

# Hydraulic Control Valve

Normally Closed with Hydraulic Control

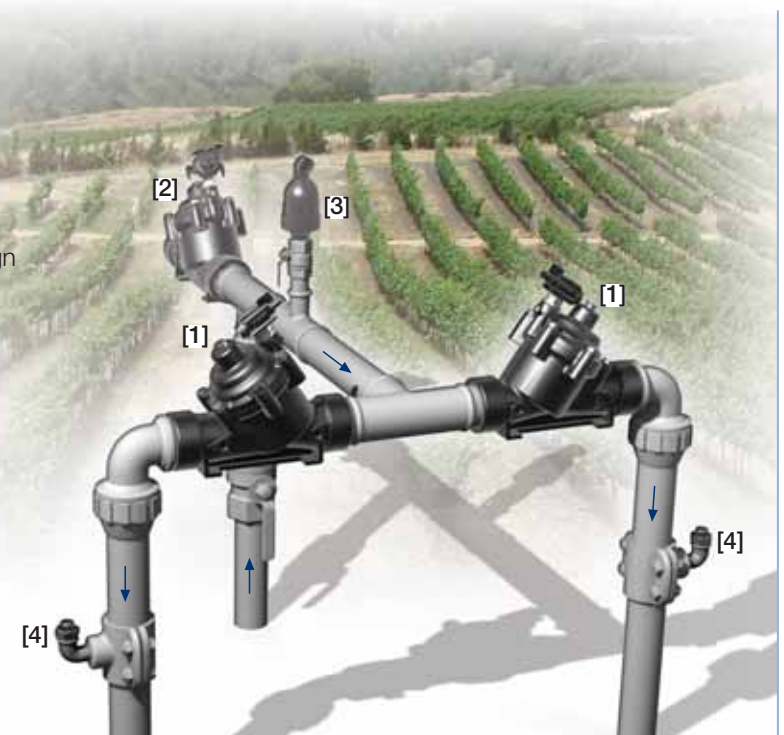
IR-105-54-X

The BERMAD Normally Closed Control Valve with Hydraulic Control is a hydraulically operated, diaphragm actuated control valve, which opens in response to a remote pressure rise command and shuts in the absence of that command.



## Features and Benefits

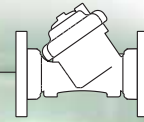
- Hydraulically Controlled, Normally Closed Valve
  - Line pressure driven
  - Closes upon control failure
  - Amplifies and relays weak remote command
- Engineered Plastic Valve with Industrial Grade Design
  - Highly durable, chemical and cavitation resistant
  - No internal bolts and nuts
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity – Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and Guided Plug
  - Smooth closing
  - Requires low opening and actuation pressure
  - Prevents diaphragm erosion and distortion
- Simple In-Line Inspection and Service



## Typical Applications

- Computerized Irrigation Systems
- Remote/Elevated Systems
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

- [1] BERMAD Model IR-105-54-X opens upon pressure rise command.
- [2] BERMAD Relief Valve Model IR-13Q
- [3] BERMAD Air Valve Model ARA-A-P-P
- [4] BERMAD Vacuum Breaker Model 1/2"-ARV



## IR-105-54-X

For full technical details, refer to Engineering Section.

## 100 Series hYflow

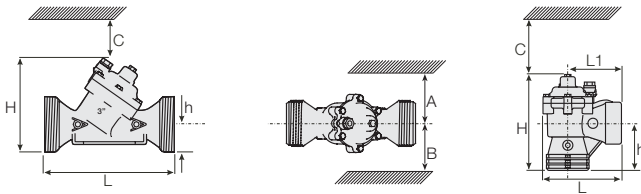
On/Off Control

### Technical Specifications

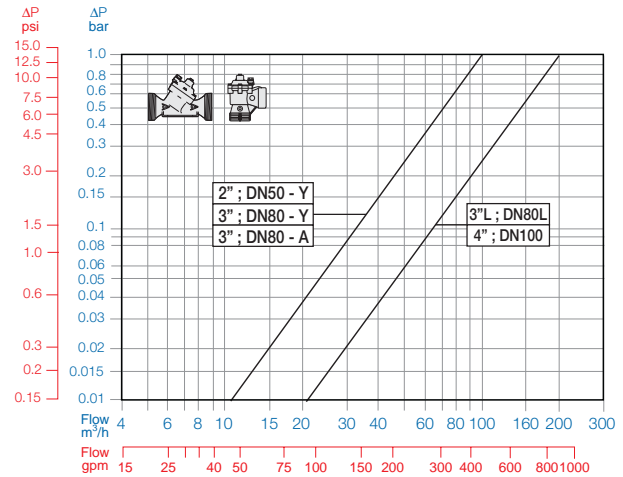
#### Dimensions and Weights

Pattern Size	DN Inch	Angle 80-T 3-T	Y (Oblique)			
			50-T 2-T	65-T* 21/2-T*	80-T 3-T	80L-T 3L-T
L (L1)	mm	187 (130)	230	230	298	300
	inch	7.4 (5.1)	9.1	9.1	11.7	11.8
H (Hf)	mm	235 (245)	170 (185)	170 (185)	180 (195)	240
	inch	9.3 (9.6)	6.7 (7.3)	6.7 (7.3)	7.1 (7.7)	9.5
C	mm	53	140	140	140	180
	inch	2.1	6	6	6	8
h	mm	117	40	40	50	60
	inch	4.6	1.6	1.6	2.0	2.4
A; B	mm	320	135	135	190	190
	inch	12.6	6	6	8	8
Weight	Kg	1.6	1.35	1.4	1.6	3.0
	lb.	3.5	3.0	3.1	3.5	6.6

\* 2 1/2"; DN65 Male Thread BSP-F, for PVC glue Unions.



#### Flow Chart



### Technical Data

#### Valve Configurations & Size:

Oblique: 2, 2 1/2, 3, 3L, 4 & 6"; DN50, 65, 80, 80L, 100 & 150  
 Angle: 3"; DN80

#### End Connections:

Threaded: 2, 2 1/2, 3 & 3"L; DN50, 65, 80 & 80L  
 Flanged: 3, 3L, 4, & 6"; DN80, 80L, 100 & 150  
 Grooved: 6"; DN150

Pressure Rating: 10 bar; 145 psi

Operating Pressure Range: 0.35-10 bar; 5-145 psi

#### Materials:

Body, Cover and Plug: Glass-Filled Nylon

Diaphragm: NR, Nylon Fabric Reinforced

Seals: NR

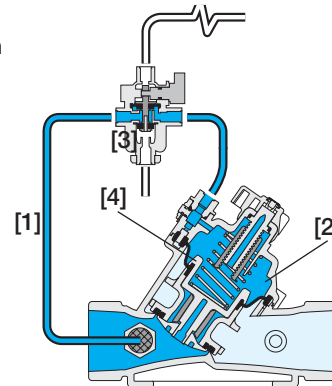
Spring: Stainless Steel

Cover Bolts: Stainless Steel

Control Accessories: Plastic

Tubing and Fittings: Plastic

### Operation



Line Pressure [1] is applied to the Control Chamber [2] through the held open, 3-Way Hydraulic Relay Valve (3W-HRV) [3]. This creates superior closing force that moves the Diaphragm Assembly [4] to a closed position. Upon pressure rise command, the 3W-HRV switches, releasing pressure from the control chamber and thereby opening the main Valve. The 3W-HRV also features local manual opening and closing.

### How to Order

Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	2- 4" <small>Other sizes available on request.</small>	105	54	Y	P	BP	3W	-	X
	Oblique Angle (3"; DN 80 Only)	Y A	BSP BSP-F (Male Threads 2 1/2"; DN65 only) NPT Plastic Flanges* Metal Flanges* ("Corona")			BP BS NP FF CC	3-Way Control Manual Selector Flow Stem Flow Stem with Position Indicator Other attributes available on request		X Z M MP

Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D

