BERMAD Irrigation



900 Series

Pressure Reducing & Sustaining

Pressure Reducing and Sustaining Automatic Metering Valve (AMV)

IR-923-DO-KX

The BERMAD Model IR-923-D0-KX integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. Equipped with a Mechanical Shut-Off Pilot, a Pressure Sustaining Pilot and a Pressure Reducing Pilot, the BERMAD AMV sustains minimum preset upstream (back) pressure and reduces downstream pressure to a constant preset maximum. It automatically shuts itself after accurately delivering a preset quantity of water.



Features and Benefits

- Integrated "All-in-One" Control Valve
 - Saves space, cost and maintenance
- Easy Modification to Mechanical Drive Hydrometer
 - Adaptable to future computerized systems
- Hydraulic Pressure and Batch Control
 - Prioritizes pressure zones and Controls system fill-up
 - Protects downstream system
 - Non-computerized quantity follow-up and control
- Internal Inlet & Outlet Flow Straighteners
 - Saves on straightening distances
 - Maintains accuracy
- Integrated Flow Metering Calibration Device
- Measurement precision to ±2%
- User-Friendly Design
 - Easy pressure and dose setting
 - Simple in-line inspection and service

Typical Applications

- Semi-Automatic Irrigation Systems
- Manual Irrigation Intended for Computerization
- Line Fill-Up Control Solutions
- Systems Subject to Varying Supply Pressure
- Pressure Reducing Systems
- Volumetric Irrigation Systems



- [1] BERMAD Model IR-923-D0-KX sustains supply system pressure, protects filter and downstream system, and delivers precise water quantity.
- [2] BERMAD Pressure Reducing Valve Model IR-220-bZ
- [3] BERMAD Vacuum Breaker Model 1/2"-ARV



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IR-923-DO-KX

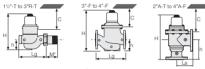
For full technical details, refer to Engineering Section.

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Technical Specifications

Dimensions and Weights

Size	DN Inch	40-T 1 ¹ / ₂ -T	50-T 2-T	50A-T 2A-T	80R-T 3R-T	80R-F 4R-F	80-F 3-F	80A-F 3A-F	100-F 4-F	100A-F 4A-F
Lg	mm	250	250	N.A.	250	310	300	N.A.	350	N.A.
	inch	9.8	9.8	N.A.	9.8	12.2	11.8	N.A.	13.8	N.A.
La	mm	N.A.	N.A.	120	N.A.	N.A.	N.A.	150	N.A.	180
	inch	N.A.	N.A.	4.7	N.A.	N.A.	N.A.	5.9	N.A.	7.1
Н	mm	293	300	322	300	298	405	425	470	500
	inch	11.5	11.8	12.7	11.8	11.7	15.9	16.7	18.5	19.7
С	mm	210	210	210	210	225	285	285	365	365
	inch	9	9	9	9	9	11	11	15	15
h	mm	95	95	125	79	100	123	196	137	225
	inch	3.7	3.7	4.9	3.1	3.9	4.8	7.7	5.4	8.9
M*	mm	67	77	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
	inch	2.6	3.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Weight	Kg	6.8	8.8	8.1	7.3	16	26.0	25.8	37.0	36.1
	lb.	15	19.4	17.4	16.1	35.3	57.3	56.2	81.6	78.9



Accuracy & Flow Data (ISO 4064-I, Class A)

Size	Accuracy	DN inch	40 1¹/₂	50 2	3"R 80R	80 3	100 4
Q min	5%	m ³	0.8	0.8	1.2	1.2	1.8
(Minimum flow)	5%	gpm	3.5	3.5	5.3	5.3	7.9
Qn, ISO 4064-1	00/	m ³	15	15	17	40	60
(Nominal flow)	2%	gpm	66	66	75	176	264
Qper=Q3	2%	m³	25	40	40	100	160
(Permanent flow)	∠%	gpm	110	176	176	440	704

Dial Options

		Cubic Meter (m³)									1000 Gallon					
Capacity	40	80	120	150	200	350	009	800	1,200	2,100	13	50	130	200	200	870
	Cubic Meter (m³)								Gallon							
Graduation	-	_	2	2	5	10	10	10	20	50	100	1000	2,500	5,000	10,000	20,000
11/2" & 2"	•		-								-					
3"R							•				•		-	•		
3"				-	•	•	•	•	•			•	-	•		
4"					-	•	-	-	•	-		•	-	•	-	

Technical Data

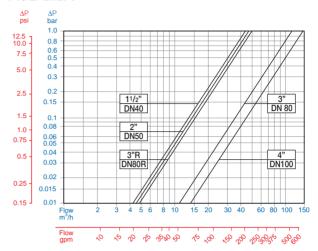
End Connections:

Threaded: 1½, 2 & 3"R; DN40, 50 & 80R Flanged: 3R, 3 & 4"; DN80R, 80 & 100 Pressure Rating: 10 bar; 145 psi Minimum Operating Pressure: 0.5 bar; 7 psi For lower pressure requirements, consult factory

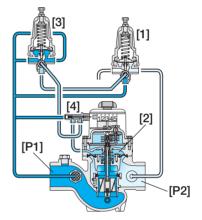
Setting Range: 1-7.0 bar; 15-100 psi

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

Flow Chart



Operation



The Pressure Reducing Pilot (PRP) [1] is hydraulically connected to the AMV Control Chamber [2] through the Pressure Sustaining Pilot (PSP) [3] and the manually preset Shut-Off Pilot (SOP) [4]. The PSP commands the AMV to throttle closed should Upstream Pressure [P1] drop below setting. When [P1] rises, the PSP switches and allows the PRP to control the AMV, commanding it to reduce Downstream Pressure [P2]. Upon delivering the preset quantity of water, the SOP switches, directs line pressure into the control chamber, shutting the AMV.

How to Order

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

