



# 3W SOLENOID CONTROLLED VALVE

## Model IR-210-3W-X

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



- [1] BERMAD Model IR-210-3W-X opens in response to electric signal.
- [2] BERMAD Ultrasonic Water Meter
- [3] BERMAD Combination Air Valve Model IR-C10
- [4] BERMAD Vacuum Breaker
- [5] RTU

### Features & Benefits

- Line Pressure Driven, Hydraulically Controlled
  - Hydraulically control Valve with Solenoid Control
  - Line pressure driven
  - Electrically controlled On/Off
  - Suitable also for remote and/or elevated systems
- Plastic Globe Hydro-Efficient Valve
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
  - Highly durable, chemical and cavitation resistant
- Unitized Flexible Diaphragm and Guided Plug
  - Excellent low flow regulation performance
  - Prevents diaphragm erosion and distortion
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
- User-Friendly Design
  - Simple in-line inspection and service

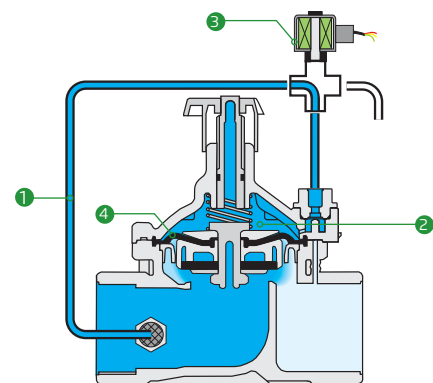
### Typical Applications

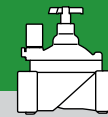
- Computerized Irrigation Systems
- Distribution Centers
- Landscape
- Low Supplied Pressure Irrigation Systems

*All images in this catalog are for illustration only*

### 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.





### Technical Data

**Sizes:** ¾"-2"; DN20-DN50  
**Patterns:**  
**Globe:** ¾"-2"; DN20-DN50  
**Angle:** 1½" & 2"; DN40 & 50  
**End Connections:**  
 Female Threads BSP; NPT

**Pressure Rating:**  
 10 bar; 145 psi  
**Operating Pressure Range:**  
 0.5-10 bar; 7-145 psi

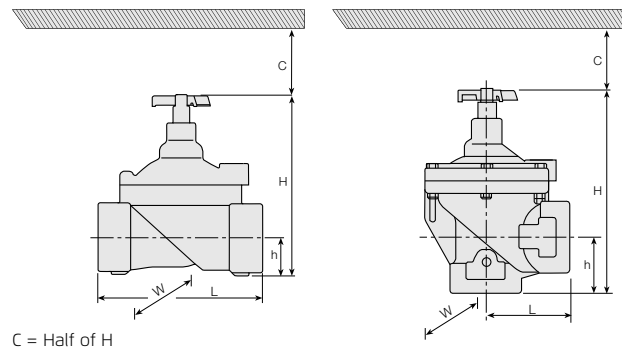
**Standard Materials:**  
**Body, Cover and Plug:**  
 Reinforced Nylon  
**Diaphragm:** NR  
**Seals:** NBR [Buna-N] and NR  
**Spring:** Stainless Steel  
**Cover Bolts:** Stainless Steel

**Control Accessories:** Plastic  
**Tubing and Fittings:** Plastic  
**Solenoid Voltage Range:**  
 390 & S-400: 24 VAC, 24 VDC  
 S-392-T & S-402: 9-20 VDC, Latch  
 S-982 & S-985: 12-50 VDC, Latch  
 \*Other voltages available

### Technical Specifications

#### Dimensions and Weights

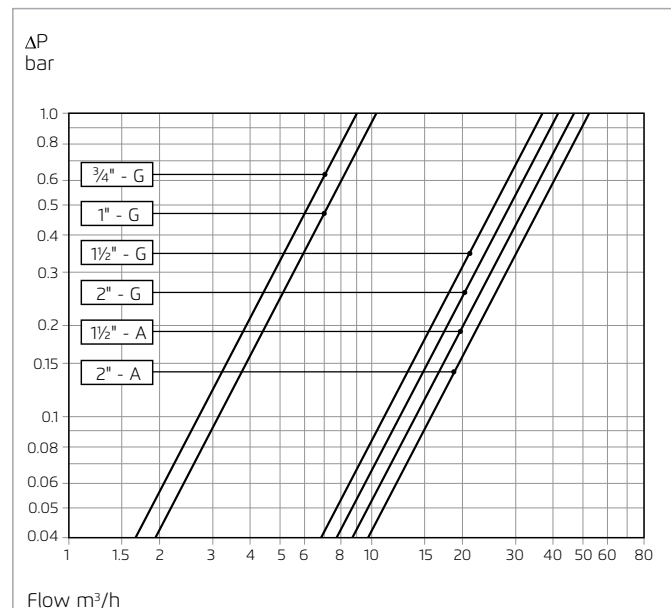
Sizes Inch ; DN	¾" ; 20	1" ; 25	1½" ; 40		2" ; 50	
Pattern	Globe	Globe	Globe	Angle	Globe	Angle
L (mm)	100	110	160	80	170	85
H (mm)	115	115	180	190	190	210
W (mm)	22	22	35	40	38	60
h (mm)	78	78	125	125	125	125
Weight (kg)	0.35	0.33	1	0.95	1.1	0.91



#### Flow Properties

Sizes	Inch DN	G	G	G	A	G	A
		¾" 20	1" 25	1½" 40		2" 50	
KV		9	10.5	37	47	41	52

#### Flow Chart



#### Valve flow coefficient, Kv or Cv

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

Where:  
 Kv = Valve flow coefficient  
 Cv = Valve flow coefficient (flow in gpm at Diff. Press. 1 psi)  
 Q = Flow rate (m³/h; gpm)  
 P = Differential pressure (bar; psi)  
**Cv = 1.155 Kv**

