



# TOP PILOT PRESSURE REDUCING VALVE

## With 3-Way Solenoid Control

### Model IR-12T-55-3W-X-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-12T-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.



- [1] BERMAD Model IR-12T-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

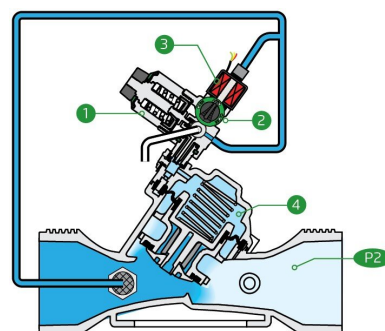
- Line Pressure Driven, Hydraulically Controlled On/Off
  - Protects downstream systems
  - Opens fully upon line pressure drop
- 3-Way Integrated Pilot - User Friendly Design
  - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
  - Compact "Box-Size" solution
  - Solenoid control is easily added or removed
  - Uniquely suitable to all size range up to 3"
- Engineered Composite Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection
  - Highly durable, chemical and cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity at low pressure loss
- Unitized "Flexible Super Travel" (FST) Diaphragm and Guided Plug
  - Accurate and stable regulation with smooth closing
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion

### 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 electric control, in which the solenoid [3] connects valve control chamber [4] with line pressure to shut the valve or vents it through the pilot to open the valve.





## Technical Data

**Pressure Rating:**

150 psi

**Operating Pressure Range:**

7-150 psi

## Materials

**Body & Cover:**

Polyamide 6 & 30% GF

**Diaphragm:**

NR, Nylon fabric reinforced

**Spring:**

## Stainless Steel

## Control Loop Accessories

**PR Pilot:** Top Pilot

**Pilot Spring Range:**

Spring	Spring Color	Setting range
Black	Black	12-80 psi

- $H_2$  for bar scale
- $J_2$  for psi scale

### Tubing and Fittings:

### Polyethylene and Polypropylene

**AC solenoid:**

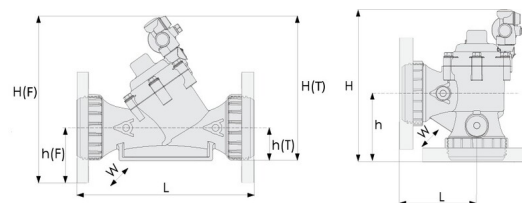
S-390-T-3W

DC latch solenoid:

S-392-T-3W P.B

S-982-3W P.B.

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



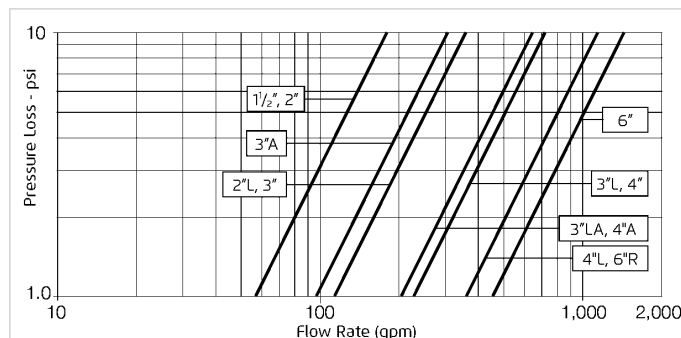
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	Oblique	Threaded	2.9	7%	9%	1%	5%	0.026	58
2" ; DN50	Oblique	Threaded	3	9%	9%	1%	5%	0.026	58
2" L ; DN50L	Oblique	Threaded	4	9%	10%	1%	6	0.033	116
2½" ; DN65	Oblique	Threaded	3	9%	10%	1%	6	0.033	116
2" ; DN50	Angle	Threaded	3	4%	11	4%	5%	0.026	58
3" ; DN80	Oblique	Threaded	4	11%	10%	2%	6	0.033	116
3" ; DN80	Oblique	Plastic Flanges	6	4%	12%	4	7%	0.033	116
3" ; DN80	Oblique	Metal Flanges	10.1	4%	12%	4	7%	0.033	116
3" ; DN80	Angle	Threaded	4	5%	11%	4%	6	0.033	98
3" ; DN80	Angle	Plastic Flanges	6	5½	11%	4%	7%	0.033	98
3" ; DN80	Angle	Metal Flanges	10.1	5½	11%	4%	7%	0.033	98

CCDV = Control Chamber Displacement Volume • **Threaded** = BSP & NPT are available. External thread is available for 2" and 2½" only. • Other End Connections are available on request. For dimensions and weights of adapters or valves with adapters please consult with customer service.

### Additional Features

Code	Description	Size Range
5	Plastic Test Point	1½"-4"
Z	Manual Selector	1½"-4"
V3	Victaulic PVC Adaptors 3"	3"
V4	Victaulic PVC Adaptors 4"	4"

### Flow Chart



### Differential Pressure & Flow Calculation

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

$C_v = \text{gpm @ } \Delta P \text{ of } 1 \text{ psi}$

$$Q = \text{gpm}$$
$$\Delta P = \text{psi}$$