



PRESSURE REDUCING VALVE

For Drip-Tape Applications

Model IR-120-Zb

The BERMAD Pressure Reducing Valve 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.



[1] BERMAD Model IR-120-Zb establishes reduced pressure zone protecting laterals and distribution line.

Features & Benefits

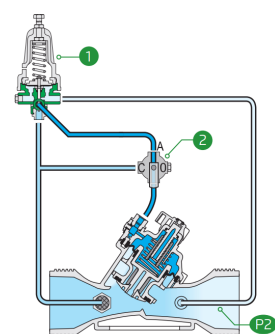
- Line Pressure Drive, Hydraulically Controlled
 - Protects downstream systems
- Pressure Reducing Servo Pilot Controlled
 - Dynamic integrated needle valve
 - Settable to 0.5 bar; 7 psi
 - Very low hysteresis
- Engineered Composite Valve with Industrial Grade Design
 - Highly durable, chemical and cavitation resistant
 - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
 - Ultra-high flow capacity at 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 mechanical stress
- Simple In-Line Inspection and Service

Typical Applications

- Drip-Tape Systems
- Low Set Pressure Applications
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

Operation:

The Pressure Reducing Servo Pilot **[1]** commands the main Valve to throttle closed, preventing Downstream Pressure **[P2]** from rising above pilot setting, and to modulate open when **[P2]** 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-S-A-P

Pilot Spring Range:

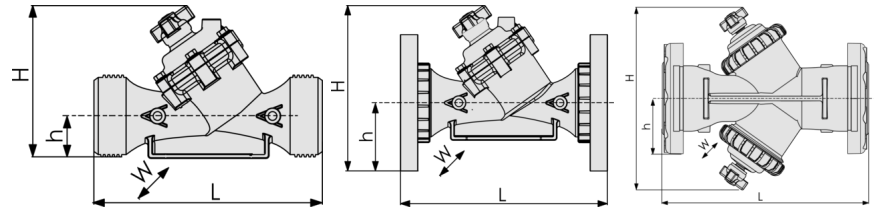
Spring	Spring Color	Setting range
J	Green	0.2-1.7 bar
K	Gray	0.5-3.0 bar

Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and
Polypropylene

Technical Specifications

For other patterns and end connection types,
Please refer to [BERMAD](#) full engineering page.

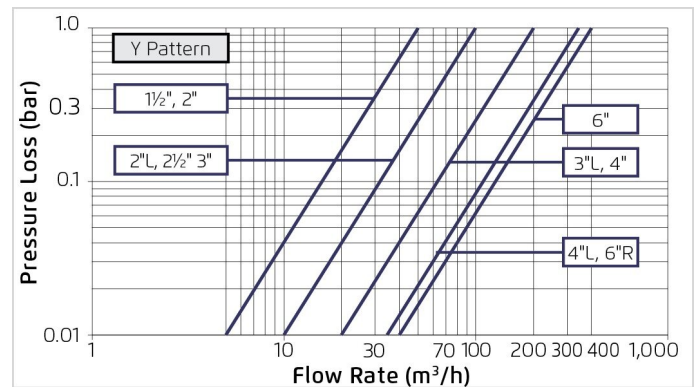


Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Oblique	Threaded	1.1	200	173	40	97	0.12	50
2" ; DN50	Oblique	Threaded	1.2	230	173	40	97	0.12	50
2"L ; DN50L	Oblique	Threaded	1.5	230	187	43	135	0.15	100
2½" ; DN65	Oblique	Threaded	1.5	230	187	43	135	0.15	100
3" ; DN80	Oblique	Threaded	1.6	298	199	55	135	0.15	100
3" ; DN80	Oblique	Plastic Flanges	2.5	308	244	100	200	0.15	100
3" ; DN80	Oblique	Metal Flanges	4.4	308	244	100	200	0.15	100
3"L ; DN80L	Oblique	Threaded	3	298	278	60	168	0.62	200
3"L ; DN80L	Oblique	Plastic Flanges	3.7	308	317	100	200	0.62	200
3"L ; DN80L	Oblique	Metal Flanges	4.6	308	317	100	200	0.62	200
4" ; DN100	Oblique	Plastic Flanges	4.6	350	329	112	224	0.62	200
4" ; DN100	Oblique	Metal Flanges	7.4	350	329	112	224	0.62	200
4"L ; DN100L	Oblique	Plastic Flanges	9.2	442	340	112	226	1.15	340
4"L ; DN100L	Oblique	Metal Flanges	11.2	442	340	112	226	1.15	340
6"R ; DN150R	Oblique	Metal Flanges	16.5	470	377	149	287	1.15	340
6" ; DN150	Boxer	Grooved	11	480	387	100	475	2x0.62	400
6" ; DN150	Boxer	Plastic Flanges	12.5	504	387	143	475	2x0.62	400

Additional Features

Code	Description	Size Range
M	Flow Stem (*Exclude sizes 4"L, 6"R)	1½"-6" / DN40-150
S	Plastic Test Point	1½"-4" / DN40-100
Z	Manual Selector	1½"-4"L / DN40-100L
V3	Victaulic PVC Adaptors 3"	3" / DN80
V4	Victaulic PVC Adaptors 4"	4" / DN100

Flow Chart



Differential Pressure & Flow Calculation

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

$K_v = m^3/h \text{ @ } \Delta P \text{ of 1 bar}$
 $Q = m^3/h$
 $\Delta P = \text{bar}$