CASH VALVE
PRESSURE REGULATING AND BACK PRESSURE VALVES OVERVIEW

ISSUED 2007 REVISED NOVEMBER 2012 | ISO 9001 CERTIFIED
# Pressure Regulating and Back Pressure Valves Overview

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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 and up through 6 inches for flanged configurations.

Cash Valve offers a wide selection of pressure reductions with initial inlets of 720 psi and reductions from 1 to 400 psi.

Temperatures range between cryogenic up through 800°F.

Materials of construction are offered with Iron, Brass, Bronze, Carbon and Stainless Steel 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.
Pressure Regulating Valves

Small Pressure Regulating Valves For Water, Air, Light Oil

Model: 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", 1/2"

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.

Request data sheet: CAVMC-0508.

Pressure Regulating Valve For Mobile Homes

Model: A-31HC

Features: This modified regulator is specially designed for mobile homes and recreational trailer installations where space limitations are important and relatively low capacity is required.

Applications: Mobile homes and recreational trailers.

Sizes: 3/8" only

Options: Standard brass hose connections and washers for connections to trailer and to water supply. Standard reduced pressure setting is 45 psi; for maximum temperature of 180°F [82°C]. See Type A-31 for further details.

Request data sheet: CAVMC-0508.

Small Commercial Pressure Regulating Valves


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)


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.

Request data sheet: CAVMC-0508.
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:
1/4", 3/8", 1/2", 3/4", 1", 1 1/4", 1 1/2", 2" on NPTF or BSPP 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. Can be modified to be used as a cryogenic control valve for liquid or gas service. See CAVMC-0514. Can be furnished with tapped spring chamber for differential and dome loaded applications.

Request data sheet: CAVMC-0509.

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 & paper industry, utility lines, and specialist OEM applications. Cryogenic: suitable for liquid or gas phase in the pressure build circuit of cryogenic storage tanks.

Sizes:
1/2", 3/4", 1" in NPTF or BSPP 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.

Request data sheet: CAVMC-0509.
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. Stainless 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.

Request data sheet: CAVMC-0509.

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:
- Can be modified to be used as a cryogenic control valve for liquid or gas service. See CAVMC-0514.

Request data sheet: CAVMC-0510.
**Pilot Operated Relief Valve**

**Pilot Operated Pressure Reducing Valve**

**Model:** G-4

**Features:**
Self actuated pilot operated pressure reducing valve providing very high capacity with less <1 psi fall-off. It is very compact in design, offers positive shut off and is available in iron, bronze, cast and stainless steel for pressures up to 600 psi inlet, between 1 and 300 psi outlet and temperatures up to 800°F. Stainless steel seats are used for steam and where a tighter shut off is required for air and gases BUNA-N and TFE® seats are used. Also may be modified for oxygen gas service.

**Applications:**
Steam heating lines, dryers, ovens, sterilizers, oil heaters, steam jacketed equipment etc. and any other steam, air and gaseous application.

**Sizes:**

<table>
<thead>
<tr>
<th>Valve Size</th>
<th>Inlet Pressure Range (psig)</th>
<th>Minimum Pressure Differential (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1/2&quot; - 2&quot;</td>
<td>10-50 50-120 120 plus</td>
<td>5 10 15</td>
</tr>
<tr>
<td>2 1/2&quot; - 4&quot;</td>
<td>10-50 50 plus</td>
<td>10 15</td>
</tr>
<tr>
<td>5&quot; - 6&quot;</td>
<td>Refer to sales office</td>
<td>Refer to sales office</td>
</tr>
</tbody>
</table>

**Minimum Pressure Differential**

The pressure differential is the difference between the inlet pressure and outlet (reduced) pressure. The minimum allowable pressure differential varies depending upon both the inlet pressure and the size of the valves.

**Pressure Temperature Ratings**

<table>
<thead>
<tr>
<th>Material</th>
<th>ASTM Spec.</th>
<th>ANSI Class</th>
<th>Pressure (psig)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cast Iron</td>
<td>A126 Class B</td>
<td>CL125 (Iron)</td>
<td>200 175 160 135 125 — —</td>
</tr>
<tr>
<td>Bronze</td>
<td>B62 Alloy 836</td>
<td>CL150 (Bronze)</td>
<td>225 195 180 150 — — —</td>
</tr>
<tr>
<td>Carbon and Stainless Steel</td>
<td>A216 GR WCB A351 CF* (304)</td>
<td>CL150 (Steel)</td>
<td>285 245 230 195 185 170 *</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL300 (Steel)</td>
<td>740 660 655 630 615 590 500</td>
</tr>
<tr>
<td></td>
<td></td>
<td>CL250 (Steel Threaded)</td>
<td>600 530 525 500 490 470 460</td>
</tr>
</tbody>
</table>

* 570F for 150 psig
Pressure Regulating Valves

High Capacity Pressure Regulating Valve

Model: **G-60**


Applications: Dryers, steam atomizing oil burners, plastic molding, cookers, degreasers, sterilizers. Also, liquid or gas cryogenic service.


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. Can be modified to be used as a cryogenic control valve for liquid or gas service. See CAVMC-0514.

Request data sheet: CAVMC-0511

<table>
<thead>
<tr>
<th>Pressure and Temperature Ratings</th>
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<tbody>
<tr>
<td><strong>Maximum</strong></td>
</tr>
<tr>
<td><strong>Inlet Temperature</strong></td>
</tr>
<tr>
<td><strong>°F [°C]</strong></td>
</tr>
<tr>
<td><strong>Body</strong></td>
</tr>
<tr>
<td><strong>Iron</strong></td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>250</td>
</tr>
<tr>
<td><strong>Bronze</strong></td>
</tr>
<tr>
<td>400</td>
</tr>
<tr>
<td>300</td>
</tr>
<tr>
<td><strong>Carbon Steel or St. Steel</strong></td>
</tr>
<tr>
<td>450</td>
</tr>
<tr>
<td>720</td>
</tr>
</tbody>
</table>

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

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.

Request data sheet: CAVMC-0513.
Cryogenic Valves and Controls

Cryogenics – the science of materials at extremely low temperatures – has become more and more important to industry. One important aspect of this field is the liquification of normally gaseous elements, including the following, which are widely used throughout industry:

- **Oxygen** - Used extensively in BOF furnaces in the steel industry, for metal cutting, as a rocket fuel and in medicine.
- **Acetylene** - Widely used in welding.
- **Nitrogen** - Used in refrigeration systems, for metal degassing, in aerosol packaging and in cryogenic surgery.
- **Hydrogen** - Used as a rocket propellant and in the production of several metals.
- **Argon** - Widely used in incandescent lamps and fluorescent tubes.
- **Helium** - Used for arc welding, in the manufacture of electron tubes and in cryogenic research.
- **Carbon Dioxide** - Used in refrigeration, to make aerosol tanks and in fire fighting.

Other cryogenic fluids include liquefied natural gas, fluorine, krypton, neon, methane and ethane.

Cash Valve has an extensive line of cryogenic valves and controls. Includes pressure reducing valves, pressure build-up regulators, back pressure valves, economizer valves, combination valves, low temperature cut-off valves, safety relief valves, shut-off valves, final line regulators, strainers and high purity valves. Full specifications of construction, dimensions and available pressure ranges are contained in separate Data Sheets.

*Request data sheet: CAVMC-0514 and CAVMC-0515.*

*Contact Factory For Additional Information on Shutoff and Combination Valves.*
Back Pressure Valves

Low Pressure Back Pressure Valve

Model: DR-A
Features: Controls up to 25 psi. Automatically maintains desired pressure in a line or system by discharging excess pressure to the atmosphere or to a lower pressure system. All bronze, neoprene-nylon diaphragm, composition disc, sensitive adjusting spring. On installation, a “T” is placed in the inlet line and a sensing connection is run from it to the top of the valve.

Applications: For service on air, water, oil and other non-corrosive liquids and gases.
Sizes: 1/2", 3/4", 1", 1 1/4"
Options: Can be furnished to control down to 1 psi on the inlet.

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.
Request data sheet: CAVMC-0516.

Compact 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, stainless 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. Ideally suited for many applications in the cryogenic field.
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).
Request data sheet: CAVMC-0516.
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, stainless steel adjusting spring, high temperature gaskets. 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", 1 1/4", 1 1/2", 2"

Request data sheet: CAVMC-0517.

Piston Type Back Pressure Valve

Model: K-10

Features: Bronze angle body, stainless steel trim, threaded connections, single metal-to-metal seat only, bottom 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: 1/4", 3/8", 1/2", 3/4", 1", 1 1/4"

Request data sheet: CAVMC-0517

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

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.

Request data sheet: CAVMC-0517.
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", 1 1/4", 1 1/2", 2"
Options: Available with modifications for high temperature (to 400°F [204°C]), high pressure (to 400 psi). Request data sheet: CAVMC-0518.

Small By-pass Valve

Model: MC

Applications: For water, oil, and other fluids.
Sizes: 1/2", 3/4", 1"

Adjustable Angle By-pass Valve

Model: NSW
Features: Bronze body, BUNA-N disc and stainless steel spring. One of three pressure springs is used, providing an adjustable range of 10 to 60 lbs., 0 to 125 lbs., or 20 to 200 lbs. Male inlet, female outlet.

Applications: An inexpensive solution to installations requiring frequent changes in the set point. Designed for bypass and overpressure protection in pumping systems such as weed sprayers, etc. that are non-corrosive to bronze.
Sizes: 1/2" only

Compressor Pilot Valve

Model: CP and CP2
Features: Bronze body, bronze trim, with stainless steel seat ring and disc. Maximum Controlled pressure of 400 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: 1/4"
Temperature Regulating Valves

Temperature Regulating Valve

Model: TA

Features:
Bronze body with union ends, direct or reverse acting, stainless steel trim. Also available as a 3-way valve for diverting or mixing applications. Brass thermal systems standard. Stainless steel, Teflon® or PVC coated thermal system available as special option. Temperature ranges from -15°F [-25°C] to 415°F [252°C]. As temperature rises in the bulb, liquid in the bulb vaporizes and transmits power through the tubing to a bellows in the control valve. Heating or cooling fluid passing through the valve is thus modulated to maintain a desired temperature in the process being controlled.

Applications:
Designed for use in installations where a certain temperature must be maintained in heating or cooling fluids.

Sizes:
1/2”, 3/4”, 1”, 11/4”, 11/2”, 2”

Options:
Different bulb sizes available.

Request data sheet: CAVMC-0519.

<table>
<thead>
<tr>
<th>Valve Model</th>
<th>Specifications</th>
</tr>
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<tbody>
<tr>
<td>TA-1</td>
<td>Direct Acting, Single Seat, Indicating</td>
</tr>
<tr>
<td>TA-2</td>
<td>Reverse Acting, Single Seat, Indicating</td>
</tr>
<tr>
<td>TA-3</td>
<td>3-Way, Single Seat, Indicating</td>
</tr>
<tr>
<td>TA-4</td>
<td>Direct Acting, Double Seat, Indicating</td>
</tr>
<tr>
<td>TA-5</td>
<td>Reverse Acting, Double Seat, Indicating</td>
</tr>
</tbody>
</table>

Controlling Storage Heater

Cash Valve
Type TA-1, 4, Thermostatic Temperature Regulator

Hot Water Outlet
Relief Valve
Thermostatic Bulb
Storage Heater
Cold Water Inlet
Drain and Blow-off
To Thermostatic Trap
Steam Inlet
Vacuum Breaker
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

<table>
<thead>
<tr>
<th>Multiply:</th>
<th>By:</th>
<th>To Obtain:</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pounds Per Square Inch</td>
<td>27.686</td>
<td>Inches of Water</td>
</tr>
<tr>
<td>Pounds Per Square Inch</td>
<td>2.036</td>
<td>Inches of Mercury</td>
</tr>
<tr>
<td>Inches of Water</td>
<td>0.07355</td>
<td>Inches of Mercury</td>
</tr>
<tr>
<td>Inches of Mercury</td>
<td>13.596</td>
<td>Inches of Water</td>
</tr>
<tr>
<td>Inches of Water</td>
<td>0.03613</td>
<td>Pounds Per Square Inch</td>
</tr>
<tr>
<td>Inches of Mercury</td>
<td>0.4812</td>
<td>Pounds Per Square Inch</td>
</tr>
</tbody>
</table>

### Pressure Conversion Figures

<table>
<thead>
<tr>
<th>psi</th>
<th>kg/cm²</th>
<th>ATM.</th>
<th>Columns of Mercury at 0°C</th>
<th>Columns of Water at 15°C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>inches</td>
<td>millimeters</td>
</tr>
<tr>
<td>1.00</td>
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<tr>
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<td>22.40</td>
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<td>1.421</td>
<td>0.09901</td>
<td>0.09901</td>
<td>2.893</td>
<td>73.49</td>
</tr>
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</table>

### Scale C

<table>
<thead>
<tr>
<th>Feet Head-Water</th>
</tr>
</thead>
<tbody>
<tr>
<td>0</td>
</tr>
</tbody>
</table>

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.

### 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

Cut Sheet on A-31VR provided for your reference.
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”

Cut Sheet provided for your reference.

Vacuum Breaker Valves

Model: FRM-V

Features: Features full adjustability by means of a top adjusting screw. The adjusting screw is turned clockwise for a higher setting and counterclockwise for a lower setting.Forged brass body, stainless steel valve seat and valve disc, stainless steel or rust-proofed steel pressure spring, and neoprene or phosphor bronze diaphragms. Adjustable spring range 2” to 30” vacuum.

Applications: A small sized vacuum breaker for controlling vacuum in a system by admitting atmosphere when the vacuum level exceeds the valve setting.

Sizes: 1/8”, 1/4”, 3/8”

Cut Sheet provided for your reference.

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.

Request data sheet: Write or Call For: CAVMC-0520.