

PRESSURE REDUCING VALVE - DOUBLE CHAMBER

Model IR-120-DC-3W-XZ

The BERMAD Model IR-120-DC-3W-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 Double Chamber Valve is a high performance valve, specially designed for quick response and challenging regulation requirements.



- [1] BERMAD Model IR-120-DC-3W-XZ reduces the supply pressure to preset pressure, protecting the system.
- [2] Solenoid Control Valves Model IR-210
- [3] Combination Air Valve Model IR-C10
- [4] Kinetic Air Valve Model IR-K10
- [5] RTU-Remote Terminal Unit

Features & Benefits

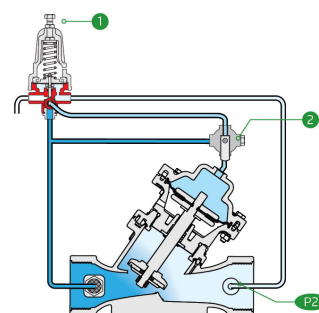
- Line Pressure Driven, Hydraulically Controlled
 - Protects downstream systems
 - Opens fully upon line pressure drop
- Double Chamber Design
 - Full powered opening and closing
 - Decreased pressure loss
 - Low throttling noise
 - Non-slam closing characteristic
 - Protected diaphragm
- Engineered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

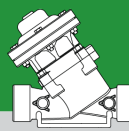
Typical Applications

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

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





Technical Data

Pressure Rating:
10 bar

Operating Pressure Range:
0.5-10 bar

Materials

Body & Cover:
Polyamide 6 & 30% GF

Diaphragm:
NR, Nylon fabric reinforced

Spring:
Stainless Steel

Control Loop Accessories

PR Pilot: PC-SHARP-X-P

Pilot Spring Range:

Spring	Spring Color	Setting range
J	Green	0.2-1.7 bar
K	Gray	0.5-3.0 bar
N	Natural	0.8-6.5 bar
V	Blue & White	1.0-10.0 bar

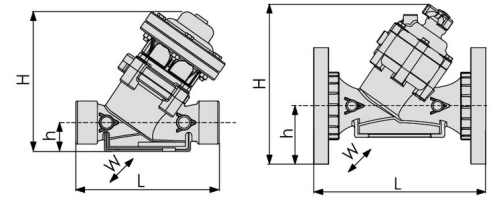
Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

**For other pilots please consult BERMAD*

Technical Specifications

For other patterns and end connection types,
Please refer to BERMAD full engineering page.



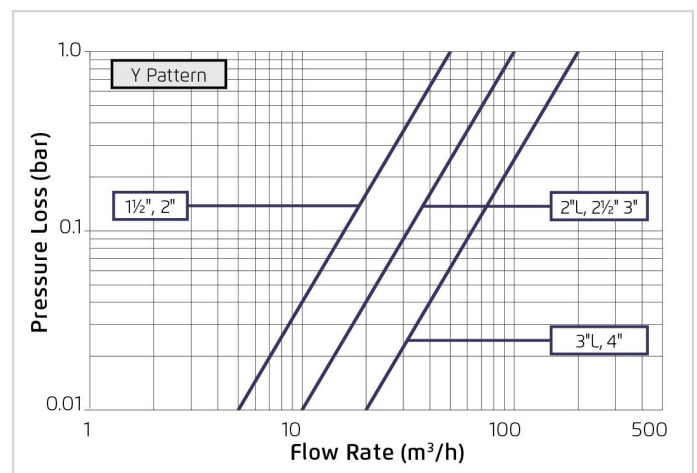
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	"Y" (globe)	Threaded	1.7	200	194	40	126	0.13	50
2" ; DN50	"Y" (globe)	Threaded	1.7	230	196	40	126	0.13	50
2"L ; DN50L	"Y" (globe)	Threaded	2.2	230	220	43	135	0.17	100
2½" ; DN50L	"Y" (globe)	Threaded	2.2	230	220	43	135	0.17	100
3" ; DN80	"Y" (globe)	Threaded	2.3	298	232	55	135	0.17	100
3" ; DN80	"Y" (globe)	Plastic Flanges	3.2	308	277	100	200	0.17	100
3" ; DN80	"Y" (globe)	Metal Flanges	5.1	308	277	100	200	0.17	100
3"L ; DN80L	"Y" (globe)	Threaded	6	338	356	60	210	0.55	200
3"L ; DN80L	"Y" (globe)	Plastic Flanges	6.5	343	395	100	210	0.55	200
3"L ; DN80L	"Y" (globe)	Metal Flanges	7.4	343	395	100	210	0.55	200
4" ; DN100	"Y" (globe)	Plastic Flanges	7.6	364	407	112	224	0.55	200
4" ; DN100	"Y" (globe)	Metal Flanges	9.5	364	407	112	224	0.55	200

CCDV = Control Chamber Displacement Volume • **Threaded** = BSP & NPT are available. External thread is available for 2" and 2½" only. • Other End Connections are available on request. For dimensions and weights of adapters or valves with adapters please consult with customer service.

Additional Features

Code	Description	Size Range
K/L	Auxiliary Closing / Lifting Spring (for 100-DC models only)	1½"-4" / DN40-100

Flow Chart



Differential Pressure & Flow Calculation

$$\Delta P = \left(\frac{Q}{Kv} \right)^2$$

Kv = m³/h @ ΔP of 1 bar
Q = m³/h
ΔP = bar