

Pressure Reducing Valve

Normally Closed with Relief Override
for Drip-Tape Applications

IR-120-54-3Q-b

The BERMAD Model IR-120-54-3Q-b is a hydraulically operated, diaphragm actuated control valve that accurately reduces higher upstream pressure to very low and stable preset downstream pressure. It is a Normally Closed valve that opens in response to a remote pressure drop command and shuts in the absence of that command. The BERMAD Model IR-120-54-3Q-b also serves as a Pressure Relief Valve protecting the system even when in closed position.



Features and Benefits

- Normally Closed PRV with Relief Override Feature
 - Protects downstream and upstream systems
 - Closes upon control failure
 - Amplifies and relays weak remote command
- 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
 - Prevents diaphragm erosion and distortion



Typical Applications

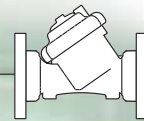
- Computerized Irrigation Systems
- Drip-Tape Systems
- Low Set Pressure Applications
- Remote and/or Elevated Plots
- Distribution Centers
- Energy Saving Irrigation Systems

[1] BERMAD Model IR-120-54-3Q-b opens upon pressure rise command, establishes reduced pressure zone, and relieves supply pressure peaks even when in closed position.

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

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

BERMAD Irrigation



IR-I20-54-3Q-b

For full technical details, refer to Engineering Section.

100 Series hYflow

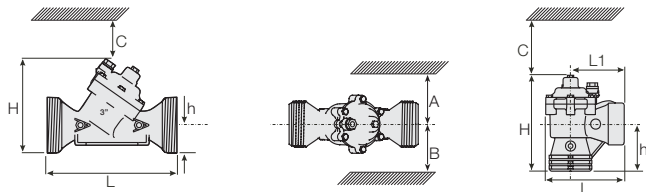
Pressure Reducing
Drip-Tape

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: Reducing: 0.5-1.7 bar; 7-25 psi

Relief: 0.5-3 bar; 7-40 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

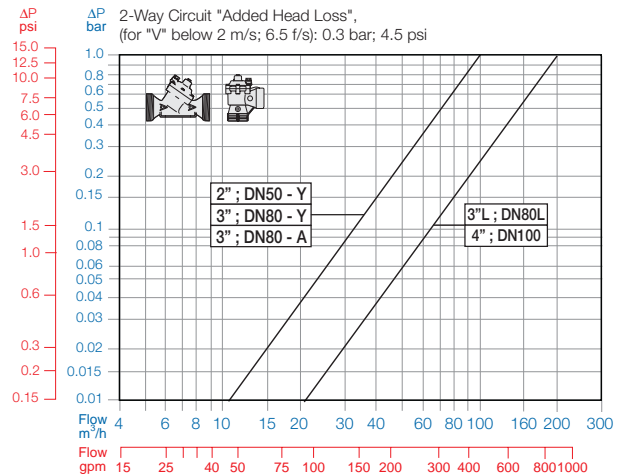
Seals: NR

Spring: Stainless Steel

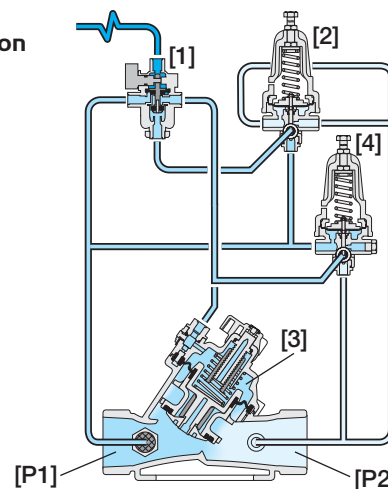
Control Accessories: Plastic

Tubing and Fittings: Plastic

Flow Chart



Operation



The 3-Way Hydraulic Relay Valve (3W-HRV) [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. The 3W-HRV switches upon pressure drop command, causing the main Valve to shut. Should Upstream Pressure [P1] rise above setting, the Relief Pilot [4] opens, thereby opening the Valve to relieve excessive pressure.

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	54-3Q	Y	P	BP	2W/3W	-	b
	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 Flow Stem Flow Stem with Position Indicator Other attributes available on request		b M MP

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



info@bermad.com • www.bermad.com

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