

Pressure Reducing Valve

with Hydraulic Control
for Drip-Tape Applications

IR-120-50-bZ

The BERMAD Pressure Reducing Valve with Hydraulic Control is a hydraulically operated, diaphragm actuated control valve that accurately reduces higher upstream pressure to very low and stable preset downstream pressure regardless of fluctuating demand or varying upstream pressure. It either opens or shuts in response to a remote pressure command.



Features and Benefits

- Line Pressure Driven, Hydraulically Controlled On/Off
 - Protects downstream systems
- Pressure Reducing Servo Pilot Controlled
 - Dynamic integrated needle valve
 - Settable to 0.5 bar; 7 psi
 - Very low hysteresis
- 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

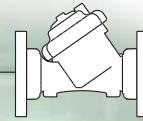


Typical Applications

- Computerized Irrigation Systems
- Drip-Tape Systems
- Low Set Pressure Applications
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

- [1] BERMAD Model IR-120-50-bZ opens upon pressure drop command, and establishes reduced pressure zone protecting laterals and distribution lines.
- [2] BERMAD Automatic Metering Valve Model IR-900-D0
- [3] BERMAD Vacuum Breaker Model 1/2"-ARV

BERMAD Irrigation



100 Series hYflow Pressure Reducing Drip-Tape

IR-I20-50-bZ

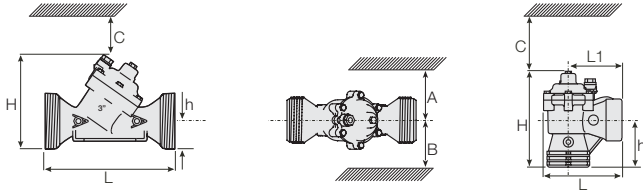
For full technical details, refer to Engineering Section.

Technical Specifications

Dimensions and Weights

Pattern Size	DN Inch	Angle		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	
	ib.	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"; 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: 0.5-1.7 bar; 7-25 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

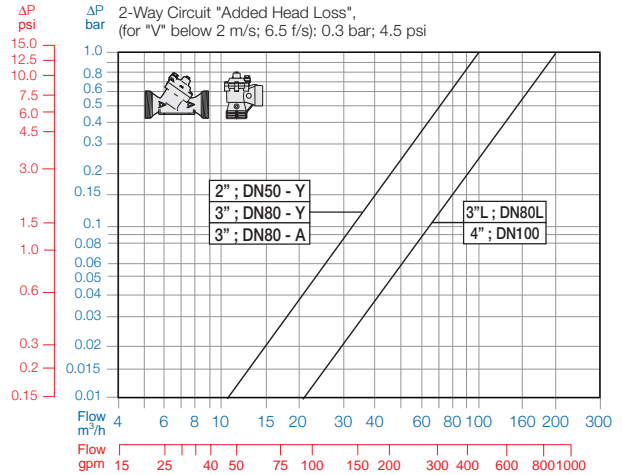
Spring: Stainless Steel

Cover Bolts: Stainless Steel

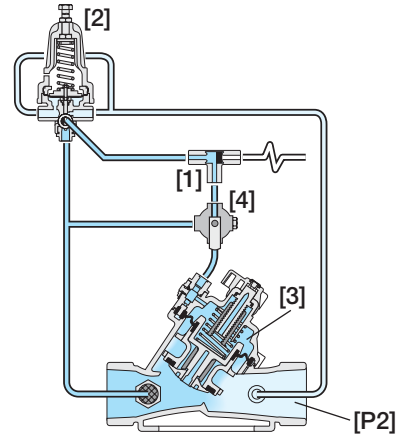
Control Accessories: Plastic

Tubing and Fittings: Plastic

Flow Chart



Operation



The Shuttle Valve [1] hydraulically connects the Pressure Reducing Servo Pilot (PRSP) [2] to the valve Control Chamber [3]. The PRSP commands the valve to throttle closed, preventing Downstream Pressure [P2] from rising above pilot setting. Upon pressure rise command, the shuttle valve automatically switches, allowing pressurization of the control chamber, which causes the main Valve to shut. The Manual Selector [4] enables local manual closing.

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" <small>Other sizes available on request.</small>	120	50	Y	P	BP	2W/3W	-	bZ
	Oblique Angle (3"; DN 80 Only)		Y A	BSP BSP-F (Male Threads 2 1/2"; DN65 only) NPT Plastic Flanges* Metal Flanges* ("Corona")		BP BS NP FF CC	Servo Manual Selector Flow Stem Flow Stem with Position Indicator		b Z M MP
									<small>Other attributes available on request</small>

Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D



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