



# SOLENOID CONTROLLED VALVE

## With 2-Way Internal Control & Trio Solenoid

### Model IR-11T-N5-2W

The BERMAD 2-Way Solenoid Controlled Valve is a hydraulically operated, diaphragm actuated control valve with external feed & internal bleed control loop. The BERMAD Model IR-11T-N5-2W 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.



[1] The BERMAD Model IR-11T-N5-2W 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 & Benefits

- Hydraulic Control Valve
  - Line pressure driven
  - Hydraulically controlled On/Off
- 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

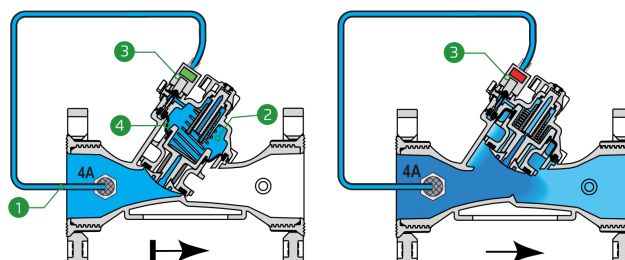
### Typical Applications

- Automated Irrigation Systems
- Greenhouses Irrigation
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems
- Landscape - Municipal & Domestic
- Turf-Golf Courses & Stadiums

### Operation:

**Closed Position:** Line Pressure [1] is applied to the Control Chamber [2] through the opened 3-Way Solenoid actuator [3]. This creates superior closing force that moves the Diaphragm Assembly [4] toward a closed position.

**Opened Position:** Electric command to the solenoid causes it to switch position, discharging pressure from the control chamber Through internal passage in the valve and thereby opening the valve.





## Technical Data

### Pressure Rating:

10 bar

### Operating Pressure Range:

0.5-10 bar

### Materials

#### Body & Cover:

Polyamide 6 &amp; 30% GF

#### Diaphragm:

NR, Nylon fabric reinforced

#### Spring:

Stainless Steel

### Control Loop Accessories

#### Tubing and Fittings:

Polyethylene and  
Polypropylene

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

#### AC solenoid:

S-390-T-2W

#### DC solenoid:

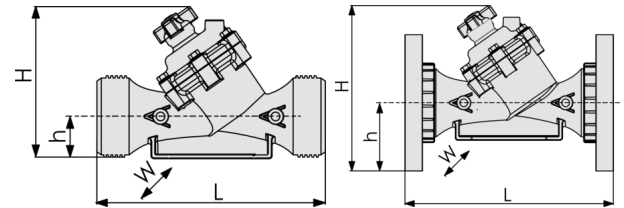
S-390-T-2W

#### DC latch solenoid:

S-392-T-2W

## Technical Specifications

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



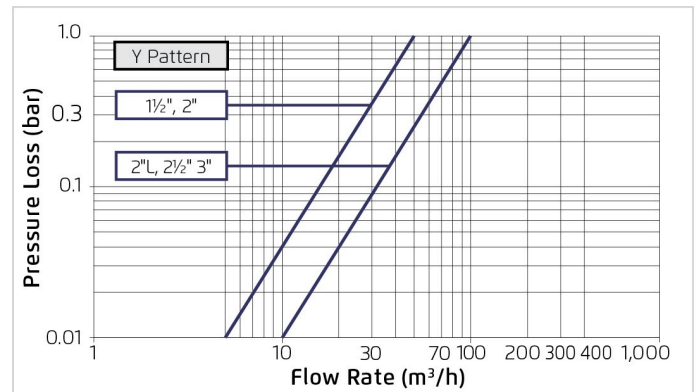
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1½" ; DN40	Oblique	Threaded	1.1	200	173	40	97	0.12	50
2" ; DN50	Oblique	Threaded	1.2	230	173	40	97	0.12	50
2"L ; DN50L	Oblique	Threaded	1.5	230	187	43	135	0.15	100
2½" ; DN65	Oblique	Threaded	1.5	230	187	43	135	0.15	100
3" ; 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

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	2½"-3" / DN65-80
V3	Victaulic PVC Adaptors 3"	3" / DN80
V4	Victaulic PVC Adaptors 4"	4" / DN100

### Flow Chart



2-Way circuit "Added Head Loss" (for "V" below 2 m/s): 0.3 bar

### Differential Pressure & Flow Calculation

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

$K_v = \text{m}^3/\text{h} @ \Delta P \text{ of } 1 \text{ bar}$   
 $Q = \text{m}^3/\text{h}$   
 $\Delta P = \text{bar}$