

# Double Chamber Hydraulic Control Valve

## IR-100-DC

The BERMAD Model IR-100-DC is a double chambered, hydraulically operated, diaphragm actuated globe control valves in either the standard oblique (Y) or angle pattern design.

The valve comprises two major components: The body and the actuator assembly. The actuator assembly is unitized and is removable from the body as an integral unit. It consists of both an upper and a lower control chamber. Each basic valve can easily be configured, on-site, either as a single chamber (Model 105), or a double chamber (Model 100). The shaft sub assembly is center guided, providing an unobstructed seat area.

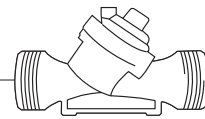
The Model 100 double chambered valve operation is independent of valve differential pressure. This develops maximum power, ensuring immediate valve response.



### Features and Benefits

- Hydraulic Control Valve
  - Line pressure driven
  - Meets all irrigation applications range
- Double chamber
  - Full powered opening and closing
  - Decreased pressure loss
  - No throttling noise
  - Non-slam closing characteristic
  - Protected diaphragm
- Engineered Plastic Valve with Industrial Grade Design
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity - Low pressure loss
- User-Friendly Design
  - Simple in-line inspection and service



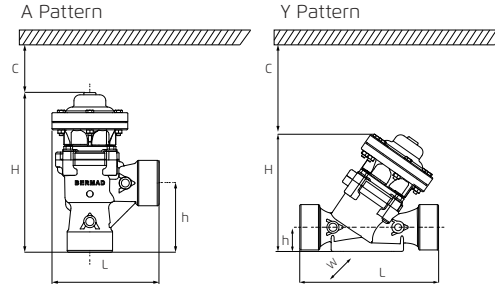


### Technical Specifications

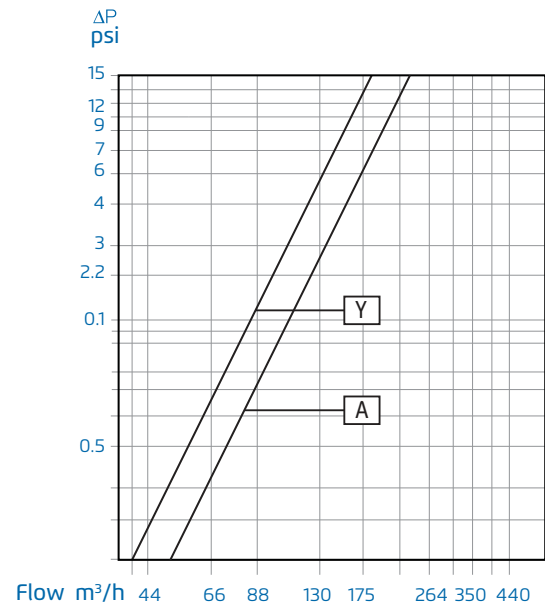
#### Dimensions and Weights

Size	Inch	Double Chamber			Single Chamber		
		A	Y	Y	A	Y	Y
		2	1½	2	2	1½	2
L	inch	7.0	7.9	9.1	7.0	7.9	9.1
H	inch	10.5	7.7	7.7	8.5	6.1	6.1
W	inch	5	5	5	5	5	5
h	inch	4.4	1.6	1.6	4.4	1.6	1.6
Weight	lib	3.8	3.8	3.8	2.7	2.7	2.7

Note: C = Half of H



### Flow Chart



		A	Y	Y
Size	Inch	2	1½	2
Flow Coefficient	CV	60	49	49
CCDV	Gallon	0.03	0.03	0.03

CCDV = Control Chamber Displacement Volume

Valve flow coefficient, Kv or Cv

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

Where:

Cv = Valve flow coefficient (flow in gpm at Diff. Press. 1 psi)

Q = Flow rate (m³/h; gpm)

ΔP = Differential pressure (bar; psi)

### Technical Data

Available Patterns & Sizes: "Y" 1½" & 2"  
Angle 2"

End Connections: Threaded BSP or NPT

Pressure Rating: 10 bar; 145psi

Operating Pressure Range: 7-145 psi

Temperature Range: Water up to 82°F

### Standard Materials:

Body: Glass-Filled Nylon

Actuator: Plastic & Stainless Steel

Diaphragm: Nylon Fabric Reinforced Natural Rubber

Seals: NBR

Spring: Stainless Steel

Cover Bolts: Stainless Steel

