



TOP PILOT PRESSURE REDUCING VALVE

Model IR-22T-3W-X

The BERMAD Top Pilot Pressure Reducing Control valves 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-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. *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-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

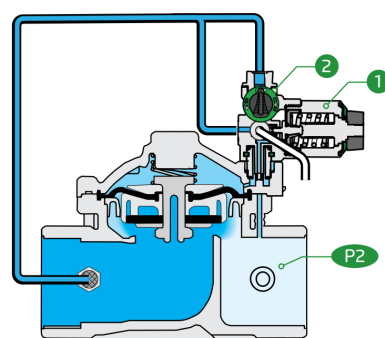
- Line Pressure Driven, Hydraulically Controlled On/Off
 - Protects downstream systems
 - Opens fully upon line pressure drop
- 3-Way Integrated Pilot - User Friendly Design
 - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
 - Compact "Box-Size" solution
 -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

- 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.





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

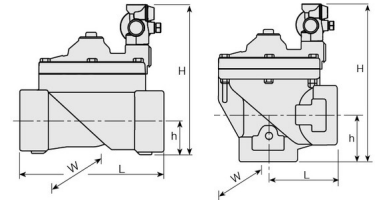
Tubing and Fittings:

Polyethylene and Polypropylene

Technical Specifications

For other end connection types,

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



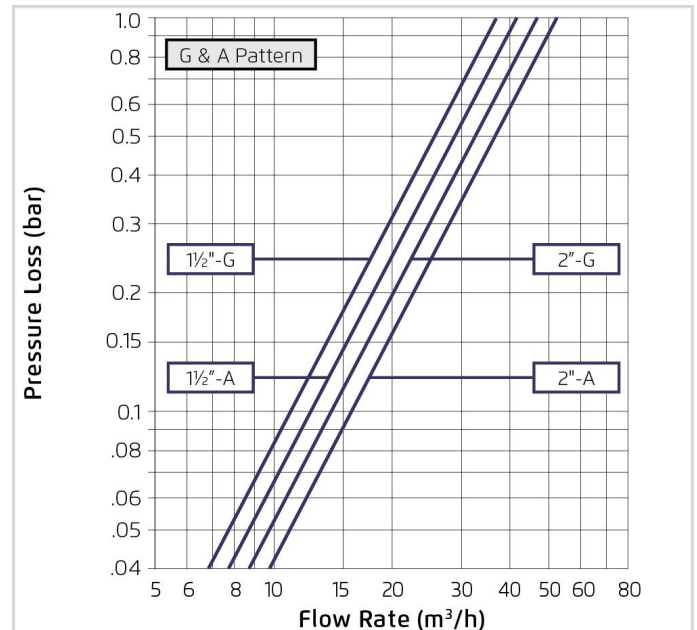
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Globe	Threaded	1.18	160	217	35	148	0.072	37
1½" ; DN40	Angle	Threaded	1.13	80	216	40	148	0.072	41
2" ; DN50	Globe	Threaded	1.28	170	210	38	148	0.072	47
2" ; DN50	Angle	Threaded	1.09	85	236	60	148	0.072	52

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
55	Solenoid Controlled	1½"-2" / DN40-50

Flow Chart



Differential Pressure & Flow Calculation

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

$K_v = m^3/h$ @ ΔP of 1 bar

$Q = m^3/h$

$\Delta P = \text{bar}$