

Highly engineered pressure valves for OEM engineered applications



CASH VALVE

Industrial pressure regulating and back pressure valves overview.



Global Performance

Cash Valve is a leading manufacturer of Pressure Regulating and Back Pressure Valves offering products for Steam, Air/Gas, Liquid, and Cryogenic applications.

Our products range in size from 1/8" to 2" for threaded NPTF* connections.

Cash Valve offers a wide selection of pressure reductions with a max inlet pressure of 2400 psi and a max out of 750 psi.

Temperatures range between cryogenic up through -320°F to 800°F.

Materials of construction are offered with Bronze, Brass, Stainless Steel, Carbon Steel and Iron depending on your application and diaphragms of various elastomers and metal configurations.

* NPTF, also referred to as "Dryseal" thread, is designed to provide a more leak-free seal without the use of Teflon tape or other sealant compound. NPTF are interchangeable with NPT and are standard on all Cash Valve products.

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A-16, A-31, A-31S



A-360, A-361, A-365

Pressure Regulating Valves

Small Pressure Regulating Valves For Water, Air, Light Oil

- Model:** A-16, A-31 and A-31S
- Features:** Reduces high pressure to lower outlet pressure within close limits. Good for inlet pressures up to 300 psi. Maximum temperature 180°F (82°C).
- Applications:** Drinking fountains, bubblers, water coolers, humidifiers, beverage dispensers, spray paint rigs, air tools, etc. For water, air, light oil.
- Sizes:** 1/8", 1/4", 3/8"
- Options:** Forged brass body. Reduced pressure ranges from 2 to 180 psi. Available with composition seat, BUNA-N, in two or three way valve bodies, side inlet and outlet, and side gauge connection (A-31S). Fillister or hex head adjusting screw standard; also available with wing lock nut or T-handle. Can be furnished with balanced Piston design.
- Data sheet:** VCTDS-00508.

Small Commercial Pressure Regulating Valves

- Model:** A-360, A-361, A-365
- Features:** Recommended for regulating the flow of air, oils, gases and all non-corrosive fluids. Not for use on steam.
- Sizes:** 1/4", 3/8", 1/2" (A-365 1/4" and 3/8" only)
- Features:** The A-360 and A-361 incorporate an aspirating action to give exceptionally good regulation at high flow rates. Maximum initial pressure, 400 psi. Maximum delivery pressure, 175 psi. Maximum temperature, 180°F (82°C). Type A-360 has one inlet and one outlet; furnished with forged brass body. Type A-361 is designed for 3-way or 4-way use. One inlet, three outlets. Gauge tappings 1/4" NPTF; cast bronze body. Type A-365 is a special modification of the A-360 for pressures up to 1,100 psi inlet, to 250 psi outlet. Sizes 1/4" and 3/8" only.
- Options:** Can be furnished with T-handle adjusting screw or handwheel, or tamper-proof seal cap.
- Data sheet:** VCTDS-00508.



B



B-95

Pressure Regulating Valves

Pressure Regulating Valve

Model: B

Features: Automatically maintains, within close limits, the desired reduced pressure in the service line. Threaded connections. Iron body valves are for initial pressures up to 200 psi on water, air, oil, or other liquids and gases, and for initial pressures up to 150 psi on steam. Maximum delivery pressure in all cases is 125 psi. Bronze body valves are for initial pressures up to 400 psi on water, air, oil, etc. and for pressures up to 250 psi on steam. Maximum delivery pressure 150 psi. Teflon® Seat available for temperatures to 350° maximum on steam.

Applications: Water, air, light oil: spray equipment, dishwashers, air tanks, food, chemical and industrial process lines. Steam: unit heater, pressing irons, steam cookers, degreasers, sterilizers, vulcanizers.

Sizes: ¼", ⅜", ½", ¾", 1", 1¼", 1½", 2" on NPTF and BSPT Threads

Options: Self-contained, easily cleaned strainer; large area diaphragm, renewable and readily accessible working parts; self-cleaning seat. Available with T-handle or handwheel. See CAVMC-0514. Can be furnished with tapped spring chamber for differential and dome loaded applications.

Data sheet: VCTDS-00509.

Pressure Regulating Valve

Model: B-95

Features: Automatically maintains, within close limits, the desired reduced pressure in the service line. Threaded connections. Investment cast carbon steel and stainless steel bodies, chambers and bottom plug, with stainless steel trim and a choice of Teflon® or BUNA-N-seating. Initial pressure up to 720 psig, reduced pressures up to 400 psig and the operating temperature range is -320°F to +450°F depending on the trim options.

Applications: Suitable for almost any service. Water, air, light oil, steam: suitable for chemical, food, pulp and paper industry, utility lines and specialist OEM applications.

Sizes: ½", ¾", 1" in NPTF and BSPT Threads.

Options: Self contained, easily cleaned strainer, large area diaphragm, renewable and readily accessible working parts; self cleaning seat; stainless laminated diaphragms and can be furnished for differential and dome loaded use with a tapped spring chamber and a sealed closing cap over the adjusting screw.

Data sheet: VCTDS-00509.

Teflon® is a mark owned by E.I. du Pont de Nemours and Co.



BBC



E-55

Pressure Regulating Valves

Pressure Regulating Valve For Heavy Oil

Model: BBC

Features: Direct acting, single seat, spring loaded diaphragm. Maintains lower pressure within reasonably close limits. Iron or bronze bodies, threaded connections, Monel® or BUNA-N diaphragm. Stain less steel piston and seat, both of which are renewable. Standard valve equipped with square head adjusting screw. **Maximum initial pressure in iron, 200 psi; maximum reduced pressure, 125 psi. In bronze, maximum initial pressure, 400 psi; maximum reduced pressure, 200 psi.**

Applications: Intended for Heavy Oil Service (Bunker C and other grades), dirty liquids, high viscosity fluids.

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

Options: T-handle or handwheel also available.

Data sheet: VCTDS-00509.

High Capacity Pressure Regulating Valve

Model: E-55

Features: Aspirated design for close pressure control. Handles high and variable flow rates well beyond the limitations of ordinary regulators. Bronze body with stainless steel body seat. Brass built in strainer is easily removed for cleaning. Maximum initial pressure, 400 psi. Delivery pressure: maximum 300 psi; minimum 25 psi. Maximum temperature 180°F (82°C).

Applications: All types of water systems; various pneumatic, cryogenic and hydraulic systems, etc.

Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" in NPTF and BSPT threads.

Options: Optional Monel® strainer screen

Data sheet: VCTDS-00510.

Monel® is a mark owned by Special Metals Corporation.



G-60



LS

Pressure Regulating Valves

High Capacity Pressure Regulating Valve

Model: G-60

Features: Self-contained, self actuated, threaded connections. Produces exceptional control with high capacity. Its design offers a wide range of adjustment and exceptional sensitivity of control.

Applications: Dryers, steam atomizing oil burners, plastic molding, cookers, degreasers, sterilizers.

Sizes: ¼", ⅜", ½", ¾", 1", 1¼", 1½"

Options: Can be furnished with internal trim suitable for regulating steam, air, water, oils, gases, chemicals, and other fluids. A slightly modified G-60 is offered as a constant differential control valve or dome loaded valve. Available in Iron, Bronze, Carbon Steel or Stainless Steel.

Data sheet: VCTDS-00511.

PRESSURE TEMPERATURE RATINGS		
Body	Inlet Pressure	Maximum
		Temperature °F (°C)
Iron	400	180° (82°)
	250	410° (210°)
Bronze	400	180° (82°)
	300	500° (260°)
Carbon Steel or Stainless Steel	450	750° (399°)
	720	180° (82°)

High Pressure Regulating Valve

Model: LS

Features: Single seated, spring loaded, direct acting diaphragm type regulator. Maintains reduced pressure within reasonably close limits regardless of inlet fluctuations. Maximum initial pressure up to 2,400 psi. Delivery pressure: maximum, 500 psi; minimum, 40 psi. Bronze body, spring chamber and bottom plug; stainless steel piston/piston assemblies, cylinders, seat ring and strainer screens; BUNA-N diaphragm and O-rings. Self-renewable seat ring may be flipped over and reinstalled rather than replaced.

Applications: Designed for use on air, water, light oil, oxygen, carbon dioxide and other gases and fluids.

Sizes: ⅜", ½", ¾"

Options: Up to 750 psi maximum delivery pressure with internal modification. Three versions of the valve are as follows:

LS-1 is furnished with a metal seat piston and cylinder particularly designed for high or low temperature and high pressure drop applications.

LS-2 is furnished with a Teflon® seat and balanced piston design for applications requiring higher capacities and/or tight shut-off. The balanced design assures close control regardless of inlet pressure fluctuations.

LS-3 is furnished with a modified cylinder and no strainer screen for applications involving heavy or high viscosity fluids.

LS-4 is furnished with construction for cryogenic service on liquid or gas.

Data sheet: VCTDS-00513.

Teflon® is a mark owned by E.I. du Pont de Nemours and Co.



FR, FR-6, FR-10



FRM, FRM-2

Back Pressure Valves

Back Pressure Valves

Model: FR, FR-6, FR-10

Features: Protects against periodic high pressures; maintains a desired inlet pressure by relieving to a lower variable pressure, or to atmosphere. Relieves dependably at adjusted pressures; shuts tight after relieving. Features unique "Floating Ring" seating arrangement that produces perfect seat contact. The FR valves afford unusually close regulation, repeatability of opening pressure and close reseating pressures. The FR-10 is for more economical, lower pressure applications - maximum pressure setting 250 psi. (Provided with iron body and spring housing only). Type FR is available in iron, bronze, steel or stainless steel body; threaded connections; monel, stainless steel or BUNA-N diaphragm. Pressure settings from 0 to 400 psi. The FR-6 is available for 200 to 600 psi.

Applications: Centrifugal, regenerative turbine, reciprocating or rotary pump bypass valve. Protects pump systems from over pressure.

Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"

Options: Can be used with two side inlets, bottom outlet, or angle type with side inlet, bottom outlet. And can be furnished for differential and dome loaded applications.

Data sheet: VCTDS-00516.

Back Pressure Valves

Model: FRM, FRM-2

Features: Automatically maintains a constant inlet or back pressure. Functions as a pressure limiting regulator, not as a safety device. Bronze body, stain less steel seat ring and disc.

Applications: For service on liquids, air and gases not corrosive to brass. Recommended for bypass regulation on fuel oil systems, compressor governor pilot control, and many small to medium pumping system bypass jobs.

Sizes: 1/8", 1/4", 3/8" FRM

1/4", 3/8", 1/2" FRM-2

Options: Furnished with either neoprene diaphragm (max. temp. 180°F (82°C)) or metal diaphragms (max. temp. 500°F (255°C)), in three body styles: side inlet, side outlet; side inlet, bottom outlet; and two side inlets, one bottom outlet. Available with stainless steel wetted parts. FRM maximum control pressure of 175 psi, FRM-2 maximum control pressure of 250 psi (may be modified for higher pressures to 600 psi).

Data sheet: VCTDS-00516.



K-5, K-5C



K-10



K-15

Back Pressure Valves

Angle Back Pressure Valves

Model: K-5, K-5C

Features: High-capacity valves. For flow up to 200 gallons per minute in the larger sizes. Bronze body and trim, threaded connections, bottom and side female connections, brass spring chamber, stain less steel adjusting spring, high temperature gas kets. K-5 has a metal seat. K-5C has a soft seat for tight shut-off. Relief pressures range from 5 to 150 psi.

Applications: Suitable for pump systems of all kinds. Applicable on water, other fluids and especially oils of all grades.

Sizes: 1", 1¼", 1½", 2"

Data sheet: VCTDS-00517.

Piston Type Back Pressure Valve

Model: K-10

Features: Bronze angle body, stainless steel trim, threaded connections, single metal-to-metal seat only, bot tom female inlet, side female outlet. Relief pressure ranges from 15 to 600 psi. Maximum temperature is 450°F (232°C).

Applications: For water, other liquids, and light fuel oils. Not for steam. Designed to limit a specific pump discharge pressure on machine tool hydraulic systems, oil burning equipment, rams, presses, lifts, etc.

Sizes: ¼", ⅜", ½", ¾", 1", 1¼"

Data sheet: VCTDS-00517.

High Pressure, Angle By-pass Valve

Model: K-15

Features: Angle type by-pass valve handles high pressure up to 1500 psi in brass body. Threaded connections. Maximum temperature 450°F (232°C).

Applications: Suited for by-pass applications on high pressure pumps or any system requiring automatic regulation of pump discharge pressure. Many applications in the chemical and process field (waste treatment-desalination) and car washes.

Sizes: ¼", ⅜", ½", ¾"

Options: Employs a replaceable stainless steel seat and piston for longer valve life at minimal cost. Does not have to be removed from the line for servicing.

Data sheet: VCTDS-00517.



KP



CP, CP2

Back Pressure Valves

Pilot Operated Back Pressure Valve

Model: KP

Features: Offers high-capacity, extremely accurate control. Main valve features brass construction, BUNA-N diaphragm and seat disc, stainless steel spring. Pilot is brass with stainless steel spring, seat disc and seat ring; bronze diaphragms for air service or neoprene diaphragms for water. Pressure setting 15 to 200 psi.

Applications: Suitable for various gases or water service.

Sizes: 1", 1¼", 1½", 2"

Options: Available with modifications for high temperature (to 400°F (204°C)), high pressure (to 400 psi).

Data sheet: VCTDS-00518.

Compressor Pilot Valve

Model: CP and CP2

Features: Bronze body, bronze trim, with stainless steel seat ring and disc. Maximum Controlled pressure of 600 psig.

Applications: Types CP and CP-2 are used as pilot valves in Rotary Screw Compressors to control receiver pressure or compressor discharge pressure. The Pilot Valves provide a regulated output pressure that increases on a desired ratio to provide input pressure to the air intake valve. Benefits of the Types CP and CP-2 are savings in energy, quieter compressor operation, and reduced wear.

Sizes: ¼"

Options: Various body connection types available
Available with aluminum (CP, CPR, CP-V), stainless steel (CP2 only) and brass spring chamber
Adjusting screw available in flister head, hex head, T-handle and handwheel

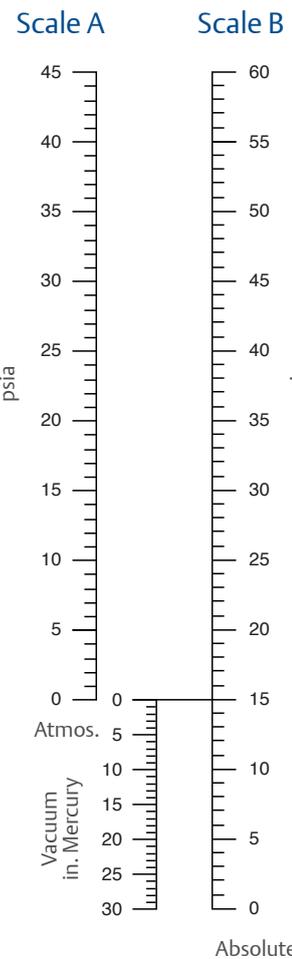
Data sheet: VCTDS-00522

Vacuum Valves

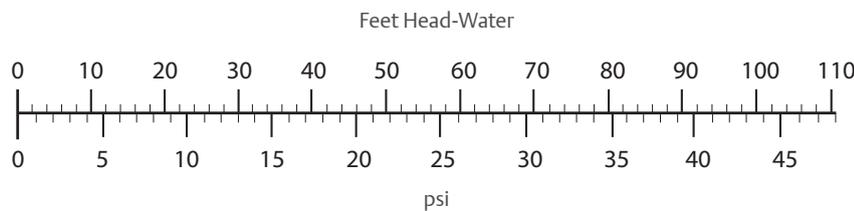
Vacuum is simply pressure below atmospheric pressure, or in a sense a “negative pressure.” It is measured in terms of inches of mercury (Abbreviated - Hg, as in 21" Hg), in terms of absolute pressure (psia) or in terms of inches of water column. Below are some simple conversion figures which at times may be useful.

VACUUM CONVERSION FIGURES		
Multiply	By	To Obtain
Pounds Per Square Inch	27.68600	Inches of Water
Pounds Per Square Inch	2.03600	Inches of Mercury
Inches of Water	0.07355	Inches of Mercury
Inches of Mercury	13.59600	Inches of Water
Inches of Water	0.03613	Pounds Per Square Inch
Inches of Mercury	0.49120	Pounds Per Square Inch

PRESSURE CONVERSION FIGURES								
psi	kg/cm ²	ATM.	Columns of Mercury at 0°C		Columns of Water at 15°C			
			inches	millimeters	inches	feet	meters	
1.00	0.070310	0.068040	2.03600	51.710	27.7000	2.30900	0.70370	
14.22	1.000000	0.967800	28.96000	735.500	394.1000	32.84000	10.01000	
14.70	1.033000	1.000000	29.92000	760.000	407.1000	33.93000	10.34000	
0.4912	0.034530	0.033420	1.00000	25.400	13.6100	1.13400	0.34560	
0.01934	0.001360	0.001316	0.03937	1.000	0.5357	0.04464	0.01361	
0.03609	0.002538	0.002456	0.07349	1.367	1.0000	0.08333	0.02540	
0.4331	0.030450	0.029470	0.88190	22.400	12.0000	1.00000	0.30480	
1.421	0.099010	0.099010	2.89300	73.490	39.3700	3.28100	1.00000	



Scale C



To convert pounds per square inch gauge (psig) or pressure below atmosphere (vacuum, inches of mercury) to absolute pressure, read horizontally from A to B. Conversely, to convert absolute pressure to psig or inches of mercury, read from B to A.



A-31VR



D-51, D-52



D-53

Vacuum Valves

Small Vacuum Regulating Valve

Model: A-31VR

Features: Furnished in forged brass, with neoprene seat and diaphragm. Two adjustable ranges of 2" to 16" and 10" to 30" mercury vacuum. All connections are 1/4" IPS. Standard valve is plain brass. Closely controls low capacity vacuum systems. The vacuum source is connected to the bottom of the valve, one side connection is for a gauge, the other side connects to the system in which vacuum is to be controlled. The sensitive top screw automatically adjusts the vacuum source to maintain the desired vacuum in the system.

Applications: Suitable for surgical equipment, lab or manufacturing processes, and other applications requiring accurate and sensitive vacuum regulation at low flows.

Sizes: 1/4" only

Data sheet: VCTDS-00508

Vacuum Regulating or Breaker Valves

Model: D-51, D-52

Features: Fully adjustable and furnished with bronze bodies, threaded connections and internal parts, neoprene-nylon diaphragms, stainless steel body seats and composition discs. Two ranges - 2" to 30" mercury.

Applications: Designed for use where a predetermined vacuum is to be accurately maintained in a closed system (D-51 Vacuum Regulator) or by automatically admitting atmosphere when the vacuum level exceeds the valve setting (D-52 Vacuum Breaker).

Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2"

Data sheet: VCTDS-00523

Miscellaneous Control Valve

Two Position Control Valve

Model: D-53

Features: All bronze, with renewable stainless steel valve seat of full port diameter, renewable composition seat disc, neoprene-nylon diaphragm. Rust-proof steel bolting. Full port diameter means full capacity and low pressure drop through the valve. For maximum hook-up flexibility, diaphragm pressure connection may be indexed to any of four positions: over inlet, over outlet, or either side. Maximum body pressure 250 psi; diaphragm pressure 300 psi. Maximum temperature 180°F (82°C).

Applications: Cooling water control valve for water cooled air compressors, air compressor dump valve, explosive atmosphere valve, substitute for expensive electric solenoids. Available normally open or normally closed.

Sizes: 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" - threaded connections (top connection 1/8" for 1/2" and 3/4" body sizes; all other sizes have 1/4" top connection).

Options: Numerous options for OEM applications.

Data sheet: VCTDS-00520.

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