

PRESSURE DIFFERENTIAL OVERFLOW CONTROL VALVE

Model FP-426-02

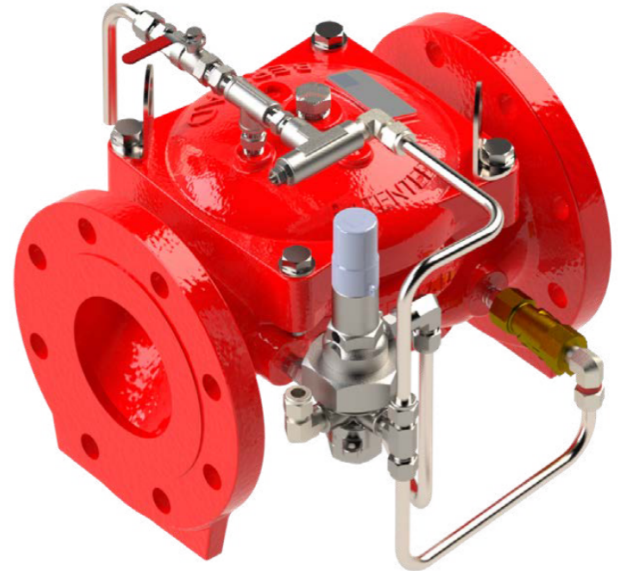
The BERMAD model FP-426-02 is an elastomeric hydraulic line pressure driven differential reducing valve.

The 426-02 is equipped with an adjustable differential pilot valve and is used to maintain a set pressure differential between two different points.

When the differential between the two sensed pressures approaches the pre-set maximum the pilot valve starts to close the main valve, regulating the pressure and preventing the differential from rising further.

The 426-02 is ideal for balanced foam proportioning systems, also as a safeguard for dosing pump flow overload.

As an option the 426-02 can be fitted with a valve position indicator that can include a limit switch suitable for Fire & Gas monitoring systems.



Features & Benefits

- Safety and reliability
 - Time proven, simple design with a fail safe actuation
 - Single piece rugged elastomer, VRSD technology
 - Obstacle-free, uninterrupted flow path
 - No mechanical moving parts
- Quick and easy maintenance
 - In-line serviceable
 - Fast and easy cover removal

Approvals



ABS
American Bureau of Shipping
Type Approval



Det Norske Veritas
Type Approval



Lloyd's Register
Type Approval

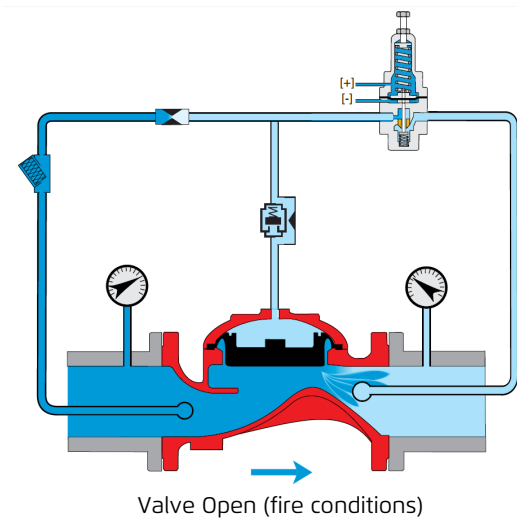
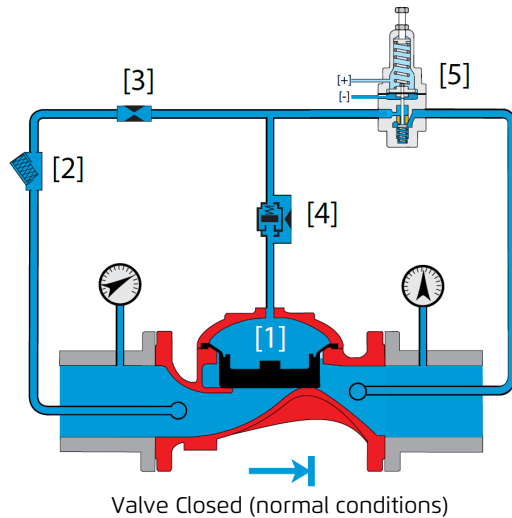
Typical Applications

- Pump overload & cavitation protection
- Balanced pressure proportioning systems
- Foam concentrate injection systems
- Pump flow safeguard

Additional Features

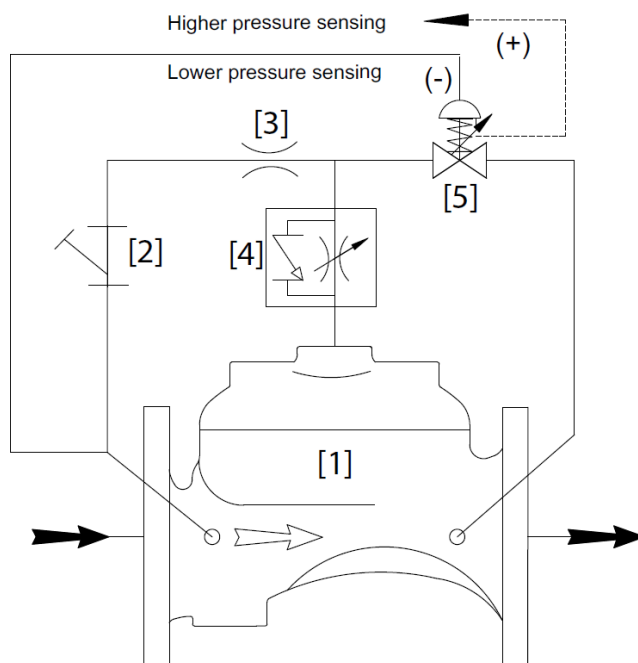
- Large control filter
- Valve Position Indicator
- Corrosion resistant zinc based high build epoxy coating

Operation



The BERMAD model 426-02 is held closed by inlet pressure in the control chamber [1] supplied via the pilot line filter [2] and the restriction orifice [3]. To open the valve the pressure in the control chamber must be released to the outlet by way of the pilot [5] opening. The pilot senses two pressures, a higher pressure (+) and a lower pressure (-). Should the differential between these two pressures approach the set maximum (determined by the pilot adjusting screw) the pilot will tend to close, thus allowing pressure to accumulate in the valve control chamber causing the main valve to throttle. This regulates the pressure in the downstream pipeline keeping the differential pressure below the set maximum. Should the differential pressure fall, the pilot will open, releasing pressure in the valve control chamber thereby causing the main valve to open and maintain the differential pressure. The adjustable opening speed control device [4] restricts the flow of water exiting the valve control chamber thereby slowing the valve opening speed, preventing any momentary excessive flow.

System P&ID



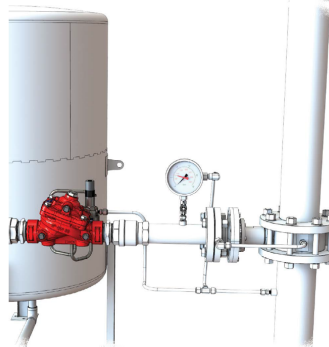
Components	
1	BERMAD 400 Valve
2	Control filter
3	Restriction orifice
4	Opening speed control device
5	Differential sensing pilot

System Installation

A typical installation of the BERMAD model 426-02 features valve actuation via pilot control to regulate the flow in response to an increase in differential pressure between two points. The 426-02 is ideally suited for regulation in balanced pressure proportioning systems or foam dosing applications.

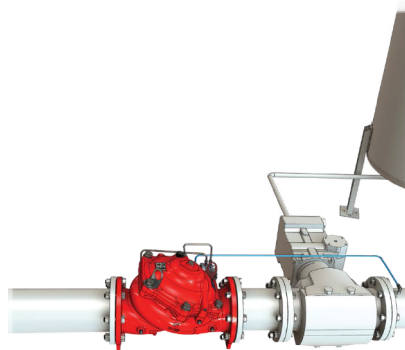
Balanced Pressure Proportioning System

- A typical installation is in a Balanced Pressure Proportioning System, where the BERMAD 426-02 is installed on the foam concentrate supply pipe, and is used to maintain the correct pressure differential between the firewater system pressure and the foam supply pressure.



Foam Concentrate Dosing System

- By sensing the differential pressure across the dosing pump the 426-02 tends to throttle when the maximum allowable flow rate for the dosing pump has been reached, regulating and preventing the flow from exceeding the recommended maximum for the dosing pump, avoiding dangerous pump overload.



Suggested Specifications

The valve shall have an unobstructed flow path, with no stem guide or supporting ribs.

Valve actuation shall be accomplished by a single-piece, rolling diaphragm bonded with a rugged radial seal disk.

The diaphragm assembly shall be the only moving part.

Removing the valve cover for inspection or maintenance shall not require removal of the entire control trim.

The valve shall be inline serviceable, and shall not require removal of the valve from the pipeline

The valve and its entire control trim shall be supplied pre-assembled and hydraulically tested by a factory certified to ISO 9000 and 9001 standards.

Technical Data

Available Sizes:

Flanged- 1½, 2, 2½, 3, 4, 6, 8, 10 & 12"

Grooved- 2, 3, 4, 6, & 8"

Pressure Rating:

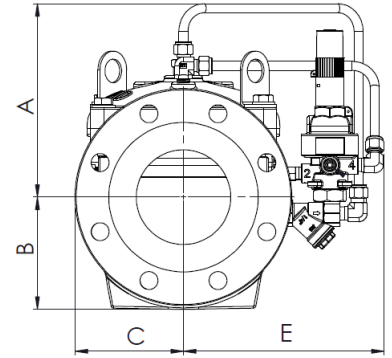
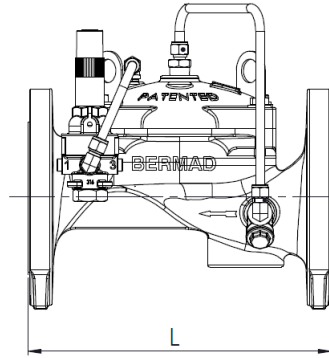
ANSI#150 - 17.2 bar | 250 psi

Setting range: 0.5 - 3 bar | 7 - 43 psi

Elastomer:

HTNR - Fabric Reinforced High Temperature

Compound - See engineering data



Valve Size	L #150 mm in	L Grooved mm in	L #300 mm in	A mm in	B mm in	C mm in	ØD in	E mm in	F mm in	G mm in	Weight #150 kg lb	Weight #300 kg lb
DN40 1½"	205 8.1	-	-	159 6.2	64 2.5	64 2.5	-	168 6.6	-	-	11 25	-
DN50 2"	205 8.1	205 8.1	-	159 6.3	78 3.1	78 3.1	-	168 6.6	-	-	12 27	-
DN65 2½"	205 8.1	-	-	158 6.2	92 3.6	89 3.5	-	195 7.7	-	-	14 31	-
DN80 3"	257 10.1	250 9.8	-	177 7	97 3.8	96 3.8	-	200 7.9	-	-	23 51	-
DN100 4"	320 12.6	320 12.6	-	328 12.9	119 4.7	115 4.5	-	212 8.3	-	-	33 73	-
DN150 6"	415 16.3	415 16.3	-	276 10.8	145 5.7	145 5.7	-	238 9.4	-	-	77 170	-
DN200 8"	500 19.7	500 19.7	-	327 12.9	174 6.9	187 7.4	-	272 10.7	-	-	139 306	-
DN250 10"	605 23.8	-	-	324 12.8	210 8.3	204 8	-	285 11.2	-	-	156 343	-
DN300 12"	725 28.5	-	-	440 17.3	248 9.8	304 12	-	380 15	-	-	250 550	-

IMPORTANT: Dimensions for the trim envelope or extents refer to a horizontal orientation and may vary with specific component positioning -Apart from the "L" dimension, allow a tolerance of at least ±15%

Valve Code Designations

