

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

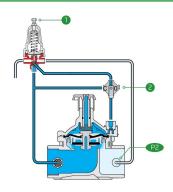
- Line Pressure Drive, Hydraulically Controlled
  - Protects downstream systems
  - Opens fully upon line pressure drop
- Smooth Valve Opening and Closing
  - Accurate and stable regulation
  - Low operating pressure requirements
- Composite Hydro-Efficient Globe Valve
  - Unobstructed flow path
  -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

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:**

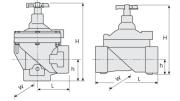
Polyethylene and Polypropylene

\*For other pilots please consult

#### **Technical Specifications**

For other end connection types,

Please refer to **BERMAD** full engineering page.



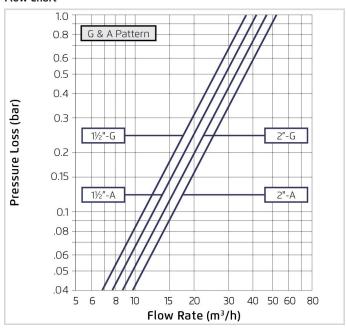
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½"; DN40	Globe	Threaded	1	160	180	35	125	0.072	37
1½"; DN40	Angle	Threaded	0.95	80	190	40	125	0.072	41
2" ; DN50	Globe	Threaded	1.1	170	190	38	125	0.072	47
2"; DN50	Angle	Threaded	0.91	85	210	60	125	0.072	52

**CCDV** = Control Chamber Displacement Volume

#### **Additional Features**

Code	Description	Size Range
М	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**

$$\Delta P = \left(\frac{Q}{Kv}\right)^2$$
  $Kv = m^3/h \otimes \Delta P \text{ of 1 bar}$   
 $Q = m^3/h$   
 $\Delta P = bar$ 



#### www.bermad.com