

Pressure Reducing and Sustaining Valve

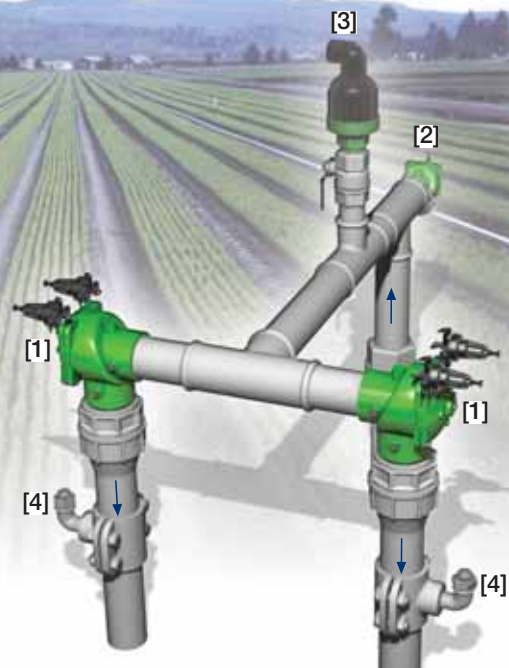
IR-423-KXZ

The BERMAD Model IR-423-KXZ is a hydraulically operated, diaphragm actuated control valve that sustains minimum preset upstream (back) pressure and reduces downstream pressure to a constant preset maximum.



Features and Benefits

- Line Pressure Driven, Hydraulically Controlled
 - Protects downstream system
 - Prioritizes pressure zones
 - Controls system fill-up
- Advanced Globe Hydro-Efficient Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low 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
 - Easy addition of control features



Typical Applications

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

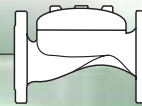
[1] BERMAD Model IR-423-KXZ sustains supply system pressure thereby preventing emptying, controls laterals and distribution line fill-up, and reduces their operating pressure.

[2] BERMAD Relief Valve Model IR 43Q-R

[3] BERMAD Air Valve Model ARA-A-P-P

[4] BERMAD Vacuum Breaker Model 1/2"-ARV

BERMAD Irrigation



400 Series

Pressure Reducing & Sustaining

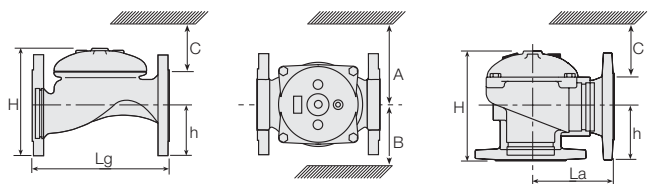
IR-423-KXZ

For full technical details, refer to Engineering Section.

Technical Specifications

Dimensions and Weights

Pattern	Globe						Angle					
	Connections	Threaded					Fl.	Threaded				Fl.
Size	DN	40	50	65	80R	80	100	50	65	80R	80	100
	Inch	1½"	2"	2½"	3"	3"	4"	2"	2½"	3"	3"	4"
Lg	mm	153	180	210	210	255	320	N.A.	N.A.	N.A.	N.A.	N.A.
	inch	6	7.1	8.3	8.3	10.0	12.6	N.A.	N.A.	N.A.	N.A.	N.A.
La	mm	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	86	110	110	110	160
	inch	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	3.4	4.3	4.3	4.3	6.3
H	mm	87	114	132	140	165	242	136	180	178	184	223
	inch	3.4	4.5	5.2	5.5	6.5	9.5	5.4	7.1	7	7.2	8.8
C	mm	52	68	80	84	100	145	82	108	107	110	134
	inch	2	2.7	3.1	3.3	3.9	5.7	3.2	4.2	4.2	4.3	5.3
h	mm	29	39	45	53	55	112	61	93	91	80	112
	inch	1.1	1.5	1.8	2.1	2.2	4.4	2.4	3.7	3.6	3.1	4.4
A; B	mm	130	130	130	140	175	312	130	130	140	175	312
	inch	5	5	5	6	7	12.3	5.1	5.1	5.5	6.9	12.3
Weight	Kg	2	4	5.7	5.8	13	28	4.4	5.8	7	11	26
	lb.	4.4	8.8	12.6	12.8	28.7	61.7	9.7	12.8	15.4	24.3	57.3



Technical Data

End connections:

Size	1½"	2"	2½"	3"	3"	4"
	DN40	DN50	DN65	DN80R	DN80	DN100
Threaded	Globe	■	■	■	■	■
	Angle	■	■	■	■	■
Flanged	Globe	■	■	■	■	■
	Angle	■	■	■	■	■
Grooved	Globe	■	■	■	■	■
	Angle	■	■	■	■	■

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.5-10 bar; 7-145 psi

For lower pressure requirements, consult factory

Setting Range: 1-7 bar; 15-100 psi

Setting ranges vary according to specific pilot spring. Please consult factory.

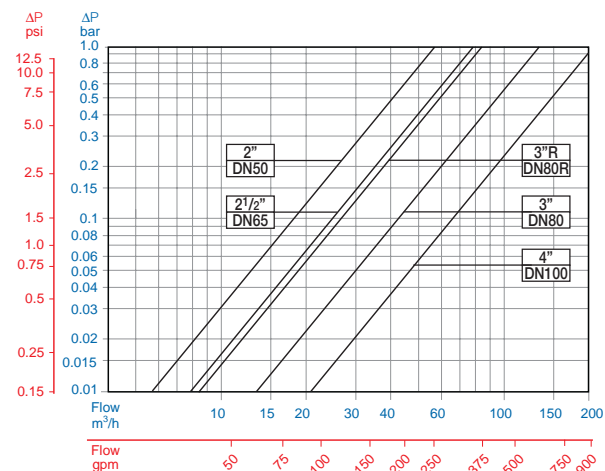
How to Order

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

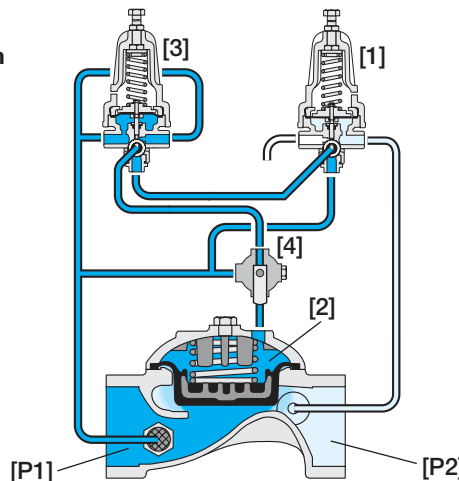
Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	1½"-4" <small>Other sizes available on request.</small>	423	00	-	G	I	BP	PG	-	PP	KXZ
Globe		G	BSP		BP	Plastic Tubing & Fittings		PP		Plastic Control Accessories	K
Angle		A	NPT		NP	Plastic Tubing & Brass Fittings		PB		3-Way Control	X
			ISO-16		16					Manual Selector	Z
			ISO-10		10					Valve Position Indicator ⁽¹⁾	I
			ISO-10 (ISO 10/4 Holes)		14					Flow Stem ⁽¹⁾	M
			ANSI-125		A1						
			JIS-10		J1						
			BST-D		BD						
			Grooved		VI						

For available end connections/sizes, see End Connections Table above.

Flow Chart



Operation



The Pressure Reducing Pilot (PRP) [1] is hydraulically connected to the Valve Control Chamber [2] through the Pressure Sustaining Pilot (PSP) [3]. The PSP commands the Valve to throttle closed should Upstream Pressure [P1] drop below setting. When [P1] rises above setting, the PSP switches and allows the PRP to control the Valve, commanding it to reduce Downstream Pressure [P2]. The Manual Selector [4] enables local manual closing.



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