



PRESSURE REDUCING VALVE, DOUBLE CHAMBER

Model IR-120-DC-XZ

The BERMAD Model IR-120-DC-XZ Pressure Reducing Valve is a double chambered, hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream

pressure and opens fully upon line pressure drop. The valve comprises two major components: The body and the actuator assembly. The actuator assembly consists of both an upper and a lower control chamber.

The double chambered valve operation is independent of valve differential pressure. This develops maximum power, ensuring immediate valve response combined with inherent soft closing.



Features & Benefits

- Line pressure driven, Hydraulically Controlled
 - Protects downstream systems
 - Opens fully upon line pressure drop
- Double chamber
 - Full powered opening and closing
 - Decreased pressure loss
 - Low throttling noise
 - Non-slam closing characteristic
 - Protected diaphragm
- Engineered Plastic Valve with Industrial Grade Design
- hYflow 'Y' Valve Body with "Look Through" Design
 - Ultra-high flow capacity - Low pressure loss
- User-Friendly Design
 - Simple in-line inspection and service

Typical Applications

- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Energy Saving Irrigation Systems



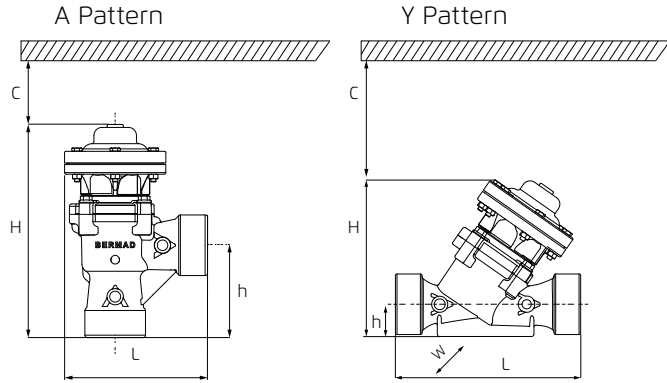
- [1] BERMAD Model IR-120-DC-XZ reduces the supply pressure to preset pressure, protecting the system
- [2] BERMAD Pressure Sustaining Valve IR-130-DC-XZ
- [3] BERMAD Solenoid Control Valves Model IR-210
- [4] BERMAD Combination Air Valve Model IR-C10
- [5] BERMAD Kinetic Air Valve Model IR-K10
- [6] BERMAD RF RTU Battery Operated with Solar Kit



Technical Specifications

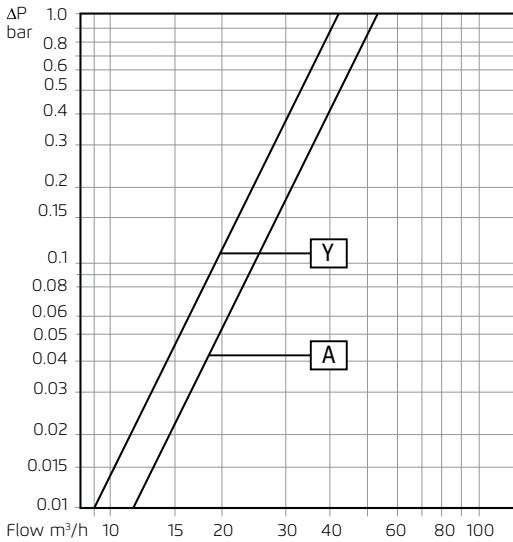
Dimensions and Weights

Size	DN	50-A	40-Y	50-Y
	Inch	2-A	1½-Y	2-Y
L	mm	178	200	200
	inch	7.0	7.9	9.1
H	mm	267	196	196
	inch	10.5	7.7	7.7
W	mm	126	126	126
	inch	5	5	5
h	mm	112	40	40
	inch	4.4	1.6	1.6
Weight	Kg	1.7	1.7	1.7
	lib	3.8	3.8	3.8



Note: C = Half of H

Flow Chart



		A	Y	Y
Size	DN	50	40	50
	Inch	2	1½	2
Flow Coefficient	KV	52	42	42
	CV	60	49	49
CCDV	Liter	0.13	0.13	0.13
	Gallon	0.03	0.03	0.03

CCDV = Control Chamber Displacement Volume

Valve flow coefficient, Kv or Cv $\Delta P = \left(\frac{Q}{Kv}\right)^2$; $\Delta P = \left(\frac{Q}{Cv}\right)^2$

Where:

Kv = Valve flow coefficient (flow in m³/h at Diff. Press. 1 bar)

Cv = Valve flow coefficient (flow in gpm at Diff. Press. 1 psi)

Q = Flow rate (m³/h; gpm)

ΔP = Differential pressure (bar; psi)

$Cv = 1.155 Kv$

Technical Data

Available Patterns & Sizes: "Y" DN40; 1½" & DN50; 2"
Angle DN50; 2"

End Connections: Threaded BSP or NPT

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.5-10 bar; 7-145 psi

Setting Range: 1-7 bar; 15-100 psi.

Setting: Setting ranges vary according to specific pilot spring. Please consult factory.

Temperature Range: Water up to 50°C; 82°F

Standard Materials:

Body: Glass-Filled Nylon

Actuator: Plastic & Stainless Steel

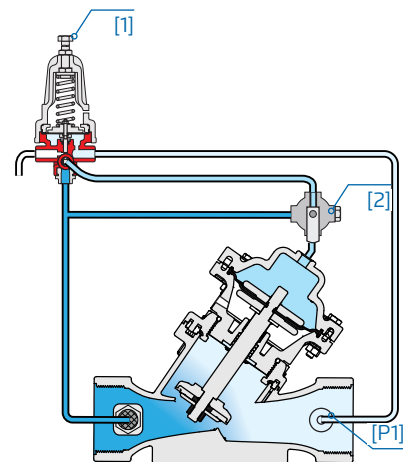
Diaphragm: Nylon Fabric Reinforced Natural Rubber

Seals: NBR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

Operation



The Pressure Reducing Pilot [1] commands the main Valve to throttle closed should Downstream Pressure [P2] rise above pilot setting, and to open fully when it drops below pilot setting. The Manual Selector [2] enables local manual closing.

