

## Flow Control Valve

with Solenoid Control

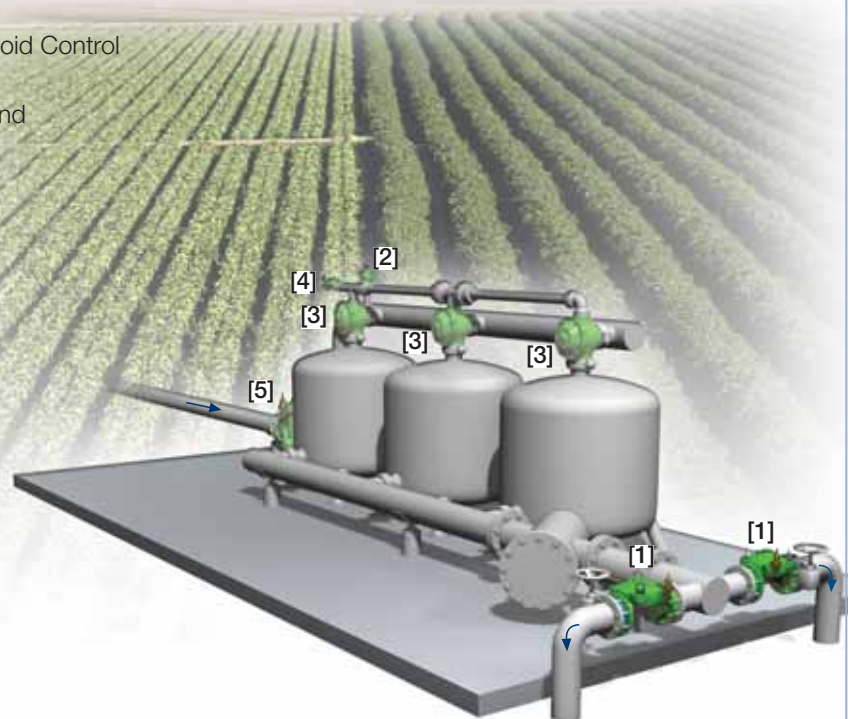
IR-470-55-bRU

The BERMAD Flow Control Valve with Solenoid 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 an electric signal.



### Features and Benefits

- Hydraulic Flow & Pressure Control with Solenoid Control
  - Line pressure driven
  - Limits fill-up rate and consumer over-demand
  - Electrically 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 and pressure setting
  - Simple in-line inspection and service

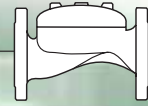


### Typical Applications

- Computerized Irrigation Systems
- Remote and/or Elevated Plots
- Line Fill-Up Control
- Multiple Independent Consumer Systems
- Irrigation Machines
- Distribution Centers
- Filter Stations

- [1] BERMAD Model IR-470-55-bRU opens in response to an electric signal, 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-470-55-bRU

For full technical details, refer to Engineering Section.

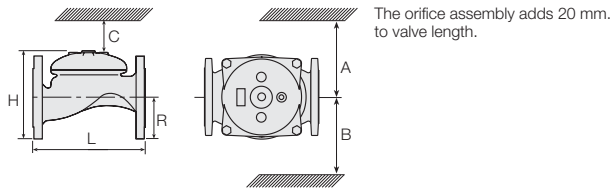
## 400 Series

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; 232 psi

Operating Pressure Range: 0.5-16 bar; 7-232 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 Ductile Iron  
(8"; DN200 and larger)

Spring: Stainless Steel

##### Diaphragm:

Nylon fabric NR  
(Reinforced 6" DN150 and larger)

Control Accessories: Brass

Tubing and Fittings:  
Reinforced Plastic and Brass

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

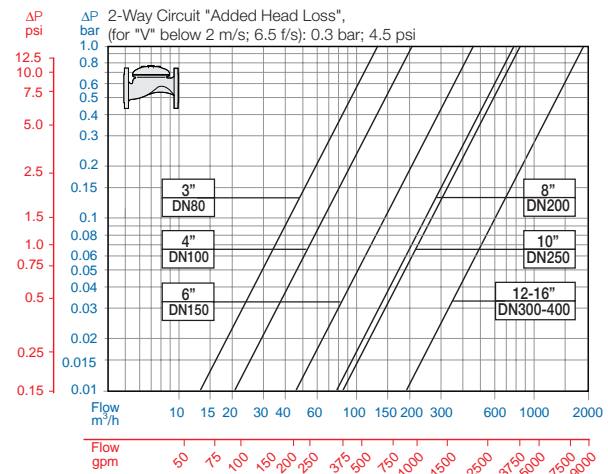
### How to Order

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

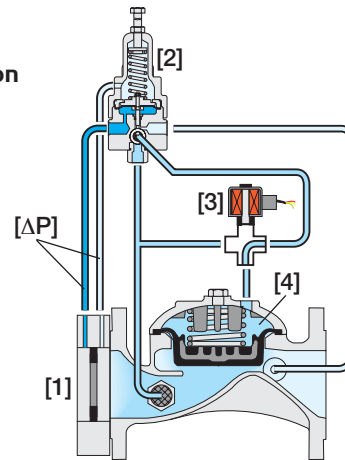
Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	3-16" <small>Other sizes available on request.</small>	470	55	-	G	I	16	PG	4AC	PB	bRU
Globe Angle (up to 4"; DN100)		G A	ISO-16 ISO-10 IS 14 (ISO 10/4 Holes) ANSI-125 ANSI-150 JIS-10		16 10 14 A1 A5	9VDC - 12VDC - 24VDC - 24VAC - 24VAC, Lightning Proof - N.C. 24VAC, Lightning Proof - N.O.	Latch Latch N.C. N.O. N.C. N.O.	9DS 1DS 4DC 4AC 4AO 4RC 4RO	Servo Metal Control Accessories Orifice Assembly Large Control Filter Valve Position Indicator <sup>(1)</sup> Flow Stem <sup>(1)</sup>	b R U F I M	
Cast Iron (up to 6"; DN150) Ductile Iron (8"; DN200 & above)		I C	BST-D Grooved (3-6" DN80-150 only)		BD VI	Other electrical ratings are available.				PB CB	

(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 Solenoid [3] hydraulically connects the flow pilot to the main Valve Control Chamber [4]. In response to an electric signal, the solenoid switches, directing line pressure into the control chamber causing the main Valve to shut.



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