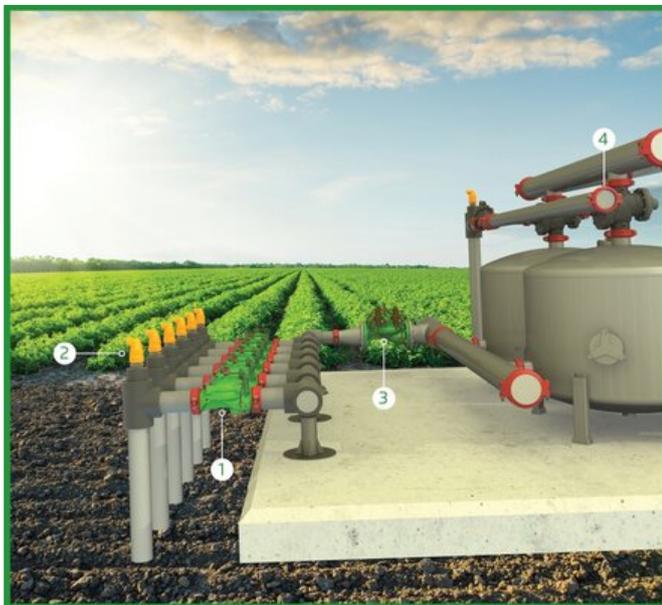


HYDRAULIC CONTROL VALVE

Model IR-405-KZ

The BERMAD Hydraulic Control Valve is a hydraulically operated, diaphragm actuated control valve that opens and shuts off in response to a local or remote pressure command.



- [1] BERMAD Models IR-405-KZ open upon local manual command.
- [2] Kinetic Air Valve Model IR-K10
- [3] Pressure Reducing & Sustaining Valve Model IR-423-3W-RXZ
- [4] Filter Backwash Hydraulic Valve Model IR-350

Features & Benefits

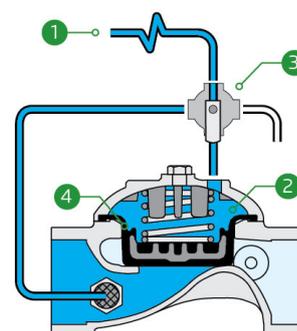
- Hydraulic Control Valve
 - Line pressure driven
 - Hydraulically controlled On/Off
- Advanced Hydro-Efficient Globe Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low opening and actuation pressure
 - Progressively restrains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

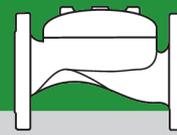
Typical Applications

- Automated Irrigation Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems

Operation:

Hydraulic Command [1] is applied to the Control Chamber [2] through the Manual Selector [3]. This creates superior closing force that moves the Diaphragm Assembly [4] to a closed position. Discharging pressure from the control chamber, by turning the manual selector, causes the line pressure acting on the lower side of the diaphragm assembly to move the valve to an open position.





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

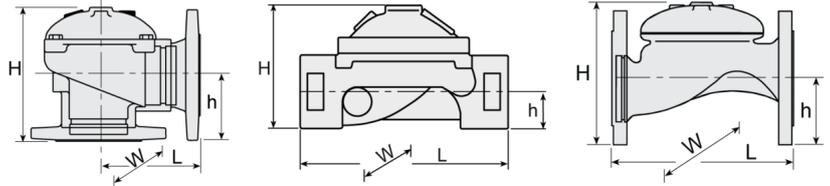
**Other materials are available on request*

Control Loop Accessories

Tubing and Fittings:
Polyethylene and
Polypropylene

Technical Specifications

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



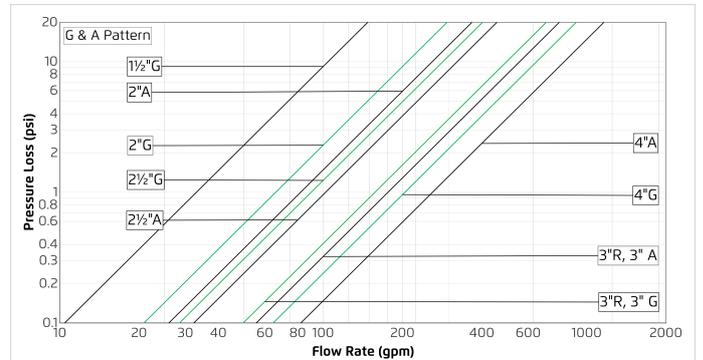
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	w	CCDV (Gal)	CV
1" ; DN25	Globe	Threaded	2.4	4½	2¾	1¾	2¾	0.005	15
1½" ; DN40	Globe	Threaded	4.4	6	3¾	1¼	3	0.016	33
2" ; DN50	Globe	Threaded	8.8	7	4½	1½	4¾	0.03	66
2" ; DN50	Globe	Flanged	19.8	8	6	3	6	0.03	66
2" ; DN50	Globe	Grooved	11	8	4	1	4	0.03	66
2" ; DN50	Angle	Threaded	9.7	3½	5¾	2½	4¾	0.03	82
2" ; DN50	Angle	Flanged	19.8	4¾	7	3¾	6	0.03	82
2½" ; DN65	Globe	Threaded	12.6	8	5	1	5	0.05	90
2½" ; DN65	Globe	Flanged	23.1	8	7	3½	7	0.05	90
2½" ; DN65	Angle	Threaded	12.8	4	7	3¾	5	0.05	102
3R" ; DN80R	Globe	Threaded	12.9	8	5½	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	6½	2¼	6¾	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	3¾	6¾	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	4½	8	0.18	236
4" ; DN100	Globe	Grooved	35.7	12	7	2½	8	0.18	236
4" ; DN100	Angle	Flanged	57.3	6	8¾	4½	8	0.18	260
4" ; DN100	Angle	Grooved	35.3	6	8¾	4½	8	0.18	260

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

Additional Features

Code	Description	Size Range
I	Position Indicator Assembly	1½"-4"
M	Flow Stem	1½"-4"
5	Plastic Test Point	1½"-4"

Flow Chart



Differential Pressure & Flow Calculation

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

$Cv = \text{gpm @ } \Delta P \text{ of 1 psi}$
 $Q = \text{gpm}$
 $\Delta P = \text{psi}$

