Pressure Sustaining Valve

IR-430-XZ

The BERMAD Model IR-430-XZ Pressure Relief/Sustaining Valve is a hydraulically operated, diaphragm actuated control valve that it sustains minimum preset upstream (back) pressure regardless of fluctuating flow or varying downstream pressure.

Features and Benefits

- 3-Way Hydraulic Actuated Pressure Sustaining Valve
  - Controls system fill-up
  - Sustains upstream line pressure
  - Opens fully upon line pressure rise
  - Prioritizes pressure zones
- Advanced Globe Hydro-Efficient Design
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
- Fully Supported & Balanced Diaphragm
  - Requires low opening and actuation pressure
  - Excellent low flow regulation performance
  - Progressively restrains valve closing
  - Prevents diaphragm distortion
- User Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service

Typical Applications

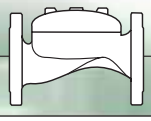
- Downhill Supply Lines Emptying Prevention
- Systems Subject to Varying Supply Pressure
- Energy Saving Irrigation Systems
- Pressure Zone Prioritizing
- Line Fill-Up Control
- Pump Overload and Cavitation Protection

Pressure Sustaining Valve

[1] BERMAD Model IR-430-XZ protects pump from overload and cavitation, prevents main line emptying, and controls system fill-up.

[2] BERMAD Check Valve Model 70N

BERMAD Irrigation



IR-430-XZ

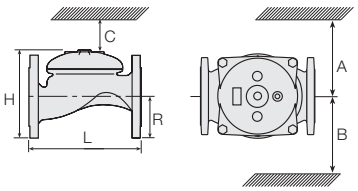
400 Series
Pressure Relief/Sustaining

For full technical details, refer to Engineering Section.

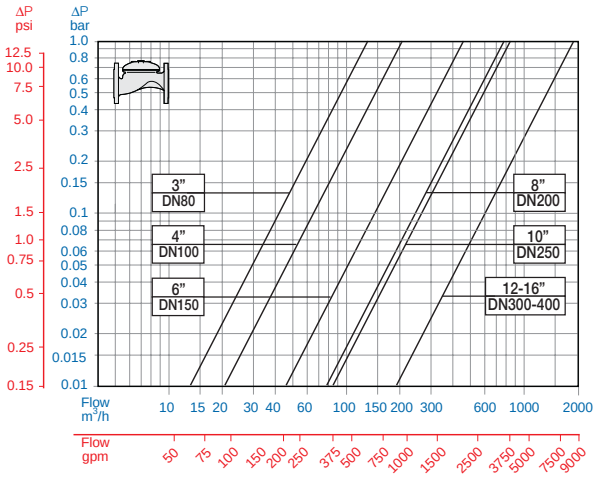
Technical Specifications

Dimensions and Weights

Size	DN Inch	80 3	100 4	150 6	200 8	250 10	300 12	350 14	400 16
L	mm	250	320	415	500	605	725	742	742
	inch	9.8	12.6	16.3	19.8	23.8	28.5	29.2	29.2
H	mm	210	242	345	430	460	635	655	965
	inch	8.3	9.5	13.6	16.9	18.1	25	25.8	38
C	mm	125	145	207	258	276	381	393	579
	inch	5	5.7	8.2	10.2	10.9	15	15.5	22.8
R	mm	100	112	140	170	202	242	260	300
	inch	3.9	4.4	5.5	6.7	8	9.5	10.2	11.8
A; B	mm	300	312	353	383	403	490	494	500
	inch	11.8	12.3	13.9	15.1	15.9	19.3	19.4	19.7
Weight	Kg	19	28	68	125	140	290	358	377
	lb.	41.9	61.7	149.9	275.6	308.6	639.3	789.2	831.1



Flow Chart



Technical Data

Patterns and Sizes: Globe: 3-16"; DN80-400 Angle: 3-4"; DN80-100
End Connections:

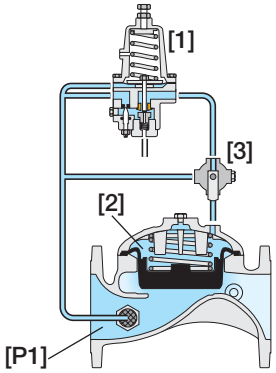
Size		3" DN80	4" DN100	6" DN150	8-16" DN200-400
Threaded	Globe	■			
	Angle	■			
Flanged	Globe	■	■	■	■
	Angle	■	■		
Grooved	Globe	■	■	■	
	Angle	■	■		

Pressure Ratings: 16 bar; 232 psi
Operating Pressure Range: 0.5-16 bar; 7-232 psi
For lower pressure requirements, consult factory
Setting Range: 1.5-16 bar; 22-232 psi
Setting ranges vary according to specific pilot spring. Please consult factory.

Materials:

Body and Cover:
Polyester Coated Cast or (10"; DN250 and larger) Ductile Iron
Spring: Stainless Steel
Diaphragm: Nylon fabric Reinforced NR with rugged insert
Bolts, Studs and Nuts: Zinc-Cobalt plated Steel
Control Accessories: Brass
Tubing and Fittings: Reinforced Plastic and Brass

Operation



The Pressure Sustaining Pilot **[1]** senses Upstream Pressure **[P1]**, and diverts line pressure into the Control Chamber **[2]** should **[P1]** drop below setting. Pressure then accumulates in the control chamber causing the Valve to throttle closed, increasing **[P1]** to pilot setting.
The pilot releases accumulated pressure to the atmosphere when **[P1]** rise above setting, thereby causing the Valve to open. Should line pressure remain above setting - the Valve opens fully. The Manual Selector **[3]** enables local manual closing.

* Sustaining (In-Line) Valve Pilot should be set to minimum system pressure allowed.
Relief (Circulation) Valve Pilot should be set slightly above system working pressure.

How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additonal Attributes
IR	3-16"	430	00	-	G	I	16	PG	-	PB	XZ

Other sizes available on request

Globe	G
Angle (up to 4"; DN100)	A

Cast Iron (up to 8"; DN200)	I
Ductile Iron (10"; DN250 & above)	C

ISO-16	16
ISO-10	10
IS 14 (ISO 10/4 Holes)	14
ANSI-125	A1
ANSI-150	A5
JIS-10	J1
BST-D	BD
Grooved (3-6"; DN80-150 only)	VI

Other end connections available on request

Plastic Tubing & Brass Fittings	PB
Copper Tubing & Brass Fittings	CB

3-Way Control Loop	X
Manual Selector	Z
Large Control Filter	F
Valve Position Indicator(1)	I
Flow Stem(1)	M

(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M.
Other attributes available on request.

info@bermad.com • www.bermad.com