

Pressure Reducing and Sustaining Valve

Normally Closed with Hydraulic Control

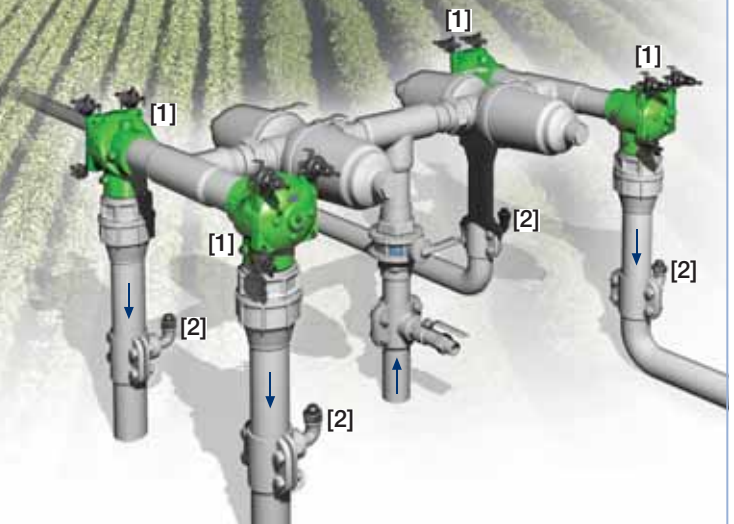
IR-423-54-KX

The BERMAD Model IR-423-54-KX is a hydraulically operated, diaphragm actuated control valve that sustains minimum preset upstream (back) pressure and reduces downstream pressure to a constant preset maximum. It is a Normally Closed valve, which opens in response to a remote pressure rise command and shuts in the absence of that command.



Features and Benefits

- Line Pressure Driven, Normally Closed
 - Closes upon control failure
 - Protects downstream system
 - Prioritizes pressure zones
 - Controls system fill-up
 - Amplifies and relays weak remote command
- 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



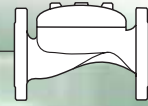
Typical Applications

- Computerized Irrigation Systems
- Line Fill-Up Control Solutions
- Pressure Reducing Systems
- Remote and/or Elevated Plots
- Infield Filter Backwash Pressure Sustaining
- Distribution Centers

[1] BERMAD Model IR-423-54-KX opens upon pressure rise command, sustains supply system pressure, controls laterals and distribution line fill-up, and reduces their operating pressure.

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

BERMAD Irrigation



IR-423-54-KX

For full technical details, refer to Engineering Section.

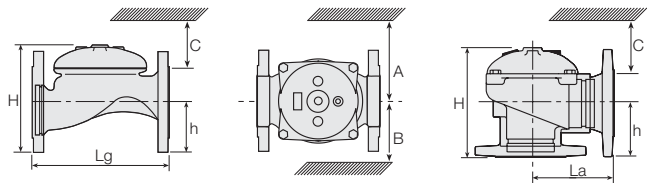
400 Series

Pressure Reducing & Sustaining

Technical Specifications

Dimensions and Weights

Pattern	Connections	Globe						Angle				
		Threaded						Fl.				
Size	DN Inch	40 1½"	50 2"	65 2½"	80R 3"R	80 3"	100 4"	50 2"	65 2½"	80R 3"R	80 3"	100 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 3.4	110 4.3	110 4.3	110 4.3	160 6.3
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 Ratings: 10 bar; 145 psi

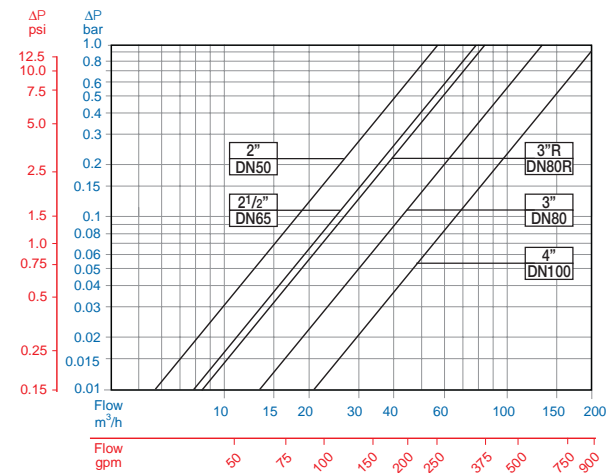
Operating Pressure Range: 0.5-10 bar; 7-145 psi

For lower pressure requirements, consult factory

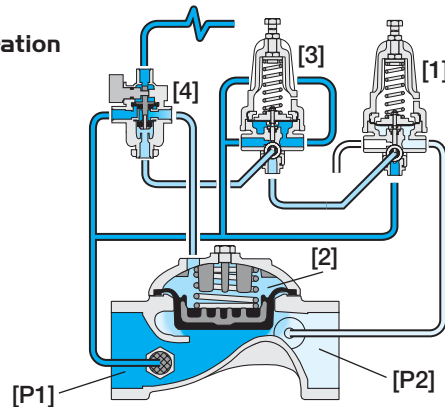
Setting Range: 1-7 bar; 15-100 psi

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

Flow Chart



Operation



The Pressure Reducing Pilot (PRP) [1] is hydraulically connected to the Valve Control Chamber [2] through the Pressure Sustaining Pilot (PSP) [3] and the 3-Way Hydraulic Relay Valve (3W-HRV) [4]. 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].

Upon a pressure drop command, the 3W-HRV switches, blocks the pilots and directs line pressure into the control chamber, shutting the Valve.

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	54	-	G	I	BP	PG	-	PP	KX
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					Valve Position Indicator ⁽¹⁾	I
			ISO-10		10					Flow Stem ⁽¹⁾	M
			IS 14 (ISO 10/4 Holes)		14					<small>(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M. Other additional attributes are optional. Please consult full-stop.</small>	
			ANSI-125		A1						
			JIS-10		J1						
			BST-D		BD						
			Grooved		VI						

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



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