

Pressure Reducing Hydrometer

**Magnetic Drive
with Hydraulic Control**

IR-920-M0-50-R

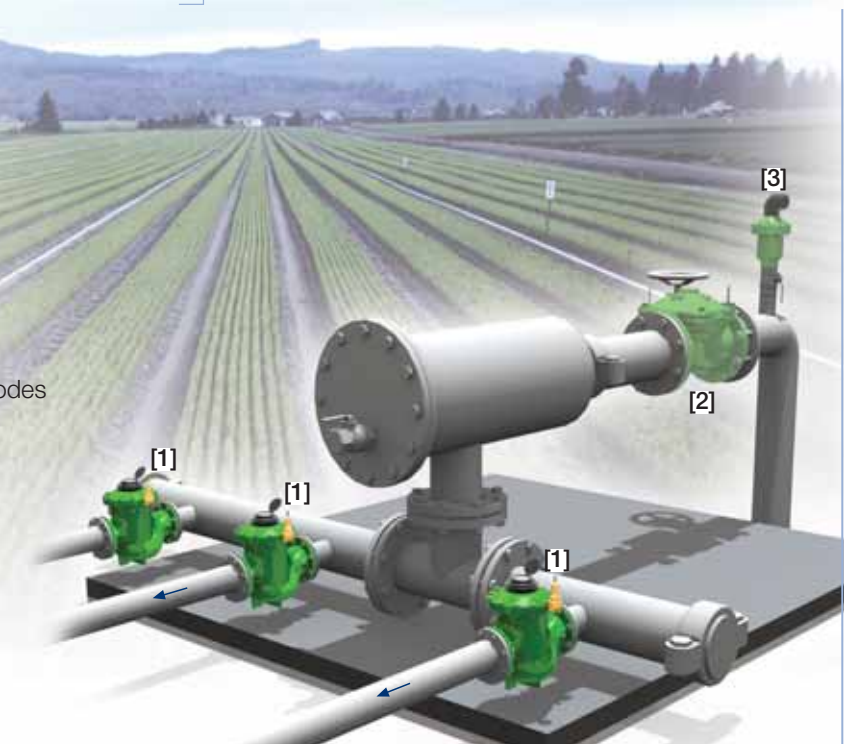
The BERMAD Model IR-920-M0-50-R integrates a vertical turbine Woltman-type water meter, with a diaphragm actuated hydraulic control valve. As the system's Flow Meter and Main Valve, it controls system irrigation together with the irrigation controller.

The BERMAD Model IR-920-M0-50-R reduces downstream pressure to a constant preset maximum. It either opens or shuts in response to pressure commands.



Features and Benefits

- Integrated "All-in-One" Control Valve
 - Saves space, cost and maintenance
- Hydraulic Pressure Control
 - Line pressure driven
 - Protects downstream systems
 - 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
 - Easy pressure setting
 - Simple in-line inspection and service



Typical Applications

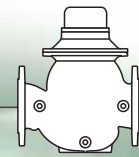
- Computerized Irrigation Systems
- Pressure Reducing Systems
- Remote Flow Data Read-Out
- Flow Monitoring & Leakage Control
- Distribution Centers
- Irrigation Machines
- Volumetric Irrigation Systems

[1] BERMAD Model IR-920-M0-50-R opens upon command pressure drop, establishing reduced pressure zones & measuring the flow.

[2] BERMAD Hydraulic Main Valve Model IR 405-54-R

[3] BERMAD Air Valve Model ARC-A-I-I

BERMAD Irrigation



IR-920-MO-50-R

For full technical details, refer to Engineering Section.

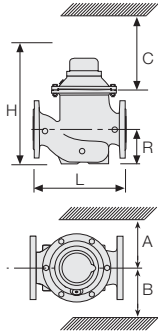
900 Series

Pressure Reducing

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	1.2	1.8	4	6.3
		gpm	5.3	7.9	17.6	27.7
Qn, ISO 4064-1 (Nominal flow)	2%	m ³	40	60	150	250
		gpm	176	264	660	1100
Qper-Q3 (Permanent flow)	2%	m ³	100	160	250	400
		gpm	440	704	1100	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 Rang: 1-10 bar; 15-145 psi

Setting ranges vary according to specific pilot spring. Please 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

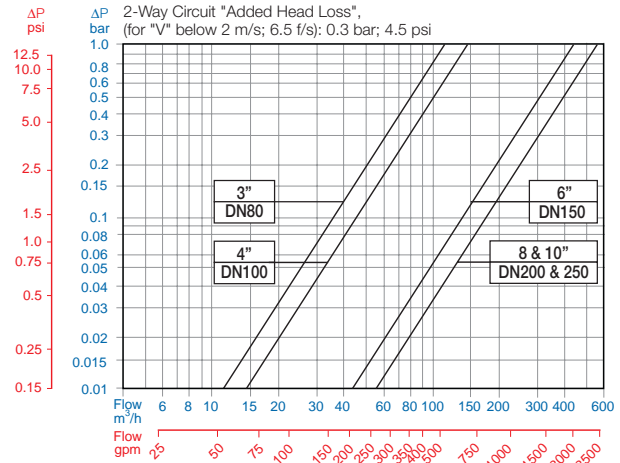
Pivots and Bearings: Tungsten Carbide

Control Accessories: Brass

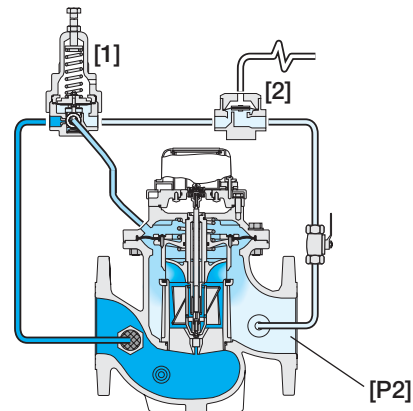
Tubing and Fittings:

Reinforced Plastic and Brass

Flow Chart



Operation



The Pressure Reducing Pilot [1] commands the Hydrometer to throttle closed should Downstream Pressure [P2] rise above pilot setting, and modulate open when it drops below pilot setting. The Hydraulic Relay Valve [2] closes upon receiving a remote pressure rise command, shutting off the Hydrometer. The downstream Cock Valve [3] enables manual closing.

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"	920	MO	50	G	I	16	PG	-	PB	WAT	R23	R
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 m ³	R03	R.S.	100 Gal	RG5	Homologation Approved		L
120 (4"; DN100 only)	H	Other attributes available on request											
ISO-16	16												
ISO-10	10												
ISO-14 (ISO-10/4 Holes)	14												
ANSI-125	A1												
JIS-10	J1												
BST-D	BD												

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



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