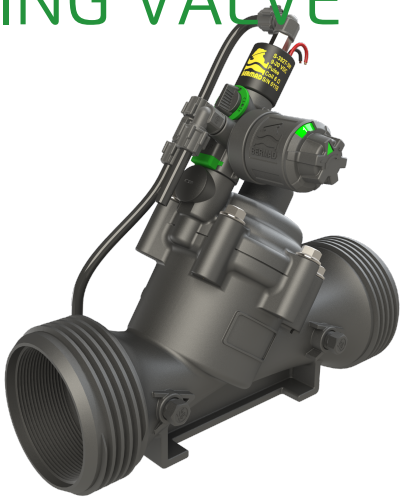
TOP PILOT PRESSURE REDUCING VALVE

Model IR-12T-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-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

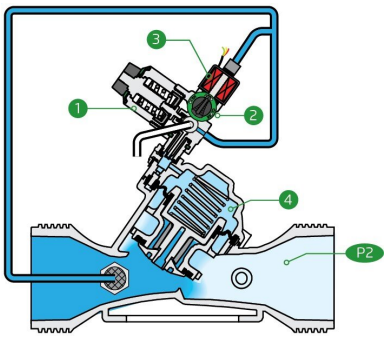
- Line Pressure Driven, Hydraulically Controlled On/Off
  - Protects downstream systems
  - Opens fully upon line pressure drop
- 3-Way Integrated Pilot - User Friendly Design
  - Adjustment knob and high resolution scale for easy calibration without any pressure gauge
  - Compact "Box-Size" solution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



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Technical Data

Pressure Rating:
10 bar

Operating Pressure Range:
0.5-10 bar

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	0.8-6 bar

- *H2 for bar scale*
- *J2 for psi scale*

Tubing and Fittings:
Polyethylene and Polypropylene

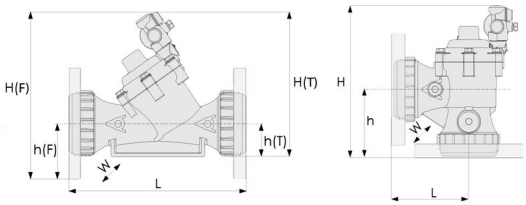
AC solenoid:
S-390-T-3W

DC latch solenoid:
S-392-T-3W P.B
S-982-3W P.B.

**For other solenoids please consult BERMAD*

Technical Specifications

For other patterns and end connection types,
Please refer to BERMAD full engineering page.



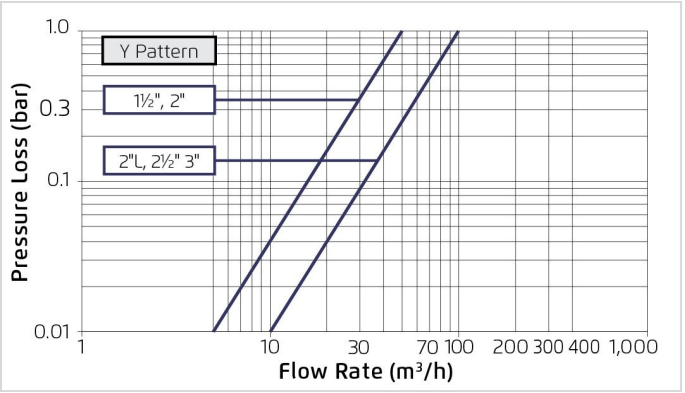
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Oblique	Threaded	1.3	200	238	40	142	0.12	50
2" ; DN50	Oblique	Threaded	1.4	230	238	40	142	0.12	50
2"L ; DN50L	Oblique	Threaded	1.7	230	257	43	152	0.15	100
2½" ; DN65	Oblique	Threaded	1.4	230	257	43	152	0.15	100
2" ; DN50	Angle	Threaded	1.4	115	279	115	142	0.12	50
3" ; DN80	Oblique	Threaded	1.8	298	269	55	152	0.15	100
3" ; DN80	Oblique	Plastic Flanges	2.7	308	314	100	200	0.15	100
3" ; DN80	Oblique	Metal Flanges	4.6	308	314	100	200	0.15	100
3" ; DN80	Angle	Threaded	1.8	133	294	118	152	0.15	85
3" ; DN80	Angle	Plastic Flanges	2.7	138	299	123	200	0.15	85
3" ; DN80	Angle	Metal Flanges	4.6	138	299	123	200	0.15	85

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" / DN40-100
Z	Manual Selector	1½"-4" / DN40-100
V3	Victaulic PVC Adaptors 3"	3" / DN80
V4	Victaulic PVC Adaptors 4"	4" / DN100

Flow Chart



Differential Pressure & Flow Calculation

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

Kv = m³/h @ ΔP of 1 bar
Q = m³/h
ΔP = bar