

Level Control Valve

with Bi-Level Vertical Float

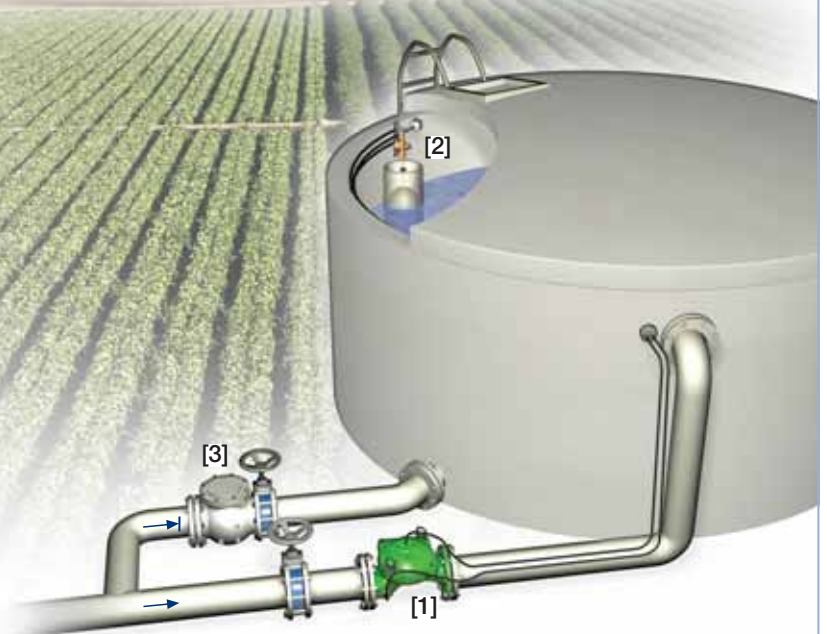
IR-450-66-Z

The BERMAD Model IR-450-66-Z Level Control Valve with Bi-Level Vertical Float is a hydraulically operated, diaphragm actuated control valve. The valve is hydraulically controlled to fully open at preset reservoir low level and to shut at preset high level.



Features and Benefits

- Line Pressure Driven, Hydraulically Controlled
- Bi-Level Hydraulic Vertical Float
 - On/Off service
 - Low cavitation damage
 - Suitable for low quality water
 - Easy level setting
- Advanced Globe Hydro-Efficient Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low opening and actuation pressure
 - 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

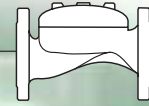
- Full Range of Low Level Reservoirs
- Unavailable Power Supply Locations
- Low Supply Pressure Systems
- Low Noise Generation Requirements
- Energy Cost-Critical Systems
- Systems with Poor Water Quality

[1] BERMAD Model IR-450-66-Z opens at reservoir preset low level and shuts at reservoir preset high level.

[2] BERMAD Bi-Level Vertical Float Model "66" in stilling tank

[3] Check Valve

BERMAD Irrigation



IR-450-66-Z

400 Series

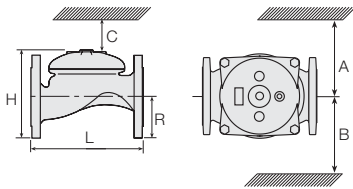
Reservoirs

For full technical details, refer to Engineering Section.

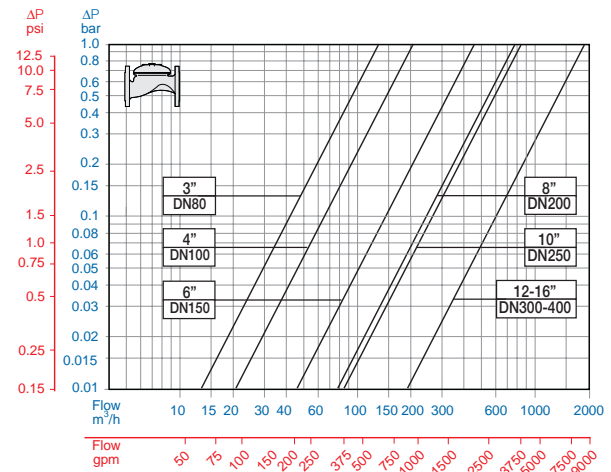
Technical Specifications

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

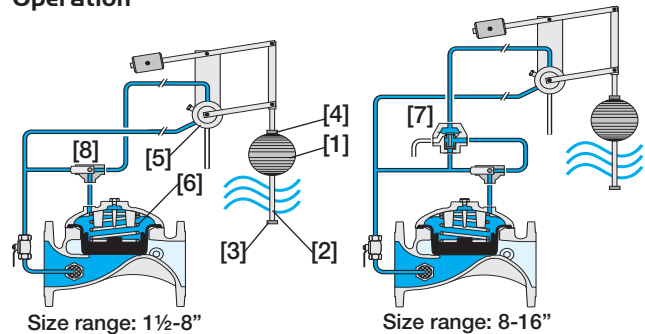
Diaphragm: Nylon fabric Reinforced NR with rugged insert

Bolts, Studs and Nuts: Zinc-Cobalt plated Steel

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

Operation



The Float [1] slides along the Rod [2] pulling the Low Level Stopper [3] or pushing the High Level Stopper [4] according to level drop or rise, thereby switching the Float Pilot (FP) [5] position. Upon level rise beyond sliding range, the FP switches open directing line pressure into the Control Chamber [6], and shutting the Valve. Level drop causes the FP switch to close, venting the control chamber and opening the Valve. As long as the float slides between stoppers [3] and [4], the Valve remains in its last position. For 8"; DN200 valves and larger, a 3-Way Hydraulic Relay Valve [7] quickens Valve response. The Manual Selector [8] 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	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	66	-	G	I	16	PG	-	PB	Z
		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	Manual Selector Large Control Filter Valve Position Indicator ⁽¹⁾ Flow Stem ⁽¹⁾		Z F I M
		Cast Iron (up to 8"; DN200) Ductile Iron (10"; DN250 & above)									

Other end connections available on request

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

