

# Automatic Metering Valve (AMV) for Sequential Irrigation

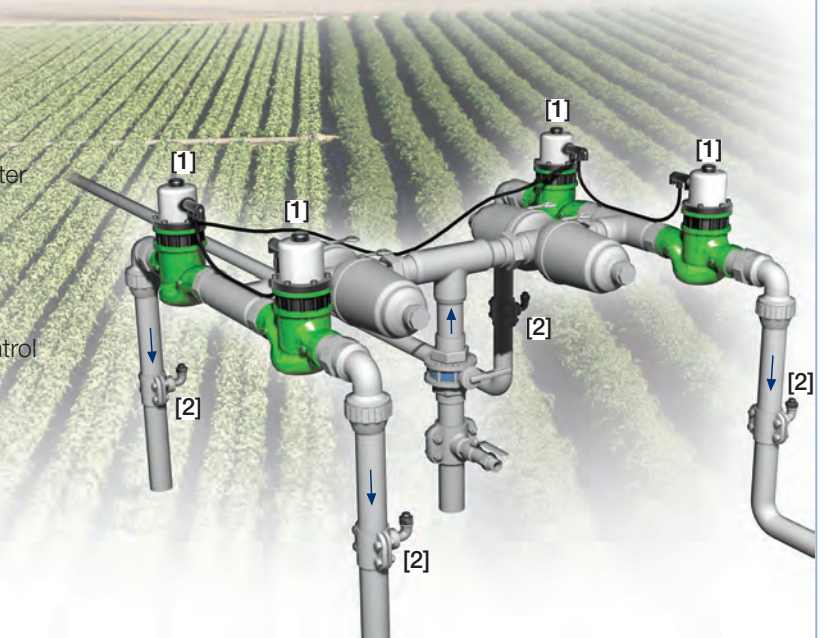
IR-900-DD

The BERMAD Automatic Metering Valve for Sequential Irrigation integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve, equipped with a Mechanical Sequential Shut-Off Pilot, the BERMAD IR-900-DD automatically shuts itself after accurately delivering a preset quantity of water. Working in a group of manually preset AMV's connected to each other by a control tube and operating in sequence, it enables semi-automatic irrigation in non-computerized systems.



## 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 Batch & Sequence Control
  - Line pressure driven
  - Hydraulic irrigation shift sequencing
  - 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 dose setting
  - Simple in-line inspection and service



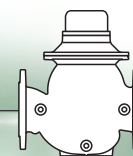
## Typical Applications

- Semi-Automatic Irrigation Systems
- Hydraulic Irrigation Shift Sequencing
- Manual Irrigation - Intended for Computerization
- Remote and/or Elevated Plots
- Volumetric Irrigation Systems

[1] BERMAD Model IR-900-DD delivers precise water quantity and sequence irrigation shifts.

[2] BERMAD Vacuum Breaker Model 1/2"-ARV

# BERMAD Irrigation



## IR-900-DD

For full technical details, refer to Engineering Section.

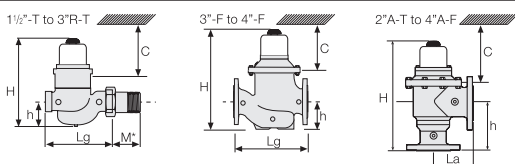
## 900 Series

On/Off Control

### 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	293 11.5	300 11.8	322 12.7	300 11.8	298 11.7	405 15.9	425 16.7	470 18.5	500 19.7
C	mm inch	210 9	210 9	210 9	210 9	225 9	285 11	285 11	365 15	365 15
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	80 3R 3	100 4
Q1 Minimum Flow (AMV)	5%	m <sup>3</sup> gpm	1.5 6.6	2 8.8	3.2 14.1	4.8 21.1
Qn Nominal flow	2%	m <sup>3</sup> gpm	15 66	15 66	17 75	40 176
Q3 Permanent flow	2%	m <sup>3</sup> gpm	25 110	40 176	40 176	100 440

#### Dial Options

Capacity	Cubic Meter (m <sup>3</sup> )								1000 Gallon							
	40	80	120	150	200	360	600	800	1,200	2,100	13	50	130	200	500	870
Graduation	Cubic Meter (m <sup>3</sup> )								Gallon							
1 1/2" & 2"	1	1	2	2	5	10	10	10	20	50	100	1000	2,500	5,000	10,000	20,000
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

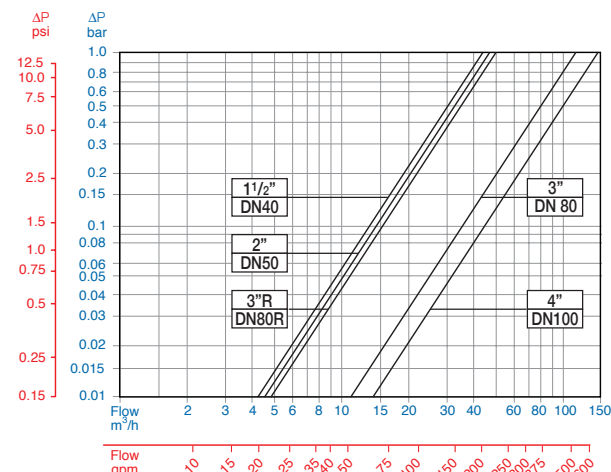
For lower pressure requirements, consult factory

### How to Order

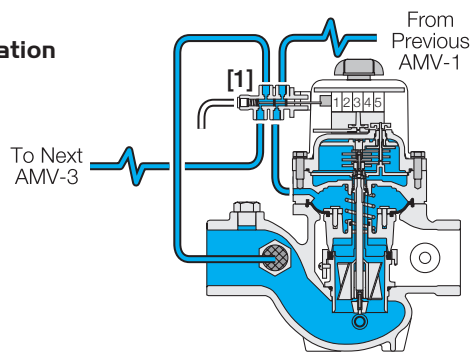
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

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

#### Flow Chart



#### Operation



AMV-2 Set & Closed

Each AMV is manually preset to a desired quantity of water. Pressure from AMV-1 enters the AMV-2 control chamber through its Sequential Shut-Off Pilot [1], closing it. AMV-2 inlet pressure is transmitted to AMV-3, closing it. When AMV-1 shuts itself, it allows the AMV-2 control chamber to drain through both AMV-2 and AMV-1 sequential shut-off pilots, opening AMV-2. AMV-3 remains closed until AMV-2 shuts itself off.



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