

## Flow Control and Pressure Reducing Hydrometer

IR-972-KVX

The BERMAD Model IR-972-M0-KVX integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. Combining a Flow Meter and Main Valve, allows efficient irrigation control. The BERMAD Hydrometer limits the flow and downstream pressure to a constant preset maximum.



### 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
- 3-Way control
  - Opens fully when flow & pressure below setting
- Pedal-Type Hydro-Mechanic Flow Pilot
  - No added head loss
  - Easy flow and pressure setting
  - Wide setting range
- Advanced control loop design
  - Linear, accurate and stable modulation
  - Convertible platform for vast number of applications
- Easy on-site set point change

### Typical Applications

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

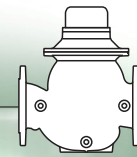
[1] BERMAD Model IR-972-KVX maintains system designed flow and establishes reduced pressure zone.

[2] BERMAD Strainer Model 70-F

[3] BERMAD Combination Air Valve Model C30

[4] BERMAD Kinetic Air Valve Model K10

# BERMAD Irrigation



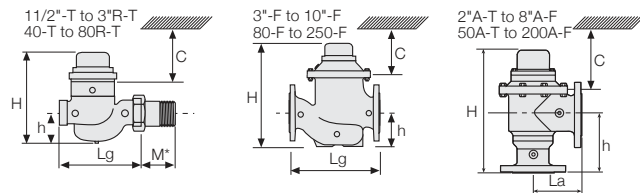
IR-972-KVX

900 Series

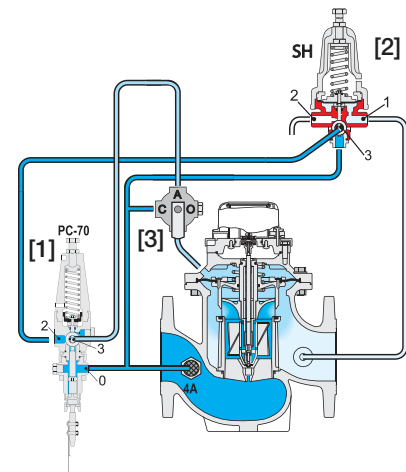
Flow Control & Pressure Reducing

## 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 inch	250 9.8	250 9.8	250 9.8	N.A N.A	250 9.8	300 11.8	250 9.8	310 12.2	300 11.8	N.A N.A	350 13.8	N.A N.A	500 19.7	N.A N.A	600.0 23.6	N.A N.A	600.0 23.6
La	mm inch	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	N.A N.A	N.A N.A	150 5.9	N.A N.A	180 7.1	N.A N.A	250 9.8	N.A N.A	250 9.8	N.A N.A
H	mm inch	28 11.3	270 10.6	277 10.9	300 11.8	280 11.3	298 11.7	277 10.9	298 11.7	382 15.0	402 15.8	447 17.6	481 18.9	602 23.7	585 23	617 24.3	585 23	617 24.3
C	mm inch	210 8.3	210 8.3	210 8.3	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	450 17.7	450 17.7	465 18.3	465 18.3	465 18.3
h	mm inch	95 3.7	95 3.7	95 3.7	125 4.9	95 3.7	95 3.7	79 3.1	100 3.9	123 4.8	196 7.7	137 5.4	225 8.9	216 8.5	306 12.0	228 9.0	280 11.0	228 9.0
A; B	mm inch	305 12.0	280 11.0	280 11.0	280 11.0	305 12.0	305 12.0	305 12.0	305 12.0	305 12.0	305 12.0	325 12.8	325 12.8	390 15.4	390 15.4	390 15.4	390 15.4	415 16.3
M*	mm inch	N.A N.A	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	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.	16 35.3	6.8 15	8.8 19.4	8.1 17.4	16 35.3	16 35.3	7.3 16.1	16.0 35.3	26.0 57.3	25.8 56.2	37.0 81.6	36.1 78.9	71.0 156.5	71.0 156.5	93.0 205	93.0 205	141.0 310.9



## Operation



The Flow Pilot [1] commands the valve to throttle closed should demand rise above setting, and to modulate open when demand drops. The Pressure Reducing Pilot [2] controls the valve, preventing Downstream Pressure from rising above setting. Should line pressure and demand drop below setting - the Valve opens fully. The Manual Selector [3] enables local manual closing.

## 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%	m³ gpm	0.8 3.5	0.8 3.5	1.2 5.3	1.2 5.3	1.2 5.3	1.8 7.9	4.0 17.6	6.3 27.7
Qn, ISO 4064-1 (Nominal flow)	2%	m³ gpm	15 66	15 66	25 110	17 75	40 176	60 264	150 660	250 1100
Qper=Q3 (Permanent flow)	2%	m³ gpm	25 110	40 176	40 176	40 176	100 440	160 704	250 1100	400 1760

## Flow limit with Pedal Pilot- (PC-70 Pilot)

Valve / Hydrometer Size (inch; DN)	40 1½	50 2	65 2½	80 3	100 4	150 6	200 8	250 10
Minimum capacity (m³/h)	5	7	12	18	28	63	110	176
Maximum capacity (m³/h)	16	25	33	63	99	222	395	617

## Pulse Option

Size	One Pulse Per	Reed Switch - Single			Reed Switch - Combined	
		100 liter	1 m³	10 m³	100 liter + 1 m³	1 m³ + 10 m³
DN40-DN100; 1½-4"		◆	◆		◆	
DN150-DN250; 6-10"			◆	◆		◆

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

## Pilot Data

Valve Size (Inch; DN)	Number of Leaves
1½; 40	1
2; 50	1
2½; 65	2
3; 80	2
4; 100	3
6; 150	4
8; 200	5
10; 250	6

## Technical Data

### End Connections:

Threaded: 1½, 2", 3"; DN40, 50, 80R  
Flanged: 3R, - 10"; DN80R - 250

### Pressure Rating:

Plastic Control Accessories: 10 bar; 145 psi  
Metal Control Accessories: 16 bar; 232 psi

Pressure Setting Range: 1-7.0 bar; 15-100 psi

Flow Setting Range: 1-5 m/sec; 3.3-16.5 f/sec

Minimum Operating Pressure: 0.5 bar; 7 psi

For lower pressure requirements, consult factory



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