

Pressure Reducing Valve

with Solenoid Control

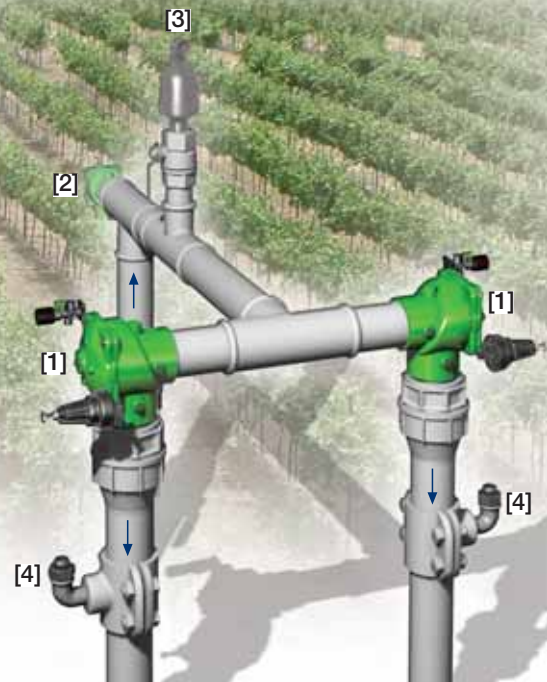
IR-420-55-KX

The BERMAD Pressure Reducing Valve with Solenoid Control is a 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 an electric signal.



Features and Benefits

- Hydraulic Pressure Control with Solenoid Control
 - Line pressure driven
 - Protects downstream systems
 - Opens fully upon line pressure drop
 - Electrically 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
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Remote and/or Elevated Plots
- Distribution Centers

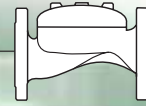
[1] BERMAD Model IR-420-55-KX opens in response to electric signals, and establishes reduced pressure zone protecting laterals and distribution line.

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

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

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

BERMAD Irrigation



400 Series

Pressure Reducing Standard

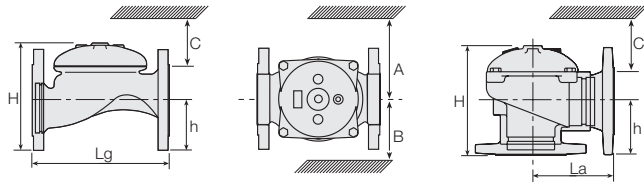
IR-420-55-KX

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.

Solenoid Voltage Range:

S-390 & S-400: 24 VAC, 24 VDC

S-392 & S-402: 9-20 VDC, Latch

S-982 & S-985: 12-50 VDC, Latch

Other Voltages available.

For full electric data, refer to Accessories Section.

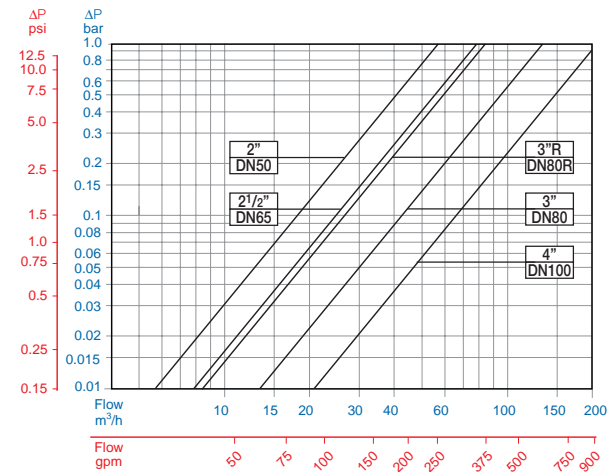
How to Order

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

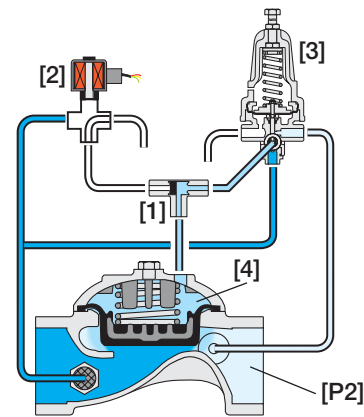
Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage - Main Valve Position	Tubing & Fittings	Additional Attributes
IR	1½"-4" <small>Other sizes available on request.</small>	420	55	-	G	I	BP	PG	4AC	PP	KX
Globe		G	BSP		BP	9VDC -	Latch	9DS		Plastic Control Accessories	K
Angle		A	NPT		NP	12VDC-	Latch	1DS		3-Way Control	X
			ISO-16		16	24VDC-	N.C.	4DC		Valve Position Indicator ⁽¹⁾	I
			ISO-10		10	24VDC-	N.O.	4DC		Flow Stem ⁽¹⁾	M
			IS 14 (ISO 10/4 Holes)		14	24VAC -	N.C.	4AC			
			ANSI-125		A1	24VAC -	N.O.	4AO			
			JIS-10		J1	24VAC, Lightning Proof - N.C.		4RC			
			BST-D		BD	24VAC, Lightning Proof - N.O.		4RO			
			Grooved		VI	Other electrical ratings are available.					
			For available end connections/sizes, see End Connections Table above.			Plastic Tubing & Fittings		PP			
						Plastic Tubing & Brass Fittings		PB			

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

Flow Chart



Operation



The Shuttle Valve [1] hydraulically connects the Solenoid [2] or the Pressure Reducing Pilot (PRP) [3] to the Valve Control Chamber [4]. When the solenoid is closed, the PRP commands the Valve to throttle closed should Downstream Pressure [P2] rise above setting, and to open fully when it drops below setting. In response to an electric signal, the solenoid switches, directing line pressure through the shuttle valve into the control chamber. This causes the Valve to shut. The solenoid also features local manual closing.



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