



Pressure Reducing and Sustaining Valve

with Solenoid Control

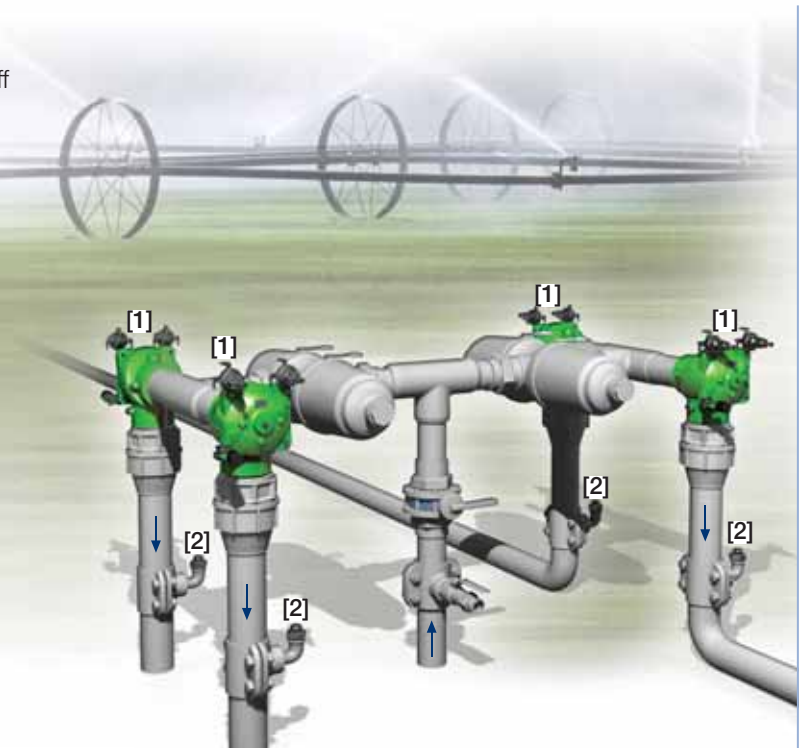
IR-423-55-KX

The BERMAD Model IR-423-55-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 either opens or shuts in response to an electric signal.



Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
 - Protects downstream system
 - Prioritizes pressure zones
 - Controls system fill-up
 - Sustains upstream line pressure
- 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
- Systems Subject to Varying Supply Pressure
- Distribution Centers

[1] BERMAD Model IR-423-55-KX opens in response to electric signal, sustains supply pressure, controls laterals and distribution line fill-up, and reduces their operating pressure.

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

BERMAD Irrigation



400 Series

Pressure Reducing & Sustaining

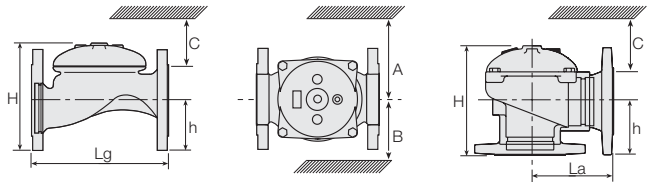
IR-423-55-KX

For full technical details, refer to Engineering Section.

Technical Specifications

Dimensions and Weights

Pattern	Connections	Globe						Angle									
		Threaded						Fl.									
Size	DN	40	50	65	80R	80	100	50	65	80R	80	100	50	65	80R	80	100
	Inch	1½"	2"	2½"	3"R	3"	4"	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.	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.	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	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	3.4	4.3	4.3	4.3	6.3
H	mm	87	114	132	140	165	242	136	180	178	184	223	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	5.4	7.1	7	7.2	8.8
C	mm	52	68	80	84	100	145	82	108	107	110	134	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	3.2	4.2	4.2	4.3	5.3
h	mm	29	39	45	53	55	112	61	93	91	80	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	2.4	3.7	3.6	3.1	4.4
A; B	mm	130	130	130	140	175	312	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	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	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	9.7	12.8	15.4	24.3	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; 22-100 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.)

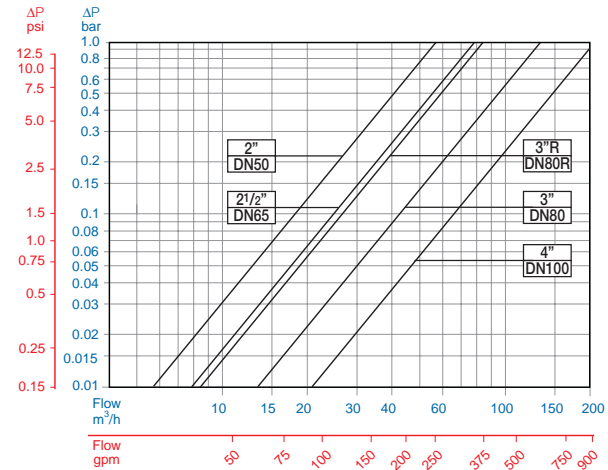
Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	1½"-4" <small>Other sizes available on request.</small>	423	55	-	G	I	BP	PG	4AC	PP	KX
Globe		G	BSP		BP	9VDC -	Latch	9DS	Plastic Tubing & Fittings	PP	
Angle		A	NPT		NP	12VDC -	Latch	1DS	Plastic Tubing & Brass Fittings	PB	
			ISO-16		16	24VDC -	N.C.	4DC			
			ISO-10		10	24VDC -	N.O.	4DC			
			IS 14 (ISO 10/4 Holes)		14	24VAC -	N.C.	4AC	Plastic Control Accessories		K
			ANSI-125		A1	24VAC -	N.O.	4AO	3-Way Control		X
			JIS-10		J1	24VAC, Lightning Proof - N.C.		4RC	Valve Position Indicator ⁽¹⁾		I
			BST-D		BD	24VAC, Lightning Proof - N.O.		4RO	Flow Stem ⁽¹⁾		M
			Grooved		VI						

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

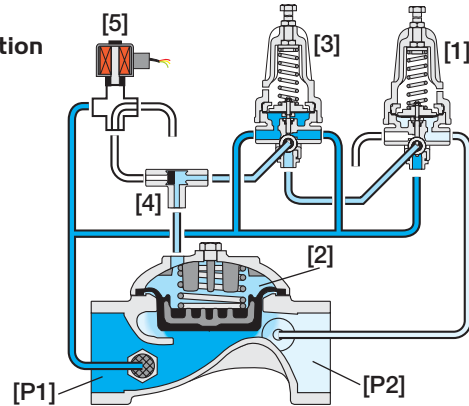
Other electrical ratings are available.

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

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 Shuttle Valve [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]. In response to an electric signal, the Solenoid [5] switches and pressurizes the shuttle valve, which then blocks the pilots and transmits line pressure into the control chamber, shutting the Valve.



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