

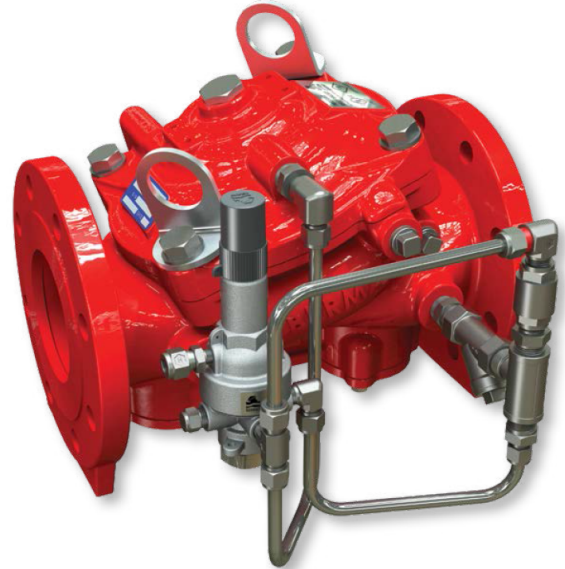
DIFFERENTIAL PRESSURE SUSTAINING VALVE

Model FP-43T-06

The BERMAD model 43T-06 is an elastomeric hydraulic line pressure operated differential sustaining valve, specifically designed for advanced fire protection systems and the latest industry standards.

The 43T-06 is equipped with an adjustable differential pilot valve and is used to sustain the differential between two different points. When the differential between the two sensed pressures rises above the pre-set value the pilot valve opens the main valve regulating the pressure and keeping the differential at the pre- preset maximum.

The 43T-06 is ideal for balanced foam proportioning systems, also as a safeguard for dosing pump flow overload. As an option the 43T-06 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 elastomeric diaphragm seal - VRSD technology
 - Obstacle-free, uninterrupted flow path
 - No mechanical moving parts
- High performance
 - Very high flow efficiency
 - Straight through Y type body
 - Approved for PN25 / 365 psi
- Quick and easy maintenance
 - In-line serviceable
 - Fast and easy cover removal

Typical Applications

- Pump overload & cavitation protection
- Pump flow safeguard
- Foam concentrate recirculation
- Foam balanced pressure proportioning systems

Approvals



ABS
American Bureau of Shipping
Type Approval



Det Norske Veritas
Type Approval

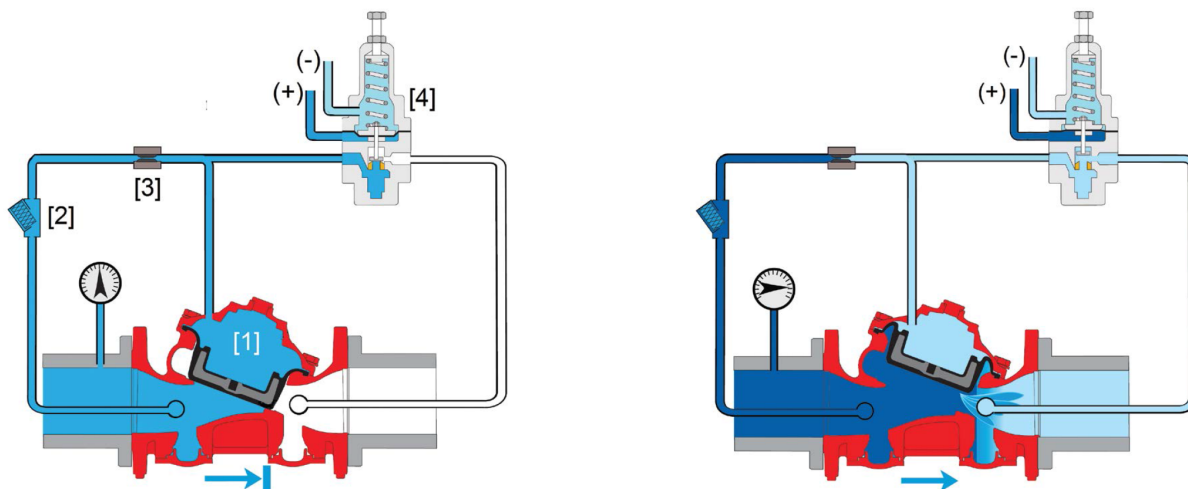


Lloyd's Register
Type Approval

Additional Features

- Valve Position Indicator
- Seawater compatibility
- Corrosion resistant zinc based high build epoxy coating

Operation

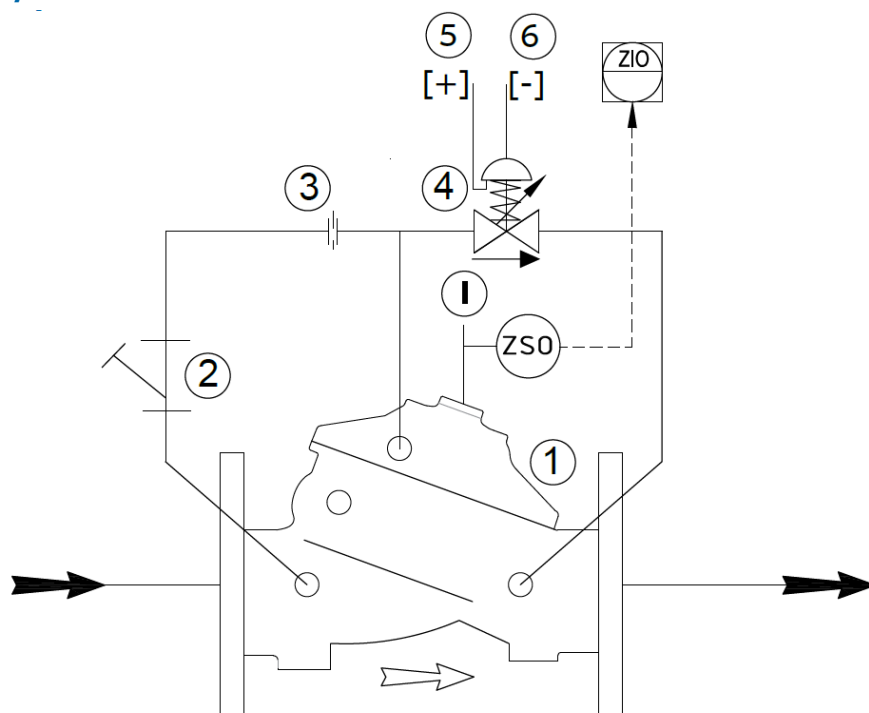


The BERMAD model 43T-06 is held closed by inlet pressure in the control chamber [1] supplied via the pilot line filter [2] and the restriction orifice [3]. To open the valve the pressure in the control chamber must be released by way of the pilot valve [4] opening and releasing pressure in the control chamber to the downstream of the valve.

The pilot valve senses two pressures, a higher pressure (+) and a lower pressure (-). Should the differential between these two pressures exceed the set maximum (determined by the pilot valve adjusting screw) the pilot valve will open, releasing pressure from the valve control chamber allowing the valve to open. This relieves the higher pressure in the pipeline maintaining the differential pressure below the set maximum.

Should the differential pressure fall below the set maximum the pilot valve will throttle or close; allowing pressure to accumulate in the valve control chamber, causing the main valve to throttle or close, sustaining differential pressure in the pipeline at or below the pilot valve setting.

System P&ID



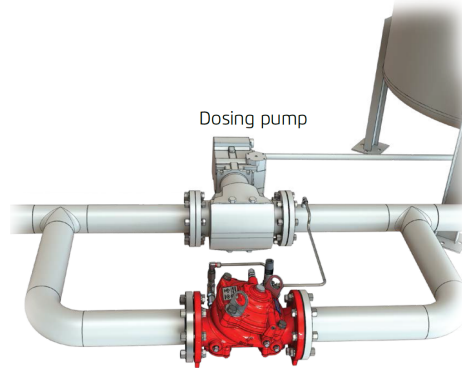
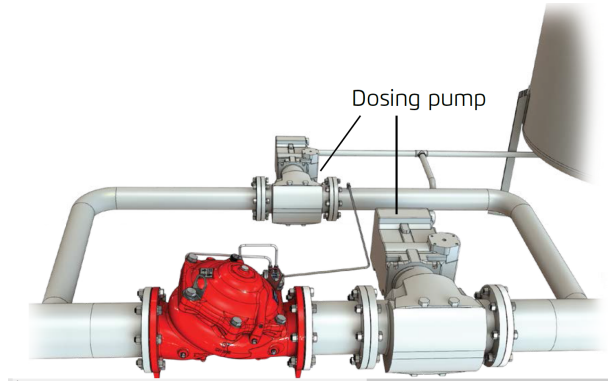
Components	
1	BERMAD 400Y Main Valve
2	Priming strainer
3	Restriction orifice
4	Differential sustaining pilot valve
5	High pressure sensing
6	Low pressure sensing

System Installation

A typical installation of the BERMAD model 43T-06 uses the automatic valve actuation via a pilot control to open the 43T-06 in response to an increase in differential pressure between two points. The 43T-06 is ideally suited for regulation in balanced pressure proportioning systems or foam dosing applications.

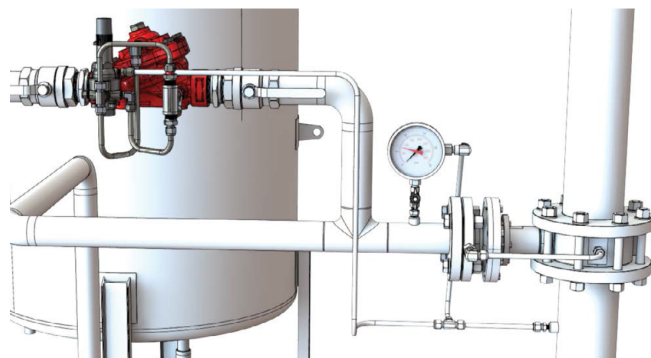
Balanced Pressure Proportioning System

- The 43T 06 senses when the maximum allowable flow rate for the dosing pump has been reached and will open, diverting the excess flow through the bypass preventing dangerous pump overload.



Balanced Pressure Proportioning System

- A typical installation is in a Balanced Pressure Proportioning System, where the BERMAD 43T-06 is installed on the foam concentrate return pipe, and is used to maintain the correct pressure differential between the firewater system pressure and the foam supply pressure. This ensures an accurate and



Suggested Specifications

The pressure differential sustaining control valve shall be 25 bar / 365 psi rated, with a straight-through Ytypebody.

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 be in-line and not require removing the control trim.

The water control 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, 14 & 16"

Grooved- 1½, 2, 2½, 3, 4, 6, 8 & 10"

Pressure Rating:

ANSI#150 - 17.2 bar | 250 psi

ANSI#300 - 1½" to 10" - 25 bar | 365 psi

ANSI#300 - 12" to 16" - 20 bar | 300 psi

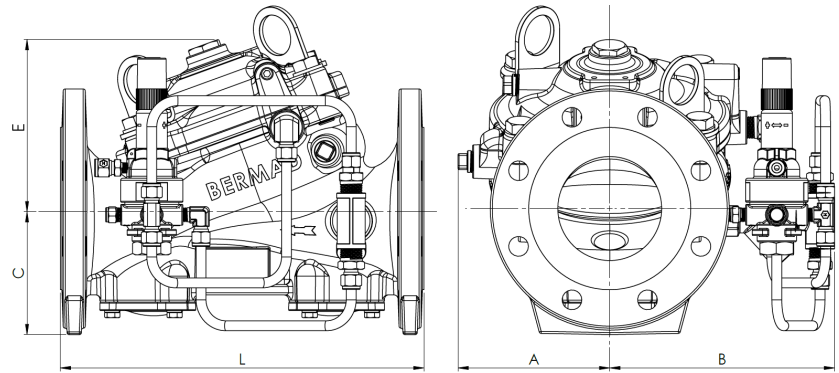
Grooved - 25 bar | 365 psi

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"	230 9.1	230 9.1	230 9.1	77.5 3	155 6.1	64 2.5	-	120 4.7	-	-	18 40	19 45
DN50 2"	230 9.1	230 9.1	238 9.4	77.5 3	155 6.1	77 3	-	120 4.7	-	-	18 40	19 45
DN65 2½"	235 9.3	235 9.3	241 9.5	82 3.3	187 7.4	92 3.6	-	146 5.8	-	-	23 50	25 54
DN80 3"	310 12.2	310 12.2	326 12.8	100 4	251 9.9	106 4.2	-	146 5.8	-	-	34 75	38 165
DN100 4"	350 13.8	320 12.6	368 14.5	115 4.5	266 10.5	121 4.8	-	158 6.2	-	-	44 96	51 112
DN150 6"	480 18.9	480 18.9	506 19.9	140 5.5	372 14.7	140 5.5	-	228 9	-	-	87 192	107 235
DN200 8"	600 23.6	600 23.6	626 24.6	172 6.8	490 19.3	172 6.8	-	295 11.7	-	-	150 331	170 374
DN250 10"	730 28.7	730 28.7	730 28.7	204 8	490 19.3	204 8	-	296 11.7	-	-	180 397	116 255
DN300 12"	850 33.5	-	888 35	242 9.5	656 25.8	247 9.7	-	441 13.4	-	-	323 712	373 821
DN350 14"	980 38.6	-	980 38.6	242 9.5	656 25.8	272 10.7	-	441 17.4	-	-	356 784	428 942
DN400 16"	1100 43.3	-	1100 43.3	242 9.5	656 25.8	316 12.4	-	415 16.3	-	-	403 886	523 1151

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

Valve Code Designations

