

## Flow Control Valve

with Solenoid Control

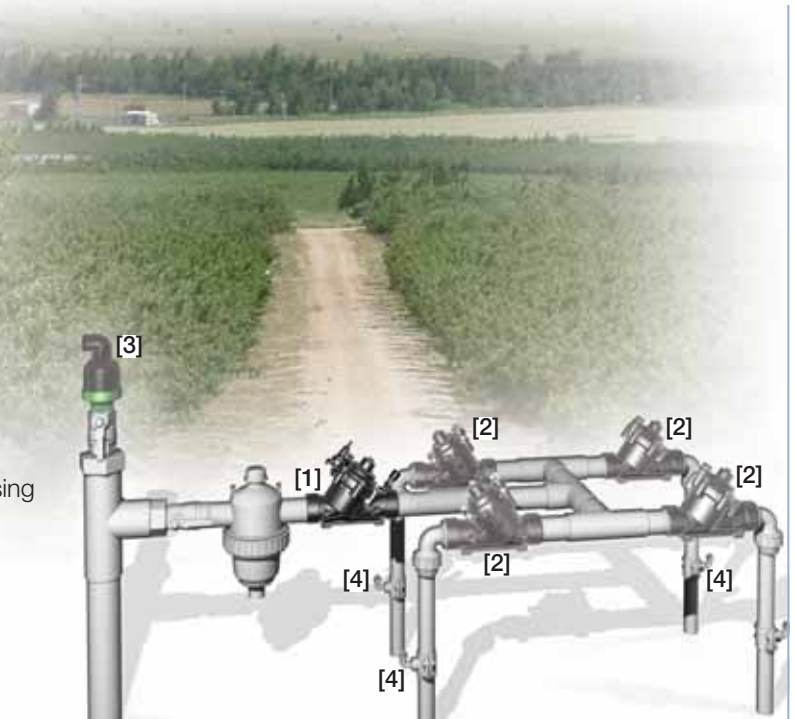
**IR-170-55-bD**

The BERMAD Normally Closed, Flow Control Valve with Hydraulic Remote Control is a hydraulically operated, diaphragm actuated control valve that limits system demand to a constant preset maximum flow rate. It either opens or shuts in response to an electric signal.



### Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
  - Limits fill-up rate and consumer over-demand
- Adjustable Servo Flow Pilot Controlled
  - Dynamic integrated needle valve
  - Easy flow setting
- 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
  - Accurate and stable regulation with smooth closing
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion
- Internal "Differential Pressure Duct" Flow Sensor
  - No moving parts
  - Saves space and simplifies installation

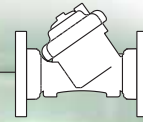


### Typical Applications

- Computerized Irrigation Systems
- Line Fill-Up Control
- Multiple Independent Consumer Systems
- Systems Subject to Varying Supply Pressure
- Remote and/or Elevated Plots
- Energy Saving Irrigation Systems
- Distribution Centers

- [1] BERMAD Model IR-170-55-bD opens in response to an electric signal, protects supply system from excessive flow, and limits lateral and distribution line fill-up.
- [2] BERMAD Solenoid Controlled Valve Model IR-110-N1-2W
- [3] BERMAD Air Valve Model ARA-A-P-P
- [4] BERMAD Vacuum Breaker Model 1/2"-ARV

# BERMAD Irrigation



## IR-I70-55-bD

For full technical details, refer to Engineering Section.

## 100 Series hYflow

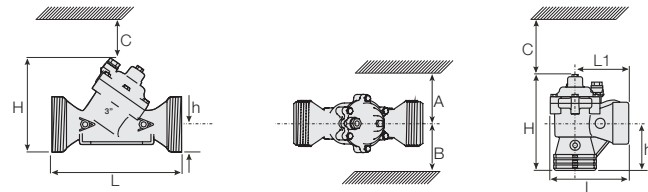
Flow Control

### Technical Specifications

#### Dimensions and Weights

Pattern	DN Inch	Angle 80-T 3-T	Y (Oblique)			
			50-T 2-T	65-T* 2 1/2-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.



### 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

**Setting Range:** ±20% from valve predetermined flow

The "Differential Pressure Duct" is pre-determined in accordance with the desired flow.

#### 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

#### Solenoid Voltage Range:

**S-390 & S-400:** 24 VAC, 24 VDC

**S-392 & S-402:** 9-20 VDC, Latch

**S-982 & S-985:** 12-50 VDC, Latch

Other voltages available.

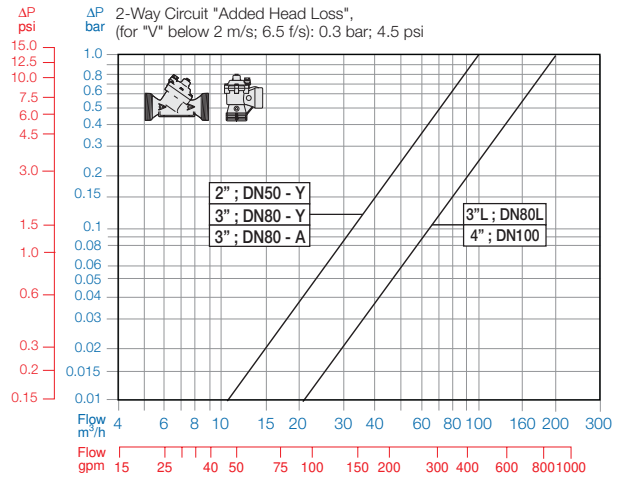
### How to Order

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

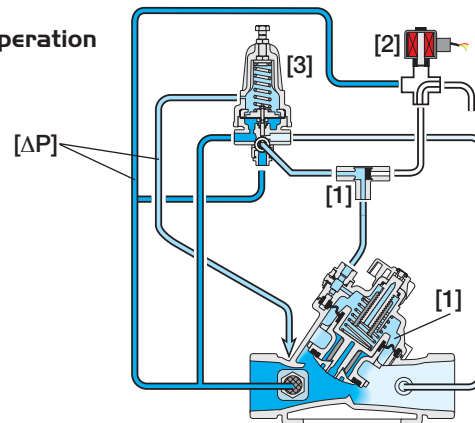
Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	2-4"	170	55	Y	P	FF	2W/3W	4AC	bD
Other sizes available on request.									
Oblique		Y	Threaded BSP (Female)	BP	9VDC -	Latch	9DS		b
Angle (3"; DN80 Only)		A	Threaded NPT (Female)	NP	12VDC -	Latch	1DS		D
			Plastic Flanges*	FF	24VDC -	N.C.	4DC		
			Metal Flanges* ("Corona")	CC	24VDC -	N.O.	4DC		Other attributes available on request
					24VAC -	N.C.	4AC		
					24VAC -	N.O.	4AO		
					24VAC, Lightning Proof -	N.C.	4RC		
					24VAC, Lightning Proof -	N.O.	4RO		
Other electrical ratings available on request.									

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

### Flow Chart



### Operation



The Shuttle Valve [1] hydraulically connects the Solenoid [2] or the Flow Pilot [3] to the Valve Control Chamber [4]. Pressure Differential [ΔP] across the Differential Pressure Duct [5] is in direct proportion to demand. When the solenoid is closed, the Flow Pilot, continuously sensing [ΔP], commands the Valve to throttle closed should demand rise above setting. In response to an electric signal the solenoid switches, directing line pressure through the shuttle valve into the control chamber, and thereby causing the main Valve to shut. The solenoid also features local manual closing.



info@bermad.com • www.bermad.com

The information herein is subject to change without notice. BERMAD shall not be held liable for any errors. All rights reserved. © Copyright by BERMAD.

PC1AE70-55 05