



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:

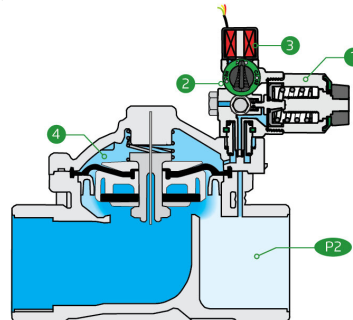
The Pressure Reducing Pilot [1] restricts, control flow resulting-in valve throttling closed should Downstream Pressure [P2] rise above setting and to open when it drops below setting. The Integrated Trio Selector [2] enables manual closing and opening override or electric control, in which the solenoid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





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

AC solenoid:

S-390-T-2W

DC latch solenoid:

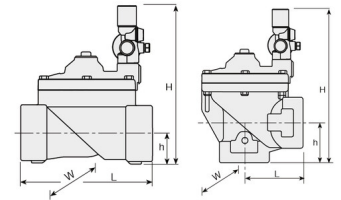
S-392-T-2W

*For other solenoids please consult [BERMAD](http://www.bermad.com)

Technical Specifications

For other end connection types,

Please refer to [BERMAD](http://www.bermad.com) full engineering page.



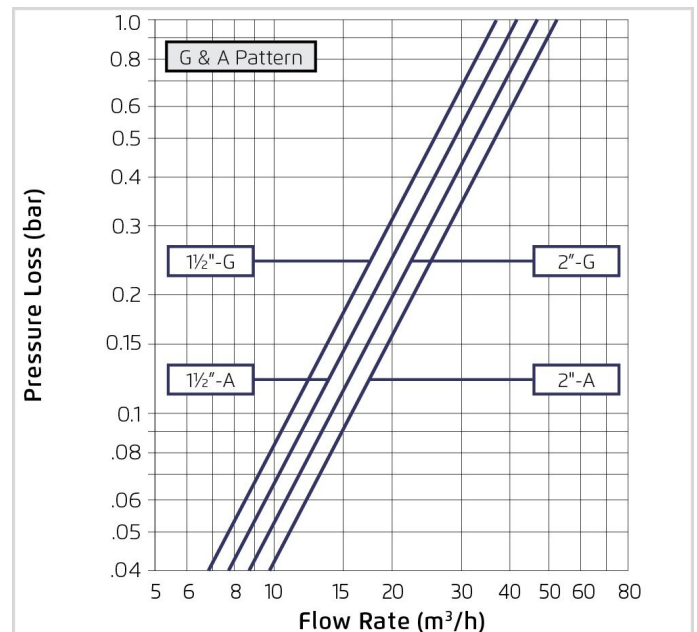
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Globe	Threaded	1.34	162	186	35	148	0.072	37
1½" ; DN40	Angle	Threaded	1.29	80	192	40	148	0.072	41
2" ; DN50	Globe	Threaded	1.44	171	193	38	148	0.072	47
2" ; DN50	Angle	Threaded	1.25	85	212	60	148	0.072	52

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

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

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