



# HYDRAULIC CONTROL VALVE

## Model IR-205-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.

\*This valve is designated for irrigation use only and not for other uses! Manufacturer warranty is limited to the permitted use only.



- [1] BERMAD Model IR-205-Z open upon local manual command
- [2] Pressure Reducing Hydrometer Model IR-920-M0-KXZ
- [3] Combination Air Valve Model IR-C10
- [4] RTU-Remote Terminal Unit

### Features & Benefits

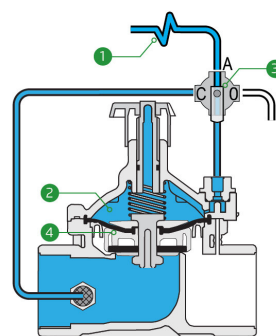
- Line Pressure Drive, Hydraulically Controlled
  - Hydraulically controlled On/Off
- Composite Hydro-Efficient Globe Valve
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
  - Highly durable, chemical and cavitation resistant
- Unitized Flexible Diaphragm and Guided Plug
  - Excellent low flow regulation performances
  - Prevents diaphragm erosion and distortion
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
- User-Friendly Design
  - Simple in-line inspection and service

### Typical Applications

- Automated Irrigation Systems
- Distribution Centers
- Systems Subject to Varying Supply Pressure
- Landscape

### 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 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.





## Technical Data

### Pressure Rating:

150 psi

### Operating Pressure Range:

10-150 psi

### Materials

#### Body & Cover:

Polyamide 6 &amp; 30% GF

#### Diaphragm:

NBR

#### Spring:

Stainless Steel

### Control Loop Accessories

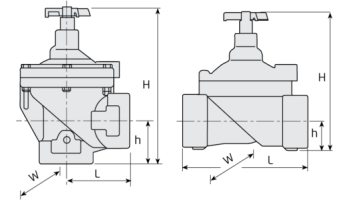
#### Tubing and Fittings:

Polyethylene and

Polypropylene

## Technical Specifications

For other end connection types,

Please refer to [BERMAD](#) full engineering page.


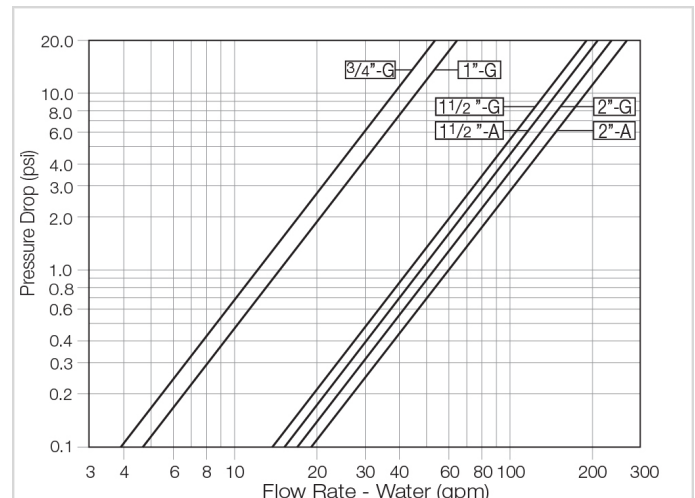
| Size       | Pattern | End Connection | Weight (Lb) | L (In) | H (In) | h (In) | W  | CCDV (Gal) | CV |
|------------|---------|----------------|-------------|--------|--------|--------|----|------------|----|
| ¾" ; DN20  | Globe   | Threaded       | 0.8         | 4¾     | 4¾     | ¾      | 3¾ | 0.003      | 10 |
| 1" ; DN25  | Globe   | Threaded       | 0.7         | 4¾     | 4¾     | ¾      | 3¾ | 0.003      | 10 |
| 1½" ; DN40 | Globe   | Threaded       | 2.2         | 6¾     | 7¾     | 1¾     | 5  | 0.016      | 43 |
| 1½" ; DN40 | Angle   | Threaded       | 2.1         | 3¾     | 7½     | 1¾     | 5  | 0.016      | 47 |
| 2" ; DN50  | Globe   | Threaded       | 2.4         | 6¾     | 12¾    | 1½     | 5  | 0.016      | 54 |
| 2" ; DN50  | Angle   | Threaded       | 2           | 3¾     | 8¾     | 2¾     | 5  | 0.016      | 60 |

CCDV = Control Chamber Displacement Volume

### Additional Features

| Code | Description        | Size Range |
|------|--------------------|------------|
| M    | Flow Stem          | 1½"-2"     |
| 5    | Plastic Test Point | 1½"-2"     |

### Flow Chart



2-Way circuit "Added Head Loss" (for "V" below 6.5 f/s): 4.5 psi

### Differential Pressure & Flow Calculation

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

Cv = gpm @ ΔP of 1 psi

Q = gpm

ΔP = psi