



# TOP PILOT PRESSURE REDUCING VALVE

## With 3-Way Trio Solenoid Control

### Model IR-22T-55-3W-X-S-390

The BERMAD Top Pilot Pressure Reducing Control Valves with solenoid control 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-55-3W-X reduces higher upstream pressure to a calibrated constant downstream pressure, regardless of flow fluctuations and opens fully when line pressure drops below setting. The valve opens & shuts in response to an electric signal. \*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-55-3W-X establishes reduced pressure zone, protecting laterals and distribution line.

[2] Kinetic Air Valve Model IR-K10

[3] Combination Air Valve Model IR-C10

[4] RTU-Remote Terminal Unit

## Features & Benefits

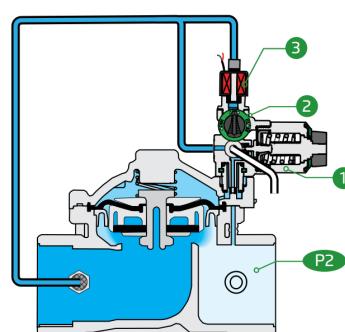
- Line Pressure Driven, Hydraulically Controlled On/Off
  - Protects downstream systems
  - Opens fully upon line pressure drop
- 3-Way Integrated Pilot - User Friendly Design
  - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
  - Compact "Box-Size" solution
  - Solenoid control is easily added or removed
  - Uniquely suitable to all size range up to 3"
- 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

- Automated 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] commands the valve to throttle closed should Downstream Pressure [P2] rise above setting and to open fully when it drops below setting. The Integrated Trio Selector [2] enables manual closing and opening override or automatic operation, in which the solenoid [3] commands the valve to open or close in response to an electric signal.





## 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:** Top Pilot

**Pilot Spring Range:**

Spring	Spring Color	Setting range
Black	Black	12-80 psi

• H2 for bar scale

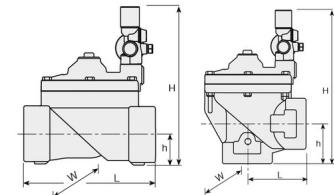
• J2 for psi scale

**Tubing and Fittings:**  
Polyethylene and  
Polypropylene

\*For other solenoids please  
consult [BERMAD](#)

## Technical Specifications

For other end connection types,

Please refer to [BERMAD](#) full engineering page.


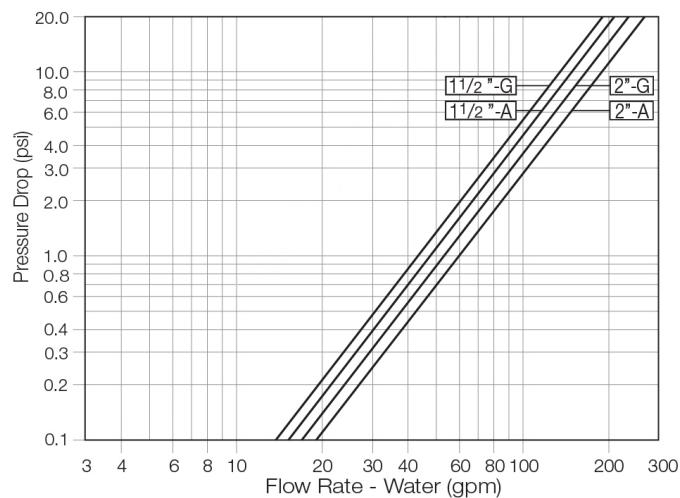
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	Globe	Threaded	2.84	6½	9½	1%	5%	0.016	43
1½" ; DN40	Angle	Threaded	2.73	3½	8½	1%	5%	0.016	47
2" ; DN50	Globe	Threaded	3	6¾	10	1½	5%	0.016	54
2" ; DN50	Angle	Threaded	2.65	3¾	9¾	2¾	5%	0.016	60

CCDV = Control Chamber Displacement Volume

### Additional Features

Code	Description	Size Range
5	Plastic Test Point	1½"-2"
7	½" Anti Vacuum at Valve Downstream	1½"-2"

### Flow Chart



### Differential Pressure & Flow Calculation

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

$Cv$  = gpm @  $\Delta P$  of 1 psi  
 $Q$  = gpm  
 $\Delta P$  = psi