

# FLUSH-'N-STOP VALVE - DOUBLE CHAMBER

## Model IR-100-DC-LM0e

The BERMAD Model IR-100-LM0e is a double chambered, hydraulically operated, diaphragm actuated control valve suitable for automatic flushing of distribution lines at the beginning and the end of each irrigation cycle. Equipped with an auxiliary opening spring, it enables automatic opening when the system reaches closure pressure and settable opening rate, ensuring line pressure build-up for secure closing.



[1] BERMAD Model IR-100-LM0e opens when the system reaches closure pressure flushing dirt and sediment out, and shuts off upon line pressure build-up when irrigation begins.

[2] Control Pressure Inlet

### Features & Benefits

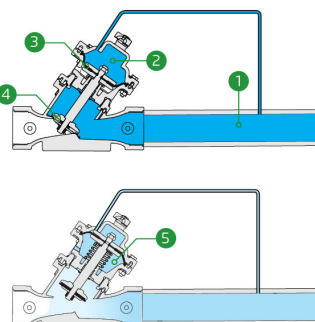
- Hydraulic Control Valve
  - Line pressure driven
  - Short response time
  - Long term drip tight sealing
- Engineered Composite Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection
  - Highly durable, chemical and cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity at low pressure loss
- Double Chamber Design
  - Full powered opening and closing
  - Decreased pressure loss
  - Low throttling noise
  - Non-slam closing characteristic
  - Protected diaphragm
- User-Friendly Design
  - Simple in-line inspection and service

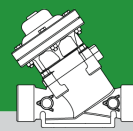
### Typical Applications

- Distribution Line Flush-n-Stop
- Drip Systems
- Sprinklers & Micro-Sprinklers
- Irrigation Machine Line Flush-'n-Stop

### Operation:

Irrigation Line Pressure [1] pressurizes the Upper Control Chamber [2], forcing the Diaphragm [3] actuated Plug [4] to move towards the closed position, thereby shutting the Valve. When irrigation stops, system pressure drops, allowing the Spring [5] opening force to overpower the hydraulic closing force. The spring force then pushes the diaphragm, thereby opening the Valve, which remains open. When irrigation starts again, a water stream flushes the line through the opened Valve. Valve resistance enables pressure to build up and rise until the pressure in the control chamber creates hydraulic closing force higher than the spring opening force, and the valve shuts off.





### 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

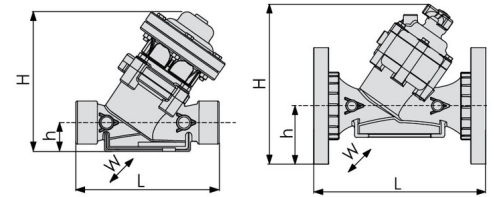
**Spring:**  
Stainless Steel

#### Control Loop Accessories

**Tubing and Fittings:**  
Polyethylene and  
Polypropylene

### Technical Specifications

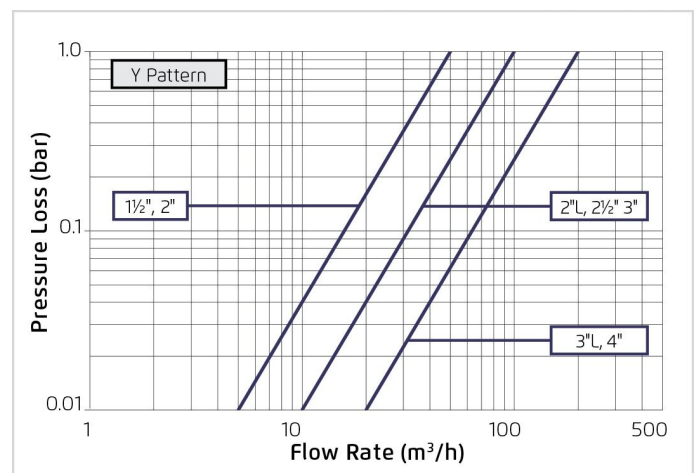
For other patterns and end connection types,  
Please refer to [BERMAD](#) full engineering page.



| Size        | Pattern     | End Connection  | Weight (Kg) | L (mm) | H (mm) | h (mm) | W   | CCDV (Lit) | KV  |
|-------------|-------------|-----------------|-------------|--------|--------|--------|-----|------------|-----|
| 1½" ; DN40  | "Y" (globe) | Threaded        | 1.7         | 200    | 194    | 40     | 126 | 0.13       | 50  |
| 2" ; DN50   | "Y" (globe) | Threaded        | 1.7         | 230    | 196    | 40     | 126 | 0.13       | 50  |
| 2"L ; DN50L | "Y" (globe) | Threaded        | 2.2         | 230    | 220    | 43     | 135 | 0.17       | 100 |
| 2½" ; DN50L | "Y" (globe) | Threaded        | 2.2         | 230    | 220    | 43     | 135 | 0.17       | 100 |
| 3" ; DN80   | "Y" (globe) | Threaded        | 2.3         | 298    | 232    | 55     | 135 | 0.17       | 100 |
| 3" ; DN80   | "Y" (globe) | Metal Flanges   | 5.1         | 308    | 277    | 100    | 200 | 0.17       | 100 |
| 3" ; DN80   | "Y" (globe) | Plastic Flanges | 3.2         | 308    | 277    | 100    | 200 | 0.17       | 100 |
| 3"L ; DN80L | "Y" (globe) | Threaded        | 6           | 338    | 356    | 60     | 210 | 0.55       | 200 |
| 3"L ; DN80L | "Y" (globe) | Plastic Flanges | 6.5         | 343    | 395    | 100    | 210 | 0.55       | 200 |
| 3"L ; DN80L | "Y" (globe) | Metal Flanges   | 7.4         | 343    | 395    | 100    | 210 | 0.55       | 200 |
| 4" ; DN100  | "Y" (globe) | Plastic Flanges | 7.6         | 364    | 407    | 112    | 224 | 0.55       | 200 |
| 4" ; DN100  | "Y" (globe) | Metal Flanges   | 9.5         | 364    | 407    | 112    | 224 | 0.55       | 200 |

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.

### Flow Chart



### Differential Pressure & Flow Calculation

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

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