

## Solenoid Controlled Valve

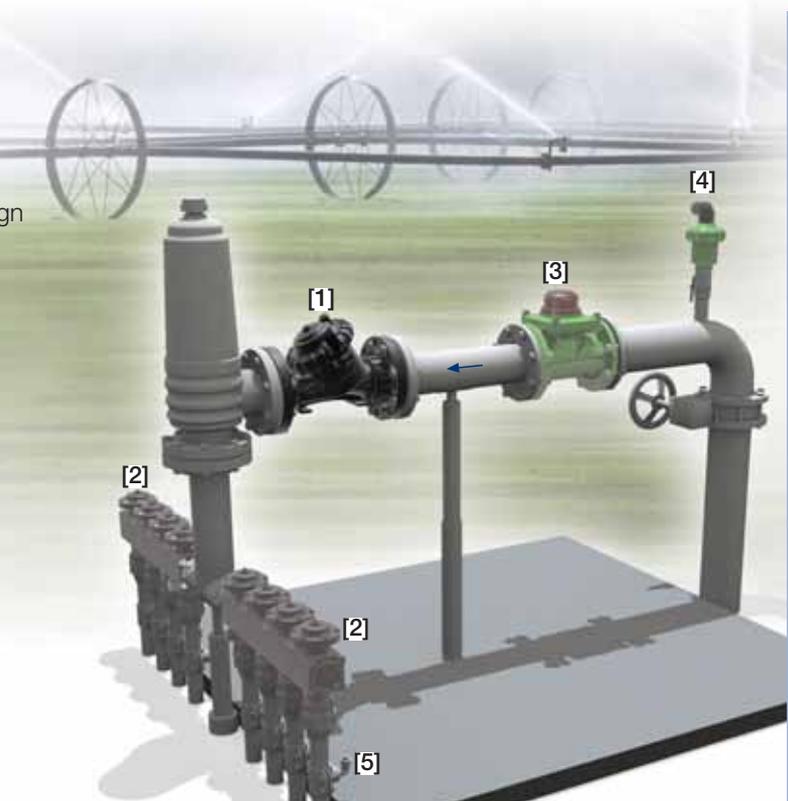
**IR-110-X**

The BERMAD Solenoid Controlled Valve is a hydraulically operated, diaphragm actuated control valve that opens and shuts in response to an electric signal.



### Features and Benefits

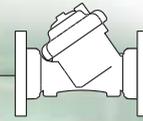
- Hydraulic Control Valve with Solenoid Control
  - Line pressure driven
  - Electrically controlled On/Off
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Articulated flange connections eliminate mechanical and hydraulic stresses
  - Highly durable, chemical and cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity - Low pressure loss
- Unitized "Flexible Super Travel" (FST) Diaphragm and Guided Plug
  - Smooth closing
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion
- User-friendly Design
  - Simple in-line inspection and service



### Typical Applications

- Computerized Irrigation Systems
- Remote and/or Elevated Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy saving Irrigation Systems

- [1] BERMAD Model IR-110-X opens in response to an electric signal.
- [2] BERMAD Manifold Valve Model IR-MVS-30540-KIT
- [3] BERMAD Water Meter Model WPH
- [4] BERMAD Air Valve Model ARC-A-P-I
- [5] BERMAD Vacuum Breaker Model 1/2" ARV



### IR-110-X

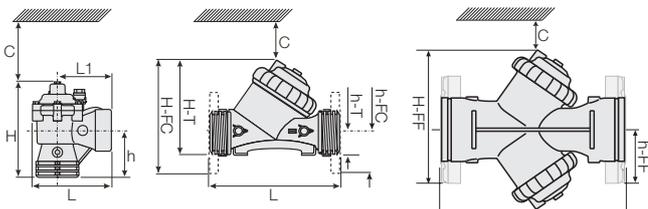
For full technical details, refer to Engineering Section.

## Technical Specifications

### Dimensions and Weights

Pattern	Angle	Y (Oblique)						Y "Boxer"
		80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-FC <sup>(2)</sup> 3-FC <sup>(2)</sup>	80L-FC <sup>(2)</sup> 3L-FC <sup>(2)</sup>	100-FC <sup>(2)</sup> 4-FC <sup>(2)</sup>	150-FF <sup>(3)</sup> 6-FF <sup>(3)</sup>	
L (L1)	mm	187 (130)	298	308	310	350	480	
	inch	7.4 (5.1)	11.7	12.1	12.2	13.8	18.9	
H (Hf)	mm	235 (245)	180 (195)	240 (255)	280	294	285	
	inch	9.3 (9.6)	7.1 (7.7)	9.4 (10)	11	11.6	11.2	
C	mm	53	53	600	600	600	600	
	inch	2.1	2.1	4	4	23.6	23.6	
h	mm	117	50	100	100	112	145	
	inch	4.6	2	3.9	3.9	4.4	5.7	
Weight	Kg	1.6	1.6	4.4	5.9	7.6	12.5	
	lb.	3.5	3.5	9.7	13	16.7	27.6	

(1) "T" = Threaded end connections  
 (2) "FC" = Flanged, Corona (Metal) end connections  
 (3) "FF" = Flanged, Universal Plastic end connections



## Technical Data

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

**Patterns:**

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

Angle: 3"; DN80

**End Connections:**

Threaded: 3 & 3"L; DN80 & 80L

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

**Pressure Rating:** 10 bar; 145 psi

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

**Materials:**

**Body, Cover and Plug:** Glass-Filled Nylon

**Diaphragm:** NR, Nylon fabric reinforced

**Seals:** NR

**Spring:** Stainless Steel

**Control Accessories:** Plastic

**Tubing and Fittings:** Plastic

**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

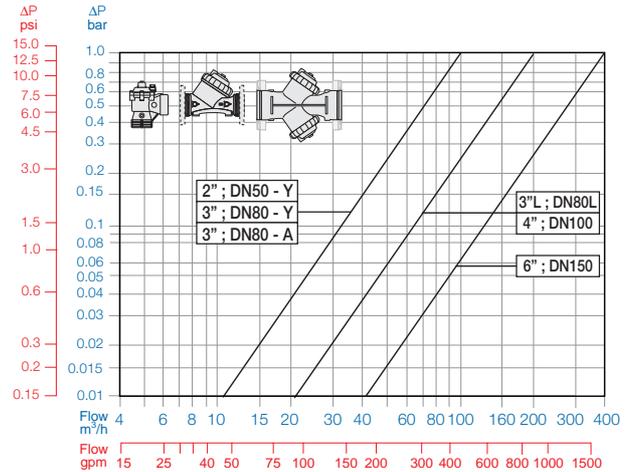
## How to Order

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

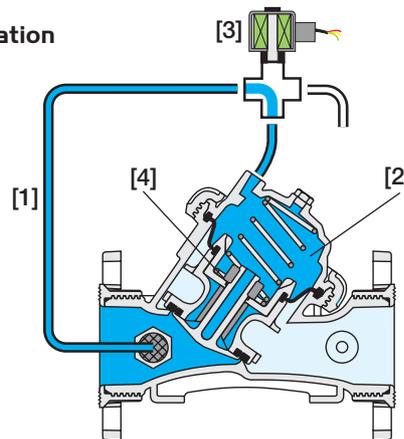
Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	3-6" <small>Other sizes available on request.</small>	110	00	Y	P	FF	3W	A4C	X
		Y A	Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona") Grooved (6"; DN150 Only)	BP NP FF CC VI	9VDC - 12VDC - 24VDC - 24VDC - 24VDC - 24VAC - 24VAC - 24VAC, Lightning Proof - 24VAC, Lightning Proof -	Latch Latch N.C. N.O. N.C. N.O. N.C. N.O.	9DS 1DS 4DC 4DC 4AC 4AO 4RC 4RO	3-Way Control  Other attributes available on request	X

\* Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D

## Flow Chart



## Operation



Line Pressure [1] is applied to the Control Chamber [2] through the opened 3-Way Solenoid [3]. This creates superior closing force that moves the Diaphragm Assembly [4] toward a closed position. Closing the solenoid causes it to discharge pressure from the control chamber, thereby opening the valve.

