

Level Control and Pressure Sustaining Valve

with Bi-Level Vertical Float

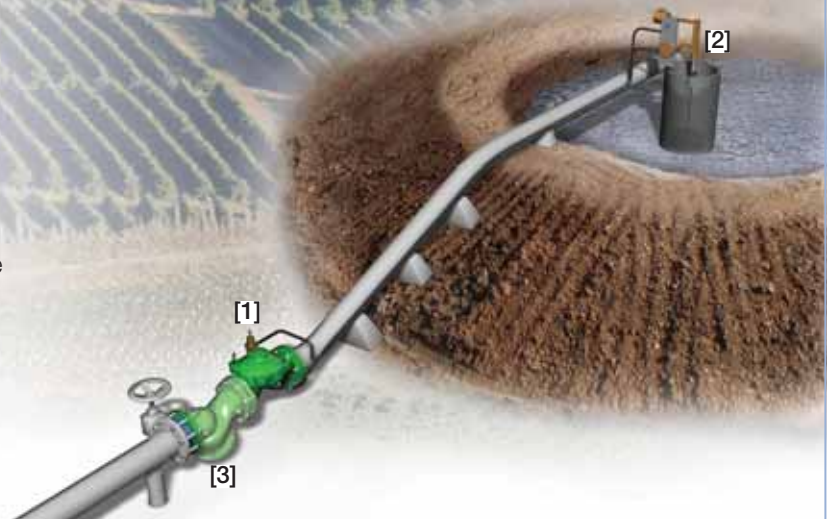
IR-453-66

The BERMAD Model IR-453-66 Level Control and Pressure Sustaining Valve with Bi-Level Vertical Float is a hydraulically operated, diaphragm actuated control valve that controls reservoir filling, opening at preset reservoir low level, and shutting at preset high level. During filling, it sustains minimum upstream pressure regardless of fluctuating flow or reservoir level.



Features and Benefits

- Line Pressure Driven, Level and Pressure Control
 - Prioritizes irrigation over reservoir fill-up
- Bi-Level Hydraulic Vertical Float
 - On/Off service
 - Flexible adjusting Range
- 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
- User Friendly Design
 - Easy access to valve and float
 - Easy level and pressure setting
 - Simple in-line inspection and service



Typical Applications

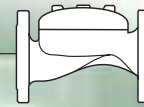
- Full Range of Low Level Reservoirs
- Unavailable Power Supply Locations
- Limited Supply Pressure Systems
- Systems Irrigated Directly from Fill-Up Line
- Backup for Reservoir Supply Valves

[1] BERMAD Model IR-453-66 opens at reservoir preset low level, sustains minimum preset supply pressure, and shuts at reservoir preset high level.

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

[3] BERMAD Strainer Model 70F

BERMAD Irrigation



IR-453-66

For full technical details, refer to Engineering Section.

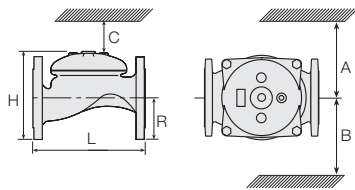
400 Series

Reservoirs

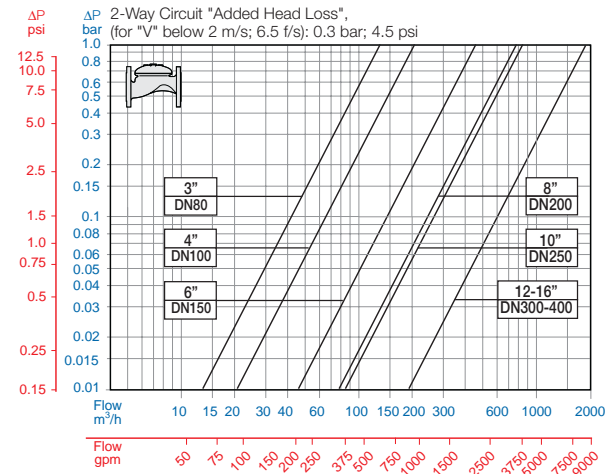
Technical Specifications

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

Setting Range: 1.5-16 bar; 22-232 psi

Setting ranges vary according to specific pilot spring. Please consult factory.

Materials:

Body and Cover:

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

Spring: Stainless Steel

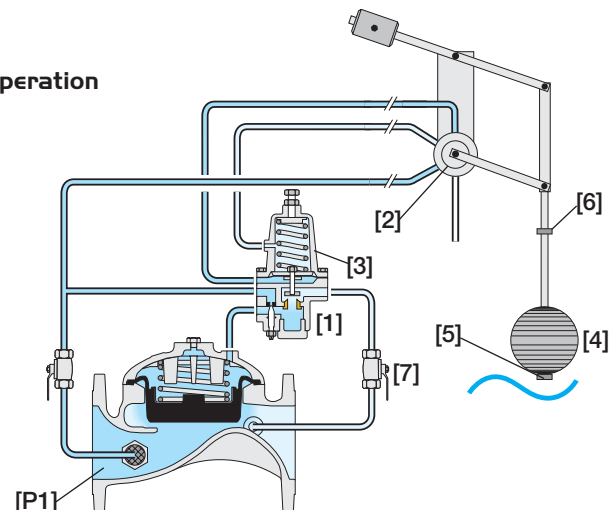
Diaphragm: Nylon fabric Reinforced NR with rugged insert

Bolts, Studs and Nuts: Zinc-Cobalt plated Steel

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

Operation



The Pressure Sustaining Pilot (PSP) [1] commands the Valve to throttle closed should Upstream Pressure [P1] drop below setting, and to modulate open when it rises above setting. Upon level rise beyond sliding range, the Float Pilot [2] switches open, directing line pressure into the PSP Control Chamber [3], which causes the Valve to shut. Level drop causes the FP switch to close, venting the control chamber, and opening the Valve. As long as the Float [4] is between stoppers [5] and [6], the Valve remains in its last position. The downstream Cock Valve [7] 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>	453	66	-	G	I	16	PG	-	PB	-
	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		Large Control Filter Valve Position Indicator ⁽¹⁾ Flow Stem ⁽¹⁾	F I M
	Cast Iron (up to 8"; DN200) Ductile Iron (10"; DN250 & above)	I C									

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

Other end connections available on request



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