

Flow Control Valve

with Hydraulic Control

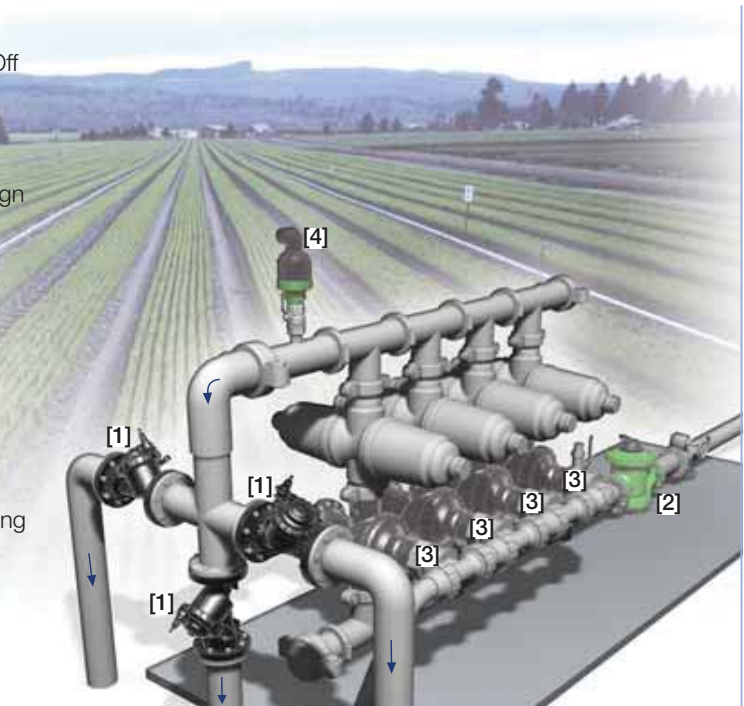
IR-170-50-bDZ

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

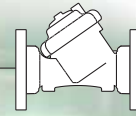


Typical Applications

- 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-170-50-bDZ

For full technical details, refer to Engineering Section.

100 Series hYflow

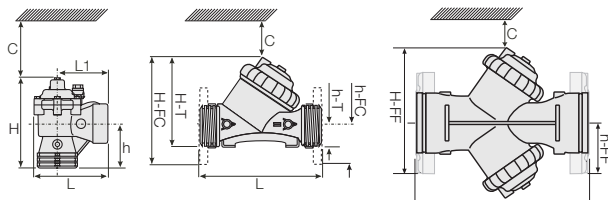
Flow Control

Technical Specifications

Dimensions and Weights

Pattern	Angle	Y (Oblique)					
		80-T ⁽¹⁾	80-T ⁽¹⁾	80-FC ⁽²⁾	80L-FC ⁽²⁾	100-FC ⁽²⁾	150-FF ⁽³⁾
Size	DN	3-T ⁽¹⁾	3-T ⁽¹⁾	3-FC ⁽²⁾	3L-FC ⁽²⁾	4-FC ⁽²⁾	6-FF ⁽³⁾
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

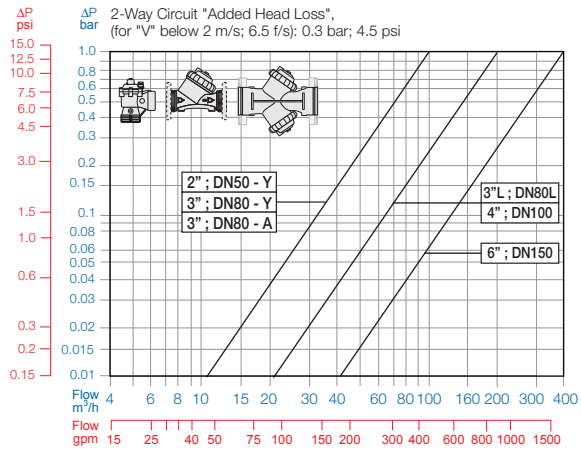
Seals: NR

Spring: Stainless Steel

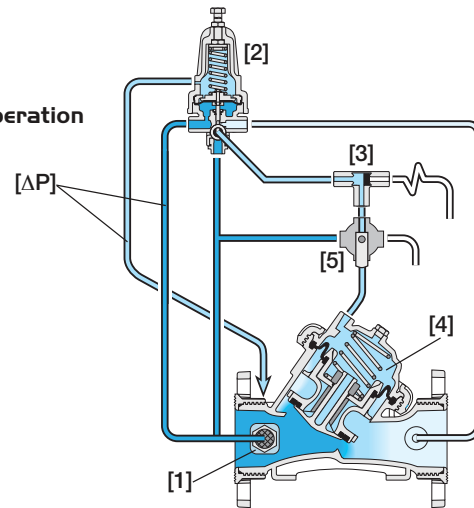
Control Accessories: Plastic

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	50	Y	P	FF	2W/3W	-	bDZ
		Oblique Angle (3"; DN80 Only)	Y A	Threaded BSP (Female) Threaded NPT (Female) Plastic Flanges* Metal Flanges* ("Corona") Grooved (6"; DN150 Only)	BP NP FF CC VI	Servo Differential Pressure Duct Manual Selector	Other attributes available on request		b D Z

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

