



GREENAPP CONTROLLED VALVE

Model IR-110-4G-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. The BERMAD GreenApp™ is a smart, flexible, easy to use, Bluetooth single station irrigation controller. With the GreenApp™, you can connect to a free (Android and iOS) user-friendly app, and manage your irrigation from your smart-phone or tablet.



[1] BERMAD Model IR-110-4G-3W-X opens & closed upon to electric command.

Features & Benefits

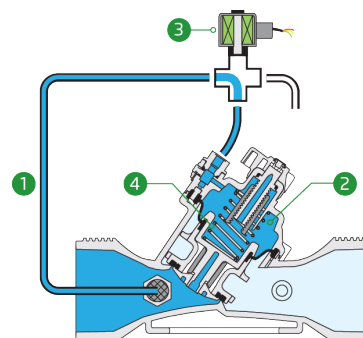
- Hydraulic Control Valve
 - Line pressure driven
 - Electrically controlled On/Off
- Engineered Composite Valve with Industrial Grade Design
 - Adaptable on-site to a wide range of end connection
 - Articulated flange connections that eliminate line bending and hydraulic stresses
 - Highly durable, 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
 - Smooth closing
 - Requires low actuation pressure
 - Prevents diaphragm erosion and distortion
- User-Friendly Design
 - Simple in-line inspection and service

Typical Applications

- Automated Irrigation Systems
- Remote and/or Elevated Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

Operation:

Line Pressure [1] is applied to the Control Chamber [2] through the opened 3-Way Solenoid [3]. This creates a 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

Pressure Rating:
10 bar

Operating Pressure Range:
0.5-10 bar

Materials

Body & Cover:
Polyamide 6 & 30% GF

Diaphragm:
NR, Nylon fabric reinforced

Spring:
Stainless Steel

Control Loop Accessories

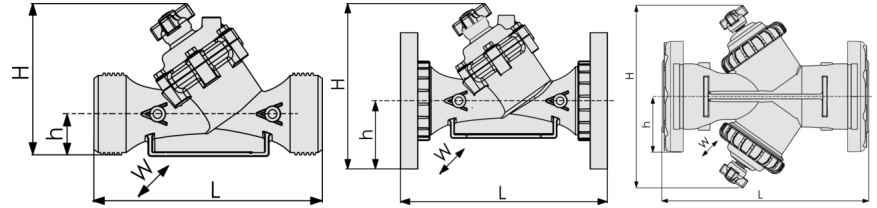
Tubing and Fittings:
Polyethylene and
Polypropylene

DC solenoid:
GreenApp 3-Way

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

Technical Specifications

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



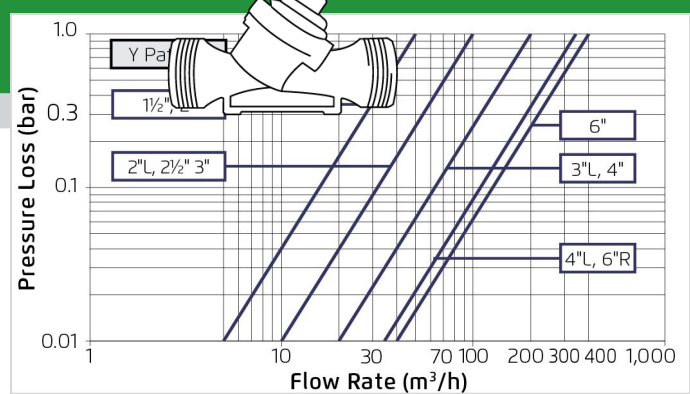
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	w	CCDV (Lit)	KV
1½" ; DN40	Oblique	Threaded	1.1	200	173	40	97	0.12	50
2" ; DN50	Oblique	Threaded	1.2	230	173	40	97	0.12	50
2"L ; DN50L	Oblique	Threaded	1.5	230	187	43	135	0.15	100
2½" ; DN65	Oblique	Threaded	1.5	230	187	43	135	0.15	100
3" ; DN80	Oblique	Threaded	1.6	298	199	55	135	0.15	100
3" ; DN80	Oblique	Metal Flanges	4.4	308	244	100	200	0.15	100
3" ; DN80	Oblique	Plastic Flanges	2.5	308	244	100	200	0.15	100
3"L ; DN80L	Oblique	Threaded	3	298	278	60	168	0.62	200
3"L ; DN80L	Oblique	Metal Flanges	4.6	308	317	100	200	0.62	200
3"L ; DN80L	Oblique	Plastic Flanges	3.7	308	317	100	200	0.62	200
4" ; DN100	Oblique	Metal Flanges	7.4	350	329	112	224	0.62	200
4" ; DN100	Oblique	Plastic Flanges	4.6	350	329	112	224	0.62	200
4"L ; DN100L	Oblique	Metal Flanges	11.2	442	340	112	226	1.15	340
4"L ; DN100L	Oblique	Plastic Flanges	9.2	442	340	112	226	1.15	340
6"R ; DN150R	Oblique	Metal Flanges	16.5	470	377	149	287	1.15	340
6" ; DN150	Boxer	Grooved	11	480	387	100	475	2x0.62	400
6" ; DN150	Boxer	Plastic Flanges	12.5	504	387	143	475	2x0.62	400

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.

Optional Features

Code	Description	Size Range
M	Flow Stem <small>*Exclude sizes 4" L / R</small>	1½"-6" / DN40-150
5	Plastic Test Point	1½"-4" / DN40-100
IR-170-403W-X	Victaulic PVC Adaptors 3"	3" / DN80
V4	Victaulic PVC Adaptors 4"	4" / DN100

Flow Chart



Differential Pressure & Flow Calculation

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

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

