HYDRAULIC CONTROL VALVE

Model IR-105-Z

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

[1] BERMAD Model IR-105-Z opens upon local manual command
[2] Kinetic Air Valve
[3] Combination Air Valve
[4] Electromagnetic Water Meter
[5] Pressure Reducing Valve

Features and Benefits

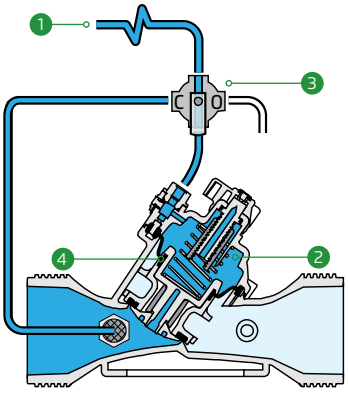
- Hydraulic Control Valve
  - Line Pressure Driven
  - Hydraulicily cpntrolled On/Off
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Highly durable, chemical & cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity at Low pressure loss
- Unitized Flexible Super Travel Diaphragm with a 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

- Computerized Irrigation Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

Operation:

Hydraulic Command ❶ is applied to the Control Chamber ❷ through the Manual Selector ❸. This creates superior closing force that moves the Diaphragm Assembly ❹ to a closed position. Discharging of 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.



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Technical Data

Pressure Rating:
10 bar; 145 psi

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

Materials:

Body, Cover and Plug:
Polyamid 6 & 30% GF

Diaphragm:
NR, Nylon fabric reinforced

Seals: NR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

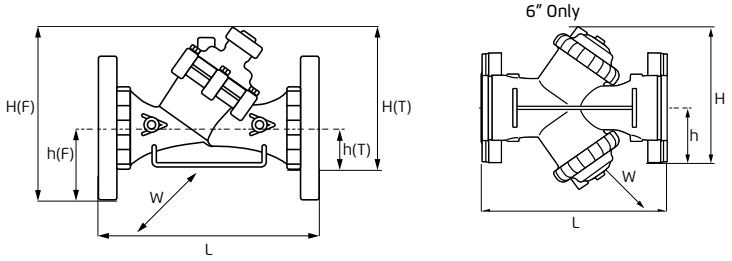
Control Accessories:

Tubing and Fittings:
Plastic

Technical Specifications

Y Pattern Valves Dimensions & Weights

For BERMAD angle, dual & T pattern,
Please see our full engineering page.



Sizes Inch ; DN	1½" ; 40	2" ; 50		2"L ; 50	2½" ; 65	3" ; 80		
End Connections	Rc (BSP.T), NPT	Rc (BSP.T), NPT	G (BSP.F)	Rc (BSP.T), NPT	G (BSP.F)	Rc (BSP.T), NPT	Universal Flanges	
							Metal	Plastic
L (mm)	200	230	230	230	230	298	308	308
H (F) (mm)	—	—	—	—	—	—	244	244
H (T) (mm)	173	173	173	187	187	199	—	—
h (F) (mm)	—	—	—	—	—	—	100	100
h (T) (mm)	40	40	40	43	43	55	—	—
W (mm)	97	97	97	135	135	135	200	200
CCDV (lit)	0.12	0.12	0.12	0.15	0.15	0.15	0.15	0.15
Weight (kg)	1.1	1.2	1.2	1.47	1.47	1.6	4.4	2.5

Sizes Inch ; DN	3"L ; 80L			4" ; 100		4"L ; 100L			6"R ; 150R	6" ; 150	6" ; 150
End Connections	Rc (BSP.T), NPT	Universal Flanges		Universal Flanges		Universal Flanges		Groove	Universal Flanges	Groove	Universal Flanges
		Metal	Plastic	Metal	Plastic	Metal	Plastic		Metal		Plastic
L (mm)	298	308	308	350	350	442	442	400	470	480	504
H (F) (mm)	—	317	317	329	329	340	340	286	377	198	286
H (T) (mm)	278	—	—	—	—	—	—	—	—	—	—
h (F) (mm)	—	100	100	112	112	112	112	57	149	100	143
h (T) (mm)	60	—	—	—	—	—	—	—	—	—	—
W (mm)	168	200	200	224	224	226	226	226	287	475	475
CCDV (lit)	0.62	0.62	0.62	0.62	0.62	1.15	1.15	1.15	1.15	2 x 0.62	2 x 0.62
Weight (kg)	3	4.6	3.7	7.4	4.6	13.5	10	8	16.5	11	12.5

CCDV = Control Chamber Displacement Volume • **BSP.T** = Internal Threaded • **BSP.F** = External Threaded • Other End Connections are available on request. For dimensions and weights of adapters or valve with adapters please consult with customer service

Flow Properties

Sizes Inch DN	1½" 40	2" 50	2"L 50L	2½" 65
KV	50	50	100	100

Sizes Inch DN	3" 80	3"L 80L	4" 100	4"L 100L	6" R 150L	6" 150
KV	100	200	200	340	340	400

Valve Flow Coefficient

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

Kv = m³/h @ ΔP of 1 bar
Q = m³/h
ΔP = bar

Flow Chart