

## Hydrometer

### Magnetic Drive

### Normally Closed with Hydraulic Control

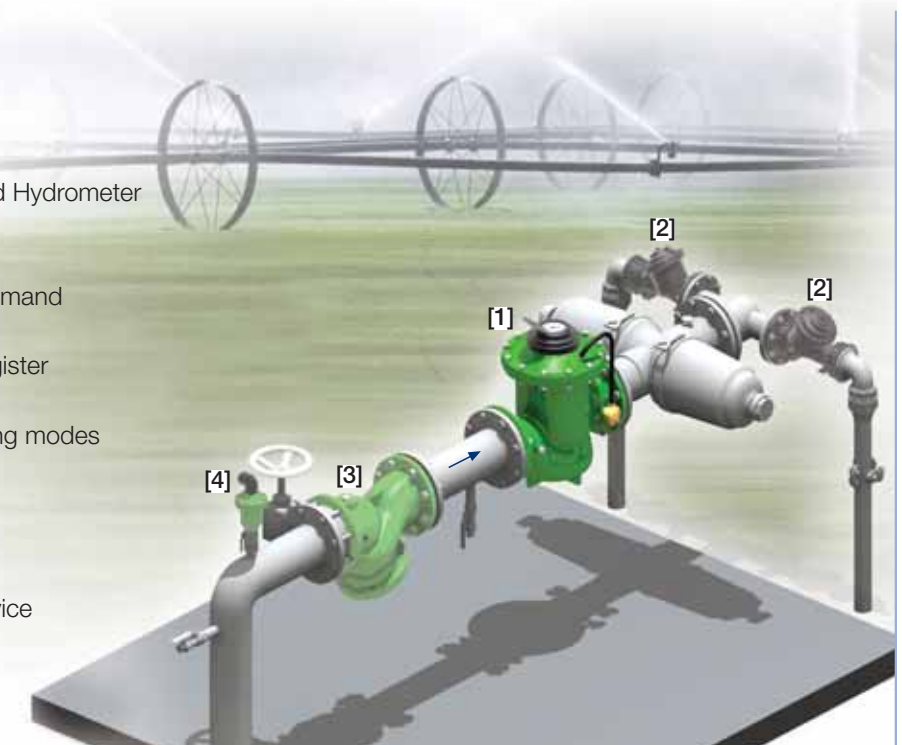
#### IR-900-M0-54-RXZ

The BERMAD Model IR-900-M0-54-RXZ 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 system irrigation together with the irrigation controller. It is a Normally Closed Hydrometer, which opens in response to a pressure command and shuts in the absence of that command.



### Features and Benefits

- Integrated "All-in-One" Control Valve
  - Saves space, cost and maintenance
- Hydraulically Controlled, Normally Closed Hydrometer
  - Line pressure driven
  - Closes upon control failure
  - Amplifies and relays weak remote command
  - Hydraulically controlled On/Off
- 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
  - Precise measurement
- User-Friendly Design
  - Simple in-line inspection and service

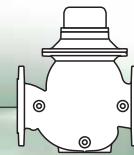


### Typical Applications

- Computerized Irrigation Systems
- Remote/Elevated Systems
- Large Diameter Distribution Centers
- Remote Flow Data Read-Out
- Flow Monitoring and Leakage Control
- Irrigation Machines
- Volumetric Irrigation Systems

- [1] BERMAD Model IR-900-M0-54-RXZ opens upon command pressure rise measuring the flow.
- [2] BERMAD On/Off Valve Model IR-105-Z
- [3] BERMAD Strainer Model 70F
- [4] BERMAD Air Valve Model ARA-A-I-I
- [5] BERMAD Vacuum Breaker Model 1/2" ARV

# BERMAD Irrigation



## IR-900-MO-54-RXZ

For full technical details, refer to Engineering Section.

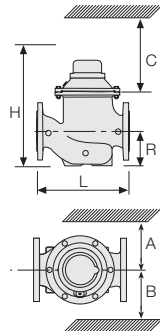
## 900 Series

On/Off Control

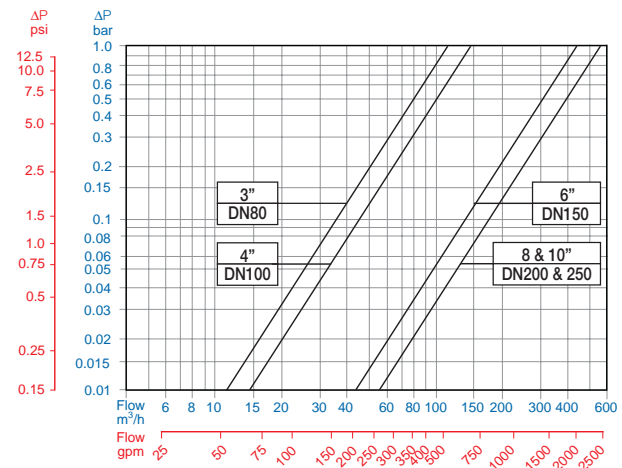
### Technical Specifications

#### 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



#### Flow Chart



#### 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%	m³ gpm	1.2 5.3	1.8 7.9	4 17.6	6.3 27.7
Qn, ISO 4064-1 (Nominal flow)	2%	m³ gpm	40 176	60 264	150 660	250 1100
Qper=Q3 (Permanent flow)	2%	m³ gpm	100 440	160 704	250 1100	400 1760

#### Pulse Option

Size	One pulse per	Liter ; Gallon			m³ ; 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 Rating: 16 bar; 232 psi

Minimum Operating Pressure:

0.5 bar; 7 psi

For lower pressure requirements, consult factory

#### Materials:

##### Body and Cover:

Polyester Coated Cast or Ductile Iron

Internals: St. St. & Glass Fiber

Reinforced Nylon

Impeller: Polypropylene

Elastomers: Reinforced NR Diaphragm & NBR (Buna-N) Seals

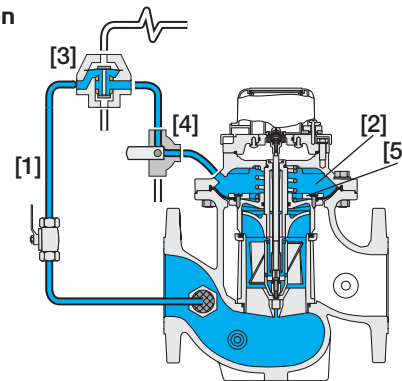
Pivots and Bearings: Tungsten Carbide

Control Accessories: Brass

Tubing and Fittings:

Reinforced Plastic and Brass

#### Operation



Line Pressure [1] is applied to the Control Chamber [2] through the held open, 3-Way Hydraulic Relay Valve (3W-HRV) [3] and the Manual Selector [4]. This creates superior closing force that moves the Diaphragm Assembly [5] toward a closed position. Upon receiving a pressure rise command, the 3W-HRV releases pressure from the control chamber. The Hydrometer then opens, measuring the flow rate.

### 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"	900	MO	54	G	I	16	PG	-	PB	WAT	R23	RXZ
Other sizes available on request.													
Globe	G	Plastic Tubing & Brass Fittings	PB	R.S.	100 Lit	R02	R.S.	10 Gal	RG4	Metal Control Accessories	R		
Angle	A	Copper Tubing & Brass Fittings	CB	R.S.	1 m³	R03	R.S.	100 Gal	RG5	3-Way Control	X		
120 (4"; DN100 only)	H			R.S.	10 m³	R04	R.S.	1000 Gal	RG6	Manual Selector	Z		
				R.S.	100 Lit +1 m³	R23	R.S.	10+100 Gal	G45	Homologation Approved	L		
ISO-16	16			R.S.	1 m³+10 m³	R34	R.S.	100+1000 Gal	G56	Other attributes available on request			
ISO-10	10			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			O.E.+R.S.	10 Lit+1 m³	P13	O.E.+R.S.	1+100 Gal	P5G				
BST-D	BD			R.S.	No Pulse	RNP	R.S.	No Pulse Gal	RNG				

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



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