

Level Control Valve

with Altitude Pilot

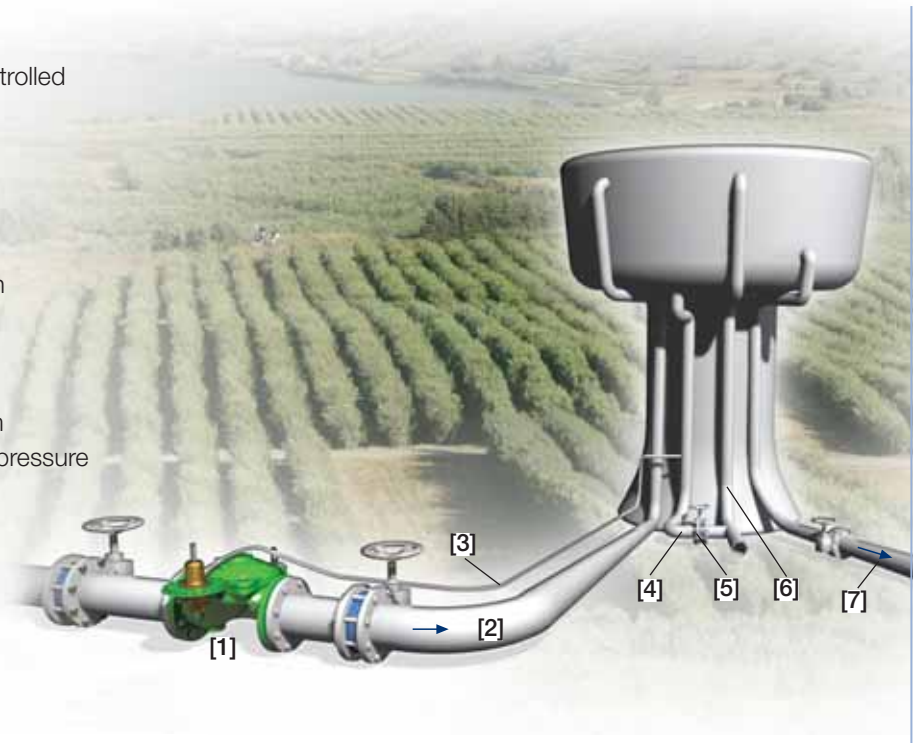
IR-450-80-XZ

The BERMAD Model IR-450-80-XZ Level Control Valve with Altitude Pilot is a hydraulically operated, diaphragm actuated control valve. The valve hydraulically shuts at preset reservoir high level and fully opens in response to an approximately one-meter (three-foot) level drop, as sensed by the 3-way altitude pilot mounted on the main valve.



Features and Benefits

- Line Pressure Driven, Hydraulically Controlled
- Bi-Level Altitude Pilot
 - No float, simple installation
 - On/Off service
 - No cavitation damage
 - Suitable for low quality water
- 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
- User Friendly Design
 - Easy level setting
 - Simple in-line inspection and service

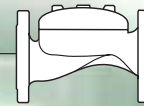


Typical Applications

- High Level Reservoirs and Water Towers
- Unavailable Power Supply Locations
- Low Supply Pressure Systems
- Low Noise Generation Requirements
- Energy Cost-Critical Systems
- Systems with Poor Water Quality
- Level Sustaining at Reservoir Outlet

- [1] BERMAD Model IR-450-80-XZ shuts at reservoir preset high level and fully opens in response to an approximately one-meter (three-foot) level drop.
- [2] Supply line
- [3] Sensing tube
- [4] Tower drainage pipe (for maintenance)
- [5] Tower drainage N.C. valve (for maintenance)
- [6] Tower "Over Flow" pipe
- [7] Outflow line

BERMAD Irrigation



400 Series

Reservoirs

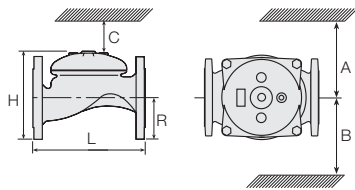
IR-450-80-XZ

For full technical details, refer to Engineering Section.

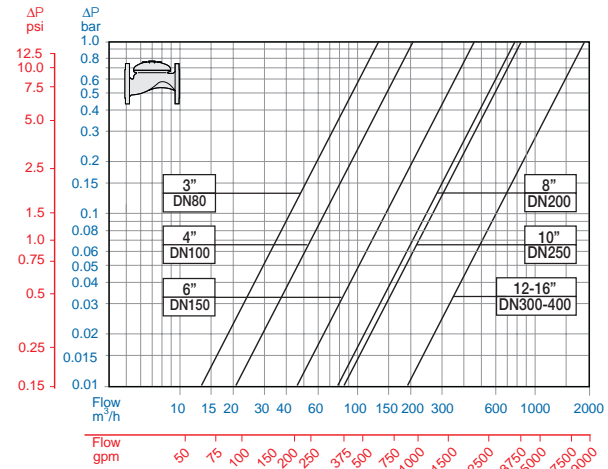
Technical Specifications

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

Pilot Setting Range:

Code	meter	feet
M6	2-14	7-46
M5	5-12	17-72
M4	15-35	49-115
M8	25-70	82-230

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

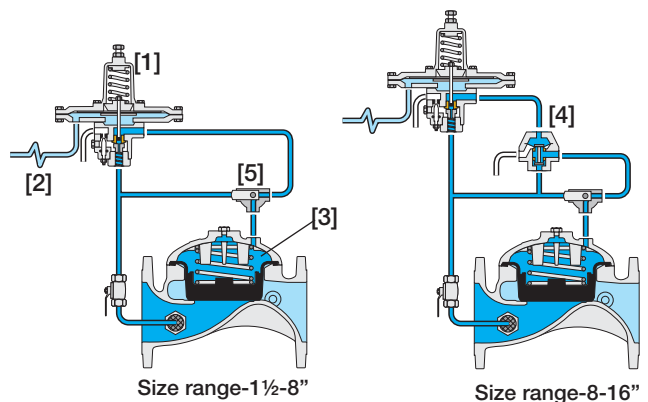
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	3-6"	450	80	M6	G	I	16	PG	-	PB	XZ
	Other sizes available on request.										
	2-14 meter Setting	M6	Cast Iron (up to 8"; DN200)	I		ISO-16	16			Plastic Tubing & Brass Fittings	PB
	5-22 meter Setting	M5	Ductile Iron (10"; DN250 & above)	C		ISO-10	10			Copper Tubing & Brass Fittings	CB
	15-35 meter Setting	M4				IS 14 (ISO 10/4 Holes)	14				
	25-70 meter Setting	M8				ANSI-125	A1			3-Way Control	X
	Globe	G				ANSI-150	A5			Manual Selector	Z
	Angle (up to 4"; DN100)	A				JIS-10	J1			Large Control Filter	F
						Grooved (3-6"; DN80-150 only)	VI			Valve Position Indicator ⁽¹⁾	I

Other end connections available on request

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

Operation



The Altitude Pilot [1] senses the static head of the reservoir level via a Tube [2] connected to a "still point" at the bottom of the reservoir. Should level rise to pilot setting, the pilot directs line pressure to pressurize the Control Chamber [3] shutting off the Valve. Should level fall approximately 1m (3ft) below setting, the pilot vents the control chamber causing the Valve to fully open. For 8" valves and larger, a 3-Way Hydraulic Relay Valve [4] quickens Valve response. The Manual Selector [5] enables local manual closing.



info@bermad.com • www.bermad.com

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Trädgårdsteknik AB
Helsingborgsvägen 578
262 96 ÄNGELHOLM
Telefon: 0431-222 90
Telefax: 0431-222 70
info@tradgardsteknik.se
www.tradgardsteknik.se
