

Flow Control and Pressure Reducing Hydrometer

Magnetic Drive

IR-972-M0-KVZ

The BERMAD Model IR-972-M0-KVZ integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. Serving as Flow Meter and Main Valve, it controls irrigation together with the irrigation controller. The BERMAD Hydrometer limits demand and reduces downstream pressure to constant preset maximum values.



Features and Benefits

- Integrated "All-in-One" Control Valve
 - Saves space, cost and maintenance
- Line Pressure Driven, Hydraulically Controlled
 - Limits fill-up rate and consumer over-demand
 - Protects downstream system
- Magnetic Drive with Vacuum-Sealed Register
 - Water-free gear train mechanism
 - Reed-switch and Opto pulse-generating modes
 - Various pulse combinations
- Internal Inlet & Outlet Flow Straighteners
 - Saves on straightening distances
 - Maintains accuracy
- Integrated Flow Metering Calibration Device
- Paddle-Type Hydro-Mechanical Flow Pilot
 - No added head loss
 - Wide setting range
- Simple In-Line Inspection and Service

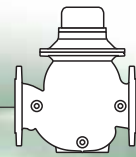


Typical Applications

- Computerized Irrigation Systems
- Remote Flow Data Read-Out
- Flow Monitoring & Leakage Control
- Line Fill-Up Control Solutions
- Pressure Reducing Systems
- Multiple Independent Consumer Systems

- [1] BERMAD Model IR-972-M0-KVZ limits over-demand, controls laterals and distribution line fill-up while reducing pressure, and measures flow.
- [2] BERMAD Relief Valve Model IR-43Q-R
- [3] BERMAD Air Valve Model ARC-A-P-I
- [4] BERMAD Vacuum Breaker Model 1/2"-ARV

BERMAD Irrigation



IR-972-MO-KVZ

For full technical details, refer to Engineering Section.

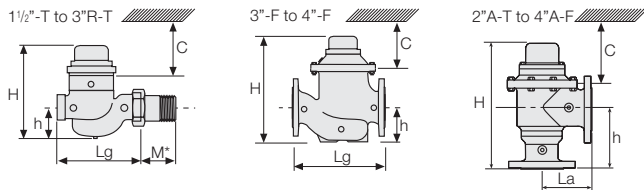
900 Series

Flow Control & Pressure Reducing

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 inch	250 9.8	250 9.8	N.A.	250 9.8	310 12.2	300 11.8	N.A.	350 13.8	N.A.
La	mm inch	N.A.	N.A.	120 4.7	N.A.	N.A.	N.A.	150 5.9	N.A.	180 7.1
H	mm inch	270 10.6	277 10.9	300 11.8	277 10.9	298 11.7	382 15.0	402 15.8	447 17.6	481 18.9
C	mm inch	210 9	210 9	210 9	210 9	225 9	285 11	285 11	365 15	365 15
h	mm inch	95 3.7	95 3.7	125 4.9	79 3.1	100 3.9	123 4.8	196 7.7	137 5.4	225 8.9
M*	mm inch	67 2.6	77 3.0	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
Weight	Kg lb.	6.8 15	8.8 19.4	8.1 17.4	7.3 16.1	16 35.3	26.0 57.3	25.8 56.2	37.0 81.6	36.1 78.9



Accuracy & Flow Data

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

Pulse Option

Size	One pulse per	Liter : Gallon			
		1; 0.1	10; 1	100; 10	1000; 100
1 1/2-4"; DN50-100		▲	▲	▲	▲

▲ R.S. = Reed-Switch ■ O.E. = Opto-Electric
Two parallel pulses are transmitted, other pulse rates are available on request.

Technical Data

Pressure Rating: 10 bar; 145 psi
Minimum Operating Pressure: 0.5 bar; 7 psi
 For lower pressure requirements, consult factory
Setting Range: 1-7 bar; 15-100 psi
Flow Setting Range: 1-5 m/sec; 3.3-16.5 f/sec

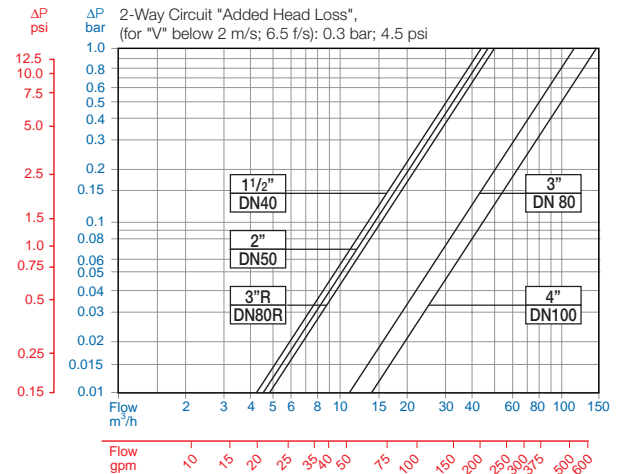
How to Order

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

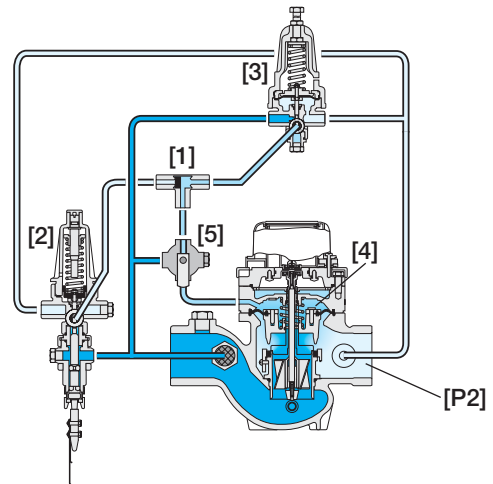
Sector	Size	Primary Feature	Control Categories	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage & Position	Tubing & Fittings	Dial Capacity	Pulse Rate	Additional Attributes		
IR	1 1/2-4" <small>Other sizes available on request.</small>	972	M0	00	G	I	BP	PG	-	PP	WAT	R12	KVZ		
Globe	Angle 90°	120° (2 1/2" & 4" only)	G	A	H	Plastic Tubing & Fittings	PP	R.S.	10 Lit	R01	R.S.	1 Gal	RG3	Plastic Control Accessories	K
						Plastic Tubing & Brass Fittings	PB	R.S.	100 Lit	R02	R.S.	10 Gal	RG4	Paddle Flow Control Pilot	V
								R.S.	1 m ³	R03	R.S.	100 Gal	RG5	Manual Selector	Z
								R.S.	100 Lit+10 Lit	R12	R.S.	10+1 Gal	G34	Homologation Approved	L
								R.S.	1 m3+1100 Lit	R23	R.S.	100+10 Gal	G45		
								O.E.	1 Lit	P01	O.E.	0.1 Gal	PG2		
								O.E.	10 Lit	P10	O.E.	1 Gal	PG3		
								O.E.+R.S.	1+100 Lit	PQ1	O.E.+R.S.	0.1+10 Gal	P4G		
								O.E.+R.S.	10 Lit+1 m ³	P13	O.E.+R.S.	1+100 Gal	P5G		
								R.S.	No Pulse	RNP	R.S.	No Pulse Gal	RNG		

R.S. = Reed-Switch O.E. = Opto-Electric

Flow Chart



Operation



The Shuttle Valve [1] hydraulically connects the Paddle Flow Pilot (PFP) [2] or the Pressure Reducing Pilot (PRP) [3] to the Hydrometer Control Chamber [4]. The PFP commands the Hydrometer to throttle closed should demand rise above setting. The PRP commands the Hydrometer to reduce Downstream Pressure [P2] to pilot setting. The Manual Selector [5] enables local manual closing.



info@bermad.com • www.bermad.com

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