

Solenoid Controlled Valve

with 2-Way Internal Controls

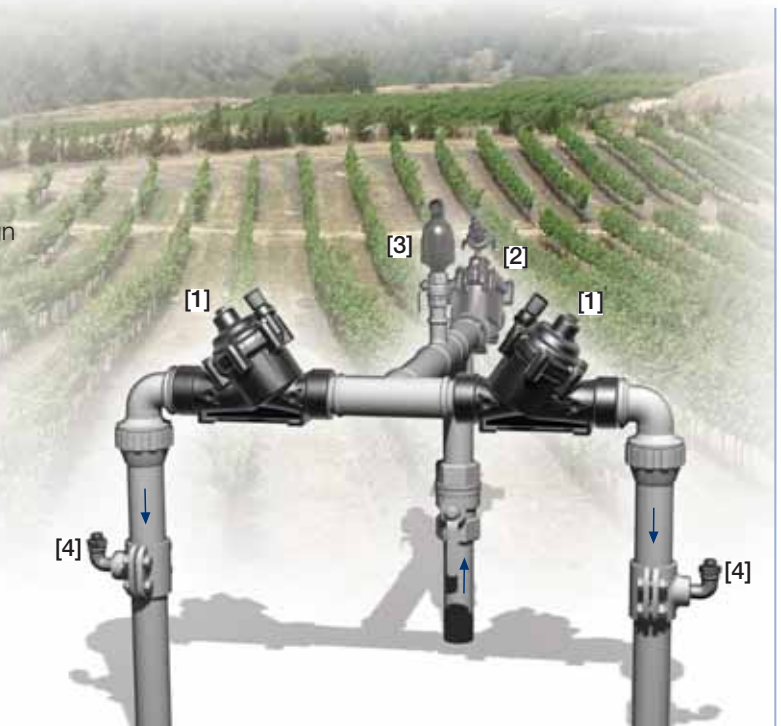
IR-110-NI-2W

The BERMAD 2-Way Solenoid Controlled Valve is a hydraulically operated, diaphragm actuated control valve with internal hydraulic Feed & Bleed control loop. The BERMAD Model IR-110-N1-2W opens and closes drip-tight in response to an electric signal, which causes the solenoid to open or close the valve's internal hydraulic loop.



Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
- Internal Hydraulic Feed & Bleed Loop
 - Self cleaning internal control strainer
 - No tubing and fittings
- 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
 - Smooth closing
 - Requires low opening and actuation pressure
 - Prevents diaphragm erosion and distortion
- Simple In-Line Inspection and Service

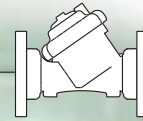


Typical Applications

- Computerized Irrigation Systems
- Remote/Elevated Systems
- Turf & Buried Pipe Applications
- Industrial Greenhouse Irrigation
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

- [1] BERMAD Models IR-110-N1-2W open in response to electric signals.
- [2] BERMAD Relief Valve Model IR-13Q
- [3] BERMAD Air Valve Model ARA-A-P-P
- [4] BERMAD Vacuum Breaker Model 1/2"-ARV

BERMAD Irrigation



IR-I10-NI-2W

For full technical details, refer to Engineering Section.

100 Series hYflow

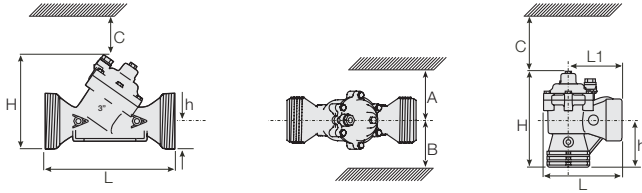
On/Off Control

Technical Specifications

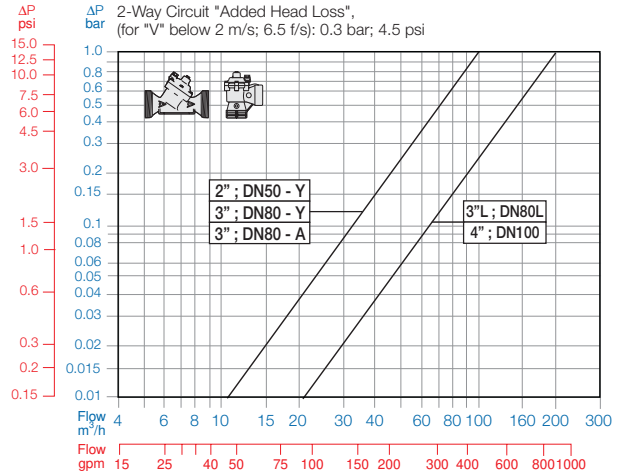
Dimensions and Weights

| Pattern Size | Angle DN Inch | 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

Materials:

Body, Cover and Plug: Glass-Filled Nylon

Diaphragm: NR, Nylon Fabric Reinforced

Seals: NR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

Control Accessories: Plastic

Tubing and Fittings: Plastic

Solenoid Voltage Range:

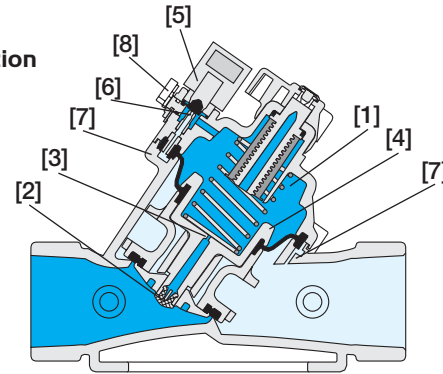
S-390: 24 VAC, 24 VDC

S-392: 9-20 VDC, Latch

Other voltages available.

For full electric data, refer to Accessories Section.

Operation



Line Pressure is applied to the Control Chamber [1] through the Internal Strainer [2] and the Orifice [3]. This creates superior closing force that moves the Diaphragm Assembly [4] to a closed position. Opening the Solenoid [5] releases the accumulated pressure from the control chamber, through the Solenoid Seat [6] and the Internal Passage [7] to the downstream, thereby opening the main Valve. The Override Handle [8] enables manual opening.

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 | 2-4" <small>Other sizes available on request.</small> | 110 | N1 | Y | P | BP | 2W | 4AC | - |
| Oblique Angle (3"; DN 80 Only) | | Y A | 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 | BP BS NP FF CC | 9VDC - Latch 24VDC - N.C. 24VAC - N.C. | 9DS 4DC 4AC | Low Preset Pressure (below 2 bar) Plastic Pressure Test Point Other attributes available on request | 2 5 | |

Other electrical ratings available on request.



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