

## Flow Control Valve

with Hydraulic Control

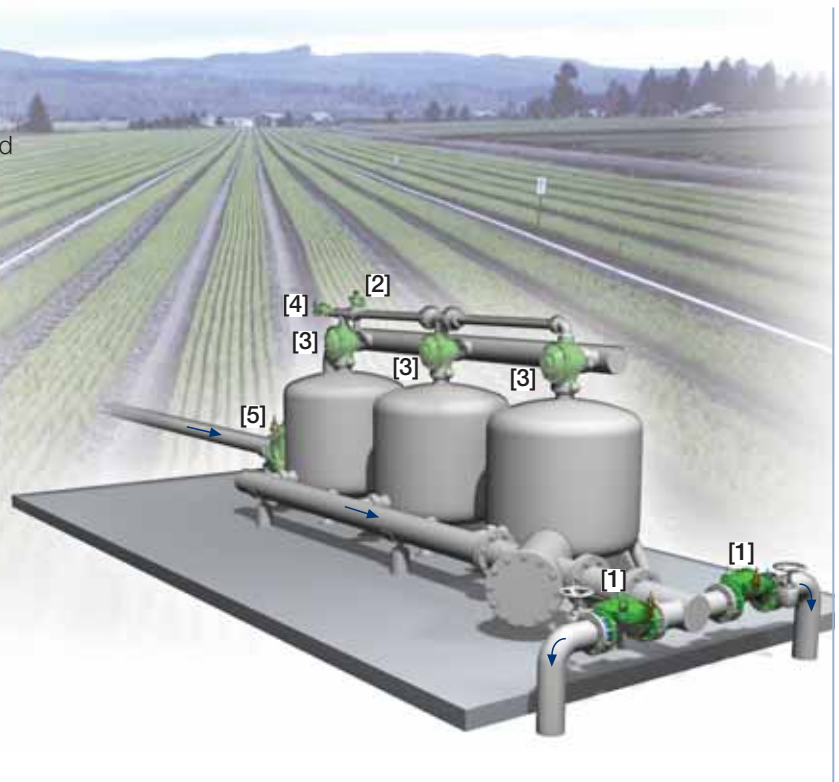
IR-470-50-bRUZ

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



### Features and Benefits

- Hydraulic Flow Control
  - Line pressure driven
  - Limits fill-up rate and consumer over-demand
  - Hydraulically controlled On/Off
- Advanced Globe Hydro-Efficient Design
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
  - Excellent low-flow regulation performance
  - Prevents diaphragm distortion
- Hydraulic Flow Sensor (upstream installation)
  - No Moving parts
  - No need for flow straightening
- User-Friendly Design
  - Easy flow setting
  - Simple in-line inspection and service

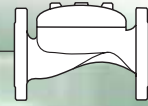


### Typical Applications

- Computerized Irrigation Systems
- Line Fill-Up Control
- Multiple Independent Consumer Systems
- Irrigation Machines
- Distribution Centers
- Filter Stations

- [1] BERMAD Model IR-470-50-bRUZ opens upon pressure drop command, limits fill-up rate and consumer over demand maintaining filters back flush pressure.
- [2] BERMAD Relief Valve Model IR-43Q-R
- [3] BERMAD Backwash Valve Model IR-3x2-350-A-I
- [4] BERMAD Backwash Flow Control Valve Model IR-470-beKU
- [5] BERMAD Pressure Reducing Hydrometer with Solenoid Control Model IR-920-M0-55-R

# BERMAD Irrigation



## IR-470-50-bRUZ

For full technical details, refer to Engineering Section.

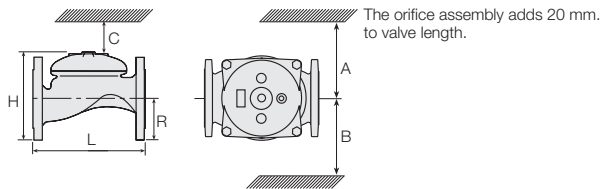
## 400 Series

Flow Control

### Technical Specifications

#### Dimensions and Weights

Size	DN Inch	80 3	100 4	150 6	200 8	250 10	300 12	350 14	400 16
L	mm	250	320	415	500	605	725	742	742
	inch	9.8	12.6	16.3	19.8	23.8	28.5	29.2	29.2
H	mm	210	242	345	430	460	635	655	965
	inch	8.3	9.5	13.6	16.9	18.1	25	25.8	38
C	mm	125	145	207	258	276	381	393	579
	inch	5	5.7	8.2	10.2	10.9	15	15.5	22.8
R	mm	100	112	140	170	202	242	260	300
	inch	3.9	4.4	5.5	6.7	8	9.5	10.2	11.8
A; B	mm	300	312	353	383	403	490	494	500
	inch	11.8	12.3	13.9	15.1	15.9	19.3	19.4	19.7
Weight	Kg	19	28	68	125	140	290	358	377
	lb.	41.9	61.7	149.9	275.6	308.6	639.3	789.2	831.1



### Technical Data

Patterns and Sizes: Globe: 3-16"; DN80-400 Angle: 3-4"; DN80-100

End Connections:

Size		3"	4"	6"	8-16"
		DN80	DN100	DN150	DN200-400
Threaded	Globe	■			
	Angle	■			
Flanged	Globe	■	■	■	■
	Angle	■	■		
Grooved	Globe	■	■	■	
	Angle	■	■		

Pressure Rating: 16 bar; 225 psi

Operating Pressure Range: 0.5-16 bar; 7-225 psi

For lower pressure requirements, consult factory

Flow Setting Range: ±20% from valve predetermined flow

Orifice diameter is calculated in accordance with desired ΔP at predetermined flow:

Although the standard calculated ΔP is 0.4 bar; 5.5 psi,

the actual head loss is 0.2 bar; 2.8 psi.

#### Materials:

Body and Cover:

Polyester Coated Cast or (10"; DN250 and larger) Ductile Iron

Spring: Stainless Steel

Diaphragm: Nylon fabric Reinforced NR with rugged insert

Bolts, Studs and Nuts: Zinc-Cobalt plated Steel

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

### How to Order

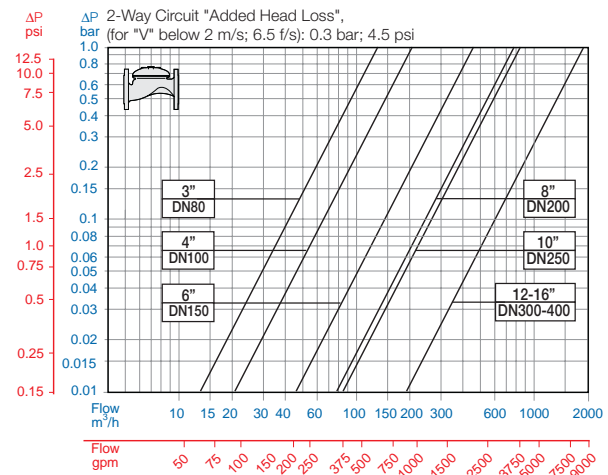
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	3-16" <small>Other sizes available on request.</small>	470	50	-	G	I	16	PG	-	PB	bRUZ
	Globe Angle (up to 4"; DN100)	G A	ISO-16 ISO-10 IS 14 (ISO 10/4 Holes) ANSI-125 ANSI-150 JIS-10 BST-D Grooved (3-6" DN80-150 only)		16 10 14 A1 A5 J1 BD VI	Plastic Tubing & Brass Fittings Copper Tubing & Brass Fittings		PB CB	Servo Metal Control Accessories Orifice Assembly Manual Selector Large Control Filter Valve Position Indicator <sup>(1)</sup> Flow Stem <sup>(1)</sup>	b R U Z F I M	
	Cast Iron (up to 6"; DN150) Ductile Iron (8"; DN200 & above)	I C									

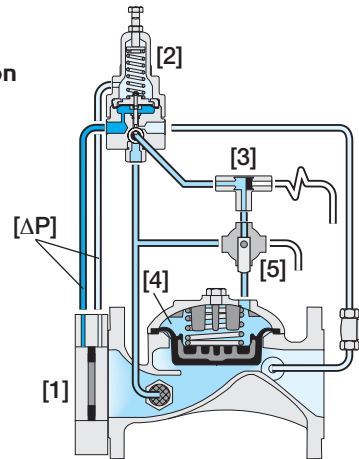
Other end connections available on request.

(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M.  
Other attributes available on request.

### Flow Chart



### Operation



Pressure Differential [ΔP] across the Orifice Assembly [1] is in direct proportion to demand. The Flow Pilot [2] continuously senses [ΔP] 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.



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