



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

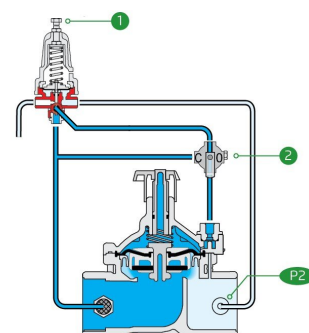
- Line Pressure Drive, Hydraulically Controlled
 - Protects downstream systems
 - Opens fully upon line pressure drop
- Smooth Valve Opening and Closing
 - Accurate and stable regulation
 - Low operating pressure requirements
- Composite Hydro-Efficient Globe Valve
 - Unobstructed flow path
 - Single 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.





Technical Data

Pressure Rating:
150 psi

Operating Pressure Range:
10-150 psi

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

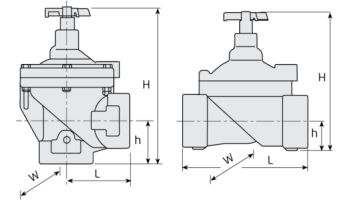
Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

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

Technical Specifications

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



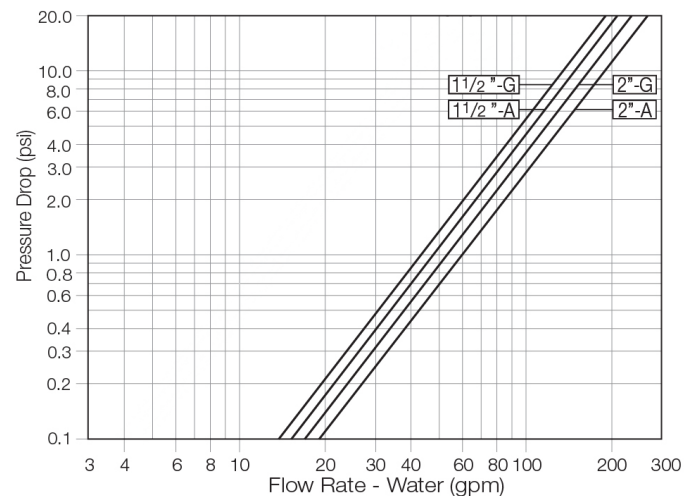
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	Globe	Threaded	2.2	6¾	7½	1¾	5	0.016	43
1½" ; DN40	Angle	Threaded	2.1	3¾	7½	1¾	5	0.016	47
2" ; DN50	Globe	Threaded	2.4	6¾	12¾	1½	5	0.016	54
2" ; DN50	Angle	Threaded	2	3¾	8¾	2¾	5	0.016	60

CCDV = Control Chamber Displacement Volume

Additional Features

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

Flow Chart



Differential Pressure & Flow Calculation

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

Cv = gpm @ ΔP of 1 psi

Q = gpm

ΔP = psi