

Pressure Reducing Valve

with Solenoid Control

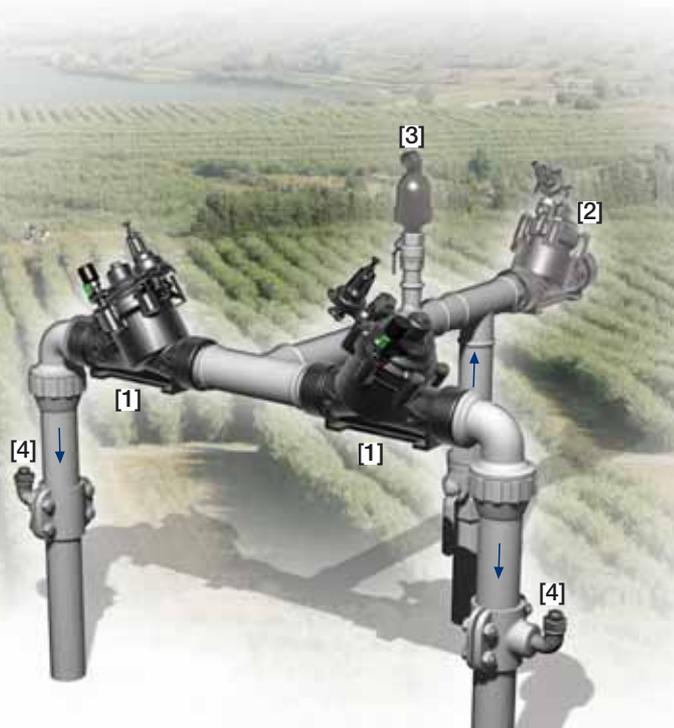
IR-120-55-X

The BERMAD Pressure Reducing Control 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. The BERMAD Model IR-120-55-X 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
- Engineered Plastic Valve with Industrial Grade Design
 - Highly durable, chemical and cavitation resistant
 - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
 - Ultra-high flow capacity – Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug
 - Accurate and stable regulation with smooth closing
 - Requires low opening and actuation pressure
 - Prevents diaphragm erosion and distortion
- Simple In-Line Inspection and Service



Typical Applications

- Computerized Irrigation Systems
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Remote and/or Elevated Plots
- Distribution Centers
- Energy Saving Irrigation Systems

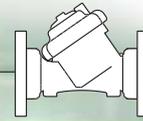
[1] BERMAD Model IR-120-55-X opens in response to electric signal, and establishes reduced pressure zone protecting laterals and distribution line.

[2] BERMAD Relief Valve Model IR-13Q

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

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

BERMAD Irrigation



IR-I20-55-X

For full technical details, refer to Engineering Section.

100 Series hYflow

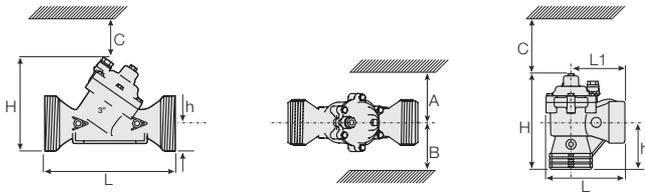
Pressure Reducing
Standard

Technical Specifications

Dimensions and Weights

Pattern Size	Angle DN Inch	Y (Oblique)				
		80-T 3-T	50-T 2-T	65-T* 2 1/2-T*	80-T 3-T	80L-T 3L-T
L (L1)	mm	187 (130)	230	230	298	300
	inch	7.4 (5.1)	9.1	9.1	11.7	11.8
H (Hf)	mm	235 (245)	170 (185)	170 (185)	180 (195)	240
	inch	9.3 (9.6)	6.7 (7.3)	6.7 (7.3)	7.1 (7.7)	9.5
C	mm	53	140	140	140	180
	inch	2.1	6	6	6	8
h	mm	117	40	40	50	60
	inch	4.6	1.6	1.6	2.0	2.4
A; B	mm	320	135	135	190	190
	inch	12.6	6	6	8	8
Weight	Kg	1.6	1.35	1.4	1.6	3.0
	lb.	3.5	3.0	3.1	3.5	6.6

* 2 1/2"; DN65 Male Thread BSP-F, for PVC glue Unions.



Technical Data

Valve Configurations & Size:

Oblique: 2, 2 1/2, 3, 3L, 4 & 6"; DN50, 65, 80, 80L, 100 & 150
Angle: 3"; DN80

End Connections:

Threaded: 2, 2 1/2, 3 & 3"L; DN50, 65, 80 & 80L
Flanged: 3, 3L, 4, & 6"; DN80, 80L, 100 & 150
Grooved: 6"; DN150

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.35-10 bar; 5-145 psi

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

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

Materials:

Body, Cover and Plug: Glass-Filled Nylon

Diaphragm: NR, Nylon Fabric Reinforced

Seals: NR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

Control Accessories: Plastic

Tubing and Fittings: Plastic

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.

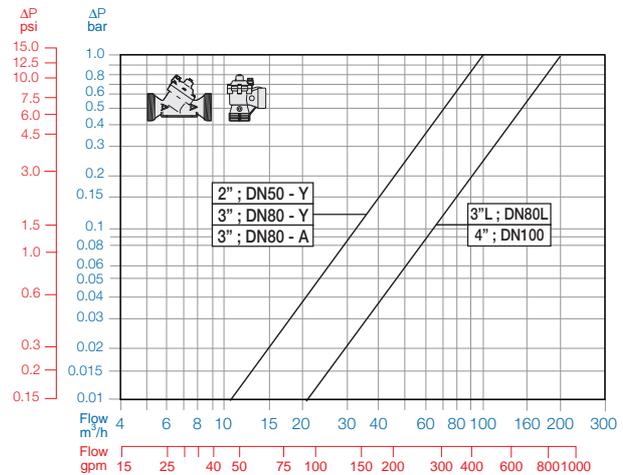
For full electric data, refer to Accessories Section.

How to Order

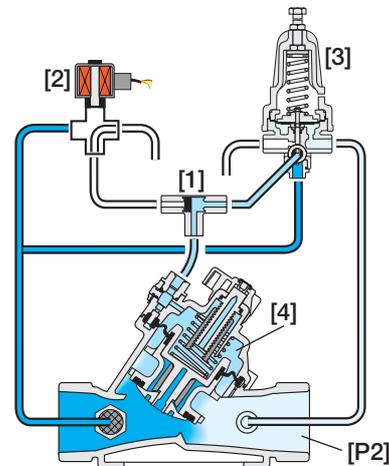
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes	
IR	2-4"	120	55	Y	P	BP	3W	4AC	X	
	Other sizes available on request.									
	Oblique Angle (3"; DN 80 Only)	Y A	Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona")	BP NP FF CC	9VDC - 12VDC - 24VDC - 24VDC - 24VAC - 24VAC - 24VAC, Lightning Proof - 24VAC, Lightning Proof -	Latch Latch N.C. N.O. N.C. N.O. N.C. N.O.	9DS 1DS 4DC 4DC 4AC 4AO 4RC 4RO	3-Way Control Low Preset Pressure (below 2 bar) Plastic Pressure Test Point Other attributes available on request	X 2 5	
			* Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D						Other electrical ratings available on request.	

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 [P2] is below setting. In response to an electric signal, the solenoid switches, directing line pressure through the shuttle valve into the control chamber, shutting the Valve. The solenoid also features local manual closing.



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