Pressure Reducing Valve

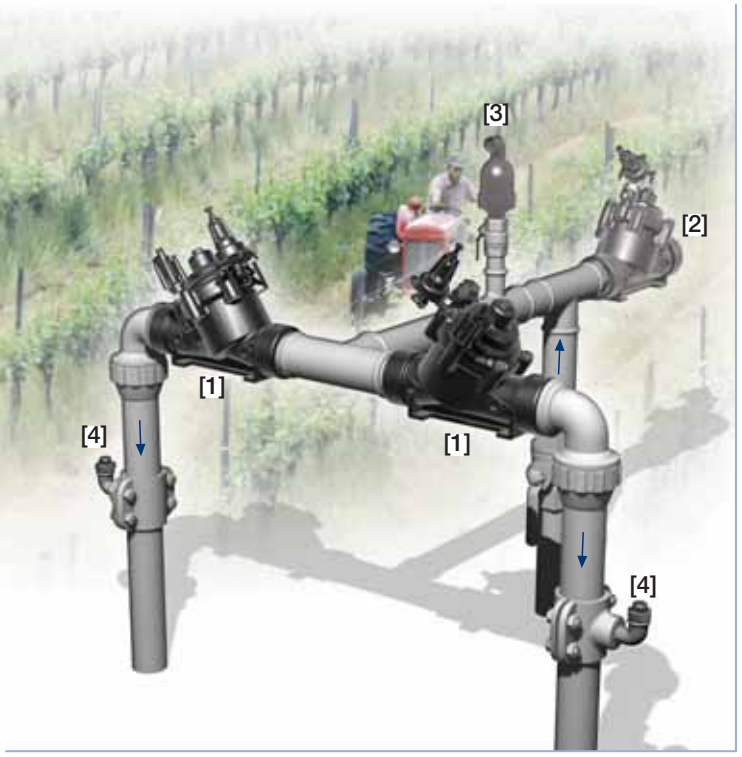
Normally Closed with Hydraulic Control for Drip-Tape Applications

IR-120-54-b

The BERMAD Model IR-120-54-b 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 is a Normally Closed valve that opens in response to a remote pressure drop command and shuts in the absence of that command.

Features and Benefits

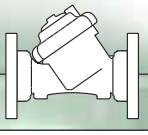
- Line Pressure Driven Normally Closed
  - Closes upon control failure
  - Amplifies and relays weak remote command
- Pressure Reducing Servo Pilot Controlled
  - Dynamic integrated needle valve
  - Settable to 0.5 bar; 7 psi
  - Very low hysteresis
- Engineered Plastic Valve with Industrial Grade Design
  - 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
  - Requires low opening and actuation pressure
  - Prevents diaphragm erosion and distortion



Typical Applications

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

[1] BERMAD Model IR-120-54-b opens upon pressure rise command, 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 ½"-ARV



IR-120-54-b

100 Series hYflow

Pressure Reducing Drip-Tape

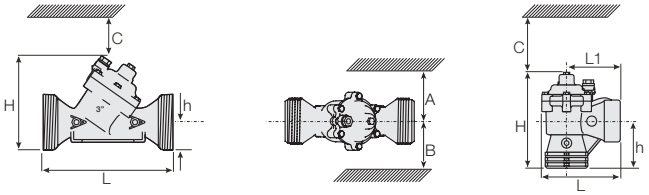
For full technical details, refer to Engineering Section.

Technical Specifications

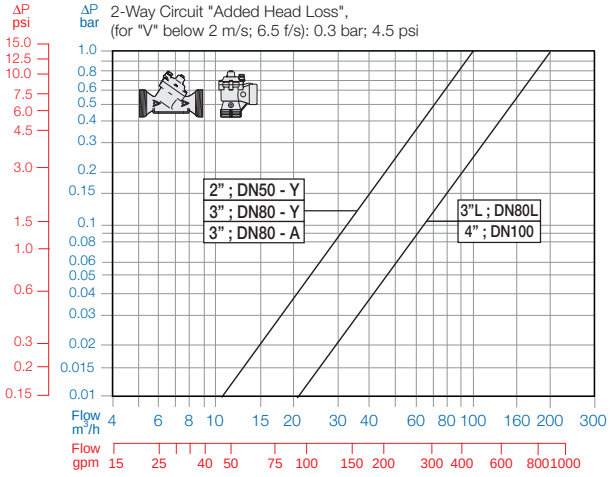
Dimensions and Weights

Pattern		Angle	Y (Oblique)			
Size	DN / Inch	80-T 3-T	50-T 2-T	65-T* 21/2-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

* 2½"; DN65 Male Thread BSP-F, for PVC glue Unions.



Flow Chart



Technical Data

Valve Configurations & Size:
Oblique: 2, 2½, 3, 3L, 4 & 6"; DN50, 65, 80, 80L, 100 & 150
Angle: 3"; DN80

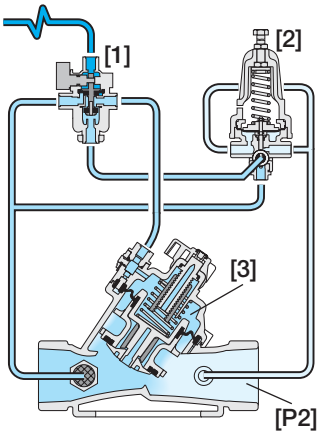
End Connections:
Threaded: 2, 2½, 3 & 3"L; DN50, 65, 80 & 80L
Flanged: 3, 3L, 4, & 6"; DN80, 80L, 100 & 150
Grooved: 6"; DN150Pressure Rating: 10 bar; 145 psi

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

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, directing line pressure into the control chamber, and thereby causing the main Valve to shut. The 3W-HRV also features 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	Additonal Attributes
IR	2-4"	120	54	Y	P	BP	2W/3W	-	b

Other sizes available on request.

Oblique	Y
Angle (3"; DN 80 Only)	A

BSP	BP
BSP-F (Male Threads 2½"; DN65 only)	BS
NPT	NP
Plastic Flanges*	FF
Metal Flanges* ("Corona")	CC

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

Servo	b
Flow Stem	M
Flow Stem with Position Indicator	MP

Other attributes available on request