

**900 Series**  
Pressure Reducing  
Standard

## Pressure Reducing Hydrometer

Magnetic Drive

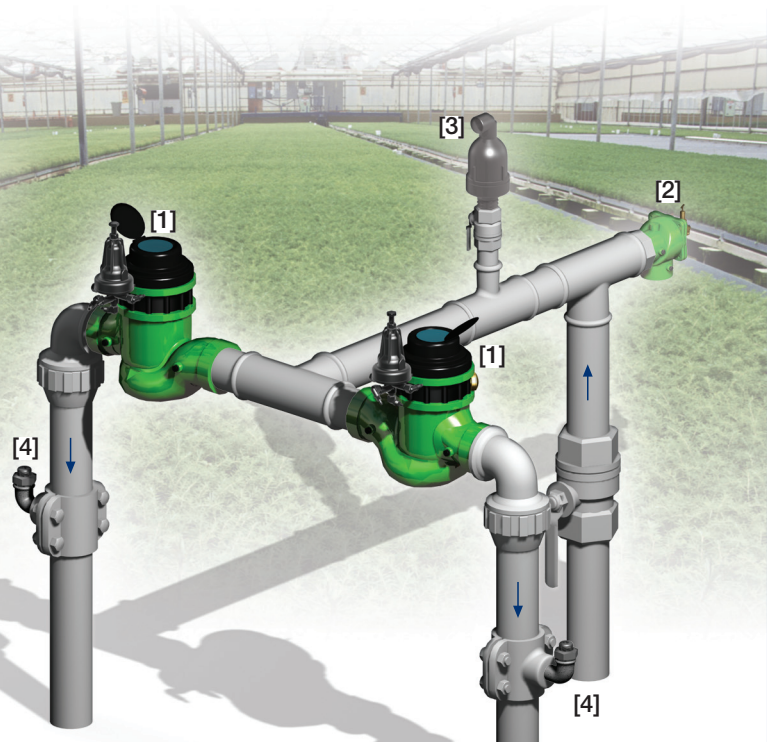
**IR-920-M0-KXZ**

The BERMAD Model IR-920-M0-KXZ 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
- Hydraulic Pressure Control
  - Line pressure driven
  - Protects downstream systems
  - Opens fully upon line pressure drop
- 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
  - Easy addition of control features

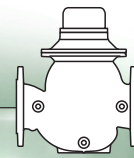


### Typical Applications

- 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-KXZ 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-KXZ

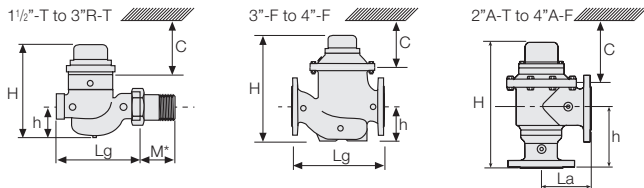
For full technical details, refer to Engineering Section.

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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 inch	250 9.8	250 9.8	N.A. N.A.	250 9.8	310 12.2	300 11.8	N.A. N.A.	350 13.8	N.A. N.A.
La	mm inch	N.A. N.A.	N.A. N.A.	120 4.7	N.A. N.A.	N.A. N.A.	N.A. N.A.	150 5.9	N.A. 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 8.3	210 8.3	210 8.3	210 8.3	225 8.9	285 11.2	285 11.2	365 14.4	365 14.4
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. 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 <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: 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

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

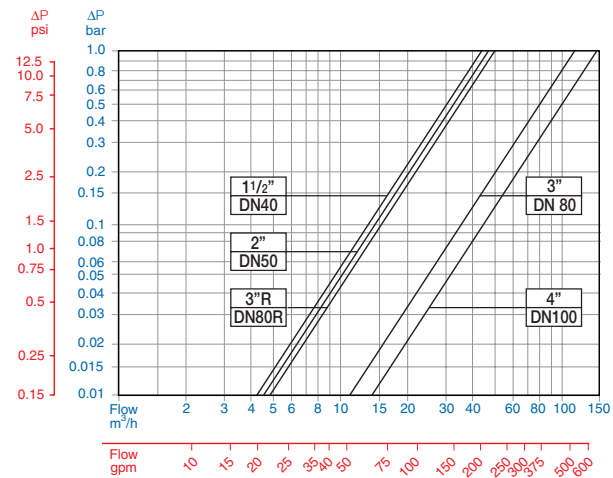
### How to Order

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

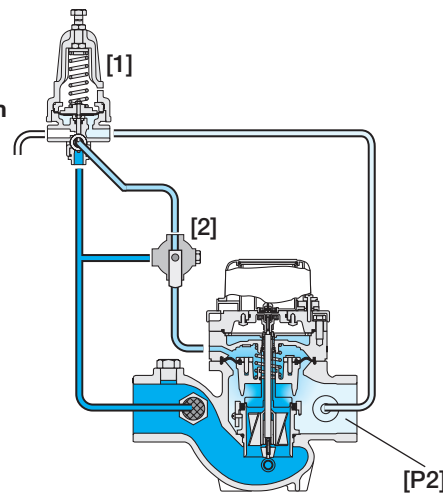
Sector	Size	Primary Feature	Control Categories	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage & Position	Tubing & Fittings	Dial Capacity	Pulse Rate	Additional Attributes
IR	1 1/2-4"	920	MO	00	G	I	BP	PG	-	PP	WAT	R12	KXZ
Other sizes available on request.													
Globe	G					R.S.	10 Lit	R01	R.S.	1 Gal	RG3		Plastic Control Accessories
Angle 90°	A					R.S.	100 Lit	R02	R.S.	10 Gal	RG4		3-Way Control
120° (2 1/2 & 4" only)	H					R.S.	1 m <sup>3</sup>	R03	R.S.	100 Gal	RG5		Manual Selector
						R.S.	100 Lit+10 Lit	R12	R.S.	10+1 Gal	G34		Homologation Approved
						R.S.	1 m <sup>3</sup> +1100 Lit	R23	R.S.	100+10 Gal	G45		
BSP (1 1/2, 2 & 3"R only)	BP					O.E.	1 Lit	P01	O.E.	0.1 Gal	PG2		
NPT (1 1/2, 2 & 3"R only)	NP					O.E.	10 Lit	P10	O.E.	1 Gal	PG3		
ISO-16	16					O.E.+R.S.	1+100 Lit	PQ1	O.E.+R.S.	0.1+10 Gal	P4G		
ISO-10	10					R.S.	No Pulse	RNP	R.S.	No Pulse Gal	RNG		
ISO-14 (ISO-10/4 Holes)	14												
ANSI-125	A1												
JIS-10	J1												
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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