

Flow Control and Pressure Reducing Valve

Normally Closed with Hydraulic Control

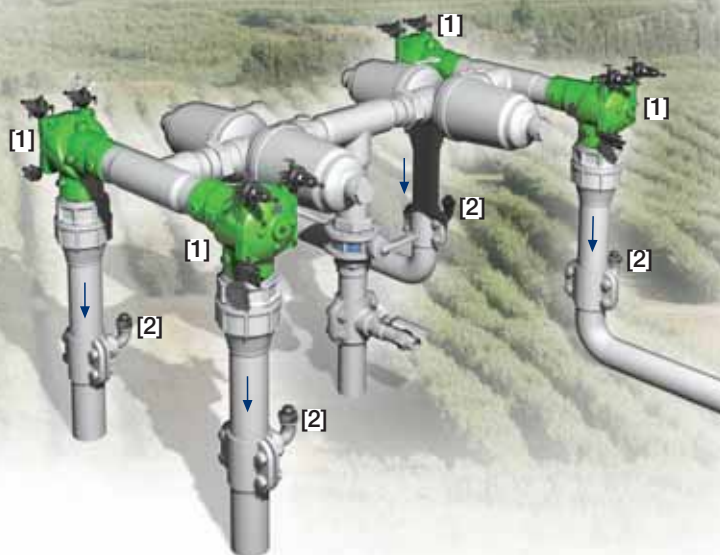
IR-472-54-bKU

The BERMAD Model IR-472-54-bKU is a hydraulically operated, diaphragm actuated control valve that limits demand and reduces downstream pressure to constant preset maximum values. 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
 - Limits fill-up rate and consumer over-demand
 - Protects downstream system
 - 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
- Hydraulic Flow Sensor (upstream installation)
 - No moving parts
 - No need for flow straightening
- Simple In-Line Inspection and Service

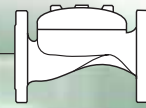


Typical Applications

- Computerized Irrigation Systems
- Remote and/or Elevated Plots
- Multiple Independent Consumer Systems
- Line Fill-Up Control Solutions
- Pressure Reducing Systems
- Distribution Centers

- [1] BERMAD Model IR-472-54-bKU opens upon pressure rise command, limits over-demand, and controls laterals and distribution line fill-up, while reducing operating pressure.
- [2] BERMAD Vacuum Breaker Model 1/2"-ARV

BERMAD Irrigation



IR-472-54-bKU

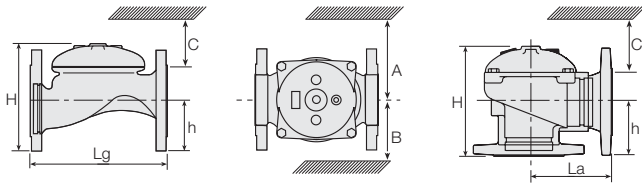
400 Series
Flow Control & Pressure Reducing

Technical Specifications

Dimensions and Weights

Pattern	Connections	Globe						Angle					
		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	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	

The orifice assembly adds to valve length.



Technical Data

End connections:

Size	End connections:						
	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 Setting Range: ±20% from valve predetermined flow

Orifice diameter is calculated in accordance with desired ΔP at predetermined flow.

Although the standard calculated ΔP is 0.4 bar; 5.5 psi, the actual head loss is 0.2 bar; 2.8 psi.

How to Order

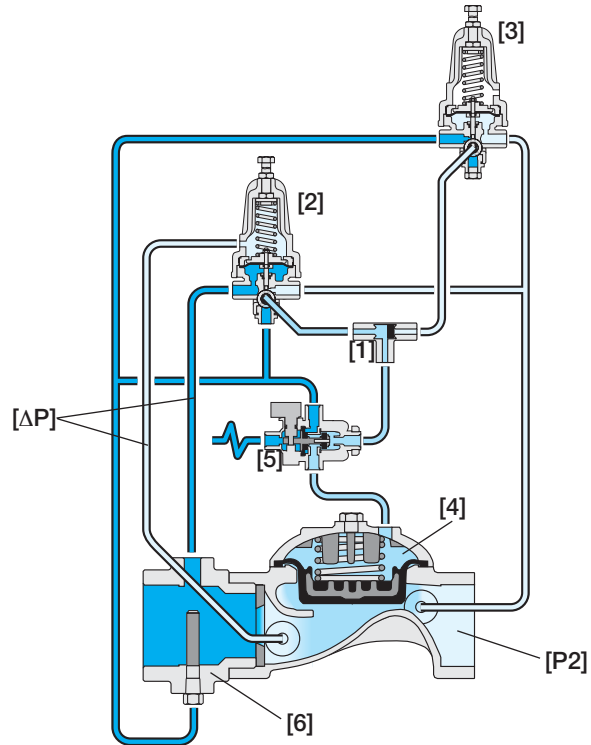
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

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>	472	54	-	G	I	BP	PG	-	PP	bKU
Globe		G	BSP		BP	Plastic Tubing & Fittings		PP	Servo	b	
Angle		A	NPT		NP	Plastic Tubing & Brass Fittings		PB	Plastic Control Accessories	K	
			ISO-16		16				Orifice Assembly	U	
			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

Operation



The Shuttle Valve [1] hydraulically connects the Flow Pilot (FP) [2] or the Pressure Reducing Pilot (PRP) [3] to the Valve Control Chamber [4], through the 3-Way Hydraulic Relay Valve (3W-HRV) [5]. Pressure Differential [ΔP] across the Orifice Assembly [6] is in direct proportion to demand. The FP, continuously sensing [ΔP], commands the Valve to throttle closed should demand rise above setting. The PRP commands the AMV to reduce Downstream Pressure [P2] to pilot setting. Upon a pressure drop command, the 3W-HRV switches and directs line pressure into the control chamber, shutting the Valve.



info@bermad.com • www.bermad.com

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