



TOP PILOT PRESSURE REDUCING VALVE

With 3-Way Trio Solenoid Control

Model IR-22T-55-3W-X

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

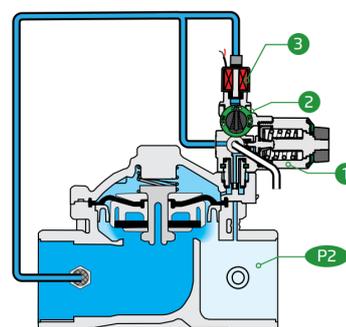
- Line Pressure Driven, Hydraulically Controlled On/Off
 - Protects downstream systems
 - Opens fully upon line pressure drop
- 3-Way Integrated Pilot - User Friendly Design
 - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
 - Compact "Box-Size" solution
 - 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:
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

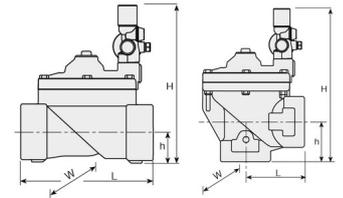
- H2 for bar scale
- J2 for psi scale

Tubing and Fittings:
Polyethylene and Polypropylene

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

Technical Specifications

For other end connection types, Please refer to [BERMAD](#) full engineering page.



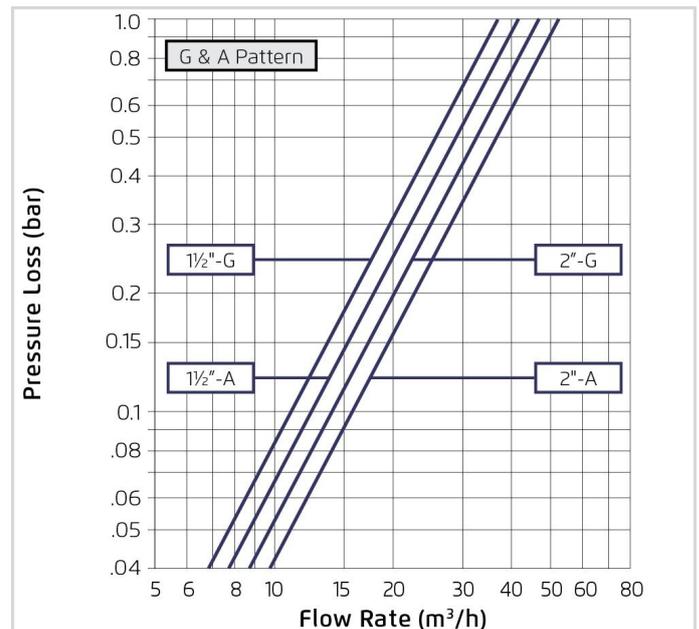
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Globe	Threaded	1.29	160	249	35	148	0.072	37
1½" ; DN40	Angle	Threaded	1.24	80	250	40	148	0.072	41
2" ; DN50	Globe	Threaded	1.39	170	255	38	148	0.072	47
2" ; DN50	Angle	Threaded	1.2	85	274	60	148	0.072	52

CCDV = Control Chamber Displacement Volume

Additional Features

Code	Description	Size Range
5	Plastic Test Point	1½"-2" / DN40-50
7	½" Anti Vacuum at Valve Downstream	1½"-2" / DN40-50

Flow Chart



Differential Pressure & Flow Calculation

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

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