PRESSURE REDUCING VALVE

Model IR-220-3W-MXZ

The BERMAD Pressure Reducing Valve is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure and opens fully upon line pressure drop.
*This valve is designated for irrigation use only and not for other uses! Manufacturer warranty is limited to the permitted use only.

[1] BERMAD Model IR-220-3W-MXZ establishes reduced pressure zone, protecting laterals and distribution line.
[2] Kinetic Air Valve Model IR-K10
[3] Combination Air Valve Model IR-C10

Features & Benefits

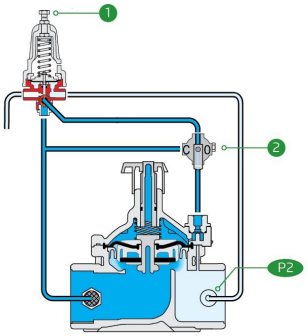
- Line Pressure Drive, Hydraulically Controlled
  - Protects downstream systems
  - Opens fully upon line pressure drop
- Smooth Valve Opening and Closing
  - Accurate and stable regulation
  - Low operating pressure requirements
- Composite Hydro-Efficient Globe Valve
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
  - Highly durable, chemical and cavitation resistant
- Unitized Flexible Diaphragm and Guided Plug
  - Excellent low flow regulation performances
  - Prevents diaphragm erosion and distortion
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
- User-Friendly Design
  - Simple in-line inspection and service

Typical Applications

- Drip Systems
- Pressure Reducing Systems
- Systems Subject to Varying Supply Pressure
- Landscape
- 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.



All images in this catalog are for illustration only

Technical Data

Pressure Rating:
10 bar

Operating Pressure Range:
0.7-10 bar

Materials

Body & Cover:
Polyamide 6 & 30% GF

Diaphragm:
NBR

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

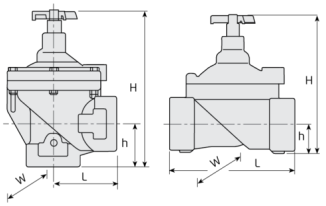
Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

**For other pilots please consult BERMAD*

Technical Specifications

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



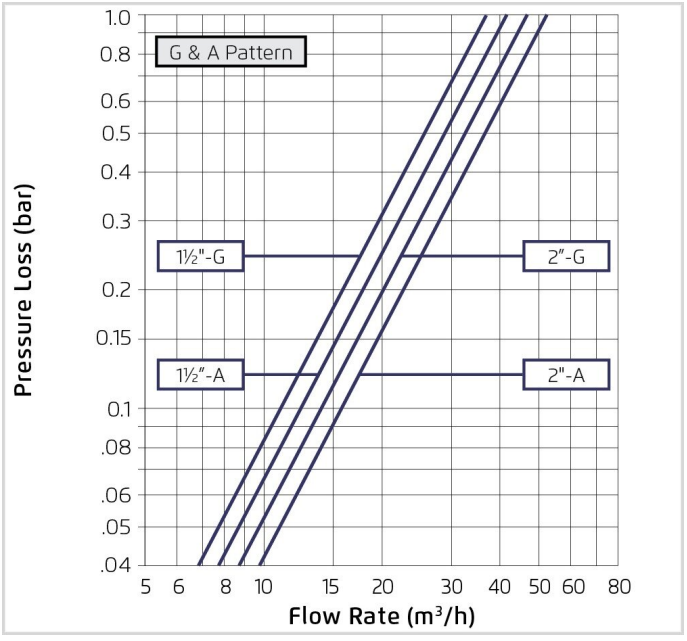
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Globe	Threaded	1	160	180	35	125	0.072	37
1½" ; DN40	Angle	Threaded	0.95	80	190	40	125	0.072	41
2" ; DN50	Globe	Threaded	1.1	170	190	38	125	0.072	47
2" ; DN50	Angle	Threaded	0.91	85	210	60	125	0.072	52

CCDV = Control Chamber Displacement Volume

Additional Features

Code	Description	Size Range
M	Flow Stem	1½"-2" / DN40-50
5	Plastic Test Point	1½"-2" / DN40-50
Z	Manual Selector	1½"-2" / DN40-50

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