

Pressure Reducing Valve

with Hydraulic Control

IR-420-50-KXZ

The BERMAD Pressure Reducing Valve with Hydraulic Control is hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand, and opens fully upon line pressure drop. It either opens or shuts in response to a remote pressure command.



Features and Benefits

- Hydraulic Pressure Control
 - Line pressure driven
 - Protects downstream systems
 - Opens fully upon line pressure drop
 - Hydraulically controlled On/Off
- 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



Typical Applications

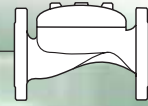
- Computerized Irrigation Systems
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Distribution Centers

[1] BERMAD Model IR-420-50-KXZ opens upon pressure drop command, and establishes pressure zone protecting laterals and distribution line.

[2] BERMAD Automatic Metering Valve Model IR-900-D0

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

BERMAD Irrigation



IR-420-50-KXZ

For full technical details, refer to Engineering Section.

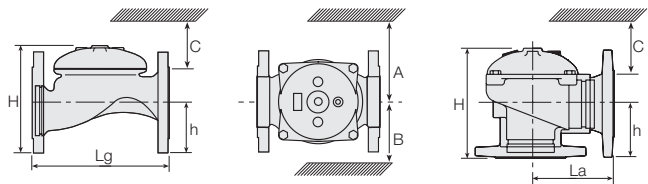
400 Series

Pressure Reducing Standard

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



Technical Data

End connections:

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

Pressure Rating: 10 bar; 145 psi

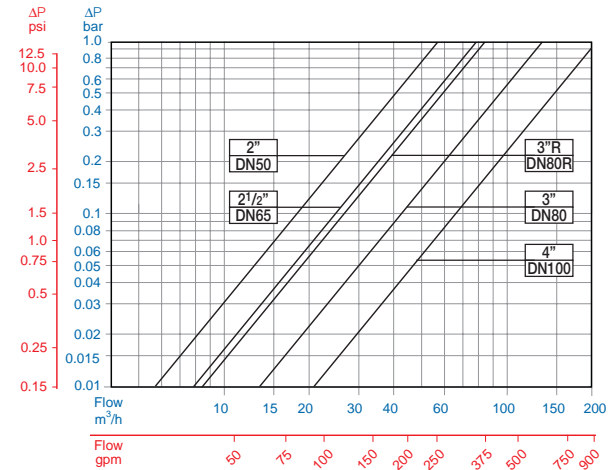
Operating Pressure Range: 0.5-10 bar; 7-145 psi

For lower pressure requirements, consult factory

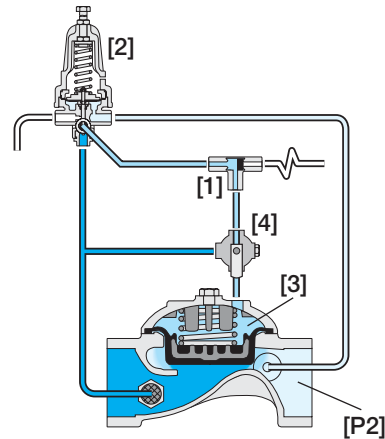
Setting Range: 1-7 bar; 15-100 psi

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

Flow Chart



Operation



The Shuttle Valve [1] hydraulically connects the Pressure Reducing (PRP) [2] to the Valve Control Chamber [3]. The PRP commands the Valve to throttle closed should Downstream Pressure [P2] rise above pilot setting and to open fully when it drops below pilot setting. Upon pressure rise command, the shuttle valve automatically switches, allowing pressurization of the control chamber, which causes the main Valve to shut. The Manual Selector [4] enables local manual closing.

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>	420	50	-	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
			IS 14 (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.

(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M. Other additional attributes are optional. Please consult full-stop



info@bermad.com • www.bermad.com

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