

# Pressure Sustaining Automatic Metering Valve (AMV)

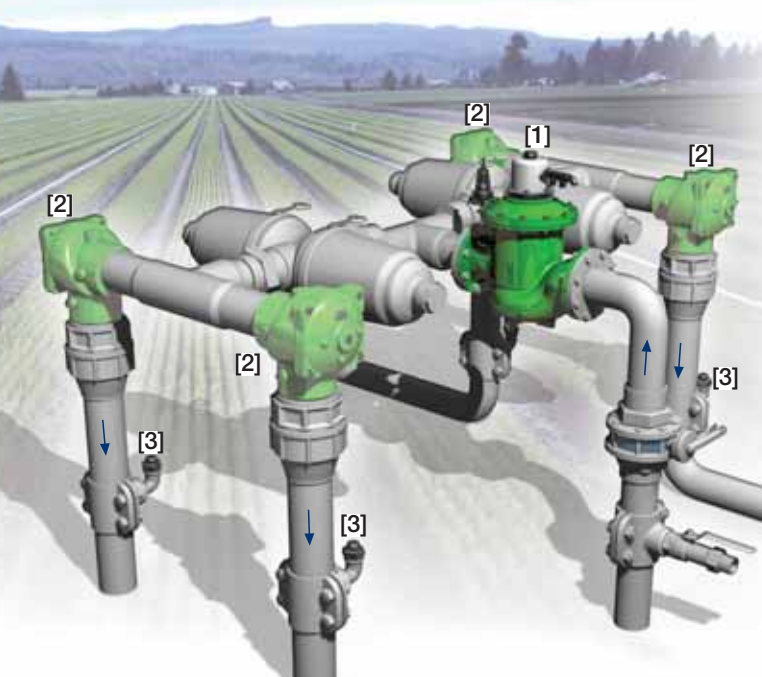
**IR-930-D0-KX**

The BERMAD Pressure Sustaining Automatic Metering Valve integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. Equipped with a Mechanical Shut-Off Pilot and a Pressure Sustaining Pilot, the BERMAD Model IR-930-D0-KX sustains minimum preset upstream (back) pressure and opens fully when line pressure is in excess of setting. It automatically shuts itself after accurately delivering a preset quantity of water.



## Features and Benefits

- Integrated "All-in-One" Control Valve
  - Saves space, cost and maintenance
- Easy Modification to Mechanical Drive Hydrometer
  - Adaptable to future computerized systems
- Hydraulic Pressure and Batch Control
  - Line pressure driven
  - Prioritizes pressure zones
  - Controls system fill-up
  - Opens fully upon line pressure rise
  - Non-computerized quantity follow-up and control
- Internal Inlet & Outlet Flow Straighteners
  - Saves on straightening distances
  - Maintains accuracy
- Integrated Flow Metering Calibration Device
  - Measurement precision to  $\pm 2\%$
- User-Friendly Design
  - Easy pressure and dose setting
  - Simple in-line inspection and service

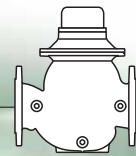


## Typical Applications

- Semi-Automatic Irrigation Systems
- Manual Irrigation intended for computerization
- Line Fill-Up Control Solutions
- Line Emptying Prevention
- Systems Subject to Varying Supply Pressure
- Infield Filters Backwash Pressure Sustaining
- Volumetric Irrigation Systems

- [1] BERMAD Model IR-930-D0-KX sustains pressure to protect supply system, and delivers precise water quantity.
- [2] BERMAD On/Off Control Valve Model IR-405-Z
- [3] BERMAD Vacuum Breaker Model 1/2"-ARV

# BERMAD Irrigation



## IR-930-DO-KX

For full technical details, refer to Engineering Section.

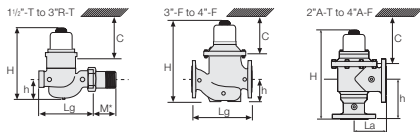
## 900 Series

Pressure Sustaining

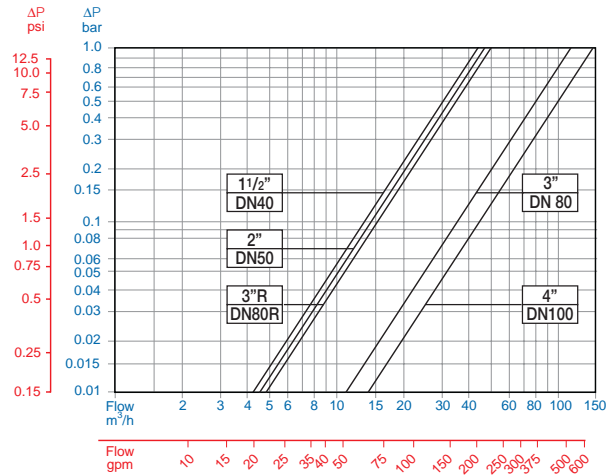
### Technical Specifications

#### 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	293	300	322	300	298	405	425	470	500
	inch	11.5	11.8	12.7	11.8	11.7	15.9	16.7	18.5	19.7
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



#### Flow Chart



#### Accuracy & Flow Data (ISO 4064-I, Class A)

Size	Accuracy	DN inch	40 1 1/2	50 2	3\"/>80R	80 3	100 4
Q min (Minimum flow)	5%	m³	0.8	0.8	1.2	1.2	1.8
		gpm	3.5	3.5	5.3	5.3	7.9
Qn, ISO 4064-1 (Nominal flow)	2%	m³	15	15	17	40	60
		gpm	66	66	75	176	264
Qper=Q3 (Permanent flow)	2%	m³	25	40	40	100	160
		gpm	110	176	176	440	704

#### Dial Options

Capacity	Cubic Meter (m³)							1000 Gallon								
	40	80	120	150	200	350	600	800	1,200	2,100	13	50	130	200	500	870
Graduation	Cubic Meter (m³)							Gallon								
	1	1	2	2	5	10	10	10	20	50	100	1000	2,500	5,000	10,000	20,000
1 1/2\"/> & 2\"/>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3\"/>R	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
3\"/>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4\"/>	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

### 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

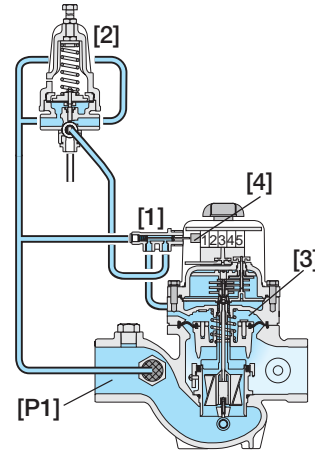
Setting ranges vary according to specific pilot spring. Please consult factory.

### 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\"/>	930	DO	00	G	I	BP	PG	-	PP	120	NPS	KX
Other sizes available on request.													
Globe		G	Plastic Tubing & Fittings		PP	40 m³	040	2,100 m³	2K0	Plastic Control Accessories		K	
Angle 90°		A	Plastic Tubing & Brass Fittings		PB	80 m³	080	3,500 m³	3K0	3-Way Control		X	
120° (2 1/2\"/> & 4\"/> only)		H				120 m³	120	13,000 Gal.	1G0	Homologation Approved		L	
Other attributes available on request													
BSP (1 1/2, 2 & 3\"/>R only)		BP				150 m³	150	50,000 Gal.	5G0				
NPT (1 1/2, 2 & 3\"/>R only)		NP				200 m³	200	130,000 Gal.	1KG				
ISO-16		16				350 m³	350	200,000 Gal.	2KG				
ISO-10		10				600 m³	600	510,000 Gal.	5KG				
ISO-14 (ISO-10/4 Holes)		14				800 m³	800	875,000 Gal.	8KG				
ANSI-125		A1				1,200 m³	1K0						
JIS-10		J1											
BST-D		BD											

#### Operation



The AMV Shut-Off Pilot (SOP) [1] hydraulically connects the Pressure Sustaining Pilot (PSP) [2] to the AMV Control Chamber [3]. The PSP commands the AMV to throttle closed should Upstream Pressure [P1] drop below setting and to open fully when [P1] rises above setting. Upon delivering the preset quantity of water, the AMV manually preset Control Head Mechanism [4] switches the SOP to direct line pressure into the control chamber, causing the AMV to shut.



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