

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

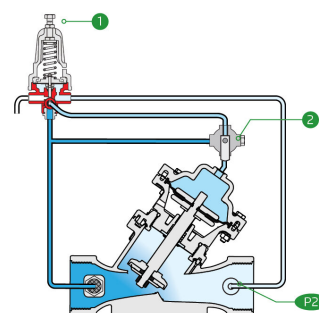
- Line Pressure Driven, Hydraulically Controlled
 - Protects downstream systems
 - Opens fully upon line pressure drop
- Double Chamber Design
 - Full powered opening and closing
 - Decreased pressure loss
 - Low throttling noise
 - Non-slam closing characteristic
 - Protected diaphragm
- Engineered 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

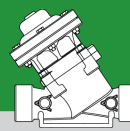
Typical Applications

- 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:
150 psi

Operating Pressure Range:
7-150 psi

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	3-25 psi
K	Gray	7-43 psi
N	Natural	12-95 psi
V	Blue & White	15-150 psi

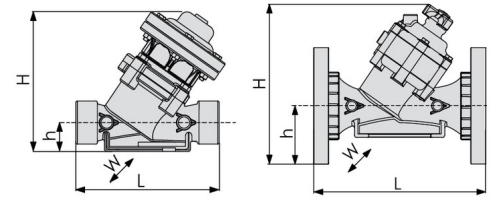
Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

**For other pilots please consult [BERMAD](http://www.bermad.com)*

Technical Specifications

For other patterns and end connection types,
Please refer to [BERMAD](http://www.bermad.com) full engineering page.



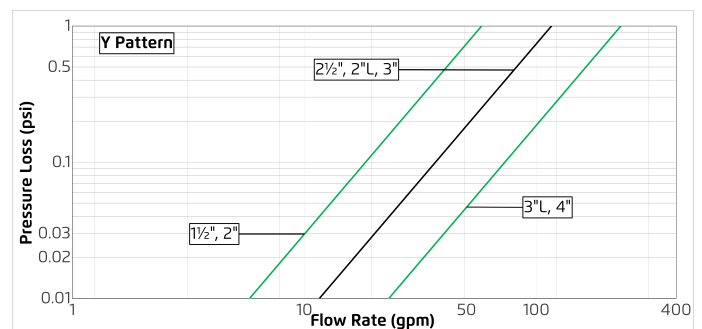
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	"Y" (globe)	Threaded	4	7⅞	7⅞	1⅞	5	0.034	58
2" ; DN50	"Y" (globe)	Threaded	4	9⅞	7⅞	1⅞	5	0.034	58
2"L ; DN50L	"Y" (globe)	Threaded	4.9	9⅞	8⅞	1⅞	5⅞	0.045	116
2½" ; DN50L	"Y" (globe)	Threaded	4.9	9⅞	8⅞	1⅞	5⅞	0.045	116
3" ; DN80	"Y" (globe)	Threaded	5	11⅞	9⅞	2⅞	5⅞	0.045	116
3" ; DN80	"Y" (globe)	Plastic Flanges	7.1	12⅞	11	4	7⅞	0.045	116
3" ; DN80	"Y" (globe)	Metal Flanges	11	12⅞	11	4	7⅞	0.045	116
3"L ; DN80L	"Y" (globe)	Threaded	13.1	13⅞	14	2⅞	8⅞	0.15	231
3"L ; DN80L	"Y" (globe)	Plastic Flanges	14.3	13⅞	15⅞	4	8⅞	0.15	231
3"L ; DN80L	"Y" (globe)	Metal Flanges	16.3	13⅞	15⅞	4	8⅞	0.15	231
4" ; DN100	"Y" (globe)	Plastic Flanges	16.8	14⅞	16	4½	8⅞	0.15	231
4" ; DN100	"Y" (globe)	Metal Flanges	21	14⅞	16	4½	8⅞	0.15	231

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"

Flow Chart



Differential Pressure & Flow Calculation

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

Cv = gpm @ ΔP of 1 psi
Q = gpm
ΔP = psi