



SOLENOID CONTROLLED VALVE

Model IR-410-3W-KX

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-410-3W-KX opens in response to electric signal.

[2] Kinetic Air Valve Model IR-K10

[3] Combination Air Valve Model IR-C10

[4] Smart Irrigation Controller-OMEGA

Features & Benefits

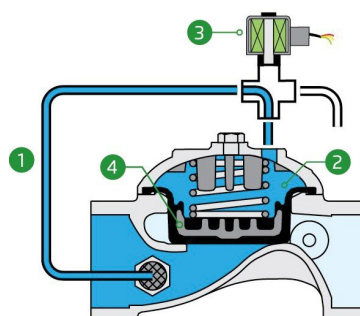
- Hydraulic Control Valve with Solenoid Control
 - Line pressure driven
 - Electrically controlled On/Off
 - Suitable also for remote and/or elevated systems
- Advanced Hydro-Efficient Globe Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low opening and actuation pressure
 - Progressively restrains valve closing
 - Prevents diaphragm distortion
- User-Friendly Design
 - Simple in-line inception
 - Easy addition of control features

Typical Applications

- Automated Irrigation Systems
- Remote/Elevated Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems

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]** to a closed position. Closing the Solenoid causes it to switch, discharging pressure from the control chamber and thereby opening the main valve.





IR-410-3W-KX

Technical Data

Pressure Rating:

150 psi

Operating Pressure Range:

7-150 psi

Materials

Body & Cover:

Cast Iron

Diaphragm:

NR, Nylon fabric reinforced

Spring:

Stainless Steel

**Other materials are available on request*

Control Loop Accessories

Tubing and Fittings:

Polyethylene and Polypropylene

AC solenoid:

S-390-T-3W

DC latch solenoid:

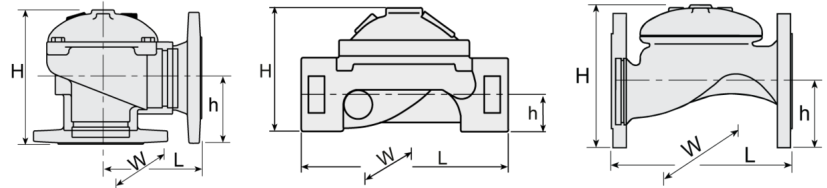
S-392-T-3W P.B

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

Technical Specifications

For other end connection types,

Please refer to [BERMAD](#) full engineering page.



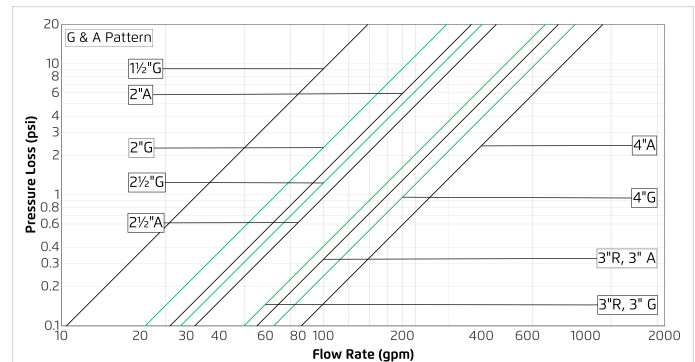
Size	Pattern	End Connection	Weight (Lb)	L (in)	H (in)	h (in)	W	CCDV (Gal)	CV
1" ; DN25	Globe	Threaded	2.4	4%	2 3/4	1 3/8	2 7/8	0.005	15
1 1/2" ; DN40	Globe	Threaded	4.4	6%	3%	1 1/4	3%	0.016	33
2" ; DN50	Globe	Threaded	8.8	7%	4 1/2	1 1/2	4%	0.03	66
2" ; DN50	Globe	Flanged	19.8	8%	6%	3%	6%	0.03	66
2" ; DN50	Globe	Grooved	11	8%	4%	1 1/4	4%	0.03	66
2" ; DN50	Angle	Threaded	9.7	3 1/2	5%	2 1/2	4%	0.03	82
2" ; DN50	Angle	Flanged	19.8	4%	7%	3%	6%	0.03	82
2 1/2" ; DN65	Globe	Threaded	12.6	8%	5%	1%	5%	0.05	90
2 1/2" ; DN65	Globe	Flanged	23.1	8%	7	3 1/2	7	0.05	90
2 1/2" ; DN65	Angle	Threaded	12.8	4%	7%	3%	5%	0.05	102
3R" ; DN80R	Globe	Threaded	12.9	8%	5 1/2	2%	5%	0.08	157
3R" ; DN80R	Globe	Flanged	28	8%	7%	4	7%	0.08	157
3R" ; DN80R	Angle	Threaded	15.4	4%	7	3%	5%	0.08	176
3" ; DN80	Globe	Threaded	28.7	10%	6 1/2	2 1/4	6%	0.08	157
3" ; DN80	Globe	Flanged	41.9	9%	8%	4	7%	0.08	157
3" ; DN80	Globe	Grooved	23.4	9%	6%	1%	6%	0.08	157
3" ; DN80	Angle	Threaded	24.3	4%	7%	3%	6%	0.08	176
3" ; DN80	Angle	Flanged	37.5	6%	8%	4	7%	0.08	176
3" ; DN80	Angle	Grooved	22.1	4%	11	3%	6%	0.08	176
4" ; DN100	Globe	Flanged	61.7	12%	9%	4 1/2	8%	0.18	236
4" ; DN100	Globe	Grooved	35.7	12%	7%	2 1/2	8	0.18	236
4" ; DN100	Angle	Flanged	57.3	6%	8 3/4	4 1/2	8%	0.18	260
4" ; DN100	Angle	Grooved	35.3	6%	8 3/4	4 1/2	8%	0.18	260

CCDV = Control Chamber Displacement Volume • Threaded = BSP & NPT are available.

Additional Features

Code	Description	Size Range
I	Position Indicator Assembly	1 1/2"-4"
M	Flow Stem	1 1/2"-4"
5	Plastic Test Point	1 1/2"-4"

Flow Chart



Differential Pressure & Flow Calculation

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

Cv = gpm @ ΔP of 1 psi

Q = gpm

ΔP = psi