PRESSURE REDUCING VALVE

Model IR-220-3W-XZ

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.

[1] BERMAD Model IR-220-3W-XZ establishes reduced pressure zone, protecting laterals and distribution line.
[2] BERMAD Kinetic Air Valve Model IR-K10
[3] BERMAD Combination Air Valve Model IR-C10
All images in this catalog are for illustration only

Features & Benefits

- Line Pressure Driven, Hydraulically Controlled
  - Protects downstream systems
  - Opens fully upon line pressure drop
- Smooth valve opening and closing
  - Accurate and stable regulation
  - Low operating pressure requirements
- Plastic Globe Hydro-Efficient 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 performance
  - 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 Stations
- Systems Subject to Varying Supply Pressure
- Landscape
- Energy Saving Irrigation Systems

Operation:

The Pressure Reducing Pilot ❶ 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 ❷ enables local manual closing.
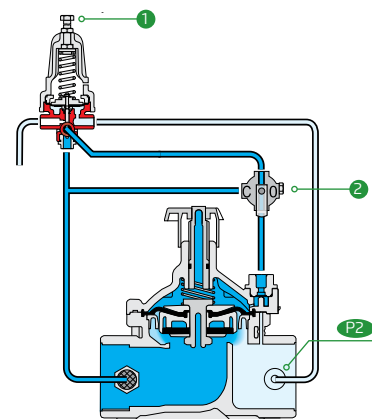
Technical Data

Sizes: 1½-2"; DN40-50
Patterns:
Globe: 1½ & 2"; DN40 & 50
Angle: 1½ & 2"; DN40 & 50
End Connections:
Female Threads BSP; NPT
Pressure Rating:
10 bar; 145 psi

Operating Pressure Range:
0.5-10 bar; 7-145 psi
Setting Range:
1-7 bar; 15-100 psi
Setting ranges vary according to specific pilot spring. Please consult factory

Standard Materials:
Body & Cover:
Black PA6+33%GF
Diaphragm: NBR
Seals: NBR

Spring: Stainless Steel
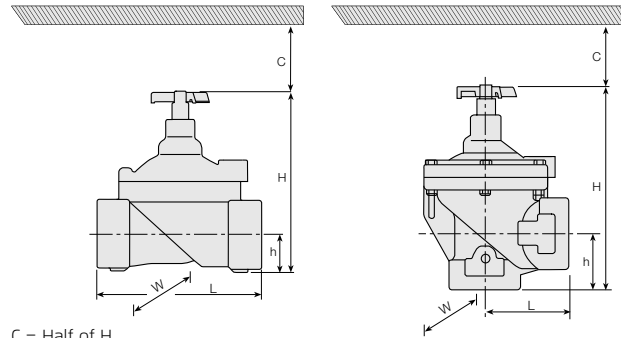**Cover Bolts:** Stainless Steel
Control Accessories: Plastic
Tubing and Fittings: Plastic
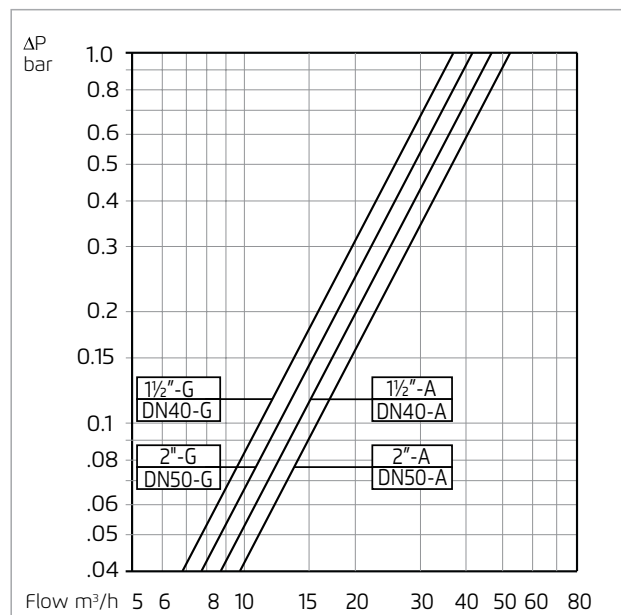
Technical Specifications

Dimensions and Weights

Sizes Inch ; DN	1½" ; 40		2" ; 50	
Pattern	Globe	Angle	Globe	Angle
L (mm)	160	80	170	85
H (mm)	180	190	190	210
W (mm)	125	125	125	125
h (mm)	35	40	38	60
Weight (kg)	1	0.95	1.1	0.91

C = Half of H

Flow Properties

Sizes	Inch DN	G 1½" 40	A 1½" 40	G 2" 50	A 2" 50
KV		37	10.5	41	52

Valve flow coefficient, Kv or Cv

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

Where:

Kv = Valve flow coefficient
Cv = Valve flow coefficient
(flow in gpm at Diff. Press. 1 psi)

Q = Flow rate (m³/h; gpm)
P = Differential pressure (bar; psi)
Cv = 1.155 Kv

Flow Chart