4 to 3	20 Mesh
4	.125 Perforation

Suffix	Option
-01	Solid cap (standard)
-02	Tapped cap
-06	Tapped cap with Ball Valve
-P2	Tapped cap with pipe plug (available in 1/2" thru 2")

Pipeline Strainers

59-300 Series



Bronze Sweat End "Y" Strainers

Designed with minimal wall thickness at solder ends to allow high strength joints. Lightweight and compact with corrosion-resistant bronze bodies, stainless steel screens.

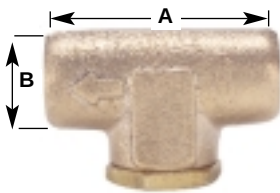
- Operating pressures to 400 psig
- Sizes: 1/2" to 2"
- Optional tapped caps for easy screen cleaning (less plug)

No.	Size(in.)	A(in.)	B(in.)	Screen Area(in. ²)	Tapped Cap/NPT Suffix (-02)	Wt./100 (lbs)
59-303-01	1/2	2-3/4	1-13/16	3.19	1/4	50
59-304-01	3/4	4	2-7/8	8.18	1/2	121
59-305-01	1	4-3/4	3-9/16	12.9	3/4	189
59-306-01	1-1/4	5-1/4	3-15/16	16.2	3/4	280
59-307-01	1-1/2	6	4-5/8	22.8	1	426
59-308-01	2	7-1/4	5	32.7	1-1/4	627

Standard Screen Size	Screen Opening
1/2	50 Mesh
3/4 to 2	20 Mesh

Suffix	Option
-01	Solid cap (standard)
-02	Tapped Cap
-P2	Tapped cap with pipe plug

59V Series

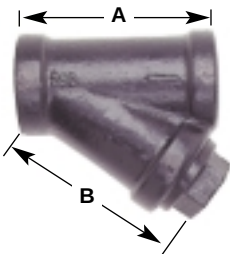


Ideal for O.E.M. applications where space is a premium. Designed to be more compact than comparable size "Y" strainers. Corrosion-resistant bodies and cleanout cap with stainless steel screens.

- Rated 400 psig at 210°F WOG and 125 psig at 400°F WSP
- Sizes: 1/8" and 1/4" NPT
- 50 mesh screen standard, optional 80 or 100 mesh

No.	Size(in.)	A(in.)	B(in.)	Cv	Wt./100 (lbs)
59V-000-01	1/8	1-3/4	1-1/4	1.03	25
59V-001-01	1/4	2	1-5/16	1.42	29.7

TCG Series



Cast Iron Pipe Threaded Y-Strainer

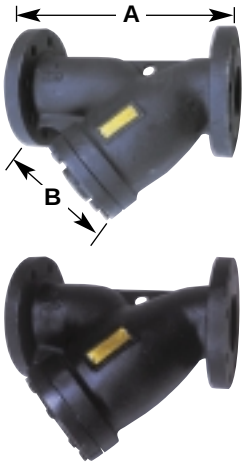
Used to protect meters, nozzles, pumps, condensers, heat exchangers and other process equipment from harmful debris.

- Graphite gasketed blowoff plug for easy clean-out
- 20 mesh screens standard to 2"; .045 perf 2-1/2" to 3", others available
- Sizes: 1/4" to 3"

No.	Size(in.)	A(in.)	B(in.)	Blow-off NPT	Wt./100 (lbs)
612-011-A1	1/4	3-3/16	2-3/8	1/4	1.25
612-012-A1	3/8	3-3/16	2-3/8	1/4	1.25
612-013-A1	1/2	3-3/16	2-3/8	1/4	1.50
612-014-A1	3/4	3-3/4	3-3/8	3/8	2.25
612-015-A1	1	4	3-1/2	1/2	3.00
612-016-A1	1-1/4	5	4-1/8	3/4	5.25
612-017-A1	1-1/2	5-3/4	4-11/16	3/4	6.50
612-018-A1	2	7	5-7/16	1	11.13
612-019-L1	2-1/2	7-1/2	5-7/16	1-1/4	23.50
612-010-L1	3	7-1/2	5-7/16	1-1/4	33.00

Pipeline Strainers

FC1 & FC2 Series



Cast Iron Pipe Flanged Y-Strainers

Same great features as the Model TCG but with flanged connections.

- FC1 rated at 125 psig WOG
- FC2 rated at 250 psig WOG
- 2-1/2" - 6" available as UL recognized
- Sizes 1-1/2" to 18"

No.	Model	Size(in.)	A Class 125	B Class 125	A Class 250	B Class 250	Blow-off NPT
613-217-L1	FC-1	1-1/2	9-1/2	5-7/16	9-1/2	5-7/16	3/4
613-317-L1	FC-2	1-1/2	9-1/2	5-7/16	9-1/2	5-7/16	3/4
613-218-L1	FC-1	2	9-1/2	6-1/2	11-5/8	6-1/8	1
613-318-L1	FC-2	2	9-1/2	6-1/2	11-5/8	6-1/8	1
613-219-L1	FC-1	2-1/2	10-1/2	7	13	6-3/4	1-1/4
613-319-L1	FC-2	2-1/2	10-1/2	7	13	6-3/4	1-1/4
613-210-L1	FC-1	3	12	8	14	8	1-1/4
613-310-L1	FC-2	3	12	8	14	8	1-1/4
613-21A-N1	FC-1	4	14-7/8	10-3/4	17-1/16	10-3/4	1-1/4
613-31A-N1	FC-2	4	14-7/8	10-3/4	17-1/16	10-3/4	1-1/4
613-21B-N1	FC-1	5	17-3/8	13-1/2	19-1/16	13-1/2	1-1/2
613-31B-N1	FC-2	5	17-3/8	13-1/2	19-1/16	13-1/2	1-1/2
613-21C-N1	FC-1	6	21	16-1/4	21-1/16	16-1/4	1-1/2
613-31C-N1	FC-2	6	21	16-1/4	21-1/16	16-1/4	1-1/2
613-21E-N1	FC-1	8	22-1/2	17	23	19-1/2	2
613-31E-N1	FC-2	8	22-1/2	17	23	19-1/2	2
613-21G-N1	FC-1	10	26-1/8	20-1/4	28	21-1/4	2-1/2
613-31G-N1	FC-2	10	26-1/8	20-1/4	28	21-1/4	2-1/2
613-21H-N1	FC-1	12	30-3/8	24	32-5/8	25	2-1/2
613-31H-N1	FC-2	12	30-3/8	24	32-5/8	25	2-1/2
613-21J-N1	FC-1	14	36	29	37-5/8	29-1/2	2
613-31J-N1	FC-2	14	36	29	37-5/8	29-1/2	2
613-21K-N1	FC-1	16	37	33	38-15/16	33-1/2	2-1/2
613-31K-N1	FC-2	16	37	33	38-15/16	33-1/2	2-1/2
613-21L-P1	FC-1	18	46	35-1/2	47-5/8	36-1/2	3
613-31L-P1	FC-2	18	46	35-1/2	47-5/8	36-1/2	3

Section IV ASME Hot Water Boiler Safety Relief Valves

10 Series



10-102



10-104



10-321



10-407 & 10-417



10-634

Section IV ASME Hot Water Boiler Relief Valves

These capacity-certified relief valves protect against excessive water pressure (from thermal expansion) and steam generated when Btu input controls fail. Valves comply with ASME Section IV requirements. Ideal for use with hot water boilers and heating systems.

- Pressures from 30 to 150 psig
- Brass or bronze body available with satin or polished chrome finish
- Maximum temperature service: 250°F
- 10-321 in polished chrome only
- Registered in all Canadian provinces and territories, CRN #0G2663.1C
- Stainless steel springs standard except 10-214
- 10-624/634 are ideal for use in various plumbing systems, commercial boiler applications and swimming pool heaters
- 10-418/417 are ideal for use in swimming pool heater applications



No.	Size(in.)		Certified Pressure Range PSIG	Height (in.)	Wt./100 (lbs)	*Certified Capacity			
	Inlet NPT	Outlet NPT				30 PSIG	40 PSIG	50 PSIG	75 PSIG
10-102	3/4 F	1 F	20-60	3-5/16	105	710,000	870,000	1,035,000	-
10-104	3/4 M	1 F	20-60	3-3/4	109	710,000	870,000	1,035,000	-
10-214	1 F	1 F	20-65	5	227	1,000,000	1,210,000	1,450,000	-
10-301	3/4 M	3/4 F	20-60	3-3/4	114	550,000	675,000	805,000	-
10-303	3/4 F	3/4 F	20-60	3-5/16	115	550,000	675,000	805,000	-
10-321	3/4 M	3/4 F	20-60	3-3/4	123	425,000	525,000	625,000	-
10-407	3/4 M	3/4 F	30&50	3	62	535,000	-	-	-
10-408	3/4 F	3/4 F	30&50	2-3/4	65	535,000	-	-	-
10-417	3/4 M	3/4 F	20-60	3	62	477,000	577,000	697,000	1,027,000
10-418	3/4 F	3/4 F	20-60	2-3/4	65	477,000	577,000	697,000	1,027,000

*National Board Capacity Certified – Btu Per Hour (90% of actual capacity at 10% accumulation)
ASME boiler and pressure vessel code – Section IV – Heating Boilers

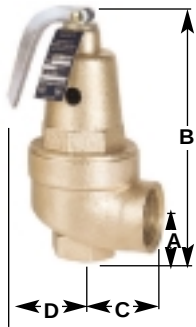
SUFFIX KEY			
Part No.	Plain Brass	Satin Chrome	Polished Chrome
Pressure PSIG			
20	-02	-41	-67
22	-03	-42	-68
25	-04	-43	-69
30	-05	-44	-70
35	-06	-45	-71
40	-07	-46	-72
43	-08	-47	-73
45	-09	-48	-74
50	-10	-49	-75
55	-11	-50	-76
60	-12	-51	-77

No.	Size(in.)		Certified Pressure Range PSIG	Height (in.)	Wt./100 (lbs)	*Certified Capacity				
	Inlet NPT	Outlet NPT				30 PSIG	75 PSIG	100 PSIG	125 PSIG	150 PSIG
10-624	3/4 M	3/4 F	30-150	4-5/8	106	689,000	1,405,000	1,802,000	2,199,000	2,597,000
10-634	3/4 F	3/4 F	30-150	4-5/8	106	689,000	1,405,000	1,802,000	2,199,000	2,597,000

Note: to order add pressure setpoint to the end of base number. (i.e. 10624150=150PSIG)

Section IV ASME Hot Water Boiler Safety Relief Valves

10-600 Series



Section IV ASME High Capacity Safety Relief Valves For Hot Water Boilers and Heating Systems

High-capacity heating system valves with female inlet, expanded or standard female outlet. Elevated seat for drainage of water away from seat area. Entire pressure range is National Board capacity certified.

- 3/4" to 2-1/2" connections
- High Btu capacity rating
- Silicone seat
- Fabric reinforced molded diaphragm isolates spring from water at all times
- Bronze body and spring cage
- Maximum temperature service 250°F
- Registered in Canadian provinces and territories CRN #0G2663.1C
- Protects against excessive water pressure due to failure of controls to regulate Btu input
- Pressures from 15-160 psig

No.	Size(in.) Inlet NPT	Size(in.) Outlet NPT	Certified Pressure Range PSIG	Wt./100 (lbs)	A(in.)	B(in.)	C(in.)	D(in.)
10-604	3/4F	3/4F	15-160	232	1-1/16	5-1/4	1-5/8	1-9/16
10-614	3/4F	1 F	15-160	226	1-1/4	5-1/4	1-23/32	1-9/16
10-605	1F	1F	15-160	410	1-1/4	6-11/16	2	2
10-615	1 F	1-1/4F	15-160	390	1-1/4	6-11/16	2	2
10-606	1-1/4F	1-1/4F	15-160	795	1-1/4	6-3/8	2-7/18	2-5/8
10-616	1-1/4F	1-1/2F	15-160	755	1-1/4	8-3/8	2-15/32	2-5/8
10-607	1-1/2F	1-1/2F	15-160	1100	2	10-3/4	2-3/4	3-1/8
10-617	1-1/2F	2F	15-160	1145	2	10-3/4	2-3/4	3-1/8
10-608	2F	2F	15-160	2375	2-3/16	14	3-11/16	3-1/2
10-618	2F	2-1/2F	15-160	2315	2 3/16	14	3-21/32	3 -1/2

Use Suffix No. to designate last two digits of Product No. for desired pressure. Other pressure settings available upon request.

10-600 Series Discharge Capacities BTU/Hour						
Pressure PSIG	Suffix No.	3/4 x 3/4 10-604	1 x 1 10-605	1-1/4 x 1-1/4 10-606	1-1/2 x 1-1/2 10-607	2 x 2 10-608
30	-05	827,000	1,339,000	2,316,000	3,151,000	5,193,000
50	-10	1,209,000	1,956,000	3,384,000	4,604,000	7,589,000
75	-15	1,686,000	2,728,000	4,720,000	6,421,000	10,583,000
100	-20	2,162,000	3,500,000	6,055,000	8,238,000	13,577,000
125	-25	2,639,000	4,272,000	7,390,000	10,054,000	16,571,000
150	-34	3,116,000	5,044,000	8,725,000	11,871,000	19,565,000

10-610 Series Discharge Capacities BTU/Hour						
Pressure PSIG	Suffix No.	3/4 x 1 10-614	1 x 1-1/4 10-615	1-1/4 x 1-1/2 10-616	1-1/2 x 2 10-617	2 x 2-1/2 10-618
30	-05	970,000	1,570,000	2,716,000	3,696,000	6,091,000
50	-10	1,418,000	2,295,000	3,969,000	5,400,000	8,900,000
75	-15	1,977,000	3,200,000	5,535,000	7,531,000	12,412,000
100	-20	2,536,000	4,105,000	7,101,000	9,661,000	15,924,000
125	-25	3,096,000	5,011,000	8,668,000	11,792,000	19,435,000
150	-34	3,655,000	5,916,000	10,234,000	13,923,000	22,947,000

17 Series



Pressure Only Relief Valve for Tankless Coils & Storage Tanks

Prevents excessive thermal expansion buildup in plumbing systems, tank applications and tankless water heaters. Conforms to HUD/FHA requirements. Ideal for well systems.

- Bronze body, stainless steel spring
- CSA certified design to ANSI Z21.22 "Relief Valves for Hot Water Supply Systems."
- ASME capacity certified from 75 to 150 psig.
- CRN #0G2663.1C registered in all Canadian provinces and territories

No.	Size (in.)	Wt./100 (lbs)	*ASME Certified Discharge Capacities BTU/HR			
			75	100	125	150
17-401	1/2 M x 1/2 F	.57	-	-	-	-
17-402	3/4 M x 3/4 F	.53	505,000	648,000	791,000	934,000

Note: When ordering specify pressure by adding the two digit key number after the product number as follows: 75 psig - 01; 100 psig - 02; 125 psig - 03; 150 psig - 04; 160 psig - 05

* National Board Capacity Certified - BTU per hour (90% of actual capacity at 10% accumulation) ASME boiler and pressure vessel code - Section IV - Heating Boilers

Section IV ASME Hot Water Boiler Safety Relief Valves

18 Series



Water Heater T&P Relief Valves

Automatic temperature and pressure relief valves feature unique non-metallic coating which protects the element against galvanic and electromechanical corrosion by isolating it from the heated water. This coating is electrostatically applied for uniform coverage, then thermobonded, resulting in optimum adhesion for extended service life. **CSA** design certified at all settings to ANSI Z21.22. **ASME Section IV** rated at 125 psig and 150 psig settings for 3/4 NPT only.

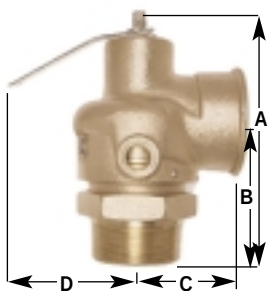
- Meets HUD/FHA requirements
- Cast bronze body, stainless steel spring
- Rated 210°F maximum
- CRN #0G2663.1C registered in all Canadian provinces and territories
- ASME capacity certified to 450,000 BTU/HR.

No.	Size	Element Length	Wt./100 (lbs)	CSA Capacity rating BTU/HR
18-401	1/2 M x 1/2 F	1	64.0	15,000
18-401	1/2 M x 1/2 F	4	64.0	15,000
18-401	1/2 M x 1/2 F	8	64.0	15,000
18-402	3/4 M x 3/4 F	1	64.4	80,000
18-402	3/4 M x 3/4 F	4	64.4	100,000
18-402	3/4 M x 3/4 F	8	64.4	100,000

SUFFIX KEY			
Pressure PSIG	Coated Element Length		
	1"	4"	8"
75	-04	-05	-07
100	-11	-12	-14
125	-27	-29	-36
150	-28	-30	-37
175	-38	-24	-41

Section IV ASME Low Pressure Steam Safety Relief Valves

12-200 Series



Low Pressure Steam Heating Boiler Safety Valves

Use on medium and large commercial and industrial steam heating and processing boilers. National Board capacity certified at 15 psig; PTFE coated O-Ring seat seal.

- All bronze construction
- 3/8" NPT side tapping for drain
- Top guide, rust-proof steel spring
- High capacity
- Registered in all Canadian provinces and territories, CRN #0G2663.1C

No.	Size(in.)		Max. Pressure PSIG	Capacity* Lbs./Hr	Wt./100 (lbs)	Dimensions			
	Inlet NPT	Outlet NPT				A(in.)	B(in.)	C(in.)	D(in.)
12-205	2	2	15	2500	514	6	3-3/4	2-5/8	4
12-206	2-1/2	2-1/2	15	3529	835	8-1/2	5-1/4	3-1/16	4
12-208	3	3	15	4100	1162	9-1/2	6	3-3/4	4

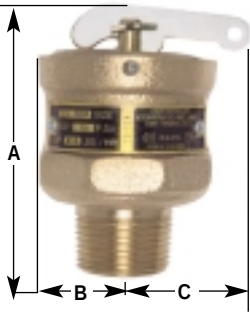
Note: When ordering specify pressure by adding the two digit key number after the product number as follows: 5 psig - 03; 6 psig - 04; 8 psig - 05; 10 psig - 06; 12 psig - 07; 15 psig - 08

*National Board Capacity Certified-(90% of actual capacity at 33% accumulation.)

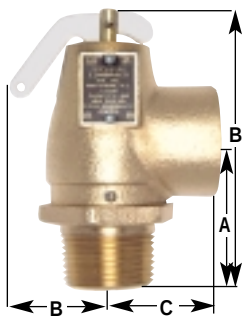


Section IV ASME Low Pressure Steam Safety Relief Valves

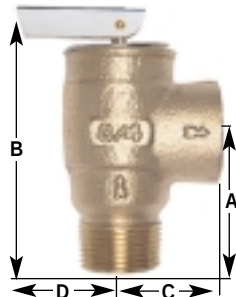
13 Series



13-101



13-200



13-511

Low Pressure Steam Heating Boiler Safety Valves

National Board capacity-certified at 15 psig in accordance with ASME Section IV; rough or polished chrome finish; positive drainage of condensate from seat area.

- Flat seat, PTFE faced disc for positive seal
- Standard set pressure of 15 psig; capacities apply to valves set @ 15 psig
- No. **13-101** is top outlet discharge
- Registered in all Canadian provinces and territories, CRN #0G2663.1C

No.	Size(in.)		Max. Pressure PSIG	Capacity* Lbs./Hr	Wt./100 (lbs)	Dimensions			
	Inlet NPT	Outlet NPT				A(in.)	B(in.)	C(in.)	D(in.)
13-101	3/4 M	Top	15	410	64	2-7/8	15/16	1-1/4	—
13-211	3/4 M	3/4 F	15	475	107	1-13/16	3-11/16	1-7/16	1-13/32
13-202	1 M	1 F	15	643	110	2-1/16	3-7/8	1-7/32	1-13/32
13-213	1-1/4 M	1-1/2 F	15	1200	218	2-17/32	4-1/2	1-7/8	1-1/2
13-214	1-1/2 M	2 F	15	1900	320	3	5-1/4	2-3/16	1-13/16
13-511	3/4 M	3/4 F	15	407	62	1-11/16	3-1/4	1-3/16	1-1/4
13-512	3/4 F	3/4 F	15	407	59	1-3/16	2-3/4	1-3/16	1-1/4

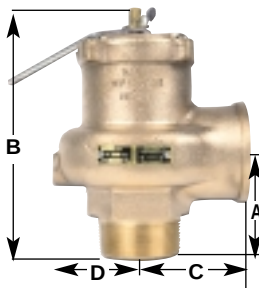
*National Board Capacity Certified at 15 psig. (90% of actual capacity at 33% accumulation.)

Use key to designate last two digits of model number. Last two digits indicate pressure and finish.

SUFFIX KEY

Pressure PSIG	Plain Brass	Satin Chrome	Polished Chrome
5	-03	-35	-43
6	-04	-36	-44
8	-05	-37	-45
10	-06	-38	-46
12	-07	-39	-47
15	-08	-40	-48

14-200 Series



High Capacity Low Pressure Steam Boiler Safety Valves

National Board capacity-certified in accordance with ASME Section IV at 15 psig. For commercial and industrial boilers. Capacities up to 6843 lbs./hr.

- Nozzle-type chrome-plated brass disc
- Test gag available to allow hydrostatic testing. (Add "G" suffix to pressure code when ordering.)
- PTFE coated O-ring for positive seal
- One piece body, all bronze construction
- Rust proof steel spring
- Registered in all Canadian provinces and territories, CRN #0G2663.1C

No.	Size(in.)	*Capacity Lbs./Hr.	Wt./Each (lbs)	A(in.)	Dimensions		
					B(in.)	C(in.)	D(in.)
14-205	2 x 2	3150	8.4	3	7-1/8	3-1/8	4
14-206	2-1/2 x 2-1/2	4676	13.0	3-1/2	8-1/4	3-1/2	4
14-207	3 x 3	6843	17.0	4-1/8	9-3/8	3-7/8	4

*National Board Capacity Certified at 15 psig. (90% of actual capacity at 33% accumulation.)

Note: When ordering specify pressure by adding the two digit key number after the product number as follows:

5 psig - 03; 6 psig - 04; 8 psig - 05; 10 psig - 06; 12 psig - 07; 15 psig - 08

Section VIII ASME Safety Valves

10-322 & 10-512 Series



10-512



ASME Section VIII Steam Safety Relief Valves

National Board capacity-certified safety relief valves; brass body with optional satin or polished chrome finish. Protects against excess pressure from thermal expansion and steam caused by failure of BTU input controls. Ideally suited for O.E.M. applications such as steam cookers, autoclaves, sterilizers, coffee makers and similar equipment.

- Stainless steel springs
- Discharge capacities to 725 lbs./hr.
- Pressure settings 15 to 60 psig
- 10-322 in polished chrome only
- CRN OG2663.1C, registered in all Canadian provinces and territories

No.	Size(in.)		Pressure		Wt./100 (lbs)
	Inlet NPT	Outlet NPT	Range PSIG	Height	
10-322	3/4 M	3/4 F	15-60	3-3/4	128
10-512	1/2 M	1/2 F	15-60	2-5/8	58



10-322

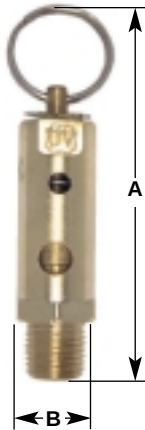
Model 10-512 available with optional stainless steel trim.

Use key to designate last two digits of model number. Last two digits indicate pressure and finish. Example: 10-322-67 = 20# pressure, polished chrome

* ASME (UV) Rating – 90% of actual capacity at 10% accumulation. Capacity in lbs. of saturated steam per hour

Key Pressure No.	*Certified Capacities				
	Plain Brass	Satin Chrome	Polished Chrome	10.322 Lbs./Hr.	10.512 Lbs./Hr.
15	01	J2	65	-	151
20	02	41	67	325	178
25	04	43	69	375	205
30	05	44	70	425	232
35	06	45	71	475	258
40	07	46	72	525	285
45	09	48	74	575	312
50	10	49	75	625	339
55	11	50	76	675	366
60	12	51	77	725	392

15 Series



ASME Air Relief Valves

- National Board certified 15 psig through 250 psig
- Stainless steel springs with silicone soft seat
- Viton O-ring seat, 3/4" & 1" only
- Maximum Temp. 325°F
- Registered in all Canadian provinces and territories: CRN #0G2663.1C
- ASTM B16 Brass Body

Set Pressure PSIG	Capacities in SCFM @ 10% Accumulation				Suffix No.
	15-112 1/4"	15-115 & 117 3/8" or 1/2"	15-118 3/4"	15-119 1"	
15	-	60	107	222	-A2
20	-	70	124	256	-A0
25	-	79	140	290	-A1
30	-	88	156	323	-A3
35	-	98	174	361	-A5
40	43	109	193	398	-01
50	51	128	229	473	-B3
60	60	149	265	547	-02
75	72	179	319	659	-03
80	76	190	337	696	-04
100	92	230	409	845	-05
120	108	271	481	995	-06
125	112	281	499	1032	-07
140	124	312	553	1144	-08
150	133	332	589	1218	-09
160	141	353	625	1293	-10
165	145	363	644	1330	-J1
175	153	383	680	1405	-11
180	157	393	698	1442	-12
200	173	432	770	1591	-13
220	-	475	842	1740	-14
230	-	495	878	1815	-R8
235	-	505	896	1852	-15
250	-	535	950	1964	-16

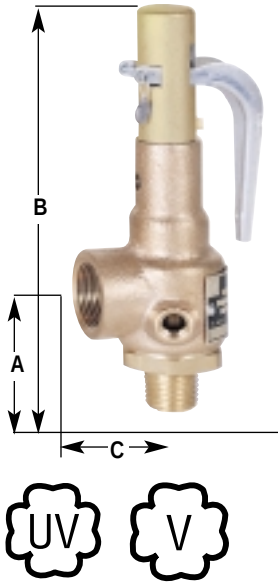
National Board certified capacities for air and gas service in air compressors, air receivers and gas lines.

Use key to designate last two digits of product number.

No.	Inlet Size(in.)	A(in.)	B(in.)	Wt./100 (lbs)
15-112	1/4 NPT	2-5/8	2-5/32	18.5
15-115	3/8 NPT	3-1/4	1-1/8	42.2
15-117	1/2 NPT	3-3/8	1-1/8	45.3
15-118	3/4 NPT	4-1/16	1-7/32	58.0
15-119	1 NPT	5-1/8	1-7/8	153.0

Section I & VIII ASME Safety Valves

19 Series



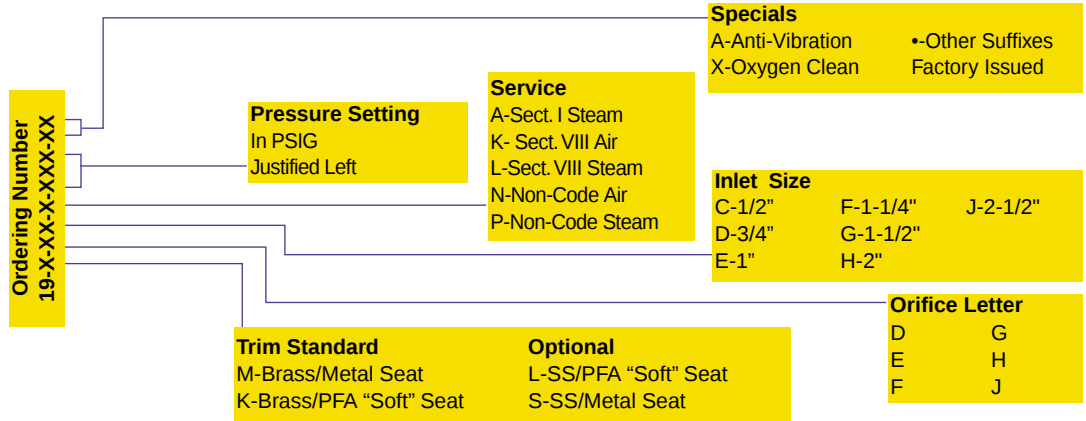
Information required for ordering 19 Series safety valves:

- Inlet Size - male pipe thread
- Outlet Size - female pipe thread (if important)
- Service Media (steam, air or gas)
- Pressure Setting
- Discharge Capacity
- Type Service
 - Power Boiler
 - Pressure Vessel

Bronze Safety Valves for Steam, Air & Gas Service

National Board capacity certified, high capacity, ideal for use with all types of boilers, pressure vessels, compressors and pressure piping systems.

- Pressures: 15 through 300 psig steam, air, gas
- Max. temp. 406°F, 422°F with stainless steel trim
- 12 sizes, 1/2" thru 2-1/2" NPT
- Stainless steel spring
- Optional 316 stainless steel wetted trim (Specify 19L or 19S Series)
- Metal to metal seat lapped to high degree optical flatness
- Less costly repairing, soft seat easily factory replaced
- Double ring, full bore, high-capacity design
- Tapped body drain facilitates piping of condensate away from equipment
- Available in metal and soft seat designs
- Registered in all Canadian provinces and territories CRN #0G2663.1C



No.	Orifice Designation	Size Inlet x Outlet	Wt./Ea. (lbs)	A(in.)	Dimensions B(in.)	C(in.)
19KDC	D	1/2 x 3/4	1.50	1-25/32	6-1/8	1-1/16
19KDD	D	3/4 x 3/4	1.50	1-27/32	6-3/16	1-1/16
19KED	E	3/4 x 1	1.90	1-15/16	6-5/8	1-3/4
19KEE	E	1 x 1	2.08	2-1/16	6-3/4	1-3/4
19KFE	F	1 x 1-1/4	3.90	2-3/8	8-13/16	2
19KFF	F	1-1/4 x 1-1/4	4.05	2-7/16	8-7/8	2
19KGF	G	1-1/4 x 1-1/2	7.03	2-11/16	10-3/16	2-3/8
19KGG	G	1-1/2 x 1-1/2	6.98	2-3/4	10-1/4	2-3/8
19KHG	H	1-1/2 x 2	11.20	3-1/16	11-5/16	2-3/4
19KHH	H	2 x 2	11.33	3-1/8	11-3/8	2-3/4
19KJH	J	2 x 2-1/2	19.20	3-7/16	13-5/8	3-1/2
19KJJ	J	2-1/2 x 2-1/2	19.80	3-13/16	14	3-1/2

ASME Section I Steam
Power Boiler - "V" steam
Lbs./hr. steam @ 3% accumulation

Set Pressure PSIG	Orifice D	Orifice E	Orifice F	Orifice G	Orifice H	Orifice J
15	174	310	484	794	1240	2035
25	229	408	637	1045	1631	2677
40	311	555	866	1421	2217	3641
50	366	653	1019	1672	2608	4283
100	646	1152	1798	2950	4602	7557
125	787	1404	2191	3595	5609	9210
150	929	1656	2585	4240	6616	10,864
165	1014	1807	2821	4628	7220	11,856
200	1211	2160	3371	5531	8630	14,170
250	1494	2664	4158	6822	10,644	17,477
300	1777	3168	4945	8112	12,658	20,784
Approx 1 PSI increments	5.7	10.1	15.7	25.8	40.3	66.1

*Specify Model 19S with stainless steel wetted trim for steam settings beyond 250 psig.

Section I & VIII ASME Safety Valves

19 Series

Bronze Safety Valves for Steam, Air & Gas Service (continued)

ASME Section VIII Steam
Unfired pressure Vessels -
"UV" steam Lbs./hr. @ 10%
accumulation

ASME Section VIII Air
Unfired pressure Vessels - "UV"
air Lbs./hr. @ 10% accumulation

*Specify Model 19S with stainless
steel wetted trim for steam settings
beyond 250 psig.

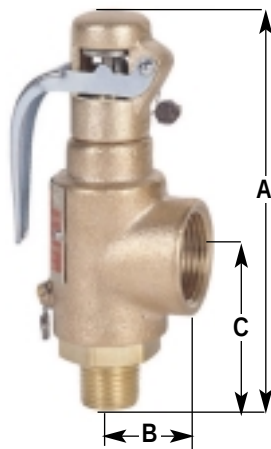
Set Pressure PSIG	D	E	F	Orifice G	H	J
15	179	320	499	819	1278	2099
25	234	417	652	1070	1669	2741
40	322	574	896	1471	2295	3768
50	382	682	1064	1746	2725	4474
100	684	1220	1904	3124	4875	8005
125	835	1489	2324	3813	5950	9770
150	985	1758	2744	4502	7025	11535
165	1076	1920	2996	4916	7670	12594
200	1287	2296	3584	5881	9175	15066
250	1590	2834	4424	7259	11325	18596
300	1892	3373	5265	8639	13,479	22,132
Approx 1 PSI increments	6.0	10.8	16.8	27.6	43.0	70.6
15	64	114	178	292	455	747
25	83	149	232	381	594	976
40	115	204	319	524	817	1342
50	136	243	379	622	970	1593
100	244	434	678	1112	1736	2849
125	297	530	828	1358	2118	3478
150	351	626	977	1603	2501	4106
165	383	683	1067	1750	2731	4484
200	459	818	1276	2094	3267	5364
250	566	1009	1575	2584	4032	6621
300	673	1201	1874	3075	4798	7878
Approx 1 PSI increments	2.2	3.8	6.0	9.8	15.3	25.1

29 Series

OEM Style Bronze Safety Valves For Steam, Air & Non-Hazardous Gas

National Board capacity-certified; PFA Teflon™ seat resists corrosive boiler chemicals. Top-guided design with rust-proofed steel stem and stainless steel springs. Features patented "soft" seat.

- Capacity Certified 30 to 200 psig
- Optional stainless trim (add "L" suffix)
- Tapped body drain
- No critical metal-to-metal seal
- Compact design ideal for OEM applications
- Registered in all Canadian provinces and territories. CRN#0G2663.1C



ASME Code and Service
No Suffix (Default) = Sec. I "V" Steam
US = Sec. VIII "UV" Steam
UA = Sec. VIII "UV" Air

Optional Stainless Trim
Add "L" suffix for Type 316 Stainless Steel Wetted
Trim. Models 29-202 and 29-303 only

Set Pressure Code
See Table

Inlet x Outlet Size
102 = 3/8 x 1
202 = 1/2 x 1
302 = 3/4 x 1
303 = 3/4 x 1-1/4
402 = 1 x 1-1/4
501 = 1-1/4 x 1-1/4

Information required for ordering 29
Series safety valves:

- Inlet Size - male pipe thread
- Outlet Size - female pipe thread (if
important)
- Service Media (steam, air or gas)
- Pressure Setting
- Required Discharge Capacity
- Type Service*
 - Power Boiler
 - Pressure Vessel

*Note: Unless otherwise specified
valve are furnished with ASME
Section I "V" steam rating. For
ASME Section VIII applications add
"US" suffix for UV steam or "UA"
suffix for UV air.

No.	Size(in.) Inlet	Outlet	Wt./Ea. (lbs)	Dimensions A(in.)	B(in.)	C(in.)
29-102	3/8	1	1.30	5-13/32	1-1/4	2-1/8
29-202	1/2	1	1.33	5-13/32	1-1/4	2-1/8
29-302	3/4	1	1.90	5-13/32	1-1/4	2-1/8
29-303	3/4	1-1/4	3.43	7-1/4	1-11/16	2-3/4
29-402	1	1-1/4	3.43	7-1/4	1-11/16	2-3/4
29-501	1-1/4	1-1/4	3.48	7-1/4	1-11/16	2-3/4

Section I & VIII ASME Safety Valves

29 Series

OEM Style Bronze Safety Valves For Steam, Air & Non-Hazardous Gas (cont'd)

Pressure PSIG	Suffix No.	Pressure PSIG	Suffix No.
30	-07	115	-24
35	-08	120	-25
40	-09	125	-30
45	-10	130	-31
50	-11	135	-32
55	-12	140	-33
60	-13	145	-34
65	-14	150	-35
70	-15	155	-36
75	-16	160	-37
80	-17	165	-38
85	-18	170	-39
90	-19	175	-40
95	-20	180	-41
100	-21	185	-42
105	-22	190	-43
110	-23	195	-44

ASME Section I Steam

Power Boiler "V" steam Lbs./hr. @ 3% accumulation

Set Pressure No.	29-102 29-202 29-302	29-303 29-402 29-501
50	238	479
75	331	664
100	423	851
125	516	1036
150	608	1223
200	794	1596
Approx. 1 PSI increments	3.70	7.40
50	251	504
75	350	704
100	448	902
125	547	1102
150	646	1299
200	844	1697
Approx. 1 PSI increments	3.95	8.00
50	89	180
75	124	250
100	159	321
125	194	391
150	230	463
200	300	605
Approx. 1 PSI increments	1.40	2.80

ASME Section VIII Steam

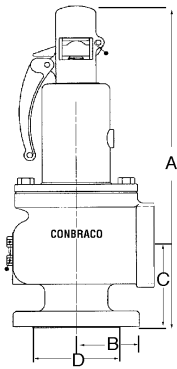
Unfired pressure Vessels - "UV" steam Lbs./hr. @ 10% accumulation

ASME Section VIII Air

Unfired pressure Vessels - "UV" air SCFM @ 10% accumulation

Section I & VIII ASME Safety Valves

119 Series



Cast Iron Safety Valve

Heavy-duty 119 Series cast iron valves are high capacity safety valves ideal for use with all types of boilers, pressure vessels and pressure piping systems. Their top guided design includes two control rings that ensure seat tightness. Direct replacement for most competitive models.

- Set pressures to 250 psig @ 450° F maximum
- Flanged inlet sizes: 1-1/2" through 6" ANSI 250 lb.; some sizes available in female NPT
- National Board certified ASME flow ratings
- Metal to metal seating, lapped to optical flatness
- Semi-nozzle design comes in eight orifice sizes
- Rust-proof steel stem, spring and spring washers
- Drip pan elbows are available (see page 38)
- Registered in all Canadian provinces and territories under CSA B51, CRN OG2663.1C
- Optional 316 Stainless Steel wetted trim (disc and nozzle) specify 120 series

Base Model No.	Valve Size(in.)	Orifice Letter	Orifice Area(sq. in.)	Dimensions(in.)			Wt./Lbs.
				A	B	C	Hex D APP
119 JGC	1-1/2 250# x 2 1/2 FNPT	J	1.356	15	4	4-5/16	35
119 KHC	2 250# x 3 FNPT	K	1.926	16	4	4-5/8	36
119 KHA	2 FNPT x 3 FNPT	K	1.926	16	4	4-5/8	37
119 KJC	2-1/2 250# x 3 FNPT	K	1.926	16	4	4-5/8	41
119 LJC	2-1/2 250# x 4 FNPT	L	2.99	22	5-1/8	5-5/8	84
119 LJA	2-1/2 FNPT x 4 FNPT	L	2.99	22	5-1/8	5-5/8	81
119 LKC	3 250# x 4 FNPT	L	2.99	22	5-1/8	5-5/8	85
119 MKA	3 FNPT x 4 FNPT	M	3.774	22	5-1/8	5-5/8	80
119 MKC	3 250# x 4 FNPT	M	3.774	22	5-1/8	5-5/8	87
119 NMD	4 250# x 6 125#	N	4.55	28	7-1/4	6-3/4	210
119 PMD	4 250# x 6 125#	P	6.692	28	7-1/4	6-3/4	215
119 QPD	6 250# x 8 125#	Q	11.593	42	10	9-1/4	530
119 RPD	6 250# x 8 125#	R	16.786	42	10	9-1/4	530

Information required for ordering 119 series valves:

1. Determine the orifice letter that corresponds to your required flow rate from the following capacity charts.
2. Select the inlet x outlet connection options from the list of models available for that orifice (above).
3. Specify base model number, set pressure, ASME Code section and service.

For Further information request brochure #PHBR119S

Orifice	Set Press. PSIG	Sec. I Lbs./Hr.	VIII Stm. Lbs./Hr.	VIII Air SCFM
	PSIG	Lbs./Hr.	Lbs./Hr.	SCFM
J	15	1947	2008	715
	30	2868	2929	1043
	50	4096	4280	1523
	75	5646	5969	2124
	100	7227	7657	2726
	125	8809	9346	3327
	150	10390	11034	3928
	175	11971	12723	4529
	200	13552	14412	5130
	225	15133	16100	5731
K	250	16714	17789	6332
	15	2761	2848	1014
	30	4067	4154	1479
	50	5809	6070	2161
	75	8008	8465	3013
	100	10250	10860	3865
	125	12493	13255	4718
	150	14735	15650	5570
	175	16978	18045	6423
	200	19220	20440	7275
L	225	21463	22834	8128
	250	23705	25229	8980
	15	4286	4421	1574
	30	6314	6449	2295
	50	9018	9423	3354
	75	12432	13141	4678
	100	15913	16859	6001
	125	19394	20577	7324
	150	22876	24295	8648
	175	26357	28013	9971
M	200	29838	31731	11294
	225	33320	35449	12618
	250	36801	39167	13941
	15	5410	5580	1986
	30	7969	8140	2897
	50	11382	11894	4234
	75	15691	16587	5904
	100	20085	21280	7574
	125	24480	25973	9245
	150	28874	30666	10915
N	175	33268	35358	12586
	200	37662	40051	14256
	225	42056	44744	15926
	250	46451	49437	17597
	15	6522	6728	2395
	30	9608	9814	3493
	50	13723	14340	5104
	75	18918	19998	7118
	100	24215	25655	9132
	125	29513	31313	11146
O	150	34811	36971	13160
	175	40108	42629	15173
	200	45406	48287	17187
	225	50704	53944	19201
	250	56002	59602	21215
	15	9592	9895	3522
	30	14131	14434	5138
	50	20183	21091	7507
	75	27823	29412	10469
	100	35615	37733	13431
P	125	43407	46055	16393
	150	51199	54376	19355
	175	58990	62697	22317
	200	66782	71018	25278
	225	74574	79340	28240
	250	82366	87661	31202
	15	16617	17141	6101
	30	24480	25004	8900
	50	34964	36537	13005
	75	48200	50952	18136
Q	100	61698	65368	23267
	125	75197	79783	28398
	150	88695	94199	33529
	175	102193	108614	38660
	200	115691	123030	43791
	225	129189	137445	48923
	250	142687	151861	54054
	15	24061	24820	8834
	30	35446	36205	12887
	50	50628	52903	18830
R	75	69791	73776	26260
	100	89336	94649	33689
	125	108880	115522	41119
	150	128425	136395	48549
	175	147969	157267	55978
	200	167514	178140	63408
	225	187059	199013	70837
	250	206603	219886	78267
	15	24061	24820	8834
	30	35446	36205	12887

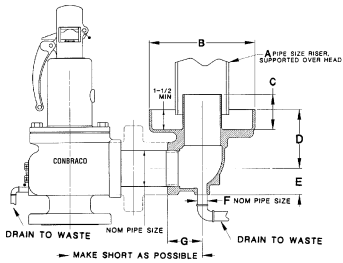
ASME Section I - Steam Boilers -
Pounds of saturated steam per hour @ 3% or 2 psig accumulation, whichever is greater.

ASME Section VIII - Pressure Vessels -
Pounds of saturated steam per hour @ 10% or 3 psig accumulation, whichever is greater.

ASME Section VIII - Pressure Vessels -
Standard cubic feet of air per minute @ 10% or 3 psig, whichever is greater.

Section I & VIII ASME Safety Valves

Drip Pan Elbow



The use of a drip pan elbow is highly recommended for steam service safety valves. When attached to a safety valve outlet, these elbows collect and remove condensate as well as isolate the valve from discharge piping stresses. Elbows through 4" feature female NPT threads and connect to the valve outlet by means of a close nipple. The 6" and 8" elbows have integral 125# ANSI B16.1 flanges and bolt directly to the valve outlet.

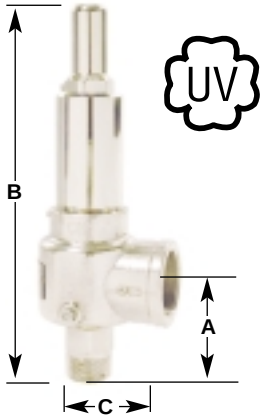
No.	Size(in.)	Dimensions(in.)							Approx. Wt./Lbs.
		A	B	C	D	E	F	G	
Q-5740-00	3/4	1-1/2	3-3/4	1-5/8	2-1/4	1	1/4	1-1/2	2
Q-5739-00	1	1-1/2	3-3/4	1-5/8	2-1/4	1	1/4	1-1/2	2
Q-5736-00	1-1/4	2	5-1/2	2-1/8	3-3/8	1-1/2	3/8	2-1/8	5
Q-5737-00	1-1/2	2	5-1/2	2-1/8	3-3/8	1-1/2	3/8	2-1/8	5
Q-5734-00	2	3	6-1/4	2-1/4	3-5/8	1-5/8	1/2	2-1/4	7
N-4098-00	2-1/2	4	7-3/8	3	4-3/8	1-7/8	3/4	2-3/4	11
N-4100-00	3	4	8	3-1/2	4-7/8	2-1/8	3/4	3-1/8	17
N-4102-00	4	6	9-5/8	4-1/2	5-3/4	2-5/8	3/4	3-1/4	30
N-4104-00	6	8	12-3/4	6-5/8	7-5/8	3	3/4	8	84
N-4106-00	8	10	16-1/2	7-1/2	8-5/8	4-1/8	1	10-3/4	151

Note: Ordering size of drip pan elbow is also nominal outlet size of safety valve.

Section VIII ASME Safety Relief Valves

500 Series

Versatile ASME Section VIII safety relief valve certified for steam, air/gas and liquid service. Choice of bronze, carbon steel or stainless steel bodies to suit a wide range of applications.



- Set pressures to 900 psig @ 800° F maximum
- Inlet sizes 1/2" through 2"
- Wide range of materials and options
- High capacity full - nozzle design
- Stainless steel springs are standard
- Short "tuned" blowdown
- API 527 Seat tightness
- Back pressure tight bonnet design
- Pack lever and screwed cap designs
- One trim suitable for all types of service
- CSA B51 CRN OG2663.1C

No.	Orifice Designation	Size (in.) Inlet x Outlet	Flow Area(sq. in.)	A	Screwed		B	C	Wt. Ea. (lbs.)
					Cap	Packed Lever			
5XXDC	D	1/2 X 1	.1295	2-3/8	7-1/2	7-1/2	1-5/8	2	
5XXDD	D	3/4 X 1	.1295	2-3/8	7-1/2	7-1/2	1-5/8	2	
5XXED	E	3/4 X 1-1/4	.2282	2-5/8	9	9	2	3	
5XXEE	E	1 X 1-1/4	.2282	2-5/8	9	9	2	3	
5XXFE	F	1 X 1-1/2	.3589	2-7/8	10-1/4	10-1/4	2-3/8	5	
5XXFF	F	1-1/4 X 1-1/2	.3589	2-7/8	10-1/4	10-1/4	2-3/8	5	
5XXGF	G	1-1/4 X 2	.5890	3-1/4	13-1/4	13-1/4	2-5/8	9	
5XXGG	G	1-1/2 X 2	.5890	3-1/4	13-1/4	13-1/4	2-5/8	9.5	
5XXHG	H	1-1/2 X 2-1/2	.9195	3-1/2	15	15	2-3/4	15.5	
5XXHH	H	2 X 2-1/2	.9195	3-1/2	15	15	2-3/4	16	
5XXJH	J	2 X 3	1.5044	4	17	17	3-1/4	23	

Model Numbering System 500 Series Safety Relief Valve

POSITION													
1	2	3	4	5	6	7	8	9	10	11	12	13	14
SERIES BODY/TRIM MAT'L		ORIFICE CAP	SIZE	INLET	CONNECTION	SERVICE	SEAT	SPECIAL OPTIONS		SET PRESSURE			
5	2	3	J	H	B	K	M	A	A	0	4	2	5
51=BRONZE/BRASS	1=SCREWED CAP	D	C=1/2	B=MNPT X FNPT	J=SEC VIII LIQUID	M=METAL	FACTORY ISSUED	SET PRESSURE,					
52=BRONZE/STAINLESS	2=SCREWED + GAG	E	D=3/4		K=SEC VIII AIR		LETTERS / NUMBERS OR SPECIAL OPTIONS OR FEATURES	PSIG (4 DIGITS)					
53=CARBON/STAINLESS	3=PACKED LEVER	F	E=1		L=SEC VIII STEAM	K=TEFLON	"AA"=DEFAULT STANDARD	VACUUM					
54=ALL STAINLESS	4=PACKED + GAG	G	F=1-1/4		M=NON CODE LIQUID		"HT" HIGH TEMP. SPRING	"HG" PREFIX+ 2 DIGIT					
		H	G=1-1/2		N=NON CODE AIR / GAS								
		J	H=2		P=NON CODE STEAM								
					Q=VACUUM								

Notes:

1. The ASME Code Section VIII requires a lift lever for the following services: air, steam, or hot water over 140°F
2. Maximum back pressure is 50 psig.
3. High temperature stainless steel alloy spring is required above 422°F / 217°C. Specify option "HT"
4. Service limits for Teflon® seat: -330 to +450°F / -201 to 232°C

Section VIII ASME Safety Relief Valves

500 Series

Versatile ASME Section VIII safety relief valve (continued)

Set Press. PSIG	Orifice					
	D	E	F	G	H	J
15	188	331	520	853	1332	2180
20	216	381	600	984	1536	2513
25	245	432	679	1114	1740	2846
30	274	482	759	1245	1943	3180
35	305	538	846	1388	2168	3546
40	337	593	934	1532	2392	3913
45	368	649	1021	1676	2616	4280
50	400	705	1108	1819	2840	4646
55	431	760	1196	1963	3064	5013
60	463	816	1283	2106	3288	5380
65	494	872	1371	2250	3512	5746
70	526	927	1458	2393	3736	6113
75	558	983	1546	2537	3960	6479
80	589	1038	1633	2680	4184	6846
85	621	1094	1721	2824	4408	7213
90	652	1150	1808	2968	4632	7579
95	684	1205	1896	3111	4857	7946
100	715	1261	1983	3255	5081	8313
125	873	1539	2421	3972	6201	10146
150	1031	1817	2858	4690	7322	11979
175	1189	2095	3295	5408	8442	13812
200	1346	2373	3733	6126	9562	15645
225	1504	2651	4170	6843	10683	17478
250	1662	2929	4607	7561	11803	19312
275	1820	3207	5045	8279	12924	21145
300	1977	3485	5482	8997	14044	22978
325	2135	3763	5919	9714	15165	24811
350	2293	4041	6357	10432	16285	26644
375	2451	4319	6794	11150	17405	28477
400	2608	4597	7231	11867	18526	30311
425	2766	4875	7669	12585	19646	32144
450	2924	5153	8106	13303	20767	33977
475	3082	5431	8543	14021	21887	35810
500	3239	5709	8981	14738	23008	37643
525	3397	5987	9418	15456		
550	3555	6266	9855	16174		
575	3713	6544	10293	16892		
600	3870	6822	10730	17609		
625	4028	7100				
650	4186	7378				
675	4344	7656				
700	4501	7934				
725	4659	8212				
750	4817	8490				
775	4975	8768				
800	5132	9046				
825	5290	9324				
850	5448	9602				
875	5606	9880				
900	5763	10158				
Approx. 1 psi						
Increment		6.3	11.1	17.5	28.7	44.8 73.3

Set Press. PSIG	Orifice					
	D	E	F	G	H	J
15	67	118	185	304	474	776
20	77	136	213	350	547	895
25	87	154	242	397	619	1013
30	97	172	270	443	692	1132
35	109	191	301	494	772	1262
40	120	211	332	545	851	1393
45	131	231	363	596	931	1523
50	142	251	395	648	1011	1654
55	154	271	426	699	1091	1784
60	165	290	457	750	1170	1915
65	176	310	488	801	1250	2045
70	187	330	519	852	1330	2176
75	198	350	550	903	1410	2306
80	210	370	581	954	1489	2437
85	221	389	612	1005	1569	2567
90	232	409	644	1056	1649	2698
95	243	429	675	1107	1729	2828
100	255	449	706	1158	1808	2959
125	311	548	862	1414	2207	3611
150	367	647	1017	1669	2606	4264
175	423	746	1173	1925	3005	4916
200	479	845	1329	2180	3404	5569
225	535	944	1484	2436	3802	6221
250	592	1043	1640	2691	4201	6874
275	648	1142	1796	2947	4600	7526
300	704	1240	1951	3202	4999	8179
325	760	1339	2107	3458	5398	8831
350	816	1438	2263	3713	5796	9484
375	872	1537	2418	3969	6195	10136
400	928	1636	2574	4224	6594	10789
425	985	1735	2730	4480	6993	11441
450	1041	1834	2885	4735	7392	12094
475	1097	1933	3041	4991	7791	12746
500	1153	2032	3197	5246	8189	13399
525	1209	2131	3352	5501		
550	1265	2230	3508	5757		
575	1321	2329	3664	6012		
600	1378	2428	3819	6268		
625	1434	2527				
650	1490	2626				
675	1546	2725				
700	1602	2824				
725	1658	2923				
750	1715	3022				
775	1771	3121				
800	1827	3220				
825	1883	3319				
850	1939	3418				
875	1995	3517				
900	2051	3616				
Approx. 1 psi						
Increment		2.2	4	6.2	10.2	16 26.1

ASME Section VIII Steam - POUNDS PER HOUR OF SATURATED STEAM @ 10% OVERPRESSURE. NATIONAL BOARD CERTIFIED.

ASME Section VIII Air - STANDARD CUBIC FEET OF AIR PER MINUTE @ 10% OVERPRESSURE. NATIONAL BOARD CERTIFIED.

500 Series (cont'd)

Versatile ASME Section VIII safety relief valve (continued)

Set Press. PSIG	Orifice					
	D	E	F	G	H	J
15	14	25	40	65	102	167
20	16	29	45	74	115	189
25	18	32	50	82	127	208
30	19	34	54	89	138	226
35	21	37	58	96	149	244
40	22	40	62	102	160	261
45	24	42	66	108	169	277
50	25	44	70	114	178	292
55	26	46	73	120	187	306
60	28	48	76	125	195	320
65	29	50	79	130	203	333
70	30	52	82	135	211	345
75	31	54	85	140	218	357
80	32	56	88	145	226	369
85	33	58	91	149	233	381
90	34	59	93	153	239	392
95	35	61	96	158	246	402
100	36	63	98	162	252	413
125	40	70	110	181	282	462
150	44	77	121	198	309	506
175	47	83	130	214	334	546
200	50	89	139	229	357	584
225	53	94	148	242	378	619
250	56	99	156	256	399	653
275	59	104	163	268	418	685
300	62	108	171	280	437	715
350	66	117	184	302	472	772

Set Press. PSIG	Orifice					
	D	E	F	G	H	J
325	64	113	178	291	455	744
375	69	121	191	313	489	799
400	71	125	197	323	505	826
425	73	129	203	333	520	851
450	75	133	209	343	535	876
475	77	136	215	352	550	900
500	79	140	220	361	564	923
525	81	143	226	370		
550	83	147	231	379		
575	85	150	236	388		
600	87	153	241	396		
625	89	157				
650	91	160				
675	92	163				
700	94	166				
725	96	169				
750	97	171				
775	99	174				
800	100	177				
825	102	180				
850	104	183				
875	105	185				
900	107	188				

Note: To determine water capacity at 25% overpressure, multiply the capacity at 10% by 1.066.

ASME Section VIII WATER - US GALLONS PER MINUTE OF WATER @ 10% OVERPRESSURE.
NATIONAL BOARD CERTIFIED.

Gas Cocks

GB-10 Series



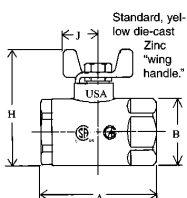
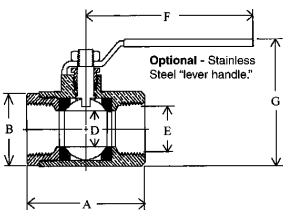
CSA Gas Shutoff Valves

Manual shut-off valves engineered specifically for low-pressure gas service. **Canadian Standard Association Design** and capacity certified with American-made quality. High-copper content body, chrome-plated ball, PTFE seats.

- Complies with ANSI Z21.15.CGA9.1-M97, and AGA 3-88, and CR91-002 standards for 1/2 psig and 5 psig installations
- Lever or tee handle options available
- Use with natural, manufactured, mixed and liquefied petroleum gases, LP gas-air mixtures
- Standard die-cast zinc "wing" handle, epoxy coated, for easy shut off

No.	Connection	BTU/Hr*
3/8" GB-10	3/8 NPT	318700
1/2" GB-10	1/2 NPT	623750
3/4" GB-10	3/4 NPT	1265000
1" GB-10	1 NPT	2037500

* Capacity based on a gas having a heating value of 1000 Btu/cubic feet and an S.G. of 0.64 at a P.D. of 1" W.C.



Valve Size (in.)	Dimensions(in.)								
	A	B	C	D	E	F	G	H	J
3/8	2.04	1.06	2.86	0.38	0.38	3.85	2.24	2.2	0.81
1/2	2.24	1.18	2.99	0.5	0.5	3.85	2.3	2.24	0.81
3/4	2.97	1.55	3.85	0.69	0.75	4.75	2.85	2.9	1
1	3.33	1.81	N/A	0.88	1	4.75	3.1	3.15	1

Handle Options: Lever, add suffix -L1; Tee, add suffix -T1 to model number.

Gas Cocks

GB-12, GB-13, GB-14, 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 these published standards:

- ANSI Z21.15.CGA9.1
- AGA No. 3-88
- UL Guide YRBX
- UL Guide MHKZ
- UL Guide YRPV
- UL Guide YSDT

No.	Part #	Size & End Connection
GB-12	51GC2T1	3/8" FNPT x FNPT
GB-12	51GC3T1	1/2" FNPT x FNPT
GB-12	51GC4T1	3/4" FNPT x FNPT
GB-12	51GC5T1	1" FNPT x FNPT
GB-13	51GD2T1	1/2" x 3/8" FNPT x Flare
GB-13	51GD3T1	1/2" x 1/2" FNPT x Flare
GB-13	51GD4T1	3/4" x 5/8" FNPT x Flare
GB-14	51GE2T1	3/8" x 3/8" Flare x Flare
GB-14	51GE3T1	1/2" x 1/2" Flare x Flare
UNIBODY SERIES		
GB-15	51GF201	3/8" FNPT x 3/8" FNPT
GB-15	51GF301	1/2" FNPT x 1/2" FNPT
GB-15	51GF401	3/4" FNPT x 3/4" FNPT
GB-16	51GG201	1/2" FNPT x 3/8" Flare
GB-16	51GG301	1/2" FNPT x 1/2" Flare

GB-50 & GB-50A Series



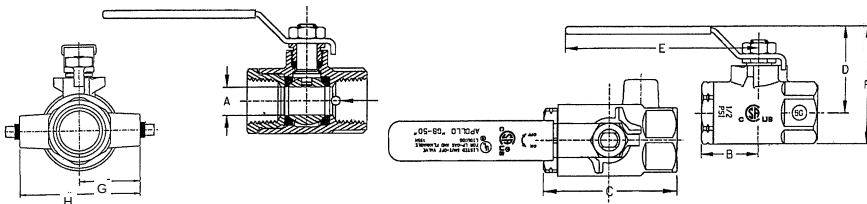
CSA Gas Shutoff Ball Valves

Designed for indoor "main burner" applications, with cast-in single or dual pilot tap for faster, simpler installation. Fully complies with AGA.3-88, ANSI Z21.15.CGA9.1-M97, single or dual and CR91-002 standards. ASTM B584 bronze body, chrome-plated ball, brass stem, retainer and gland screws for corrosion resistance.

- For natural gas, manufactured and mixed gas, liquefied petroleum gases and LP gas-air mixtures
- Rated pressures of 1/2 and 5 psig
- High capacity
- Comes standard with a reversible plated steel lever handle. Options include a die-cast zinc "wing" handle and "tee" handle
- Standard connection is FNPT x FNPT

No.				Dimensions(in.)								Capacity
Single Tapped	Dual Tapped	Size (in.)	Tapping	A	B	C	D	E	F	G	H	BTU/Hr.
50GB301	--	1/2	1/8	.50	1.11	2.25	1.68	2.85	2.27	1.00	-	693,000
50GB401	50GB401A	3/4	1/8	.75	1.26	2.67	1.93	3.85	2.72	1.12	2.24	1,258,000
50GB501	50GB501A	1	1/8	1.00	1.65	3.42	2.19	4.78	3.56	1.53	3.06	3,144,000
50GB601	50GB601A	1-1/4	1/8	1.25	1.87	3.86	2.37	4.78	3.56	1.62	3.24	6,441,000
50GB701	50GB701A	1-1/2	1/8	1.50	2.50	4.22	2.78	5.50	4.18	1.81	3.62	7,745,000
50GB801	50GB801A	2	1/8	2.00	2.48	5.02	3.15	5.50	4.90	2.18	4.36	14,741,000
50GB5A1	50GB5A1A	1	1/4	1.00	1.65	3.42	2.19	4.78	3.56	1.53	3.06	3,144,000
50GB6A1	50GB6A1A	1-1/4	1/4	1.25	1.87	3.86	2.37	4.78	3.56	1.62	3.24	6,441,000
50GB7A1	50GB7A1A	1-1/2	1/4	1.50	2.50	4.22	2.78	5.50	4.18	1.81	3.62	7,745,000
50GB8A1	50GB8A1A	2	1/4	2.00	2.48	5.02	3.15	5.50	4.90	2.18	4.36	14,741,000

*Note: Capacities based on 1000 Btu/cubic feet gas at 0.64 specific gravity, at a P.D. of 1" W.C.



Gas Cocks

46-100 Series



Standard Cocks

Wrench operated model with square head and 125 psig rating. Sizes from 1/4" FNPT to 1" FNPT.

No.	Size(in.)	Wt./100 (lbs.)
46-101-01	1/4	33
46-102-01	3/8	30
46-103-01	1/2	48.2
46-104-01	3/4	66
46-105-01	1	173.8

50 Series

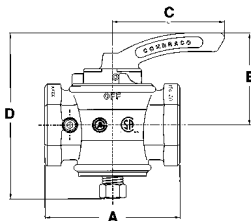


Manual Main Control Valves

CSA design certified for 1/2 psig and temperatures from 32° to 125°F. Complies to ANSI Z 21.15.CGA 9.1-M97.

- Factory tested 100% at 10 psig
- Capacities to 7.8 million Btu/hour
- Bronze construction, stainless steel springs
- Equal female inlet/outlet

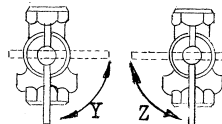
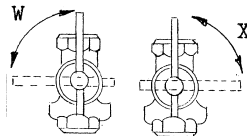
No.	Size(in.)	BTU/Hr.	Wt./100 (lbs)	Dimensions			
				A(in.)	B(in.)	C(in.)	D(in.)
50-203	1/2	800,000	88	2-1/2	1-7/16	1-23/32	2-3/4
50-303	3/4	1,310,000	156	2-15/16	1-11/16	2-1/16	3-1/2
50-403	1	2,100,000	197	3-5/16	2-3/16	2-7/8	3-7/8
50-503	1-1/4	3,250,000	300	3-21/32	2-3/4	3-5/32	4-11/16
50-603	1-1/2	3,700,000	478	4-3/8	3-5/16	3-1/2	5-3/4
50-703	2	7,300,000	845	5-7/16	3-23/32	4-1/2	6-3/4
50-803	2-1/2	7,800,000	1000	5-7/8	3-23/32	4-1/2	6-3/4



Handle
Suffix
Position

Size Pilot	W	X	Y	Z
1/8 NPT	01	02	03	04
1/4 NPT	05	06	07	08

All main burner valves furnished with 1/8" NPT pilot tapping. Valves 1" and larger can be furnished with 1/4" NPT pilot tapping.



51 Series



Gas Service Cocks

Tee or lever handle cocks; CSA design certified. In sizes 1/4" to 3/4".

- Capacities: 117,000 to 749,000 Btu/hour
- Accepted for use in City of New York Department of Buildings MEA 45-90-M
- Designed to meet ANSI Z21.15.CGA 9.1 requirements of 1/2 psig at temperatures from 32° F to 125°F

T-Handle
with Stop

Lever
Handle
w/Stop

No.	Pipe Size(in.)	Wt./100 (lbs)	Capacity (BTU/Hr.)
51-103-01	1/4	35	117,000
51-104-01	3/8	47	274,600
51-105-01	1/2	54	274,000
51-106-01	3/4	83	749,000
51-107-01	3/8	50	274,600
51-108-01	1/2	56	274,600
51-109-01	3/4	87	749,000

Gas Cocks

52 Series



T-Head

Flat Head

Gas Service Cocks

Available with tee head, flat head, square head or lever head in sizes from 1/4" to 1". Wrench operated and tested at 35 psig.

- Nut and washer bottom with stop
- For operation up to 500°F

No.	Size(in.)	Wt./100 (lbs.)
52-101-01	1/4	32
52-102-01	3/8	29
52-103-01	1/2	45
52-104-01	3/4	65.8
52-105-01	1	92.9
52-201-01	1/4	30
52-202-01	3/8	28
52-203-01	1/2	43
52-204-01	3/4	57
52-205-01	1	90.6

Square Head

Lever Head

No.	Size(in.)	Wt./100 (lbs.)
52-301-01	1/4	31
52-302-01	3/8	28
52-303-01	1/2	43
52-304-01	3/4	62.7
52-305-01	1	90
52-401-01	1/4	34.3
52-402-01	3/8	31
52-403-01	1/2	46
52-404-01	3/4	66.7
52-405-01	1	97

53 Series :



Gas Cocks

Available in male and female sizes: 1/8", 1/4" and 3/8".

No.	Male Size(in.)	Female Size(in.)	Wt./100 (lbs)
53-299-01*	1/8	1/8	14
53-300-01*	1/4	1/4	18.5
53-301-01	3/8	3/8	45

* Design certified by CSA to meet ANSI Z21.15.CGA 9.1 pressure requirements of 1/2 psig

54 Series



Gas Hose Cocks & Appliance Connector Valve

CSA design certified brass and wood handled valves with 56,500 Btu/hour capacity.

No.	Pipe Size(in.)	Handle	Wt./100 (lbs)
54-101-01	3/8	Brass	41
54-102-01	1/2	Brass	34.8
54-103-01	3/4	Brass	40
54-104-01	3/8	Wood	41
54-105-01	1/2	Wood	38
54-106-01	3/4	Wood	44.3
54-201-01	3/8	3/8 SAE	36
54-202-01	1/2	3/8 SAE	33.4

No.	Pipe Size(in.)	Handle	Wt./100 (lbs)
54-203-01	1/2	1/2 SAE	35
54-204-01	3/4	1/2 SAE	45.1
54-206-01	3/4	5/8 SAE	50
54-207-01	1/2	5/8 SAE	57
54-208-01	3/4	3/8 SAE	44
54-209-01	3/4	1/2 MNPT	44
54-401-01	3/8	*3/8 SAE	35
54-402-01	1/2	*3/8 SAE	33

* Flared end threaded 9/16 thread

55-302 Series



Gas Cock with Throttle Adjustment

Design certified by CSA

- Designed to meet ANSI Z21.15.CGA9.1-M97 pressure requirements of 1/2 psig
- Thread size: 1/4 male x 1/4 female

No.	Size(in.)	Wt./100 (lbs.)
55-302-01	1/4 M x 1/4 F	33

Gas Cocks

56 Series

Pilot Cocks

Wide variety of **CSA design** certified pilot cocks. Designed to meet ANSI Z21.15.CGA 9.1-M97 pressure requirements of 1/2 psig at temperatures from 32° to 125° F.



56-111-01



56-112-01

No.	Thread Size	Wt./100 (lbs.)
56-111-01	1/8 NPT x 1/4 Tube Plain	15.0
56-112-01	1/8 NPT x 1/4 Tube Throttle Adjust.	14.0
56-221-01	1/8 NPT x 1/8 FNPT Plain	16.1
56-222-01	1/8 NPT x 1/8 FNPT Throttle Adjust.	16.1
56-302-01*	1/8 NPT x 1/4 Tube	8.0
56-601-01	1/8 NPT x 1/4 Tube Right Hand	17.0
56-602-01	1/8 NPT x 1/4 Tube RH Throttle Adjust	17.0
56-603-01	1/8 NPT x 1/4 Tube Left Hand.	17.0
56-604-01	1/8 NPT x 1/4 Tube LH Throttle Adjust.	17.0

* Not CSA Certified



56-221-01



56-302-01



56-602-01

Water Gauges & Accessories

20-100 & 20-150 Series

Standard Pattern Bronze Water Gauges

Use for all types of liquid level verification; available with 3/8" or 1/2" NPT male pipe connections. Aluminum or plastic composition hand wheels; EPDM gauge glass gaskets standard.

- Ball checks standard for **20-150** models
- Equipped with two brass guard rods
- Rated: 125 psig @ 350°F, 300 psig @ 100°F (See note!)
- CRN Registered



No.	Pipe Size	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
20-101	3/8	5/8 x 10	145	ALUMINUM
20-102	3/8	5/8 x 10	145	COMPOSITION
20-104	1/2	5/8 x 12	160	ALUMINUM
20-105	1/2	5/8 x 12	160	COMPOSITION
20-150	1/2	5/8 x 12	160	ALUMINUM
20-151	1/2	5/8 x 12	160	COMPOSITION

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

20-200, 20-250 & 25-200 Series



Heavy Pattern Bronze Water Gauges

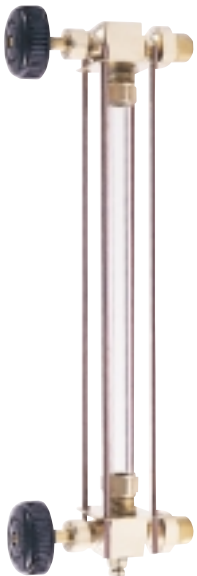
All standard 20 Series features but with a heavier valve body pattern for higher service ratings.

- Available with 3/8, 1/2 and 3/4 MNPT fittings
- Ball checks standard on **20-250** models
- Polished finish on **25-200** valves
- Rated: 200 psig @ 400°F, 400 psig @ 100°F (See note!)
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
20-201	3/8	5/8 x 10	185	ALUMINUM
20-202	3/8	5/8 x 10	189	COMPOSITION
20-204	1/2	5/8 x 12	205	ALUMINUM
20-205	1/2	5/8 x 12	205	COMPOSITION
20-207	3/4	3/4 x 16	270	ALUMINUM
20-208	3/4	3/4 x 16	270	COMPOSITION
20-250	1/2	5/8 x 12	195	ALUMINUM
20-251	1/2	5/8 x 12	200	COMPOSITION
20-253	3/4	3/4 x 16	355	ALUMINUM
20-254	3/4	3/4 x 16	360	COMPOSITION
25-201	3/8	5/8 x 10	180	ALUMINUM
25-202	3/8	5/8 x 10	185	COMPOSITION
25-204	1/2	5/8 x 12	190	ALUMINUM
25-205	1/2	5/8 x 12	190	COMPOSITION
25-207	3/4	3/4 x 16	290	ALUMINUM
25-208	3/4	3/4 x 16	295	COMPOSITION

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

20-300, 20-350, 25-400 & 25-500 Series



Square Pattern Bronze Water Gauges

Available with 1/2" (ASTM B-16 brass bar stock) or 3/4" (B-584 cast bronze) NPT male pipe connections. Four guard rods and EPDM gauge glass gaskets standard. Other packings available.

- Standard 1/4" needle drain valve in lower arm
- Pet cock or Apollo® ball valve drain on request
- Polished finish on **25-400** and **25-500**
- Ball checks standard on **20-350** and **25-500**
- Rated: 200 psig @ 400°F, 400 psig @ 100°F (See note!)
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
20-304	1/2	5/8 x 12	260	ALUMINUM
20-305	1/2	5/8 x 12	270	COMPOSITION
20-307	3/4	3/4 x 16	345	ALUMINUM
20-308	3/4	3/4 x 16	365	COMPOSITION
20-350	1/2	5/8 x 12	265	ALUMINUM
20-351	1/2	5/8 x 12	265	COMPOSITION
20-353	3/4	3/4 x 16	360	ALUMINUM
20-354	3/4	3/4 x 16	365	COMPOSITION
25-404	1/2	5/8 x 12	285	ALUMINUM
25-405	1/2	5/8 x 12	285	COMPOSITION
25-407	3/4	3/4 x 16	350	ALUMINUM
25-408	3/4	3/4 x 16	350	COMPOSITION
25-501	1/2	5/8 x 12	290	ALUMINUM
25-502	1/2	5/8 x 12	290	COMPOSITION
25-504	3/4	3/4 x 16	355	ALUMINUM
25-505	3/4	3/4 x 16	355	COMPOSITION

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

20-400 & 20-410 Series



Side Mounted Handwheel Water Gauges

Side-mounted handwheels allow water gauge operation in hard to reach places; with all the **20 Series** design features.

- Ideal for concealed jacketed type boilers
- No guard rod brackets: **20-405, 20-406, 20-410**
- Brackets and guard rods standard: **20-407, 20-408**
- EPDM standard gauge glass gasket
- Compact - requires minimum space
- Rated: 125 psig @ 350°F, 300 psig @ 100°F (See note!)
- Angle type for use on concealed jacketed type boilers
- 1-1/4" Extended shank length; 20-410
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
20-405-00 RH	1/2	5/8 x 12	165	ALUMINUM
20-406-00 LH	1/2	5/8 x 12	165	ALUMINUM
20-407-00 RH	1/2	5/8 x 12	170	ALUMINUM
20-408-00 LH	1/2	5/8 x 12	170	ALUMINUM
20-410-00 LH	1/2	5/8 x 12	180	ALUMINUM

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

20-700 & 20-710 Series



Simple Expansion Tank Gauges

Available with 3/8" or 1/2" MNPT connections; EPDM gauge glass gaskets and 1/4" needle drain valve in lower arm are both standard.

- **20-710** has plug in top arm to insert glass straight through
- 1/4" pet cock or Apollo® ball valve optional
- Ball checks on request (**20-704** only)
- Rated: 125 psig @ 350°F, 300 psig @ 100°F (See note!)
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)
20-703-00	3/8	5/8 x 10	120
20-704-00	1/2	5/8 x 12	135
20-713-00	3/8	5/8 x 10	120
20-714-00	1/2	5/8 x 12	135

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

23-600 Series



Stainless Steel Expansion Tank Gauges

Holds all 316 stainless steel-compatible liquids. In lower arm: shut-off valve and stainless steel drain valve.

- Two stainless steel guard rods
- Rated: 250 psig at 406°F: maximum working pressure (See note!)
- High pressure glass standard
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
23-651-00	1/2	5/8 x 12	225	ALUMINUM
23-654-00	3/4	5/8 x 12	225	COMPOSITION

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

20-600 & 20-800 Series



Bronze Expansion Tank Gauges

Bottom arm shut-off valve prevents water leaks during gauge glass changes.

- EPDM standard gauge glass gasket
- 20-800 models: 1/4" NPT pipe thread in upper arm for pressure gauge standard
- Rated: 200 psig @ 400°F, 400 psig @ 100°F (See note!)
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
20-604-00*	1/2	5/8 x 12	155	ALUMINUM
20-605-00*	1/2	5/8 x 12	175	COMPOSITION
20-804-00*	1/2	5/8 x 12	175	ALUMINUM
20-805-00*	1/2	5/8 x 12	175	COMPOSITION

**Automatic model*

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

20-600, 24-600 & 24-650 Series



Chain Lever Water Gauges

Lever on standard 12-foot chain allows operator to open and close valves that would be beyond reach. Valve stems operate on quarter-turns.

- Rated 250 psig @ 400°F, 500 psig @ 100°F (See note!)
- Use on large boilers with inconvenient columns
- Automatic and non-automatic models
- Furnished with 12 feet of chain
- High pressure glass standard with the 24 series
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)
20-601-00**	1/2	5/8 x 12	370
20-602-00**	3/4	3/4 x 16	435
24-601-00	1/2	5/8 x 12	515
24-602-00	3/4	3/4 x 16	580
24-651-00*	1/2	5/8 x 12	515
24-652-00*	3/4	3/4 x 16	580

* Automatic model

** Ball valve not included

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

25-600 Series



Chain Lever Water Gauges

- Quick opening, non-automatic
- Service rating: 250 psig @ 400°F, 500 psig @ 100°F (See note!)
- EPDM standard gauge glass gasket
- Furnished with 12 feet of chain
- H-2485 pull handle available
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)
25-601-00*	1/2	5/8 x 12	335
25-602-00*	3/4	3/4 x 16	350

* Polished Finish

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

24-300 Series



Bronze Liquid Level Gauges

Automatic and non-automatic direct reading gauges in shank pipe sizes 1/2" and 3/4".

- Heavy pattern bronze valve body
- Guard rod bracket to accommodate four guard rods
- Drain valve - 5/16 diameter full-blow ball valve with safety handle
- PTFE reinforced gauge glass gasket and stem packing are standard
- Rated 500 psig @ 100°F, 250 psig @ 400°F (See note!)
- Automatic - conforms to ASME power boiler code requirements for automatic water gauges; ball checks in upper and lower arms
- High pressure gauge glass and gaskets are standard
- CRN Registered

Non-Automatic

Automatic

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
24-301-00	1/2	5/8 x 12	425	ALUMINUM
24-302-00	1/2	5/8 x 12	425	COMPOSITION
24-304-00	3/4	3/4 x 16	490	ALUMINUM
24-305-00	3/4	3/4 x 16	490	COMPOSITION
24-350-00	1/2	5/8 x 12	425	ALUMINUM
24-351-00	1/2	5/8 x 12	425	COMPOSITION
24-353-00	3/4	3/4 x 16	490	ALUMINUM
24-354-00	3/4	3/4 x 16	490	COMPOSITION

Regular gauge glass is used in the standard water gauges unless otherwise noted as high pressure
Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

21 Series



Rough Bronze Water Gauges With Extended Shank

- 1-3/4" standard shank length; for 1-1/4" shank length, use - 07 suffix
- 21-100 rated 125 psig @ 350°F, 300 psig @ 100°F
- 21-200 rated 200 psig @ 400°F, 400 psig @ 100°F (See note!)
- CRN Registered

No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
21-101	3/8	5/8 x 10	163	ALUMINUM
21-102	3/8	5/8 x 10	175	COMPOSITION
21-104	1/2	5/8 x 12	185	ALUMINUM
21-105	1/2	5/8 x 12	197	COMPOSITION
21-150*	1/2	5/8 x 12	195	ALUMINUM
21-151*	1/2	5/8 x 12	207	COMPOSITION
21-204	1/2	5/8 x 12	215	ALUMINUM
21-205	1/2	5/8 x 12	219	COMPOSITION
21-250*	1/2	5/8 x 12	215	ALUMINUM
21-251*	1/2	5/8 x 12	215	COMPOSITION

* Automatic Model

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.

Water Gauges & Accessories

23-400 & 23-450 Series



Stainless Steel Liquid Level Gauges

Ideal for handling alcohol solvents, acetic acid and ketones. Automatic models conform to ASME requirements; aluminum and composition handwheels.

- PTFE reinforced gauge glass, stem packings
- Chemical resistant PTFE seat
- 5/16 dia. full flow all SS drain valve with safety handle
- Guard rod bracket to accommodate four SS guard rods
- Rated 500 psig @ 450°F (See note!)
- High pressure gauge glass standard
- CRN Registered

	No.	Pipe Size(in.)	Glass O.D. & Length	Wt./100 (lbs.)	Wheel Type
Non-Automatic	23-401-00	1/2	5/8 x 12	385	ALUMINUM
	23-402-00	1/2	5/8 x 12	385	COMPOSITION
	23-404-00	3/4	3/4 x 16	450	ALUMINUM
	23-405-00	3/4	3/4 x 16	450	COMPOSITION
Automatic	23-450-00	1/2	5/8 x 12	390	ALUMINUM ball checks
	23-451-00	1/2	5/8 x 12	390	COMPOSITION ball checks
	23-453-00	3/4	3/4 x 16	455	ALUMINUM ball checks
	23-454-00	3/4	3/4 x 16	455	COMPOSITION ball checks

Note: Service ratings are subject to pressure/temperature ratings of gauge glass and glass gaskets.



Tubular Gauge Glass Protector

Reduces risk of injury and damage from broken exploding glass; maximum length: 50".

- No. I-2733* 5/8" Glass Protector
- No. I-2734* 3/4" Glass Protector
- Made to fit most water gauges
- Not available on 23-400, 23-650, 24-300, 24-600 models
- CRN Registered

Note: Water gauge part number and centerline length are required when ordering. Priced according to length and application.

Water Gauges & Accessories

Ordering Water Gauge Glasses & Guard Rods

- Standard, Red Line and High Pressure glass, sizes 5/8" and 3/4", are available in lengths to 72"
- 3/16 diameter guard rod lengths from 6" to 74"
- Call for more pressure and temperature ratings

Formula for determining glass and rod lengths

- Glass Length = (C to C Dimension) - 1-1/4"
- Rod Length = (Glass Length) + 2"

Exceptions

(20-300, 20-350, 20-601, 20-602, 23-650, 24-300, 25-400, 25-500, 25-600)

- Glass Length = (C to C Dimension) - 2"
- Rod Length = (Glass Length) + 1-1/4"

(23-400, 24-400, 24-600)

- Glass Length = (C to C Dimension) - 2"
- Rod Length = (Glass Length) + 7/8"

(20-207, 20-208, 20-253, 20-254)

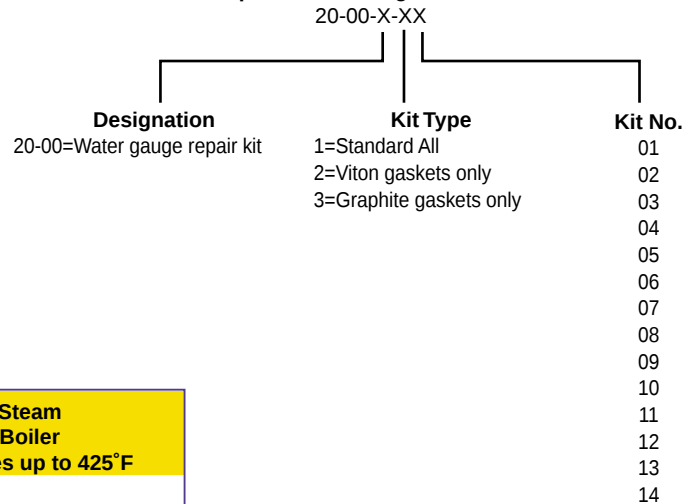
- Glass Length = (C to C dimension) - 1-1/2"
- Rod Length = (Glass length) + 2-1/4"

Suffix Key

- 00- Standard Gauge w/Standard Glass & Rod
- 01- Top only
- 02- Bottom only
- 03- Standard Gauge Less Glass and Rod
- 10- For Special Gauges and Gauges with Non-Standard Glass and Rod Lengths

NOTE! Service ratings are subject to pressure/temp. ratings of gauge glass and gaskets. Regular gauges standard unless otherwise noted as high pressure.

Repair Kit Ordering Information



Gauge Glass Service Ratings

Size	Length	Temperatures Up to 150°F No Corrosion	Steam Boiler Services up to 425°F
Standard			
5/8" O.D.	8"	210	100
+0,-3/64"	10"	210	100
	12"	205	100
Wall	14"	200	100
5/64"	16"	195	100
High Pressure			
O.D.	8"	435	320
+0,-1/32"	10"	420	315
	12"	410	305
Wall	14"	390	295
3/32"±1/64"	16"	375	285
3/4" O.D.	8"	425	315
+0,-1/32"	10"	410	310
	12"	400	300
Wall	14"	385	290
7/64"±1/64"	16"	370	280
Red Line			
5/8" O.D.	8"	370	285
+0,-1/32"	10"	345	280
	12"	335	280
Wall	14"	325	275
3/32"±1/64"	16"	315	270
3/4" O.D.	8"	360	280
+0,-1/32"	10"	340	275
	12"	330	275
Wall	14"	320	270
3/32"±1/64"	16"	310	265

Water Gauges & Accessories

Water Gauge Repair Kits

Kit	Applications		
20-001-01, 20-003-01	20-101, 20-102, 20-104, 20-105, 20-150, 20-151, 20-405, 20-406, 20-407, 20-408, 20-410, 21-101, 21-102, 21-104, 21-105, 21-150, 21-151	20-002-01	20-101, 20-102, 20-104, 20-105, 20-150, 20-151, 20-201, 20-202, 20-204, 20-205, 20-250, 20-251, 20-304, 20-305, 20-350, 20-351, 20-405, 20-406, 20-407, 20-408, 20-410, 20-601, 20-604, 20-605, 20-703, 20-713, 20-704, 20-714, 20-804, 20-805, 21-101, 21-102, 21-104, 21-105, 21-150, 21-151, 21-204, 21-205, 21-250, 21-251, 23-651, 23-654, 25-201, 25-202, 25-204, 25-205, 25-404, 25-405, 25-501, 25-502
20-001-02, 20-003-02	20-201, 20-202, 20-204, 20-205, 20-250, 20-251, 20-304, 20-305, 20-350, 20-351, 20-604, 20-605, 20-804, 20-805, 21-204, 21-205, 21-250, 21-251, 25-201, 25-202, 25-204, 25-205, 25-404, 25-405, 25-501, 25-502	20-002-02	20-207, 20-208, 20-253, 20-254, 20-307, 20-308, 20-353, 20-354, 25-207, 25-208, 25-407, 25-408, 25-504, 25-505
20-001-03, 20-003-03	20-207, 20-208, 20-253, 20-254, 20-307, 20-308, 20-353, 20-354, 25-207, 25-208, 25-407, 25-408, 25-504, 25-505	20-002-03	23-401, 23-402, 23-450, 23-451, 24-301, 24-302, 24-350, 24-351, 24-450, 24-451, 24-601, 24-651, 24-751, 24-851
20-001-04, 20-003-04	20-601, 25-601	20-002-04	23-404, 23-405, 23-453, 23-454, 24-304, 24-305, 24-353, 24-354, 24-453, 24-454, 24-602, 24-652, 24-752, 24-852
20-001-05, 20-003-05	20-602, 25-602		
20-001-06, 20-003-06	20-703, 20-704, 20-713, 20-714		
20-001-07, 20-003-07	23-401, 23-402, 23-450, 23-451		
20-001-08, 20-003-08	20-405, 20-406, 20-407, 20-408		
20-001-09, 20-003-09	23-404, 23-405, 23-453, 23-454		
20-001-10, 20-003-10	23-651, 23-654		
20-001-11, 20-003-11	24-301, 24-302, 24-350, 24-351, 24-450, 24-451		
20-001-12, 20-003-12	24-304, 24-305, 24-353, 24-354, 24-453, 24-454		
20-001-13, 20-003-13	24-601, 24-651, 24-751, 24-851		
20-001-14, 20-003-14	24-602, 24-652, 24-752, 24-852		

Standard repair kits and graphite repair kits contain glass packing, stem packing, friction washers, seat washers, and drain washer applicable to the particular valve. Three types of glass packing, EPDM rubber, Hypalon™, and PTFE, are included in the standard repair kit. For oil related service, Fluoroelastomer (Viton®) glass gasket sets are available. For severe applications, graphite glass gaskets and stem packing sets are available for each model.

26-100 & 26-300 Series



26-300

Compression Gauge Cocks

For draining expansion tanks, other liquid storage vessels.

- **26-100:** rated up to 125 psig
- **26-300:** soft metal seat/stuffing box rated up to 250 psig
- **26-310:** stainless steel ball seat/stuffing box rated up to 250 psig

No.	Pipe Size(in.)	Wt./100 (lbs.)	Wheel Type
26-101	3/8	25.0	ALUMINUM
26-102	3/8	30.0	COMPOSITION
26-104	1/2	28.3	ALUMINUM
26-105	1/2	30.0	COMPOSITION
26-301	3/8	39.0	ALUMINUM
26-302	3/8	40.0	COMPOSITION
26-304	1/2	40.0	ALUMINUM
26-305	1/2	44.0	COMPOSITION
26-307	3/4	49.0	ALUMINUM
26-308	3/4	51.7	COMPOSITION
26-311	3/8	39.0	ALUMINUM
26-312	3/8	42.0	COMPOSITION
26-314	1/2	40.0	ALUMINUM
26-315	1/2	44.0	COMPOSITION
26-317	3/4	50.0	ALUMINUM
26-318	3/4	50.0	COMPOSITION

*26-100 series is not available with packing nut

Specify the following suffix for finish: 01 - Satin Brass; 28 - Polished Brass.

Water Gauges & Accessories

26-500 Series



Chain Operated Gauge Cocks

For use on water columns beyond reach from the floor.

- Spring loaded lever
- PTFE seat
- Optional 6-foot chain (suffix -02)
- Rated up to 250 psig

No.	Size(in.)	Wt./100 (lbs.)
26-504-01	1/2	110
26-507-01	3/4	115

26-700 Series



PTFE Seat Compression Gauge Cock

PTFE seat and stuffing box provide positive seal.

- Rated up to 250 psig

No.	Size(in.)	Wt./100 (lbs.)	Wheel Type
26-704-01	1/2	78.0	ALUMINUM
26-705-01	1/2	81.5	COMPOSITION
26-707-01	3/4	88.0	ALUMINUM
26-708-01	3/4	105.0	COMPOSITION

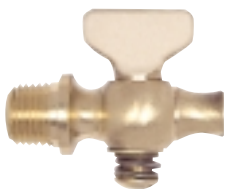
Air & Drain Cocks

41 Series

Air Cocks (for air use only)

An economical way to shut off air lines. Nut bottom available for pressures to 200 psig with 1/8" port. Many handle configurations. Spring bottom with 5/32" port standard.

- Spring bottom cocks tested at 80 psig air
- Available in satin or polished brass or satin chrome
- Maximum temperature is 500°F



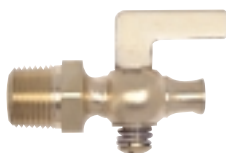
tee handle
round shoulder



tee handle
hexagon shoulder



lever handle
round shoulder



lever handle
hexagon shoulder

Type	Satin Brass	Polished Brass	Satin Chrome
Standard	-01	-05	-17
Nut Bottom	-04	-08	-20

No.	Size(in.)	Wt./100 (lbs.)
TEE HANDLE ROUND SHOULDER		
41-060	1/8	12.8
41-070	1/4	13.0
TEE HANDLE HEXAGON SHOULDER		
41-080	3/8	17.0
41-090	1/2	20.0
LEVER HANDLE ROUND SHOULDER		
41-120	1/8	13.1
41-130	1/4	14.2
LEVER HANDLE HEXAGON SHOULDER		
41-140	3/8	17.0
41-150	1/2	22.9

Air & Drain Cocks

41 Series

Air Cocks (for air use only)

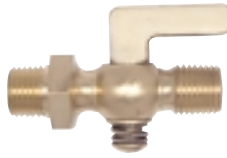
An economical way to shut off air lines. Nut bottom available for pressures to 200 psig with 1/8" port. Many handle configurations. Spring bottom with 5/32" port standard.

- Spring bottom cocks tested at 80 psig air
- Available in satin or polished brass or satin chrome
- Maximum temperature is 500°F

Type	Satin Brass	Polished Brass	Satin Chrome
Standard	-01	-05	-17
Nut Bottom	-04	-08	-20



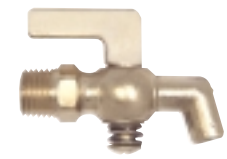
tee handle double male thread



lever handle double male thread



tee handle bibb nose



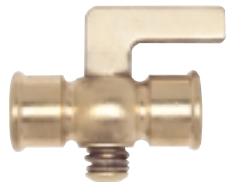
lever handle bibb nose



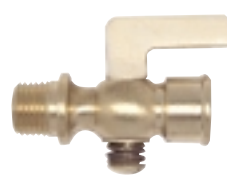
tee handle double female



tee handle male & female



lever handle double female



lever handle male & female



tee handle male & female hex shoulder

No.	Size(in.)	Wt./100 (lbs.)
TEE HANDLE DOUBLE MALE THREAD		
41-180	1/8	14.0
41-190	1/4	17.9
41-203	3/8	20.0
41-210	1/2	33.1
LEVER HANDLE DOUBLE MALE THREAD		
41-220	1/8	14.0
41-230	1/4	18.5
41-240	3/8	19.1
41-251	1/2	31.3
TEE HANDLE BIBB NOSE		
41-260	1/8	14.5
41-270	1/4	16.3
41-280	3/8	33.3
41-330	1/2	36.0
LEVER HANDLE BIBB NOSE		
41-290	1/8	16.5
41-300	1/4	15.0
41-310	3/8	32.1
41-320	1/2	36.0
TEE HANDLE DOUBLE FEMALE		
41-370	1/8	13.0
41-380	1/4	14.0
41-390	3/8	26.0
41-391	1/2	27.0
TEE HANDLE MALE & FEMALE		
41-400	1/8	13.0
41-410	1/4	14.0
41-420	3/8	21.0
41-421	1/2	26.0
LEVER HANDLE DOUBLE FEMALE		
41-430	1/8	14.8
41-440	1/4	13.0
41-450	3/8	23.0
41-451	1/2	27.0
LEVER HANDLE MALE & FEMALE		
41-460	1/8	15.2
41-470	1/4	15.0
41-480	3/8	23.0
41-481	1/2	27.0
TEE HANDLE MALE & FEMALE HEX SHOULDER		
41-490	1/8	17.0
41-500	1/4	15.0
41-510	3/8	23.0
41-511	1/2	25.0

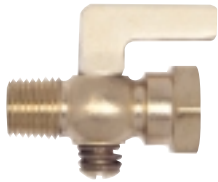
Air & Drain Cocks

41 Series

Air Cocks (for air use only)

An economical way to shut off air lines. Nut bottom available for pressures to 200 psig with 1/8" port. Many handle configurations. Spring bottom with 5/32" port standard.

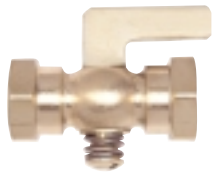
- Spring bottom cocks tested at 80 psig air
- Available in satin or polished brass or satin chrome
- Maximum temperature is 500°F



lever handle male & female hex shoulder



tee handle double female hex shoulder



lever handle double female hex shoulder



tee handle straight nose hex shoulder



lever handle straight nose hex shoulder

Type	Satin Brass	Polished Brass	Satin Chrome
Standard	-01	-05	-17
Nut Bottom	-04	-08	-20

No.	Size(in.)	Wt./100 (lbs.)
LEVER HANDLE MALE & FEMALE HEX SHOULDER		
41-520	1/8	14.0
41-530	1/4	15.0
41-540	3/8	22.1
41-541	1/2	27.0
TEE HANDLE DOUBLE FEMALE HEX SHOULDER		
41-550	1/8	17.0
41-560	1/4	17.0
41-570	3/8	25.0
41-571	1/2	28.3
LEVER HANDLE DOUBLE FEMALE HEX SHOULDER		
41-580	1/8	15.0
41-590	1/4	18.2
41-600	3/8	24.0
41-601	1/2	28.8
TEE HANDLE STRAIGHT NOSE HEX SHOULDER		
41-630	1/8	15.7
41-640	1/4	15.0
LEVER HANDLE STRAIGHT NOSE HEX SHOULDER		
41-650	1/8	14.0
41-660	1/4	15.0

41 Heavy & Extra Heavy

Pattern Air Cocks

Heavy and extra heavy patterns for stronger applications.

- Rated for air pressure up to 250 psig with nut version
- Extra heavy pattern rated for 150 WSP - nut bottom only

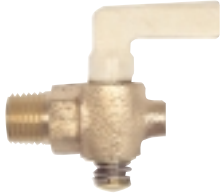


Type	Satin Brass	Polished Brass	Satin Chrome
Standard	-01	05	17
Nut Bottom	-04	08	20

No.	Size(in.)	Wt./100 (lbs.)
HEAVY PATTERN		
TEE HANDLE DOUBLE FEMALE		
41-102	1/4	28.0
LEVER HANDLE DOUBLE FEMALE		
41-103	1/4	27.0
EXTRA HEAVY PATTERN		
TEE HANDLE DOUBLE FEMALE		
41-200	1/8	32.0
41-202	1/4	32.0
TEE HANDLE DOUBLE FEMALE HEXAGON SHOULDER		
41-222	1/4	38.0
TEE HANDLE MALE AND FEMALE		
41-250	1/4	20.0

Air & Drain Cocks

42-100 Series



Drain Cocks

Rough brass construction; rated for 25 psig.

- Sizes: 1/8", 1/4", 3/8" and 1/2"

Type	Satin Brass	Polished Brass	Satin Chrome
Standard	-01	05	17
Nut Bottom	-04	08	20

No.	Size(in.)	Orifice(in.)	Wt./100 (lbs)
42-101	1/8	3/16	20.4
42-102	1/4	1/4	15.0
42-103	3/8	3/8	35.0
42-104	1/2	3/8	38.0

* see above suffix key

43-100 Series



Steam Gauge Cocks

Female fitting with male union for easy installation.

- Rated 100 WSP for standard bottom, 150 WSP for nut version
- Available in polished brass or satin brass finish

No.	Size(in.)	Wt./100 (lbs.)
43-101	1/4	45.0

Designate (-05) suffix for polished brass; (-01) suffix for satin brass.

44-100 Series



Hose End Cocks

Interior diameter hose sizes: 3/8" to 7/16"

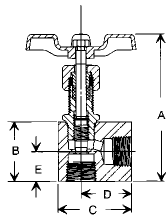
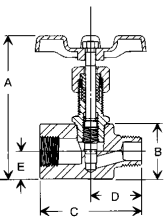
- 3/16" port; rated 25 psig
- Available in polished brass or satin brass finish

No.	Size(in.)	Wt./100 (lbs.)
44-101	1/8	19.0
44-102	1/4	22.0
44-103	3/8	23.0
44-104	1/2	25.0

Designate (-05) suffix for polished brass; (-01) suffix for satin brass.

Bar Stock Needle Valves

60 Series



Bar Stock Needle Valves

Built from a variety of materials, these needle valves are rated to 10,000 psig for cold, non-shock service and temperatures to 550°F. Will back-seat when fully opened to relieve pressure on packing, eliminate stem blow out problems and prevent leakage. Integral metal-to-metal seat and disc design; available with lock bonnet or ready for panel mounting. High-grade packing standard; carbon graphite packing standard; PTFE packing standard for 316 SS valves. Female x female NPT standard.

- **60-100:** Carbon steel, F x F, M x F, 1/8" to 1"
- **60-400:** 416 SS, F x F
- **60-700:** 316 SS, F x F, M x F, 1/8" to 1"
- **60-900:** Brass, F x F, 1/8" to 1/2"

No.	Size(in.)	Orifice	Dimensions (in.)					Cv	Wt./100 (lbs.)	
			A	B	C	D	E			
FEMALE X FEMALE										
60-100/60-400/60-700	1/8	.125	3.81	1.37	2.25	1.12	.68	.43	123	
60-101/60-401/60-701	1/4	.187	3.81	1.37	2.25	1.12	.68	.43	123	
60-102/60-402/60-702	3/8	.250	3.81	1.37	2.25	1.12	.68	.74	119	
60-103/60-403/60-703	1/2	.312	3.81	1.50	2.75	1.37	.75	1.36	164	
60-104/60-404/60-704	3/4	.437	5.43	1.93	3.18	1.59	.96	2.64	334	
60-105/60-405/60-705	1	.562	6.00	2.12	3.62	1.81	1.06	3.60	424	
60-900	1/8	.125	3.81	1.37	2.25	1.12	.68	.43	136	
60-901	1/4	.187	3.81	1.37	2.25	1.12	.68	.43	136	
60-902	3/8	.250	3.81	1.37	2.25	1.12	.68	.74	131	
60-903	1/2	.312	3.81	1.50	2.75	1.37	.75	1.36	181	
60-904	3/4	.437	5.43	1.93	3.18	1.59	.96	2.64	369	
60-905	1	.562	6.00	2.12	3.62	1.81	1.06	3.60	469	
MALE X FEMALE										
60-111/60-711	1/4	.187	3.81	1.37	2.25	1.12	.68	.43	108	
60-112/60-712	1/8	.250	3.81	1.37	2.25	1.12	.68	.74	104	
60-113/60-713	1/2	.312	3.81	1.50	2.75	1.37	.75	1.36	141	
ANGLE VALVES										
60-200/60-500/60-800	1/8	.125	3.18	1.00	1.25	.81	.50	.39	60	
60-201/60-501/60-801	1/4	.187	3.31	.87	1.50	1.03	.62	.43	80	
60-202/60-502/60-802	3/8	.250	3.31	1.00	1.59	1.06	.62	.84	90	
60-203/60-503/60-803	1/2	.312	3.31	1.50	2.00	1.37	.75	1.36	120	
60-204/60-504/60-804	3/4	.437	4.50	1.50	2.50	1.62	1.00	2.64	320	
60-205/60-505/60-805	1	.562	5.06	2.00	2.93	1.93	1.25	3.90	500	

Socket Weld

No.	Size(in.)	Orifice	Dimensions (in.)							Cv	Wt./100 (lbs.)
			A	B	C	D	E	F	G		
60-120/60-420/60-720	1/8	.125	3.81	1.37	2.25	1.12	.68	.424	.37	.43	123
60-121/60-421/60-721	1/4	.187	3.81	1.37	2.25	1.12	.68	.559	.37	.43	123
60-122/60-422/60-722	3/8	.250	3.81	1.37	2.25	1.12	.68	.694	.37	.74	119
60-123/60-423/60-723	1/2	.312	3.81	1.50	2.75	1.37	.75	.859	.37	1.36	164
60-124/60-424/60-724	3/4	.437	5.43	1.93	3.18	1.59	.96	1.069	.50	2.64	334
60-125/60-425/60-725	1	.562	6.00	2.12	3.62	1.81	1.06	1.334	.50	3.60	424

Miscellaneous Products

3T-W M V Series



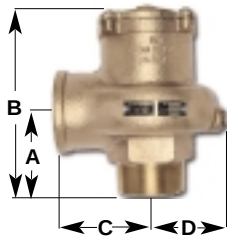
Washing Machine Control Valve

Single lever control of hot, cold water supplies; helps extend hose life and reduce risk of bursting by keeping pressure within piping. Models to fit most machine installations.

- Precision twin-ball design for positive shut-off
- Model **3S-WMV** – 1/2" sweat with swivel copper 90° elbow for easy retrofit
- Model **3T-WMV** – 1/2" NPT or 1/2" sweat connection for through-wall/concealed piping
- Model **3T-WMV-X** – 1/2" NPSM or 1/2" sweat connection extended for wall connection boxes
- 3/16" port; rated 25 psig

Model No.	Part No.	Wt./100 (lbs.)
3S-WMV	35-303-01	116
3T-WMV	35-303-02	133
3T-WMVX	35-303-03	177

14-290 Series



Vacuum Relief Valves

For protection of bulk handling vacuum systems and light gauge storage tanks.

- One-piece body, bronze construction
- Available with settings of 6 to 30 inches mercury

No.	Size(in.)	A(in.)	B(in.)	C(in.)	D(in.)	Wt./Ea. (lbs)
14-295	2 x 2	3	6-1/2	3-1/8	2-7/16	8.4
14-296	2-1/2 x 2-1/2	3-1/2	7-5/8	3-1/2	2-21/32	13.0
14-297	3 x 3	4-1/8	8-3/4	3-7/8	3-1/8	17.0

Capacities
SCFM Air
at 10%
Accumulation

Set Inches Mercury.	Key	2" 14-295	2-1/2" 14-296	3" 14-297
6	-V6	355	539	780
8	-V8	395	600	865
10	-W0	415	635	915
12	-W2	426	649	939
13	-W3	430	653	943
16	-W6	430	653	943
18	-W8	430	653	943
20	-V20	430	653	943
25	-V25	430	653	943
30	-V30	430	653	943

27-400 Series



Steam Gauge Siphon

90° and 180° configurations, made from 1/4" heavy gauge seamless brass tubing.

- Brass, satin chrome and bright dip finishes
- **27-401** is 180° loop, **27-402** is 90° loop type.
- Service rating: 250 psig saturated steam, 400 psig at 100°F

No.	Size (in.)	Wt./100 (lbs.)
27-401	1/4	44.0
27-402	1/4	40.0

SUFFIX NUMBER*		
Brass.	Satin Chrome	Bright Dip
01	03	04

*Specify finish by adding the above two-digit suffix after product number.

Miscellaneous Products

28-400 & 28-600 Series



Fusible Plugs (outside type fireside)

Model **28-400** conforms to ASME standards, with maximum pressure of 250 lbs. **28-600** offers maximum pressure of 50 lbs.

- Installed below boiler's water level
- Fusible plugs are installed between the fireside of either the plate, flue or tube of the boiler and below the water level
- **28-400** models are manufactured to conform to ASME standards and meet U.S. Coast Guard requirements
- Fire-activated fusible plugs are filled with pure tin and feature a melting point between 445°F and 450°F

No.	Size(in.)	Wt./100 (lbs.)
28-402-01	1/2	24.0
28-403-01	3/4	38.0
28-602-01	1/2	16.0
28-603-01	3/4	30.0

35-200 Series



Compression Bibb Faucet

Features heavy pattern with large opening.

- Rough brass finish; sizes 1/2" and 3/4"

No.	Size(in.)	Wt./100 (lbs.)
35-201-10	1/2	58.3
35-202-10	3/4	57.0

35-300 Series



Ball Valve Bibb Faucet

Features heavy pattern with large opening.

- Rough brass finish; sizes 1/2" and 3/4"

No.	Size(in.)	Inlet	Outlet	Wt./100 (lbs.)
35-301-03	1/2	1/2 sweat/threaded connector	.75-11.5 NHR hose	38.4
35-302-03	3/4	3/4 thread connector	.75-11.5 NHR hose	44.5

39-100 Series



Hoist Control Valve

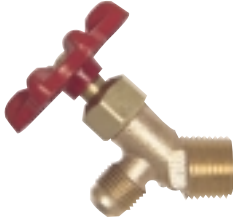
Designed and manufactured to provide years of trouble-free service. Locking and non-locking models; steel lever pins and cam. 100% tested.

- 1/2" FNPT connections
- Bronze body
- Stainless steel springs and screens
- Rust-proof, cam action lever
- Large volume
- Compact

No.	Model	Wt./100 (lbs.)
39-101-01	Non-Locking	202.0
39-102-01	Locking	202.0

Miscellaneous Products

45-100 Series



Oil Tank Valves

Designed to assure trouble-free operation and compact shut-off.

- For use with fuel oil, water, other liquids; not with steam
- Operating pressure 10 psi
- Temp. range -20°F to 250°F

No.	NPT Pipe x Flared Tube	Wt./100 (lbs.)
45-101-01	1/2 x 3/8	27.6
45-102-01	1/2 x 1/2	29.9
45-103-01	3/4 x 3/8	32.0
45-104-01	3/4 x 1/2	33.1

No.	NPT Pipe x Comp. w/Nut Sleeve	Wt./100 (lbs.)
45-105-01	1/2 x 3/8	27.0
45-106-01	1/2 x 1/2	30.0
45-107-01	3/4 x 3/8	31.7
45-108-01	3/4 x 1/2	32.0

45-201 & 45-301 Series



Barrel Faucets

Heavy duty rust-proof handle can be locked in closed position.

- Standard 3/4" tapered pipe thread for drum, barrel openings
- Rust proof steel spring
- Heavy-duty cast bronze body with wrench flats

No.	Size(in.)	Seat	Materials	Wt./100 (lbs.)
45-201-01	3/4	Brass	Brass	85.0
45-301-01	3/4	Brass	PTFE	108.0

45-301-01 Meets Factory Mutual Approval Standard NO. 6031 For Self Closing Drum Faucets

78-124 & 78-125 Series

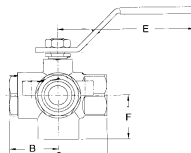
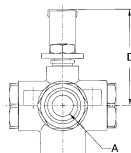
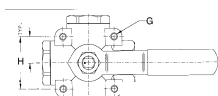


5-Port Tank Selector

Unique ball design allows for higher flow capacities. Five port construction allows access to four tanks using only one valve.

- Five NPT connections.
- Bronze ball valve with stainless steel Lever and Nut.
- PTFE seats and RPTFE stem packing.
- Stem packing adjustable for wear
- Non-lubricated
- 50 psig pressure rating
- Operation: four selected inlets feed one common outlet
- Pointer on handle indicates the selected inlet
- Easy mounting design

No.	Size	Dimensions (in.)								Wt./100 (lbs.)
		A	B	C	D	E	F	G	H	
78-124-01	1/2	0.50	1.26	2.52	2.27	3.53	1.12	10-24	1.40	106
78-125-01A	3/4	0.75	1.56	3.12	2.93	3.87	1.53	1/4-20	1.98	264



Miscellaneous Products

IBV-125 Series

Apollo International Cast Iron Full Port Class 125 Flanged Ball Valve

The Conbraco IBV-125 Series cast iron ball valve meets MSS SP-72, ANSI B16.10 and federal WW-V-35 performance standards. They can be used to replace any IBBM gate valve or plug valve. With their full port design, these valves assure an unobstructed, turbulence-free flow that gate and butterfly valves can't match. Low profile handle for easy installation in tight areas. Sizes from 2" to 10". Rated 125 WSP, 200 WOG, with a maximum operating temperature of 350°F.



- Gear operator standard 8" and 10"
- Full port design offers superior flow rate
- No bronze seat rings, disc rings or stems to wear out
- Quarter-turn offers instant, positive shutoff with zero leakage
- Stainless steel ball resists corrosion
- Handle indicates valve operation status
- Large actuator mounting pad standard
- Optional locking handles available
- Blowout-proof stainless steel stem
- PTFE seats and packing, not Nitrile or EPDM
- Opens and closes easily, without cheater bar
- For more technical information, request #PHBRIRBV brochure

IBVE-125 Series

Apollo International Epoxy Coated Cast Iron Full Port Class 125 Flanged Ball Valve

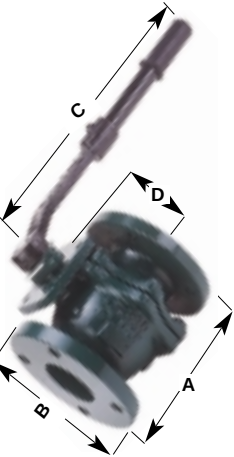
BVE-125 Series valves have all the design and construction features of the IBV-125 plus an FDA-approved, heat-fused epoxy coating making them ideal for corrosive water service as well as food contact applications. Maximum operating temperature: 140°F.

- For additional technical information, request #PHBRIRBV brochure

IBVD-125 Series

Apollo International Ductile Iron Full Port Class 125 Flanged Ball Valve

BVD-125 series valves have the same design and construction features of the IBV-125 series but in ductile iron. Same dimensional data as IBV/IBVE series. Available in sizes 2" through 6".



Model No.			Dimensions (in.)					
IBV No.	IBVE No.	IBVD No.	Size (in.)	A (in.)	B (in.)	C (in.)	D (in.)	Wt./100 (lbs.)
6P-208-01	6Q-208-01	6R-208-01	2	7	6	9	3	22
6P-209-01	6Q-209-01	6R-209-01	2-1/2	7.5	7	16	3.7	34
6P-200-01	6Q-200-01	6R-200-01	3	8	7.5	16	4	38
6P-20A-01	6Q-20A-01	6R-20A-01	4	9	9	19.7	4.8	58
6P-20C-01	6Q-20C-01	6R-20C-01	6	10.5	11	26	7.2	118
6P-20E-01	6Q-20E-01	-	8*	11.5	13.5	-	9.24	345
6P-20G-01	-	-	10*	13	16	-	11.81	440

141-143 Series

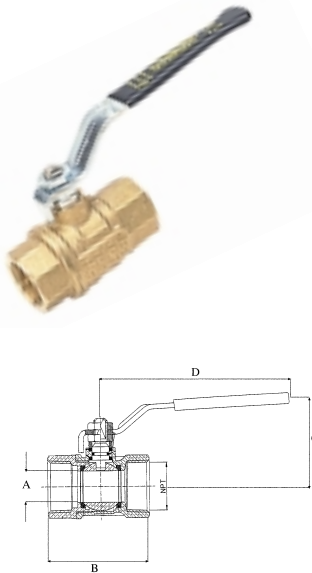
General Purpose/Economy Butterfly Valves

Apollo 141/143 Series valves form a lineup of economical butterfly valves ideal for use in industrial and HVAC/mechanical markets. 141 Series is a wafer style valve (2" - 24"); 143 Series is a companion lug (2" - 24"). Both are rated at 200 PSI (2"-12") and 150 PSI (14"-24") bubble-tight shut-off between flanges. These valves are designed for reliable performance in hot and cold water applications, treated or untreated, on-off or throttling, control isolation, flow balance or diversion tasks. Valves are 100 percent factory tested in both operational directions. 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.



Miscellaneous Products

64 Series



Apollo International Full Port Brass Ball Valves

Economy full-port forged ball valve with maximum flow; ideal choice for all plumbing applications. Lever handle is standard on all sizes.

- Sizes from 1/4" to 4"
- Threaded (-100) and solder end (-200) connections
- Pressure rated to 600 psig WOG; 150 psig steam
- Temperatures to 366°F (185°C)
- Blowout-proof stem
- Chrome-plated brass ball
- Secondary O-ring stem seal
- PTFE seats, thrust bearing and stem packing

64-100		Dimensions				
Size(in.)	No.	A(in.)	B(in.)	C(in.)	D(in.)	Cv
1/4 NPT	64-101-01	0.39	2.02	1.75	3.85	6
3/8 NPT	64-102-01	0.39	2.02	1.75	3.85	7
1/2 NPT	64-103-01	0.59	2.44	1.88	3.85	19
3/4 NPT	64-104-01	0.78	2.71	2.28	4.80	34
1 NPT	64-105-01	0.98	3.07	2.44	4.80	50
1-1/4 NPT	64-106-01	1.25	3.42	3.07	6.02	104
1-1/2 NPT	64-107-01	1.57	3.89	3.34	6.02	268
2 NPT	64-108-01	1.96	4.33	3.79	6.37	309
2-1/2 NPT	64-109-01	2.56	5.59	5.02	8.07	629
3 NPT	64-100-01	3.15	6.45	5.45	8.07	1018
4 NPT	64-10A-01	3.94	7.60	6.34	10.23	1622

64-200		Dimensions				
Size(in.)	No.	A(in.)	B(in.)	C(in.)	D(in.)	Cv
1/2	64-203-01	0.59	2.53	1.88	3.85	19
3/4	64-204-01	0.78	2.99	2.28	4.80	34
1	64-205-01	0.98	3.58	2.44	4.80	50
1-1/4	64-206-01	1.25	4.09	3.07	6.02	104
1-1/2	64-207-01	1.57	4.56	3.34	6.02	268
2	64-208-01	1.96	5.43	3.79	6.37	309
2-1/2	64-209-01	2.56	6.93	5.02	8.07	629
3	64-200-01	3.15	8.09	5.45	8.07	1018
4	64-20A-01	4.13	10.25	6.34	10.23	1622

Optional Kits Valve Size	Stem Extensions	Balancing Stops	Locking Handles	Lever Handles
1/4", 3/8" and 1/2"	78-1501-01	78-1506-01	78-1659-01	78-1646-01*
3/4" and 1"	78-1502-01	78-1507-01	78-1660-01	78-1647-01
1-1/4" and 1-1/2"	78-1503-01	78-1508-01	78-1661-01	78-1648-01
2"	78-1504-01	78-1509-01	78-1662-01	78-1649-01
2-1/2" and 3"	78-1505-01	78-1510-01	-	78-1650-01
4"	-	-	-	78-1651-01

Note: Specify -07 suffix for "T" handle, ie. 64-105-07. Available with threaded models only in 1/4"-1" sizes.

* Lever handle available with 1/2" only

95 A Series



Apollo International Full Port Brass Ball Valve With Stop & Waste

Threaded	Sweat	Size(in.)
95A-303-01	95A-403-01	1/2
95A-304-01	95A-404-01	3/4
95A-305-01	95A-405-01	1

Terms and Condition of Sale

Payment: 2% 10th prox. Net 30 days. All prices F.O.B. Matthews, N.C., or Pageland, S.C., with freight allowed on shipments of 750 pounds or \$4,000 net and over to all shipping points within the United States excluding Alaska and Hawaii. No freight allowed on Air Freight or Parcel Post shipments. Claims for shortages must be made within 10 days of receipt of material. Our responsibility ends when a receipt is furnished us by the carrier.

No Invoice Rendered For Less Than \$50.00. No freight will be allowed on Air Freight, Air Express, Parcel Post or U.P.S. shipments. Other Conbraco Products may be combined to make sufficient weight for full freight allowance. Phone order quoted prices are subject to correction. Prices and designs are subject to change without notice. Orders for material or special design or specification are made to customer's order and are not subject to cancellation or return. Goods returned to us will not be accepted unless a full explanation has been made and our written authorized permission obtained. All goods returned – if accepted – will be credited at invoice price, less 30% for service and rehandling charges, plus shipping expenses. We reserve the right to adjust orders to box quantities.

Warranty and Limitations of Liability

Conbraco Industries, Inc. 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 one year from the date of delivery to you, our initial purchaser.

Should any failure to conform to this warranty appear within one year 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.

THIS WARRANTY IS EXCLUSIVE AND IS IN LIEU OF ANY IMPLIED WARRANTY OF MERCHANTABILITY, FITNESS FOR A PARTICULAR PURPOSE OR OTHER WARRANTY, WHETHER EXPRESS 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 express or implied shall pass through our initial purchaser to any other person or corporation.

LIMITATION OF LIABILITY: Conbraco Industries, Inc. SHALL NOT UNDER ANY CIRCUMSTANCES BE LIABLE FOR SPECIAL OR CONSEQUENTIAL DAMAGES SUCH AS, BUT NOT LIMITED TO, DAMAGE TO LOSS OF OTHER PROPERTY OR EQUIPMENT, LOSS OF PROFITS OR REVENUE, COST OF CAPITAL, COST OF PURCHASED OR REPLACEMENT GOODS, OR CLAIMS OF CUSTOMERS OF OUR INITIAL PURCHASER. THE REMEDIES OF OUR INITIAL PURCHASER, AND ALL OTHERS, SET FORTH HEREIN, ARE EXCLUSIVE, AND THE LIABILITY OF CONBRACO WITH RESPECT TO SAME SHALL NOT, EXCEPT AS EXPRESSLY PROVIDED HEREIN, EXCEED THE PRICE OF THE CONBRACO GOODS UPON WHICH SUCH LIABILITY IS BASED.



Sales Department
P.O. Box 247
Matthews, NC 28106
Phone: 704-841-6000
Fax: 704-841-6021

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Customer Service Department
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Fax: 704-841-6020

			E/Mail Address	Phone	Fax
Southeast Region	B. Lynch & Assoc.	Florida	sales@blynchandassociates.com	813-901-0988	813-901-8403
	Valves & Fittings, Inc.	Georgia/Alabama/Tennessee-East	sales@valves-fittings.com	770-483-3057	770-483-3110
	Pro Marketing, Inc.	North Carolina/South Carolina	sales@promarketinginc.net	864-578-4334	864-578-4889
	Mid South Marketing	Virginia/Maryland/Washington, D.C./WV-East	midsouth7@aol.com	804-749-8712	804-749-8717
Southern Region	Southern Marketing Group	MS/TN-West/AR/Bowie Cty.-TX	SMG49@bellsouth.net	901-547-0042	901-547-0035
	AVC Mechanical	Oklahoma/Texas-North	valvesales@avale.com	817-649-2229	817-649-2225
	Knox & Associates, Inc.	Texas-South/Louisiana	knox1@pdq.net	713-462-7766	713-690-6228
Midwestern Region	HEBCO, Inc.	Kansas/Missouri-West	chuckHEBCO@aol.com	913-491-0797	913-491-5126
	New Tech Marketing, Inc.	IL/WI-East/IN-North/MI-Upper Peninsula/IA-River Counties	ntm12@ameritech.net	630-378-4300	630-378-0343
	New Tech Marketing, Inc.	Eastern Missouri/Southern Illinois	ntm112@aol.com	618-394-0329	618-394-0427
	L.J. Whitfill & Associates, Inc.	Kentucky/Indiana-South/Ohio-South	ljwhitfill@aol.com	502-459-4545	502-459-9944
	V.E. Sales Co., Inc.	Michigan (Except Upper Peninsula)	tomv@vesalesinc.com	586-774-7760	586-774-1490
	Northstar Valve & Fitting, Inc.	Minnesota/North & South Dakota/Wisconsin-West	nsvalve@aol.com	952-937-0108	952-937-0803
	Willco, Inc.	Nebraska/Iowa (Except River Counties)	willcoinc@att.net	402-573-7000	402-573-7371
	Morrissey Associates, Inc.	Ohio-North/Pennsylvania-West/West Virginia-West	sales@morrisseyassoc.com	330-538-0406	330-538-0410
Western Region	Aqua Products Group	California-North	tomikoAPG@cs.com	925-473-1288	925-473-1798
	Specification Sales	California-South	david@specsales.com	909-594-7088	909-594-2798
	Marshall-Rodeno Associated	CO/WY/MT/ID-SE/UT/NV-NE/NM/EI Paso-TX	trodeno@marshall-rodeno.com	303-575-6701	303-575-6706
	J.P. Harris & Associates, Inc.	Washington/Oregon/Idaho-North West/Alaska	jim@jpharrisassoc.com	360-944-8457	360-944-8459
	Layden Valve Sales & Solutions	Hawaii	will@laydenvalve.com	808-456-3331	808-455-1064
	Southwestern Mechanical Sales Co.	Arizona/Nevada-SW Las Vegas/Clark County/Nevada	sales@swmech.com sales@swmech.com	480-813-1313 702-368-2561	480-813-2286 702-368-1784
Northeast Region	Urell, Inc.	Massachusetts/New England States	doug@urell.com	617-923-9500	617-926-9414
	Pence & Associates	New York-Upstate/New York-West	penceassociates@aol.com	315-423-0066	315-423-0290
	Continuous Sales Corporation	New York-East/New Jersey-North	csc07@aol.com	516-248-5177	516-248-5187
	J.A. Layden Co.	Pennsylvania-East/Delaware/New Jersey-South	sales@jalayden.com	610-353-2311	610-359-1299
	Keith Engle & Associates	OEM accounts	keith.enge@worldnet.att.net	610-827-9560	610-827-9561
Canada	Conbraco Industries, Canada	160 Pennsylvania Ave., Unit 3, Concord, Ontario L4K 4A9	conbraco@conbraco.on.ca	905-761-6161	905-761-6666
	Barclay Sales Ltd.	British Columbia	mail@barclaysales.com	604-945-1010	604-945-3030
	Mechanical Systems 2000, Inc.	Alberta-South	hoth20@telusplanet.net	403-291-1244	403-219-0686
	Dynamic Agencies, Ltd.	Saskatchewan	doug.dynamicage@sk.sympatico.ca	306-343-1901	306-343-1901
	Tom Beggs Agencies Ltd.	Manitoba/NW Ontario	TBA@MB.SYMPATICO.CA	204-953-1900	204-774-6915
	Task Controls, Inc.	Ontario	taskcontrols@on.aibn.com	416-291-3004	416-754-3481
	Agences J. Pierre Sylvain, Inc.	Quebec	agencespsylvain@videotron.ca	450-655-9588	450-641-2737
	Kern Industries, Ltd.	Alberta-North	kernind@telusplanet.net	780-451-2056	780-454-6687
	J. Levandier Sales, Inc.	Nova Scotia, New Brunswick, Prince Edward Island	jlssales@istar.ca	506-858-1615	506-858-1084
	Smith Agencies	Newfoundland	smithagencies@roadrunner.nf.net	709-364-8856	709-747-9414
	Key to the North Sales Agency, Inc.	Ontario-North	keytothenorthsales@sympatico.ca	705-524-6714	705-566-0148
	Pelco Sales	Eastern-Ontario/Ottawa	pelco@cyberus.ca	613-839-0114	613-839-0115
Int'l./ Puerto Rico	Rafael Rodriguez Barril, Inc.	Puerto Rico	raul@rrbarril.com	787-759-8680	787-759-8986
	Conbraco Industries, Int'l. (Europe)	Manchester, England	sales@conbraco.co.uk	+44-161-908-2340	+44-161-908-2359

For Representatives And Distributors In Your International Area
Please Contact The Closest Conbraco Industries International Office

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