



PRESSURE SUSTAINING VALVE

Model IR-130-59-3W-X

The BERMAD Model IR-130-59-3W-X is a hydraulically operated, diaphragm actuated control valve designed to maintain proper backwash pressure in filtration systems. During normal irrigation the valve is wide open creating minimal pressure head loss and conserving pumping energy. In response to an electric signal, supplied simultaneously to system flushing command, the IR-130-59-3W-X modulates closed, sustaining minimum preset upstream (back) pressure to filters manufacturer recommendations.



- [1] BERMAD wide open Model IR-130-59-3W-X minimizes pressure loss during irrigation and, in response to an electric signal, sustains filters backwash pressure.
- [2] Kinetic Air Valve Model IR-K10
- [3] Combination Air Valve Model IR-C10
- [4] Electromagnetic Flow Meter
- [5] Pressure Reducing Valve Model IR-120-55-3W-XZ

Features & Benefits

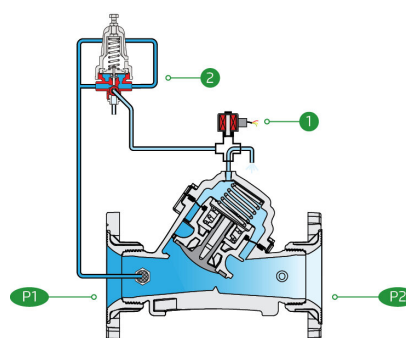
- Hydraulic Valve with Solenoid Control
 - Short response time
 - Maintains low energy system during irrigation
 - Sustains filter station proper backwash pressure
 - Sustains upstream line pressure, controlling system fill up
- Engineered Composite Valve with Industrial Grade Design
 - Adaptable on-site 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
 - Simple in-line inspection and service

Typical Applications

- Disc or Media Filter Station Flush Assist
- Remote and/or Elevated Plots
- Pressure Zone Prioritizing
- Line Fill-Up Control
- Line Emptying Prevention
- Low Supplied Pressure Irrigation Systems
- Large Surface Area Reservoirs
- Low Volume Reservoirs

Operation:

The De-Energized Solenoid [1] drains the main valve control chamber, causing the main valve to open wide, energizing the solenoid activates the Pressure Sustaining Pilot [2], which commands the valve to throttle should Upstream Pressure [P1] drop below pilot setting, and to modulate open when [P1] rises above it.





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

PS Pilot: PC-SHARP-X-P

Pilot Spring Range:

Spring	Spring Color	Setting range
J	Green	0.2-1.7 bar
K	Gray	0.5-3.0 bar
N	Natural	0.8-6.5 bar
V	Blue & White	1.0-10.0 bar

Standard spring - marked in bold

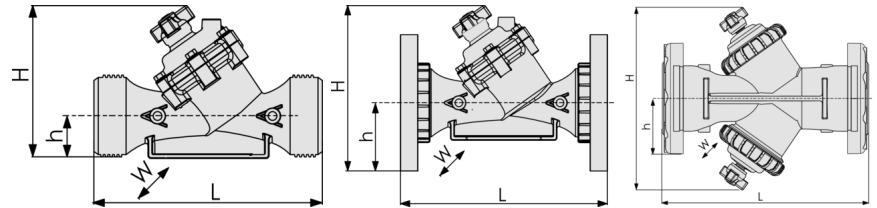
Tubing and Fittings:

Polyethylene and Polypropylene

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

Technical Specifications

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



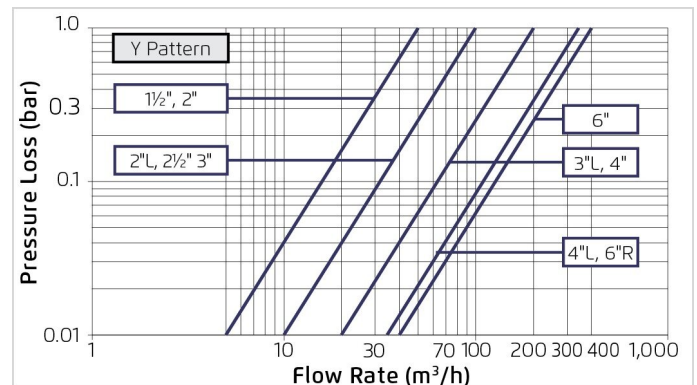
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Oblique	Threaded	1.1	200	173	40	97	0.12	50
2" ; DN50	Oblique	Threaded	1.2	230	173	40	97	0.12	50
2"L ; DN50L	Oblique	Threaded	1.5	230	187	43	135	0.15	100
2½" ; DN65	Oblique	Threaded	1.5	230	187	43	135	0.15	100
3" ; DN80	Oblique	Threaded	1.6	298	199	55	135	0.15	100
3" ; DN80	Oblique	Plastic Flanges	2.5	308	244	100	200	0.15	100
3" ; DN80	Oblique	Metal Flanges	4.4	308	244	100	200	0.15	100
3"L ; DN80L	Oblique	Threaded	3	298	278	60	168	0.62	200
3"L ; DN80L	Oblique	Plastic Flanges	3.7	308	317	100	200	0.62	200
3"L ; DN80L	Oblique	Metal Flanges	4.6	308	317	100	200	0.62	200
4" ; DN100	Oblique	Plastic Flanges	4.6	350	329	112	224	0.62	200
4" ; DN100	Oblique	Metal Flanges	7.4	350	329	112	224	0.62	200
4"L ; DN100L	Oblique	Plastic Flanges	9.2	442	340	112	226	1.15	340
4"L ; DN100L	Oblique	Metal Flanges	11.2	442	340	112	226	1.15	340
6"R ; DN150R	Oblique	Metal Flanges	16.5	470	377	149	287	1.15	340
6" ; DN150	Boxer	Grooved	11	480	387	100	475	2x0.62	400
6" ; DN150	Boxer	Plastic Flanges	12.5	504	387	143	475	2x0.62	400

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
M	Flow Stem (*Exclude sizes 4"L, 6"R)	1½"-6" / DN40-150
S	Plastic Test Point	1½"-4" / DN40-100
Z	Manual Selector	1½"-4"L / DN40-100L
V3	Victaulic PVC Adaptors 3"	3" / DN80
V4	Victaulic PVC Adaptors 4"	4" / DN100

Flow Chart



Differential Pressure & Flow Calculation

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

$K_v = m^3/h$ @ ΔP of 1 bar

$Q = m^3/h$

$\Delta P = \text{bar}$