

## Pressure Reducing Hydrometer

Magnetic Drive with metal Accessories

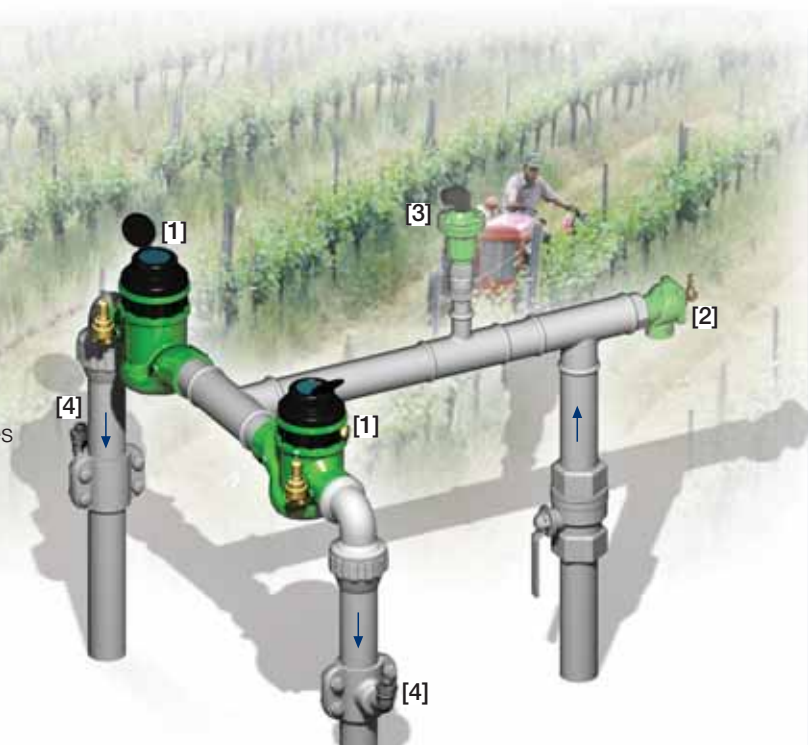
**IR-920-M0-RXZ**

The BERMAD Model IR-920-M0-RXZ 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 reduces higher upstream pressure to lower constant downstream pressure and opens fully upon line pressure drop.



### Features and Benefits

- Integrated "All-in-One" Control Valve
  - Saves space, cost and maintenance
- Line Pressure Driven
  - Protects downstream systems
  - Opens fully upon line pressure drop
- Metal Control Accessories
  - Damage resistant
  - High pressure rating
- 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

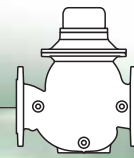


### Typical Applications

- Computerized Irrigation Systems
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Remote Flow Data Read-Out
- Flow Monitoring & Leakage Control
- Volumetric Irrigation Systems

- [1] BERMAD Model IR-920-M0-RXZ establishes reduced pressure zone 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 ½"-ARV

# BERMAD Irrigation



## IR-920-MO-RXZ

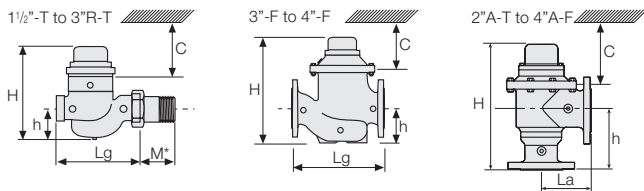
For full technical details, refer to Engineering Section.

**900 Series**  
Pressure Reducing Standard

### 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
H	mm	270	277	300	277	298	382	402	447	481
	inch	10.6	10.9	11.8	10.9	11.7	15.0	15.8	17.6	18.9
C	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

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 <sup>3</sup> 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 <sup>3</sup> gpm	15 66	15 66	17 75	40 176	60 264
Qper=Q3 (Permanent flow)	2%	m <sup>3</sup> 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

##### End Connections:

Threaded: 1 1/2, 2 & 3"R; DN40, 50 & 80R

Flanged: 3R, 3 & 4"; DN80R, 80 & 100

Pressure Rating: 16 bar; 232 psi

Minimum Operating Pressure: 0.5 bar; 7 psi

For lower pressure requirements, consult factory

Setting Range: 1-7 bar; 15-100 psi

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

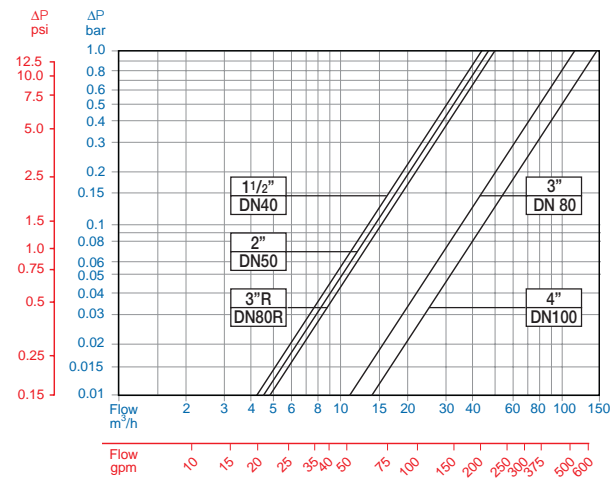
#### How to Order

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

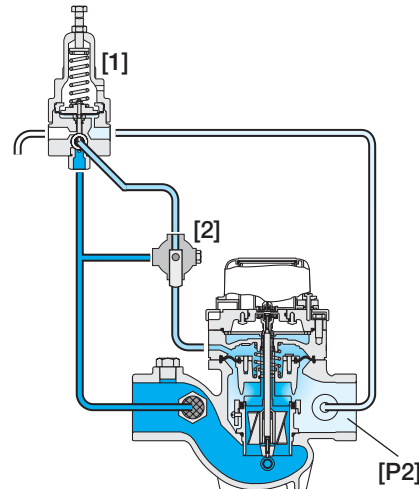
Sector	Size	Primary Feature	Control Categories	Additional Feature	Pattern Construction	Materials	End Connections	Coating	Voltage & Position	Tubing & Fittings	Dial Capacity	Pulse Rate	Additional Attributes
IR	1 1/2-4"	920	MO	50	G	I	BP	PG	-	PP	WAT	R12	RXZ
Other sizes available on request.													
Globe	G	Plastic Tubing & Fittings		PP	R.S.	10 Lit	R01	R.S.	1 Gal	RG3	Metal Control Accessories		R
Angle 90°	A	Plastic Tubing & Brass Fittings		PB	R.S.	100 Lit	R02	R.S.	10 Gal	RG4	3-Way Control		X
120° (2 1/2" & 4" only)	H				R.S.	1 m <sup>3</sup>	R03	R.S.	100 Gal	RG5	Manual Selector		Z
BSP (1 1/2, 2 & 3"R only)	BP				R.S.	100 Lit+10 Lit	R12	R.S.	10+1 Gal	G34	Homologation Approved		L
NPT (1 1/2, 2 & 3"R only)	NP				R.S.	1 m3+1100 Lit	R23	R.S.	100+10 Gal	G45	Other attributes available on request		
ISO-16	16				O.E.	1 Lit	P01	O.E.	0.1 Gal	PG2			
ISO-10	10				O.E.	10 Lit	P10	O.E.	1 Gal	PG3			
ISO-14 (ISO-10/4 Holes)	14				O.E.+R.S.	1+100 Lit	PQ1	O.E.+R.S.	0.1+10 Gal	P4G			
ANSI-125	A1				O.E.+R.S.	10 Lit+1 m <sup>3</sup>	P13	O.E.+R.S.	1+100 Gal	P5G			
JIS-10	J1				R.S.	No Pulse	RNP	R.S.	No Pulse Gal	RNG			
BST-D	BD												

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

#### Flow Chart



#### Operation



The Hydrometer continuously transmits flow data to the irrigation controller. The Pressure Reducing Pilot [1] commands the Hydrometer to throttle closed when Downstream Pressure [P2] rises above pilot setting, and to open fully when it drops below pilot setting. The Manual Selector [2] enables local manual closing.



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