



# TOP PILOT PRESSURE REDUCING VALVE

## With 2-Way Solenoid Control

### Model IR-22T-55-2W-S-392

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-55-2W 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.

\*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-55-2W 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

#### Operation:

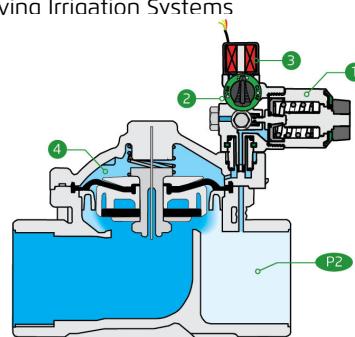
The Pressure Reducing Pilot [1] restricts, control flow resulting in valve throttling closed should Downstream Pressure [P2] rise above setting and to open when it drops below setting. The Integrated Trio Selector [2] enables manual closing and opening override or electric control, in which the solenoid [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.

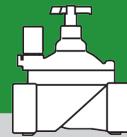
#### Features & Benefits

- 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

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





## 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

**AC solenoid:**  
S-390-T-2W

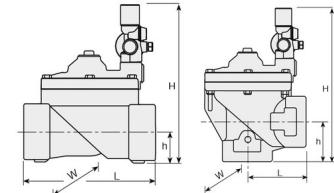
**DC latch solenoid:**  
S-392-T-2W

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

## Technical Specifications

For other end connection types,

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



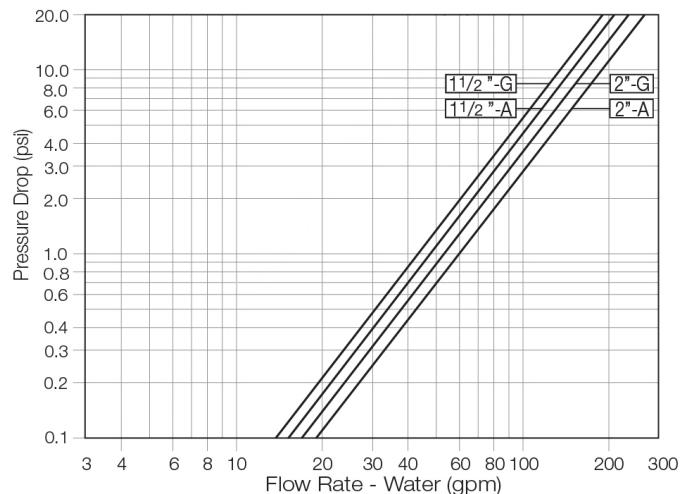
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	Globe	Threaded	2.95	6⅜	7⅜	1⅓	5⅜	0.016	43
1½" ; DN40	Angle	Threaded	2.84	3⅓	7⅜	1⅓	5⅜	0.016	47
2" ; DN50	Globe	Threaded	3.17	6⅔	7⅜	1⅓	5⅜	0.016	54
2" ; DN50	Angle	Threaded	2.75	3⅓	8⅔	2⅓	5⅜	0.016	60

CCDV = Control Chamber Displacement Volume

### Additional Features

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

### Flow Chart



2-Way circuit "Added Head Loss" (for "V" below 6.5 f/s): 4.5 psi

### Differential Pressure & Flow Calculation

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

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

$Q$  = gpm

$\Delta P$  = psi