

Pressure Reducing Hydrometer

**Magnetic Drive
with Solenoid Control**

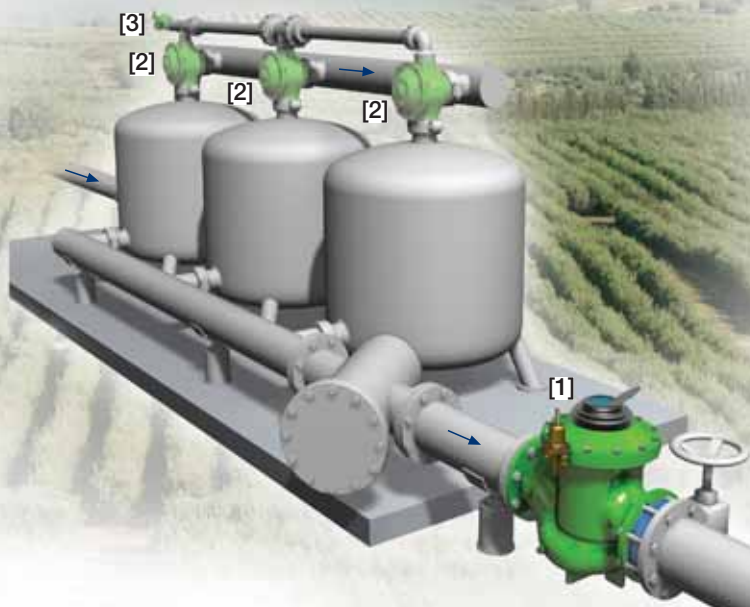
IR-930-M0-55-R

The BERMAD Model IR-930-M0-55-R integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. As the system's Flow Meter and Main Valve, it controls irrigation together with the irrigation controller. The BERMAD Hydrometer sustains minimum preset upstream (back) pressure regardless of fluctuating flow or varying downstream pressure. It either opens or shuts in response to an electric signal.



Features and Benefits

- Integrated "All-in-One" Control Valve
 - Saves space, cost and maintenance
- Line Pressure Driven, Electrically Controlled On/Off
 - Prioritizes pressure zones
 - Controls system fill-up
- 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
- User-Friendly Design
 - Easy pressure setting
 - Simple in-line inspection and service



Typical Applications

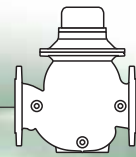
- Computerized Irrigation Systems
- Distanced and/or Elevated Plots
- Flow Monitoring & Leakage Control
- Line Fill-Up Control
- Line Emptying Prevention
- Filter Stations
- Irrigation Machines

[1] BERMAD Model IR-930-M0-55-R opens in response to an electric signal, and sustains filters back flush pressure controlling system fill-up.

[2] BERMAD Backwash Valve Model IR-3x2 350-A-I

[3] BERMAD Backwash Flow Control Valve Model IR-470-beKU

BERMAD Irrigation



IR-930-MO-55-R

For full technical details, refer to Engineering Section.

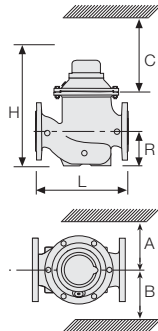
900 Series

Pressure Sustaining

Technical Specifications

Dimensions and Weights

Size	DN Inch	80 3	100 4	150 6	200 8	250 10
L	mm	300	350	500	600	600
	inch	11.8	13.8	19.7	23.6	23.6
H	mm	382	447	602	617	617
	inch	15	17.6	23.7	24.3	24.3
C	mm	290	340	450	465	465
	inch	11.4	13.4	17.7	18.3	18.3
R	mm	123	137	216	228	228
	inch	4.8	5.4	8.5	9	9
A; B	mm	305	325	390	390	415
	inch	12	12.8	15.4	15.4	16.3
Weight	Kg	23	31	71	93	141
	lb.	57.7	68.3	156.5	205	310.9



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

Size	Accuracy	DN inch	80 3	100 4	150 6	200 & 250 8 & 10
Q min (Minimum flow)	5%	m ³ gpm	1.2 5.3	1.8 7.9	4 17.6	6.3 27.7
Qn, ISO 4064-1 (Nominal flow)	2%	m ³ gpm	40 176	60 264	150 660	250 1100
Qper=Q3 (Permanent flow)	2%	m ³ gpm	100 440	160 704	250 1100	400 1760

Pulse Option

Size	One pulse per	Liter ; Gallon			m ³ ; Gallon	
		1; 0.1	10; 1	100; 10	1; 100	10; 1000
3-4"; DN80-100	■			▲	▲	
	■			▲	▲	
6-10"; DN150-250	■				▲	▲
	■				▲	▲

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

Technical Data

Patterns and Sizes:

Globe: 3-10"; DN80-250
Angle 90°: 3-8"; DN80-200
Angle 120°: 4"; DN100

End Connections:

Flanged: 3-10"; DN80-250

Pressure Ratings: 16 bar; 232 psi

Minimum Operating Pressure:

0.5 bar; 7 psi

For lower pressure requirements, consult factory

Setting Range: 1-16 bar; 15-232 psi

Setting ranges vary according to specific pilot spring.

Please consult factory.

Materials:

Body and Cover:

Polyester Coated Cast or Ductile Iron

Metal Internals:

St. St. & Glass Fiber Reinforced Nylon

Impeller: Polypropylene

Elastomers: Reinforced NR & NBR

Pivots and Bearings: Tungsten Carbide

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

Solenoid Voltage Range:

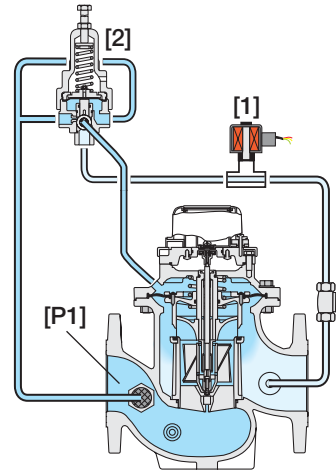
S-390 & S-400: 24 VAC, 24 VDC

S-392 & S-402: 9-20 VDC, Latch

S-982 & S-985: 12-50 VDC, Latch

Other voltages available

Operation



Opening the Solenoid [1] opens the Hydrometer, which continuously transmits flow data to the irrigation controller. The Pressure Sustaining Pilot [2] commands the Hydrometer to throttle closed should Upstream Pressure [P1] drop below pilot setting, and to modulate open when it rises above pilot setting. Closing the solenoid causes the Hydrometer to shut.

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	3-10"	930	MO	00	G	I	16	PG	4AC	PB	WAT	R23	R
Other sizes available on request.													
Globe	G	9VDC - Latch	9DS	R.S.	100 Lit	R02	R.S.	10 Gal	RG4	Metal Control Accessories			R
Angle	A	12VDC - Latch	1DS	R.S.	1 m ³	R03	R.S.	100 Gal	RG5	Homologation Approved			L
120° (4"; DN100 only)	H	24VDC - N.C.	4DC	R.S.	10 m ³	R04	R.S.	1000 Gal	RG6	Other attributes available on re.request			
		24VDC - N.O.	4DC	R.S.	100 Lit +1 m ³	R23	R.S.	10+100 Gal	G45				
ISO-16	16	24VAC - N.C.	4AC	R.S.	1 m ³ +10 m ³	R34	R.S.	100+1000 Gal	G56				
ISO-10	10	24VAC - N.O.	4AO	O.E.	1 Lit	P01	O.E.	0.1 Gal	PG2				
ISO-14 (ISO-10/4 Holes)	14			O.E.	10 Lit	P10	O.E.	1 Gal	PG3				
ANSI-125	A1			O.E.+R.S.	1+100 Lit	PQ1	O.E.+R.S.	0.1+10 Gal	P4G				
JIS-10	J1	Plastic Tubing & Brass Fittings	PB	O.E.+R.S.	10 Lit+1 m ³	P13	O.E.+R.S.	1+100 Gal	P5G				
BST-D	BD	Copper Tubing & Brass Fittings	CB	R.S.	No Pulse	RNP	R.S.	No Pulse Gal	RNG				
		Other electrical ratings are available.											

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



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