



# TOP PILOT PRESSURE REDUCING VALVE

## Model IR-22T-2W

The BERMAD Top Pilot Pressure Reducing Control valves offer top performance, compact design and intuitive plug & play operation, thanks to an innovative integrated pilot, equipped with a high resolution adjustment dial for easy, quick & accurate calibration. Model IR-22T-2W reduces higher upstream pressure to a calibrated constant downstream pressure, regardless of flow fluctuations; and opens when line pressure drops below setting.

\*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-22T-2W 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

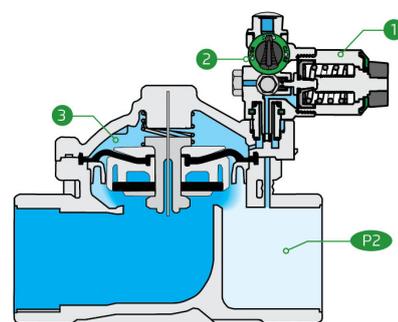
- Line Pressure Driven, Hydraulically Controlled On/Off
  - Protects downstream systems
- 2-Way Integrated Pilot - User Friendly Design
  - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
  - Compact "Box-Size" solution
  - Internal Self-Cleaning control - No external tubes
  - Solenoid control is easily added or removed
- 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

### Typical Applications

- Systems Subject to Varying Supply Pressure
- Plot Valves in Drip & Sprinklers Irrigation Systems
- Energy Saving Irrigation Systems

### Operation:

The Pressure Reducing Pilot [1] restricts, control flow resulting-in valve throttling closed should Downstream Pressure [P2] rise above setting and to open when it drops below setting. The Integrated Trio Selector [2] enables manual closing and opening override or automatic hydraulic control, in which the pilot connects Valve Control Chamber [3] with line pressure to throttle close the valve or vents it through the pilot to open the valve.





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:** Top Pilot

**Pilot Spring Range:**

Spring	Spring Color	Setting range
Black	Black	0.8-6 bar

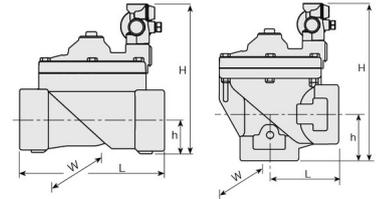
- H2 for bar scale
- J2 for psi scale

**Tubing and Fittings:**

Polyethylene and Polypropylene

Technical Specifications

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



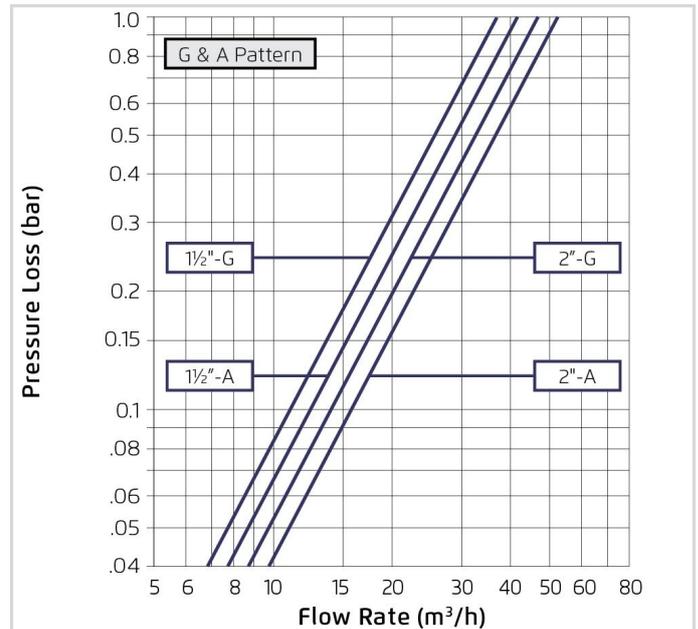
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Globe	Threaded	1.18	160	217	35	148	0.072	37
1½" ; DN40	Angle	Threaded	1.13	80	216	40	148	0.072	41
2" ; DN50	Globe	Threaded	1.28	170	210	38	148	0.072	47
2" ; DN50	Angle	Threaded	1.09	85	236	60	148	0.072	52

CCDV = Control Chamber Displacement Volume

Additional Features

Code	Description	Size Range
5	Plastic Test Point	1½"-2" / DN40-50

Flow Chart



2-Way circuit "Added Head Loss" (for "V" below 2 m/s): 0.3 bar

Differential Pressure & Flow Calculation

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

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