

Pressure Reducing Valve

with Hydraulic Control

IR-120-50

The BERMAD Model IR-120-50 is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant 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

- Hydraulic Pressure Control
 - Line pressure driven
 - Protects downstream systems
 - Hydraulically controlled On/Off
- Engineered Plastic Valve with Industrial Grade Design
 - Adaptable on-site to a wide range of end connection sizes and types
 - Articulated flange connections eliminate mechanical and hydraulic stresses
 - Highly durable, chemical and cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
 - Ultra-high flow capacity - Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and a Guided Plug
 - Accurate and stable regulation with smooth closing
 - Requires low actuation pressure
 - Prevents diaphragm erosion and distortion
- User-Friendly Design
 - Easy pressure setting
 - Simple in-line inspection and service



Typical Applications

- Computerized Irrigation Systems
- Pressure Reducing Stations
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

[1] BERMAD Model IR-120-50 opens upon pressure drop command establishing reduced pressure zone.

[2] Bermad Water Meter Model WPH

[3] Bermad Air Valve Model ARC-A-I-I

BERMAD Irrigation



IR-120-50

For full technical details, refer to Engineering Section.

100 Series hYflow

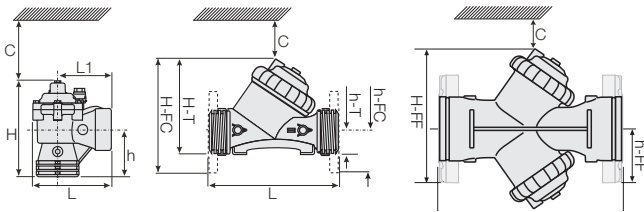
Pressure Reducing

Technical Specifications

Dimensions and Weights

Pattern	Size	DN Inch	Angle		Y (Oblique)				Y "Boxer"		
			80-T ⁽¹⁾ 3-T ⁽¹⁾	80-T ⁽¹⁾ 3-T ⁽¹⁾	80-FC ⁽²⁾ 3-FC ⁽²⁾	80L-FC ⁽²⁾ 3L-FC ⁽²⁾	100-FC ⁽²⁾ 4-FC ⁽²⁾	150-FF ⁽³⁾ 6-FF ⁽³⁾	80-FC ⁽²⁾ 3-FC ⁽²⁾	150-FF ⁽³⁾ 6-FF ⁽³⁾	
L (L1)			mm	187 (130)	298	308	310	350	480		
			inch	7.4 (5.1)	11.7	12.1	12.2	13.8	18.9		
H (Hf)			mm	235 (245)	180 (195)	240 (255)	280	294	285		
			inch	9.3 (9.6)	7.1 (7.7)	9.4 (10)	11	11.6	11.2		
C			mm	53	53	600	600	600	600		
			inch	2.1	2.1	4	4	23.6	23.6		
h			mm	117	50	100	100	112	145		
			inch	4.6	2	3.9	3.9	4.4	5.7		
Weight			Kg	1.6	1.6	4.4	5.9	7.6	12.5		
			lb.	3.5	3.5	9.7	13	16.7	27.6		

(1) "T" = Threaded end connections
 (2) "FC" = Flanged, Corona (Metal) end connections
 (3) "FF" = Flanged, Universal Plastic end connections



Technical Data

Sizes: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

Patterns:

Oblique: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

Angle: 3"; DN80

End Connections:

Threaded: 3 & 3"L; DN80 & 80L

Flanged: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

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

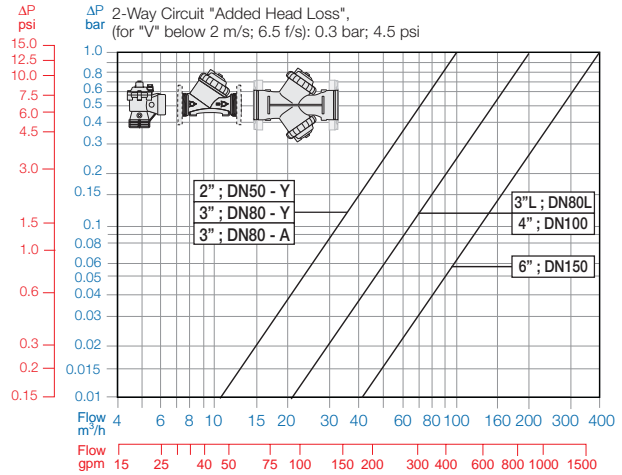
Seals: NR

Spring: Stainless Steel

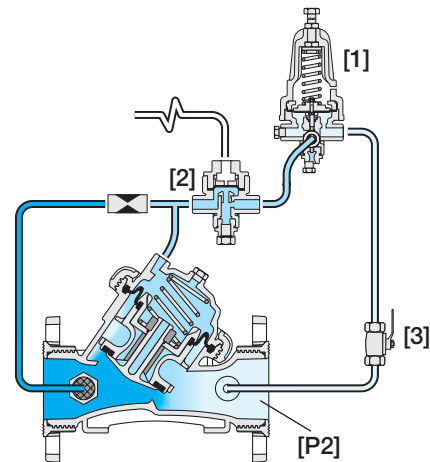
Control Accessories: Plastic

Tubing and Fittings: Plastic

Flow Chart



Operation



The Pressure Reducing Pilot [1] commands the Valve to throttle closed should Downstream Pressure [P2] rise above setting and to modulate open when it drops below pilot setting. The Hydraulic Relay Valve [2] closes upon pressure rise command, shutting the main Valve. The downstream Cock Valve [3] enables 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	3-6"	120	50	Y	P	FF	2W	-	-
	Other sizes available on request.	Oblique Angle (3"; DN80 Only)	Y A	Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona") Grooved (6"; DN150 Only)	BP NP FF CC VI	Low Preset Pressure (below 2 bar) Plastic Pressure Test Point	2 5	Other attributes available on request	

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



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