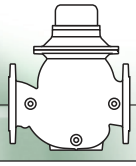
BERMAD Irrigation



900 Series

Pressure Sustaining, Flow Control & Pressure Reducing

Flow Control Pressure Reducing and Sustaining Hydrometer

IR-975-55-RUX

The BERMAD Hydrometer Model IR-975-55-RUX integrates both a vertical turbine Woltman-type water meter and a hydraulically operated diaphragm actuated control valve. Combining a Flow Meter and Main Valve, allows efficient irrigation control with an irrigation controller.
The IR-975-55-RUX provides three independent functions: It maintains pre-set maximum flow, reduces higher upstream pressure to lower constant downstream pressure and sustains minimum pre-set upstream (back) pressure. The Hydrometer opens and shuts off in response to an electric signal.

Features and Benefits

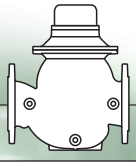
- Integrated “All-in-One” control valve
  - Saves space, cost and maintenance
- Internal Inlet & Outlet Flow Straighteners
  - Saves on straightening distances
  - Maintains accuracy
- Integrated Flow Metering Calibration Device
- Simple in-Line Inspection and Service
- Line Pressure driven
  - Independent operation
  - Limits fill-up rate and consumer over-demand
  - Protects downstream system
  - Prevents line emptying
- Hydraulic flow sensor (Orifice)
  - No moving parts
  - No electronic components
  - No need of flow straightening
- Advanced control loop design
  - Linear, accurate and stable modulation
  - Convertible platform for vast number of applications
- Easy on-site set point change
- Electrical Open / Close command
  - Adding main valve capabilities

Typical Applications

- Downhill Pressurized Supply Lines
- Multiple Independent Consumer Systems
- Line Fill-Up Control Solution
- Pressure Reducing Systems
- Computerized Irrigation Systems
- Flow Monitoring and Leakage Control

[1] BERMAD Model IR-975-55-RUX opens in respond to an electric signal, prevents emptying of supply line, maintains system designed flow and establishes reduced pressure zone
[2] BERMAD Strainer Model 70-F
[3] BERMAD Combination Air Valve Model C30
[4] BERMAD Kinetic Air Valve Model A10

BERMAD Irrigation



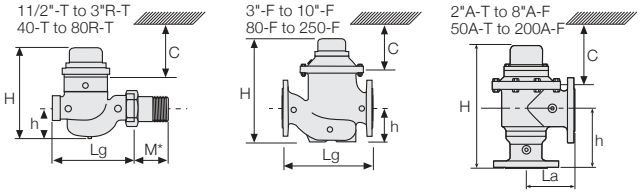
IR-975-55-RUX

900 Series

Pressure Sustaining, Flow Control & Pressure Reducing

Dimensions and Weights

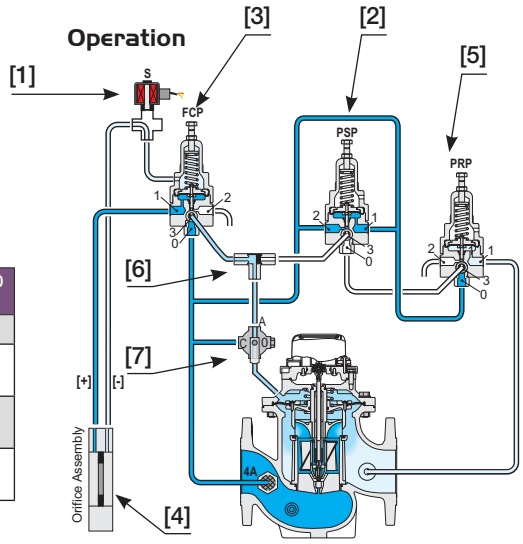
Size	DN Inch	40-F 1½-F	40-T 1½-T	50-T 2-T	50A-T 2A-T	50-F 2-F	65-F 2½-F	80R-T 3R-T	80R-F 4R-F	80-F 3-F	80A-F 3A-F	100-F 4-F	100A-F 4A-F	150-F 6-F	150A-F 6A-F	200-F 8-F	200A-F 8A-F	250-F 10-F
L	mm	250	250	250	N.A	250	300	250	310	300	N.A	350	N.A	500	N.A	600.0	N.A	600.0
	inch	9.8	9.8	9.8	N.A	9.8	11.8	9.8	12.2	11.8	N.A	13.8	N.A	19.7	N.A	23.6	N.A	23.6
La	mm	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	150	N.A	180	N.A	250	N.A	250	N.A
	inch	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	N.A	5.9	N.A	7.1	N.A	9.8	N.A	9.8	N.A
H	mm	28	270	277	300	280	298	277	298	382	402	447	481	602	585	617	585	617
	inch	11.3	10.6	10.9	11.8	11.3	11.7	10.9	11.7	15.0	15.8	17.6	18.9	23.7	23	24.3	23	24.3
C	mm	210	210	210	210	210	210	210	225	285	285	365	365	450	450	465	465	465
	inch	8.3	8.3	8.3	8.3	8.3	8.3	8.3	8.9	11.2	11.2	14.4	14.4	17.7	17.7	18.3	18.3	18.3
h	mm	95	95	95	125	95	95	79	100	123	196	137	225	216	306	228	280	228
	inch	3.7	3.7	3.7	4.9	3.7	3.7	3.1	3.9	4.8	7.7	5.4	8.9	8.5	12.0	9.0	11.0	9.0
A; B	mm	305	280	280	280	305	305	305	305	305	305	325	325	390	390	390	390	415
	inch	12.0	11.0	11.0	11.0	12.0	12.0	12.0	12.0	12.0	12.0	12.8	12.8	15.4	15.4	15.4	15.4	16.3
M*	mm	N.A	67	77	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
	inch	N.A	2.6	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	16	6.8	8.8	8.1	16	16	7.3	16.0	26.0	25.8	37.0	36.1	71.0	71.0	93.0	93.0	141.0
	lb.	35.3	15	19.4	17.4	35.3	35.3	16.1	35.3	57.3	56.2	81.6	78.9	156.5	156.5	205	205	310.9



Accuracy & Flow Data

Size	Accuracy	DN Inch	40 1½	50 2	65 2½	80R 3R	80 3	100 4	150 6	200 & 250 8 & 10
ISO 4064-1 Class			A	A	A		B	B	B	B
Q min (Minimum flow)	5%	m^3	0.8	0.8	1.2	1.2	1.2	1.8	4.0	6.3
		gpm	3.5	3.5	5.3	5.3	5.3	7.9	17.6	27.7
Qn, ISO 4064-1 (Nominal flow)	2%	m^3	15	15	25	17	40	60	150	250
		gpm	66	66	110	75	176	264	660	1100
Qper=Q3 (Permanent flow)	2%	m^3	25	40	40	40	100	160	250	400
		gpm	110	176	176	176	440	704	1100	1760

Operation



Energizing the Solenoid [1] opens the Hydrometer. The Pressure Sustaining Pilot [2] commands the Hydrometer to throttle closed when upstream Pressure [P1] is below setting (pumps are off). The Flow Pilot [3], sensing the DP across the Orifice Assy. [4], commands the Hydrometer to throttle closed should demand rise above setting. The Pressure Reducing Pilot [5] prevents Downstream Pressure from rising above setting. The Shuttle Valve [6] directs the pilots commands into/out-off the Hydrometer Control Chamber. De-energizing the solenoid causes the Hydrometer to shut. The Manual Selector [7] enables local manual closing.

Pulse Option

One Pulse Per / Size	Reed Switch - Single			Reed Switch - Combined	
	100 liter	1 m^3	10 m^3	100 liter + 1 m^3	1 m^3 + 10 m^3
DN40-DN100; 1½-4"	◆	◆		◆	
DN150-DN250; 6-10"		◆	◆		◆

Two parallel pulses are transmitted. other pulse rates are avaiable on request.

Technical Data

End Connections:
Threaded: 1½, 2", 3"; DN40, 50, 80R
Flanged: 3R, - 10"; DN80R - 250
Pressure Rating: 10 bar; 145 psi
16 bar; 232 psi

Minimum Operating Pressure: 0.5 bar; 7 psi
For lower pressure requirements, consult factory
Setting Range: 1-7.0 bar; 15-100 psi
1-10 bar; 15-145 psi
Flow Setting Range: 1-5 m/sec; 3.3-16.5 f/sec

Solenoid Voltage Range:
S-390 & S-400: 24 VAC, 24 VDC
S-392 & S-395: 6-20 VDC, Latch
S-402 & S-405: 9-40 VDC, Latch
S-982 & S-985: 12-50 VDC, Latch
Other voltages available.
For Full electric data, refer to Accessories Section.

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