

## Flow Control Valve

with Hydraulic Control

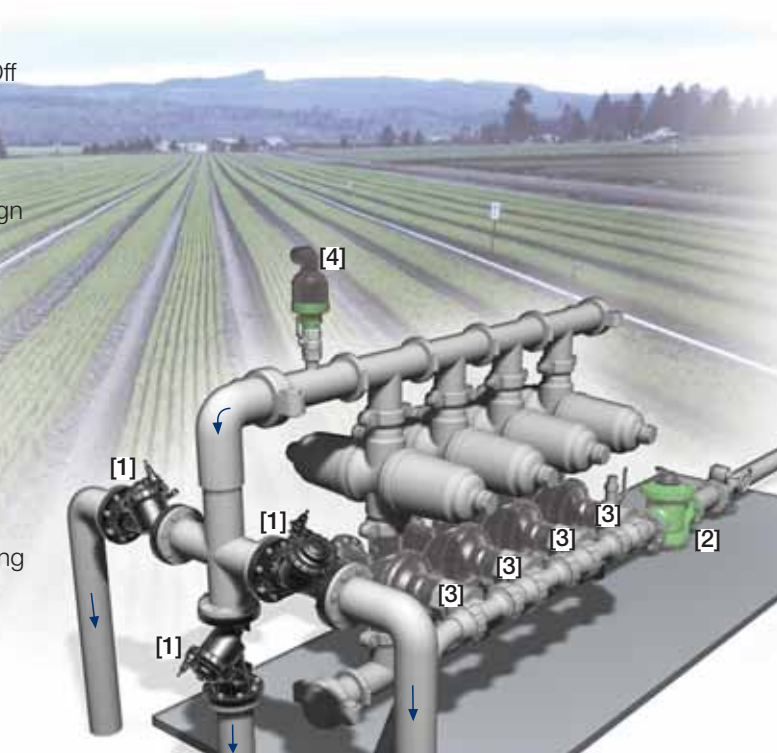
IR-170-50-bDZ

The BERMAD Flow Control Valve with Hydraulic Remote Control is a hydraulically operated, diaphragm actuated control valve that limits system demand to a preset maximum flow rate. It either opens or shuts in response to a remote pressure command.



### Features and Benefits

- Line Pressure Driven, Hydraulically Controlled On/Off
  - Limits fill-up rate and consumer over-demand
- Adjustable Servo Flow Pilot Controlled
  - Dynamic integrated needle valve
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Articulated flange connections eliminate mechanical and hydraulic stresses
  - Highly durable, chemical and cavitation resistant
- 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
- Distribution Centers
- Filter Stations

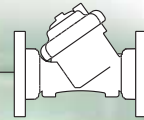
[1] BERMAD Model IR-170-50-bDZ opens upon pressure drop command, limits fill-up rate and consumer over-demand and maintains filter backwash pressure.

[2] BERMAD Hydrometer Model IR-900-M0-Z

[3] BERMAD Backwash Valve Model IR-3x3-350-S-P

[4] BERMAD Air Release Valve Model ARC-A-P-I

# BERMAD Irrigation



## IR-I70-50-bDZ

For full technical details, refer to Engineering Section.

## 100 Series hYflow

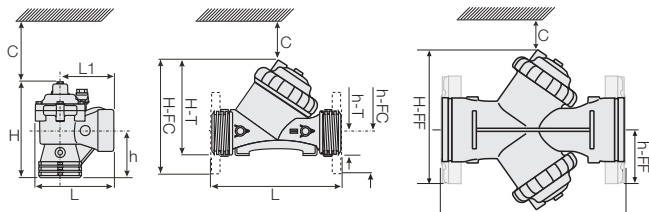
Flow Control

### Technical Specifications

#### Dimensions and Weights

Pattern Size	DN Inch	Angle	Y (Oblique)				Y "Boxer"	
			80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-FC <sup>(2)</sup> 3-FC <sup>(2)</sup>	80L-FC <sup>(2)</sup> 3L-FC <sup>(2)</sup>		100-FC <sup>(2)</sup> 4-FC <sup>(2)</sup>
L (L1)	mm		187 (130)	298	308	310	350	480
	inch		7.4 (5.1)	11.7	12.1	12.2	13.8	18.9
H (Hf)	mm		235 (245)	180 (195)	240 (255)	280	294	285
	inch		9.3 (9.6)	7.1 (7.7)	9.4 (10)	11	11.6	11.2
C	mm		53	53	600	600	600	600
	inch		2.1	2.1	4	4	23.6	23.6
h	mm		117	50	100	100	112	145
	inch		4.6	2	3.9	3.9	4.4	5.7
Weight	Kg		1.6	1.6	4.4	5.9	7.6	12.5
	lb.		3.5	3.5	9.7	13	16.7	27.6

(1) "T" = Threaded end connections (2) "FC" = Flanged, Corona (Metal) end connections  
(3) "FF" = Flanged, Universal Plastic end connections



### Technical Data

**Sizes:** 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

**Patterns:**

Oblique: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

Angle: 3"; DN80

**End Connections:**

Threaded: 3 & 3"L; DN80 & 80L

Flanged: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

**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

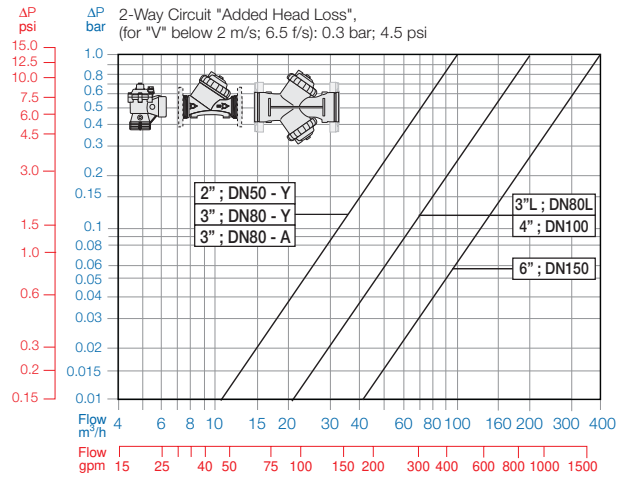
**Seals:** NR

**Spring:** Stainless Steel

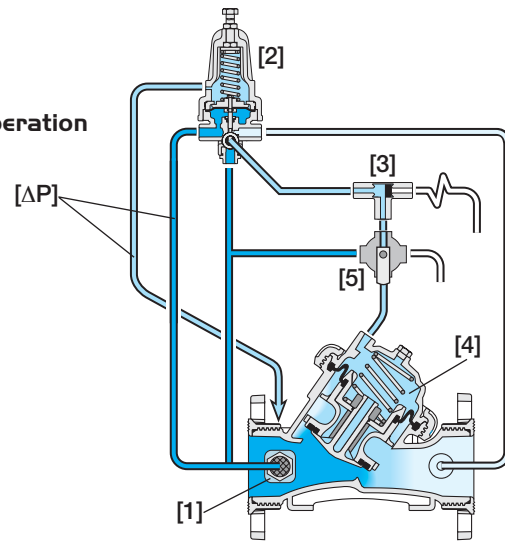
**Control Accessories:** Plastic

**Tubing and Fittings:** Plastic

### Flow Chart



### Operation



Pressure Differential  $[\Delta P]$  across the Differential Pressure Duct **[1]** is in direct proportion to demand. The Flow Pilot **[2]** continuously senses  $[\Delta P]$  and commands the Valve to throttle closed should demand rise above pilot setting. The Shuttle Valve **[3]** directs the pilot command into the main Valve Control Chamber **[4]**. Upon pressure rise command, the shuttle valve automatically switches, allowing pressurization of the control chamber, shutting the main Valve. The Manual Selector **[5]** enables local manual 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	3-6" <small>Other sizes available on request.</small>	170 <small>Oblique Angle (3"; DN80 Only)</small>	50 <small>Y A</small>	Y	P <small>Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona") Grooved (6"; DN150 Only)</small>	FF <small>BP NP FF CC VI</small>	2W/3W	-	bDZ <small>b D Z Other attributes available on request</small>

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



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