

## Pressure Reducing and Sustaining Valve

with Solenoid Control

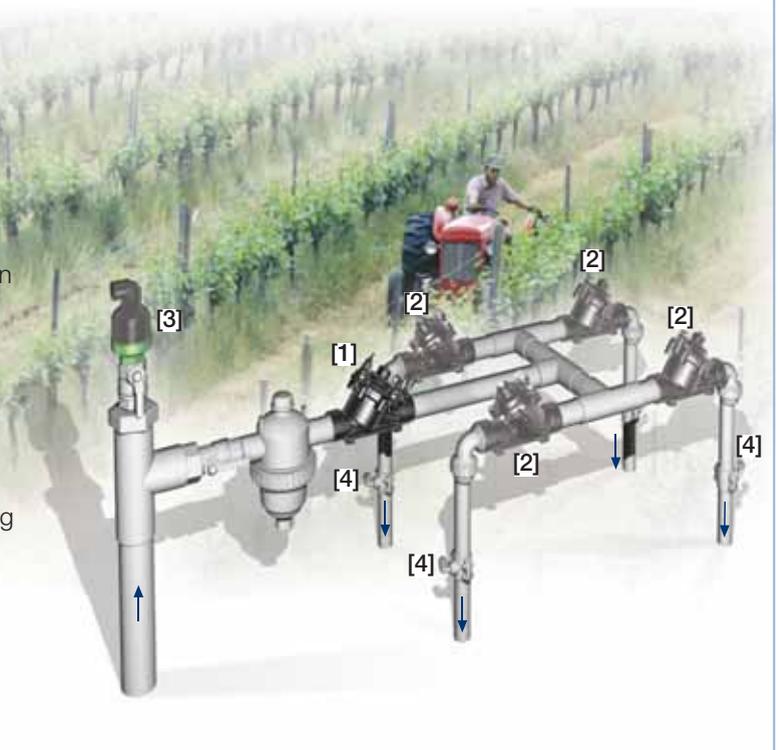
**IR-123-55-X**

The BERMAD Model IR-123-55-X is a hydraulically operated, diaphragm actuated control valve that sustains minimum preset upstream (back) pressure and reduces downstream pressure to a constant preset maximum. It either opens or shuts in response to an electric signal.



### Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
  - Protects downstream system
  - Prioritizes pressure zones
  - controls system fill-up
  - Sustains upstream line pressure
- Engineered Plastic Valve with Industrial Grade Design
  - Highly durable, chemical and cavitation resistant
  - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity – Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug
  - Accurate and stable regulation with smooth closing
  - Requires low opening and actuation pressure
  - Prevents diaphragm erosion and distortion
- User-Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service

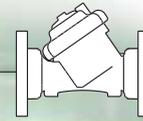


### Typical Applications

- Computerized Irrigation Systems
- Line Fill-Up Control Solutions
- Pressure Reducing Systems
- Remote and/or Elevated Plots
- Infield Filter Backwash Pressure Sustaining
- Energy Saving Irrigation Systems

- [1] BERMAD Model IR-123-55-X opens in response to electric signal, sustains supply pressure, controls laterals and distribution line fill-up, and reduces their operating pressure.
- [2] BERMAD Solenoid Controlled Valve Model IR-110-N1-2W
- [3] BERMAD Air Valve Model ARA-A-P-P
- [4] BERMAD Vacuum Breaker Model 1/2" -ARV

# BERMAD Irrigation



## IR-I23-55-X

For full technical details, refer to Engineering Section.

## 100 Series hYflow

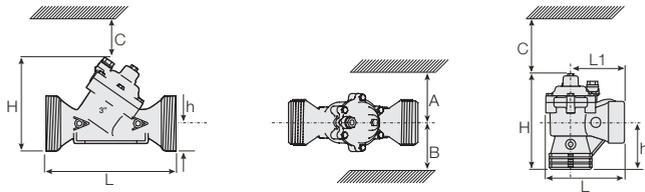
Pressure Reducing & Sustaining

### Technical Specifications

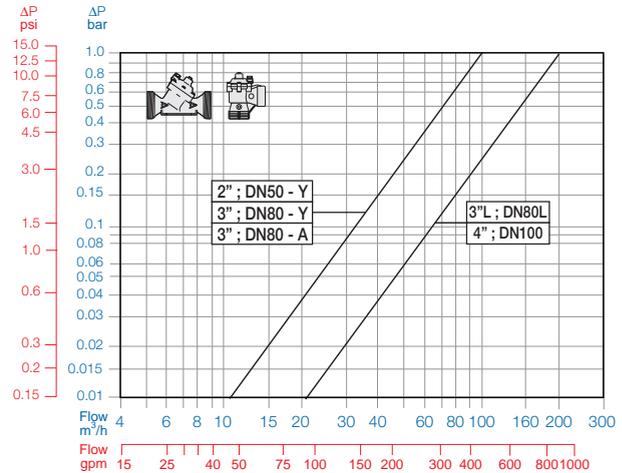
#### Dimensions and Weights

Pattern	DN Inch	Angle		Y (Oblique)			
		80-T 3-T	50-T 2-T	65-T* 2 1/2-T*	80-T 3-T	80L-T 3L-T	
L (L1)	mm	187 (130)	230	230	298	300	
	inch	7.4 (5.1)	9.1	9.1	11.7	11.8	
H (Hf)	mm	235 (245)	170 (185)	170 (185)	180 (195)	240	
	inch	9.3 (9.6)	6.7 (7.3)	6.7 (7.3)	7.1 (7.7)	9.5	
C	mm	53	140	140	140	180	
	inch	2.1	6	6	6	8	
h	mm	117	40	40	50	60	
	inch	4.6	1.6	1.6	2.0	2.4	
A; B	mm	320	135	135	190	190	
	inch	12.6	6	6	8	8	
Weight	Kg	1.6	1.35	1.4	1.6	3.0	
	lb.	3.5	3.0	3.1	3.5	6.6	

\* 2 1/2"; DN65 Male Thread BSP-F, for PVC glue Unions.



#### Flow Chart



### Technical Data

#### Valve Configurations & Size:

Oblique: 2, 2 1/2, 3, 3L, 4 & 6"; DN50, 65, 80, 80L, 100 & 150

Angle: 3"; DN80

#### End Connections:

Threaded: 2, 2 1/2, 3 & 3"L; DN50, 65, 80 & 80L

Flanged: 3, 3L, 4, & 6"; DN80, 80L, 100 & 150

Grooved: 6"; DN150

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.35-10 bar; 5-145 psi

Setting Range: 1-7 bar; 15-100 psi

Setting ranges vary according to specific pilot spring. Please consult factory.

#### Solenoid Voltage Range:

S-390 & S-400: 24 VAC, 24 VDC

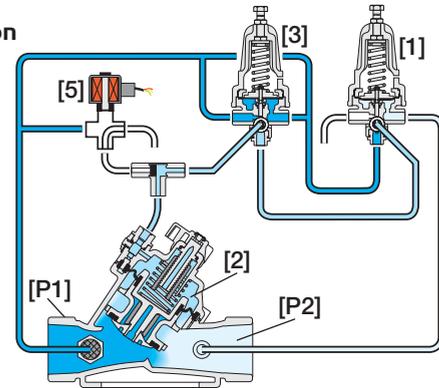
S-392 & S-402: 9-20 VDC, Latch

S-982 & S-985: 12-50 VDC, Latch

Other voltages available

For full electric data, refer to Accessories Section.

#### Operation



The Pressure Reducing Pilot (PRP) [1] is hydraulically connected to the Valve Control Chamber [2] through the Pressure Sustaining Pilot (PSP) [3] and the Shuttle Valve [4]. The PSP commands the Valve to throttle closed should Upstream Pressure [P1] drop below setting. When [P1] rises above setting, the PSP switches and allows the PRP to control the Valve, commanding it to reduce Downstream Pressure [P2]. In response to an electric signal, the Solenoid [5] switches and pressurizes the shuttle valve, which then blocks the pilots and transmits the line pressure into the control chamber, shutting the Valve.

### How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage - Main Valve Position	Additional Attributes
IR	3-4"	123	55	Y	P	BP	3W	4AC	X
<p>Other sizes available on request.</p> <p>Oblique Y Angle (3"; DN 80 Only) A</p> <p>BSP BSP-F (Male Threads 2 1/2"; DN65 only) NPT Plastic Flanges* Metal Flanges* ("Corona") Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D</p> <p>BP BS NP FF CC</p> <p>9VDC - 12VDC - 24VDC - 24VDC - 24VAC - 24VAC - 24VAC - 24VAC, Lightning Proof - N.C. 24VAC, Lightning Proof - N.O.</p> <p>Latch 9DS Latch 1DS N.C. 4DC N.O. 4DC N.C. 4AC N.O. 4AO N.C. 4RC N.O. 4RO</p> <p>3-Way Control Low Preset Pressure (below 2 bar) Plastic Pressure Test Point Other attributes available on request</p> <p>X 2 5</p>									

Other electrical ratings available on request.



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