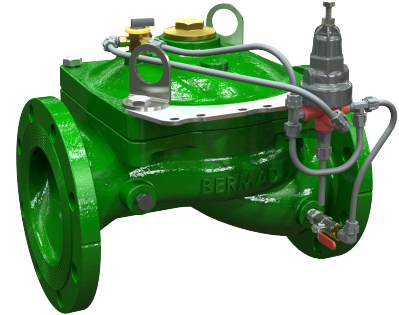




PRESSURE SUSTAINING VALVE

Model IR-430-3W-KXZ

The BERMAD Pressure Sustaining Valve is a hydraulically operated, diaphragm actuated control valve that sustains minimum preset upstream pressure and opens fully when line pressure is above setting.



[1] BERMAD Model IR-430-3W-KXZ sustains supply system pressure preventing emptying, and controls laterals and distribution line fill-up.

Features & Benefits

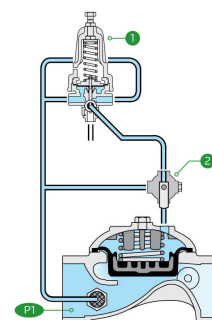
- Line Pressure Driven, Hydraulically Controlled
 - Protects downstream systems
 - Prioritizes pressure zones
 - Controls system fill-up
- Advanced Hydro-Efficient Globe Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low actuation pressure
 - Excellent low flow regulation performances
 - Progressively restrains valve closing
 - Prevents diaphragm distortion
- User-Friendly Design
 - Easy pressure setting
 - Simple in-line inspection and service
 - Easy addition of control features

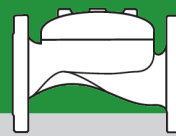
Typical Applications

- Line Fill-Up Control Solutions
- Line Emptying Prevention
- Pressure Reducing Systems
- Infield Filters Backwash Pressure Sustaining

Operation:

The Pressure Sustaining Pilot [1] commands the main valve to throttle closed should Upstream Pressure [P1] drop below setting, and to open fully when [P1] rises above setting. The Manual Selector [2] enables local manual closing.





Technical Data

Pressure Rating:
150 psi

Operating Pressure Range:
7-150 psi

Materials

Body & Cover:
Cast Iron

Diaphragm:
NR, Nylon fabric reinforced

Spring:
Stainless Steel

**Other materials are available on request*

Control Loop Accessories

PS Pilot: PC-SHARP-X-P

Pilot Spring Range:

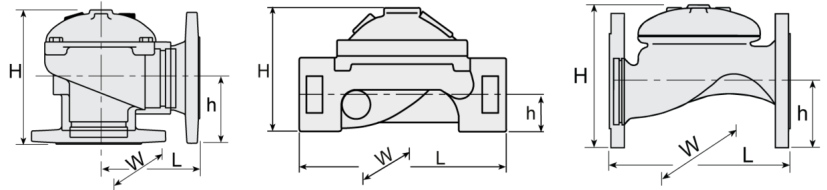
Spring	Spring Color	Setting range
J	Green	3-25 psi
K	Gray	7-43 psi
N	Natural	12-95 psi
V	Blue & White	15-150 psi

Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

Technical Specifications

For other end connection types,
Please refer to [BERMAD](#) full engineering page.



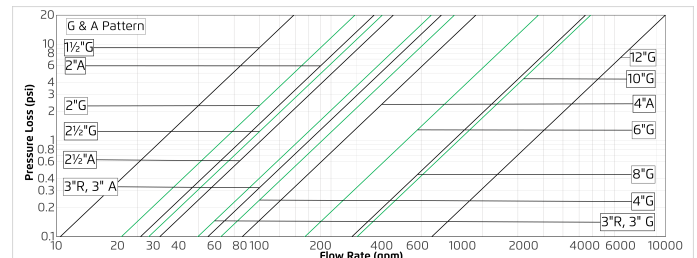
Size	Pattern	End Connection	Weight (Lb)	L (in)	H (in)	h (in)	W	CCDV (Gal)	CV
1" ; DN25	Globe	Threaded	2.4	4%	2 3/4	1 1/8	2 7/8	0.005	15
1 1/2" ; DN40	Globe	Threaded	4.4	6%	3 3/8	1 1/4	3 3/8	0.016	33
2" ; DN50	Globe	Threaded	8.8	7%	4 1/2	1 1/2	4 3/4	0.03	66
2" ; DN50	Globe	Flanged	19.8	8%	6 1/8	3 1/8	6 1/8	0.03	66
2" ; DN50	Globe	Grooved	11	8%	4 1/4	1 1/4	4 3/4	0.03	66
2" ; DN50	Angle	Threaded	9.7	3 1/2	5 3/8	2 1/2	4 3/4	0.03	82
2" ; DN50	Angle	Flanged	19.8	4 3/4	7 7/8	3 3/8	6 1/8	0.03	82
2 1/2" ; DN65	Globe	Threaded	12.6	8%	5 1/4	1 7/8	5 1/8	0.05	90
2 1/2" ; DN65	Globe	Flanged	23.1	8%	7	3 1/2	7	0.05	90
2 1/2" ; DN65	Angle	Threaded	12.8	4%	7 7/8	3 3/4	5 1/4	0.05	102
3R" ; DN80R	Globe	Threaded	12.9	8%	5 1/2	2 1/8	5 1/8	0.08	157
3R" ; DN80R	Globe	Flanged	28	8%	7 7/8	4	7 7/8	0.08	157
3R" ; DN80R	Angle	Threaded	15.4	4%	7	3 3/8	5 1/4	0.08	176
3" ; DN80	Globe	Threaded	28.7	10%	6 1/2	2 1/4	6 3/4	0.08	157
3" ; DN80	Globe	Flanged	41.9	9%	8 1/4	4	7 7/8	0.08	157
3" ; DN80	Globe	Grooved	23.4	9%	6 1/8	1 7/8	6 3/4	0.08	157
3" ; DN80	Angle	Threaded	24.3	4%	7 1/4	3 1/4	6 3/4	0.08	176
3" ; DN80	Angle	Flanged	37.5	6%	8 1/8	4	7 7/8	0.08	176
3" ; DN80	Angle	Grooved	22.1	4%	11	3 3/8	6 3/4	0.08	176
4" ; DN100	Globe	Flanged	61.7	12%	9%	4 1/2	8 3/8	0.18	236
4" ; DN100	Globe	Grooved	35.7	12%	7%	2 1/2	8	0.18	236
4" ; DN100	Angle	Flanged	57.3	6%	8 3/4	4 1/2	8 3/8	0.18	260
4" ; DN100	Angle	Grooved	35.3	6%	8 3/4	4 1/2	8 3/8	0.18	260

CCDV = Control Chamber Displacement Volume • **Threaded** = BSP & NPT are available.

Additional Features

Code	Description	Size Range
I	Position Indicator Assembly	1 1/2"-4"
M	Flow Stem	1 1/2"-4"
5	Plastic Test Point	1 1/2"-4"

Flow Chart



Differential Pressure & Flow Calculation

$$\Delta P = \left(\frac{Q}{Cv} \right)^2$$

Cv = gpm @ ΔP of 1 psi
 Q = gpm
 ΔP = psi