

PRESSURE SUSTAINING VALVE - DOUBLE CHAMBER

Model IR-130-DC-3W-XZ

The BERMAD Model IR-130-DC-3W-XZ Pressure Sustaining Valve is a double chambered, hydraulically operated, diaphragm actuated control valve that sustains minimum preset upstream (back) pressure and opens fully when line pressure is in excess of setting. The Double Chamber Valve is a high performance valve, specially designed for quick response and challenging regulation requirements.



[1] BERMAD Model IR-130-DC-3W-XZ sustains supply system pressure to prioritize uphill plots and prevent system emptying.

[2] Solenoid Control Valves Model IR-21T

[3] Combination Air Valve Model IR-C10

[4] Kinetic Air Valve Model IR-K10

[5] RTU-Remote Terminal Unit

Features & Benefits

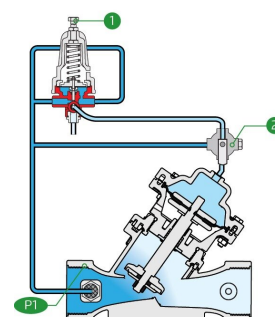
- Line Pressure Driven, Hydraulically Controlled
 - Prioritizes pressure zones
 - Controls system fill-up
 - Opens fully upon line pressure rise
- Double Chamber Design
 - Full powered opening and closing
 - Decreased pressure loss
 - Low throttling noise
 - Non-slam closing characteristic
 - Protected diaphragm
- Engineered Composite Valve with Industrial Grade Design
- hYflow 'Y' Valve Body with "Look Through" Design
 - Ultra-high flow capacity at low pressure loss
- User-Friendly Design
 - Simple in-line inspection and service

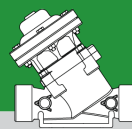
Typical Applications

- Line Fill-Up Control Solutions
- Line Emptying Prevention
- Systems Subject to Varying Supply Pressure
- Infield Filters Backwash Pressure Sustaining
- Energy Saving Irrigation Systems

Operation:

The Pressure Sustaining Pilot **[1]** commands the main valve to throttle closed should Upstream Pressure **[P1]** drop below setting, and to open fully when **[P1]** rises above setting. The Manual Selector **[2]** enables local manual closing.





Technical Data

Pressure Rating:
150 psi

Operating Pressure Range:
7-150 psi

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	3-25 psi
K	Gray	7-43 psi
N	Natural	12-95 psi
V	Blue & White	15-150 psi

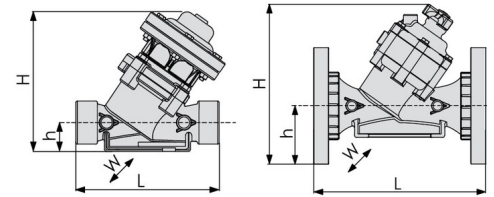
Standard spring - marked in bold

Tubing and Fittings:
Polyethylene and Polypropylene

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

Technical Specifications

For other patterns and end connection types,
Please refer to [BERMAD](http://www.bermad.com) full engineering page.



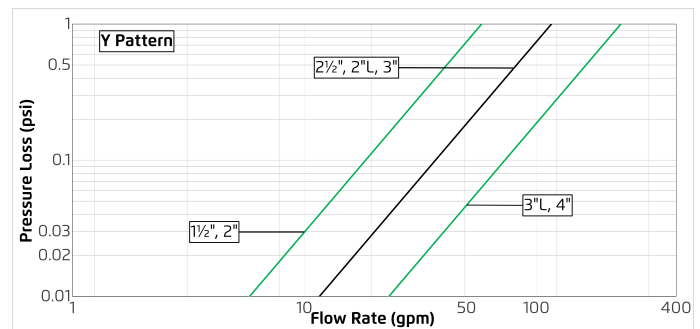
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1½" ; DN40	"Y" (globe)	Threaded	4	7⅞	7⅞	1⅞	5	0.034	58
2" ; DN50	"Y" (globe)	Threaded	4	9⅞	7⅞	1⅞	5	0.034	58
2"L ; DN50L	"Y" (globe)	Threaded	4.9	9⅞	8⅞	1⅞	5⅞	0.045	116
2½" ; DN50L	"Y" (globe)	Threaded	4.9	9⅞	8⅞	1⅞	5⅞	0.045	116
3" ; DN80	"Y" (globe)	Threaded	5	11⅞	9⅞	2⅞	5⅞	0.045	116
3" ; DN80	"Y" (globe)	Plastic Flanges	7.1	12⅞	11	4	7⅞	0.045	116
3" ; DN80	"Y" (globe)	Metal Flanges	11	12⅞	11	4	7⅞	0.045	116
3"L ; DN80L	"Y" (globe)	Threaded	13.1	13⅞	14	2⅞	8⅞	0.15	231
3"L ; DN80L	"Y" (globe)	Plastic Flanges	14.3	13⅞	15⅞	4	8⅞	0.15	231
3"L ; DN80L	"Y" (globe)	Metal Flanges	16.3	13⅞	15⅞	4	8⅞	0.15	231
4" ; DN100	"Y" (globe)	Plastic Flanges	16.8	14⅞	16	4⅞	8⅞	0.15	231
4" ; DN100	"Y" (globe)	Metal Flanges	21	14⅞	16	4⅞	8⅞	0.15	231

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
K/L	Auxiliary Closing / Lifting Spring (for 100-DC models only)	1½"-4"
5	Plastic Test Point	1½"-4"

Flow Chart



Differential Pressure & Flow Calculation

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

Cv = gpm @ ΔP of 1 psi
Q = gpm
ΔP = psi