



Level Control Valve

with Modulating Horizontal Float

IR-450-60-R

The BERMAD Model IR-450-60-R Level Control Valve with Modulating Horizontal Float is a hydraulically operated, diaphragm actuated control valve. The valve hydraulically controls reservoir filling to maintain constant water level regardless of fluctuating demand.



Features and Benefits

- Line Pressure Driven, Hydraulically Controlled
- Modulating Hydraulic Float Control
 - “Always Full” reservoir
- Advanced Globe Hydro-Efficient Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low opening and actuation pressure
 - Excellent low flow regulation performance
 - Progressively restrains valve closing
 - Prevents diaphragm distortion
- External Installation
 - Easy access to valve and float
 - Less wear and tear
 - Simple in-line inspection and service



Typical Applications

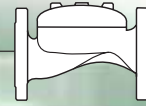
- Large Surface Area Reservoirs
- Low Volume Reservoirs
- Unavailable Power Supply Locations
- Fertilizer Mixing Tanks

[1] BERMAD Model IR-450-60-R opens upon drop in reservoir level maintaining “Always Full” reservoir, and shuts on rise in reservoir level to preset high.

[2] BERMAD Modulating Horizontal Float Model “60”

[3] BERMAD Strainer Model 70F

BERMAD Irrigation



IR-450-60-R

For full technical details, refer to Engineering Section.

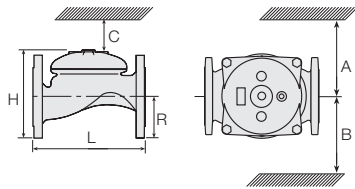
400 Series

Reservoirs

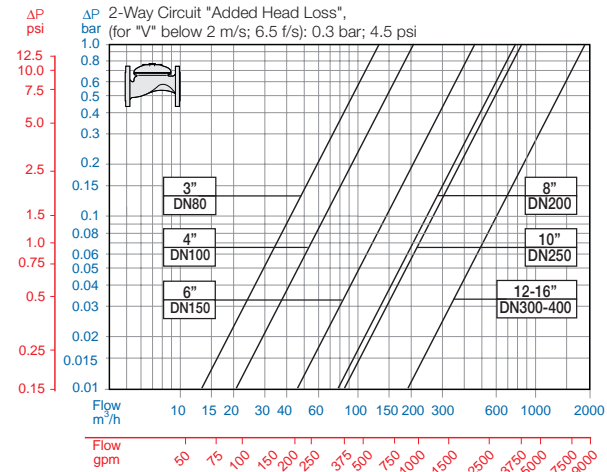
Technical Specifications

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



Flow Chart



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

Materials:

Body and Cover:

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

Spring: Stainless Steel

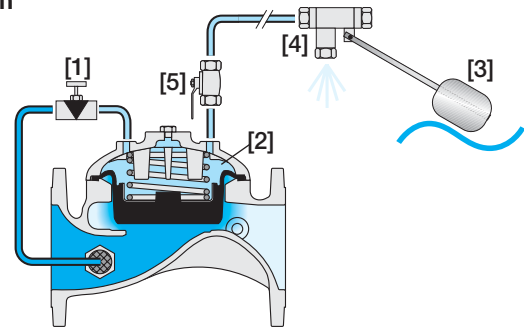
Diaphragm: Nylon fabric Reinforced NR with rugged insert

Bolts, Studs and Nuts: Zinc-Cobalt plated Steel

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

Operation



The Needle Valve [1] allows continuous flow from Valve inlet into the Control Chamber [2]. When water level rises, it pushes the Float [3] up throttling the Float Pilot [4]. Pressure in the control chamber accumulates, causing the Valve to throttle closed, reducing filling rate, and eventually closing drip tight. Should level fall, the float pilot releases pressure from the control chamber causing the Valve to modulate open. The needle valve controls Valve closing speed. The Cock Valve [5] enables 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	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>	450	60	-	G	I	16	PG	-	PB	R
		Globe Angle (up to 4"; DN100)	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		Metal Control Accessories Large Control Filter Valve Position Indicator ⁽¹⁾ Flow Stem ⁽¹⁾	R F I M
		Cast Iron (up to 8"; DN200) Ductile Iron (10"; DN250 & above)									

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



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