

# Pressure Reducing Valve

Normally Closed with Hydraulic Control

### IR-120-54

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



### Features and Benefits

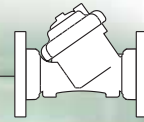
- Line Pressure Driven, Normally Closed
  - Closes upon control failure
  - Protects downstream systems
  - Amplifies and relays weak remote command
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Articulated flange connections 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
- 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
- Remote and/or Elevated Plots
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

- [1] BERMAD Model IR-120-54 opens upon pressure rise, command establishing reduced pressure zone.
- [2] BERMAD Water Meter Model WPH
- [3] BERMAD Air Valve Model ARC-A-I



## IR-120-54

For full technical details, refer to Engineering Section.

## 100 Series hYflow

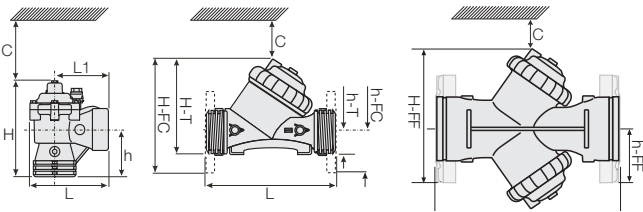
Pressure Reducing

### Technical Specifications

#### Dimensions and Weights

Pattern	Size	DN	Angle		Y (Oblique)			Y "Boxer"
			80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-FC <sup>(2)</sup> 3-FC <sup>(2)</sup>	80L-FC <sup>(2)</sup> 3L-FC <sup>(2)</sup>	100-FC <sup>(2)</sup> 4-FC <sup>(2)</sup>	150-FF <sup>(3)</sup> 6-FF <sup>(3)</sup>
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

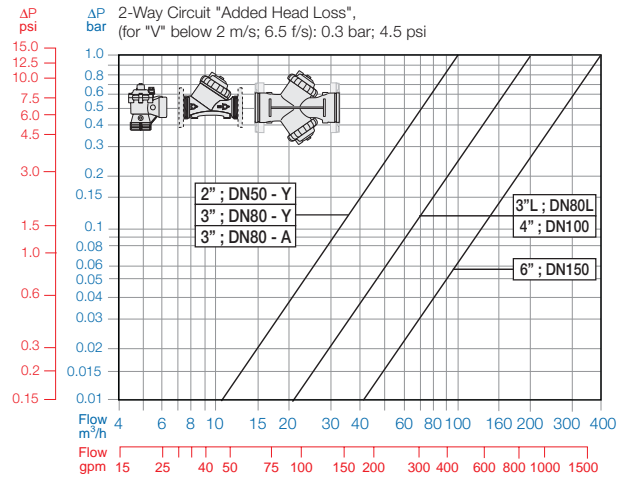
**Seals:** NR

**Spring:** Stainless Steel

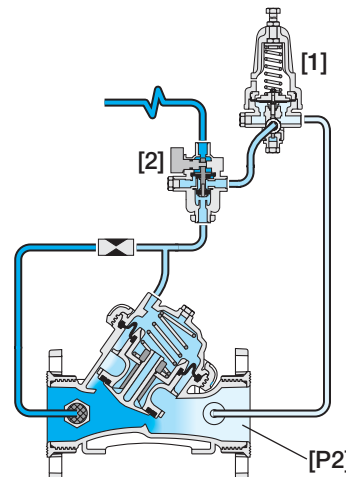
**Control Accessories:** Plastic

**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 modulate open when it drops below setting. The 3-Way Hydraulic Relay Valve [2] opens upon pressure rise command opening the valve, and closes in the absence of this command shutting the Valve.

### 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	54	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

