

# PRESSURE REDUCING TOP PILOT VALVE

With Solenoid Control

## Model IR-22T-55-2W

The BERMAD Top Pilot Pressure Reducing Control Valves with solenoid control offer top performance, compact design and intuitive plug-and-play operation, thanks to an innovative integrated pilot, equipped with a high resolution adjustment dial for easy, quick & accurate calibration.

Model IR-22T-55-2W reduces higher upstream pressure to a calibrated constant downstream pressure, regardless of flow fluctuations; and opens when line pressure drops below setting. The valve opens & shuts in response to an electric signal.



**[1]** BERMAD Model IR-22T-55-2W establishes reduced pressure zone, protecting laterals and distribution line.

**[2]** Kinetic Air Valve

**[3]** Combination Air Valve

**[4]** Remote Terminal Unit

### Features and 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 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
- 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

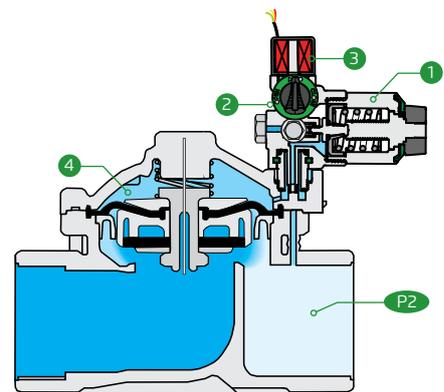
### Typical Applications

- Computerized Irrigation Systems
- 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 electric control, in which the solenoid **3** shuts control flow from the valve control chamber **4** allowing line pressure to shut the valve or vents it through the pilot to open the valve.

All images in this catalog are for illustration only





**IR-22T-55-2W**

### Technical Data

**Pressure Rating:**  
10 bar; 145 psi

**Operating Pressure Range:**  
0.5-10 bar; 7-145 psi

**Setting Range:**  
0.8-6 bar; 12-80 psi

Setting ranges vary according to specific pilot spring. Please consult factory

### Materials:

**Body, Cover and Plug:**  
Polyamid 6 & 30% GF

**Diaphragm:** NBR

**Seals:** NBR

**Spring:** Stainless Steel

**Cover Bolts:** Stainless Steel

### Control Accessories:

**Pilot Spring Range:**

| Dial Code | Spring Color | Adjustment Knob Color | Setting Range |
|-----------|--------------|-----------------------|---------------|
| J2        | Black        | Black                 | 12-80 psi     |
| H2        | Black        | Black                 | 0.8-6.0 bar   |

**Solenoid Voltage Range:**

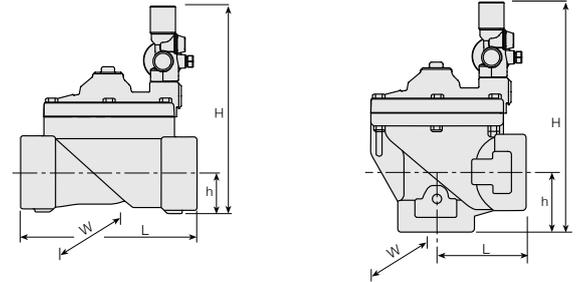
**S-390-T-2W:**  
Continues voltage:  
12VDC, 24VDC, 24VAC

**S-392-T-2W:**  
Latch 9-20VDC

### Technical Specifications

#### Dimensions & Weights

For more details of [BERMAD](#) 200 series Please see our full engineering page.



| Pattern         |   | Globe (G)                       |         | Angle (A)                       |         |
|-----------------|---|---------------------------------|---------|---------------------------------|---------|
| Size Inch ; mm  |   | 1½" ; 40                        | 2" ; 50 | 1½" ; 40                        | 2" ; 50 |
| End Connections |   | Internal Threaded (BSP-T / NPT) |         | Internal Threaded (BSP-T / NPT) |         |
| Length (mm)     | L | 162                             | 171     | 80                              | 85      |
| Height (mm)     | H | 186                             | 193     | 192                             | 212     |
|                 | h | 32                              | 39      | 38                              | 59      |
| Width (mm)      | W | 148                             | 148     | 148                             | 148     |
| CCDV (lit)      |   | 0.072                           |         | 0.072                           |         |
| Weight (Kg)     |   | 1.34                            | 1.44    | 1.29                            | 1.25    |

**CCDV** = Control Chamber Displacement Volume

Other End Connections are available on request. For dimensions and weights of adapters or valve with adapters please consult with customer service

### Flow Properties

| Sizes   | Inch DN | 1½" 40 | 1½" 40 | 2" 50 | 2" 50 |
|---------|---------|--------|--------|-------|-------|
| Pattern |         | G      | A      | G     | A     |
| KV      |         | 37     | 41     | 47    | 52    |

### Valve Flow Coefficient

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

Kv = m<sup>3</sup>/h @ ΔP of 1 bar  
Q = m<sup>3</sup>/h  
ΔP = bar

### Flow Chart

