

Pressure Reducing Automatic Metering Valve (AMV)

For Drip-Tape Applications

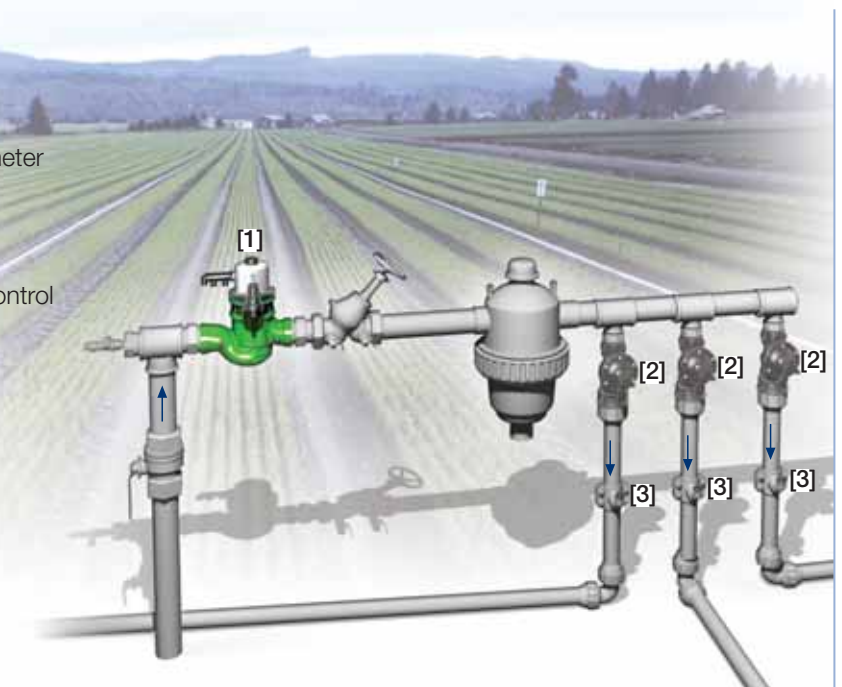
IR-920-D0-bK

The BERMAD Pressure Reducing 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 Reducing Servo Pilot, the BERMAD IR-920-D0-bK accurately reduces higher upstream pressure to very low and stable preset downstream pressure. It automatically shuts itself off after precise delivery of 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
 - Non-computerized quantity follow-up and control
- Pressure Reducing Servo Pilot Controlled
 - Dynamic integrated needle valve
 - Settable to 0.5 bar; 7 psi
 - Very low hysteresis
- 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



[1] BERMAD Model IR-920-D0-bK reduces pressure to protect filter and system, and delivers precise water quantity.

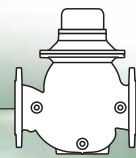
[2] BERMAD On/Off Valve Model IR-205-Z

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

Typical Applications

- Semi-Automatic Irrigation
- Manual Irrigation Intended for Computerization
- Drip-Tape Systems
- Low Set Pressure Applications
- Volumetric Irrigation Systems

BERMAD Irrigation



IR-920-DO-bK

For full technical details, refer to Engineering Section.

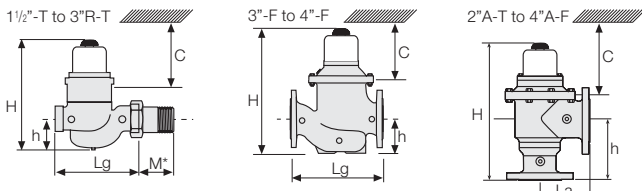
900 Series

Pressure Reducing
Drip-Tape

Technical Specifications

Dimensions and Weights

Size	DN Inch	40-T 1 1/2-T	50-T 2-T	80R-T 2A-T	80R-F 3R-T	80-F 4R-F	80A-F 3-F	100-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 (ISO 4064-I, Class A)

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

Dial Options

Capacity	Cubic Meter (m ³)									1000 Gallon						
	40	80	120	150	200	350	600	800	1,200	2,100	13	50	130	200	500	870
Graduation	Cubic Meter (m ³)									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

Pressure Rating: 10 bar; 145 psi

Minimum Operating Pressure: 0.5 bar; 7 psi

For lower pressure requirements, consult factory

Setting Range: 0.5-1.7 bar; 7-25 psi

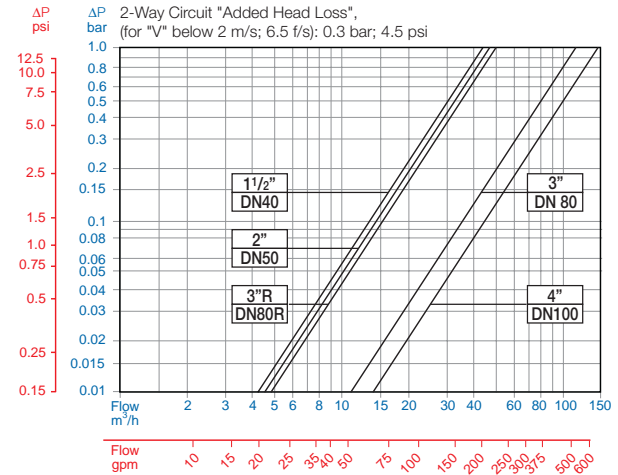
Setting ranges vary according to specific pilot spring. Please consult factory.

How to Order

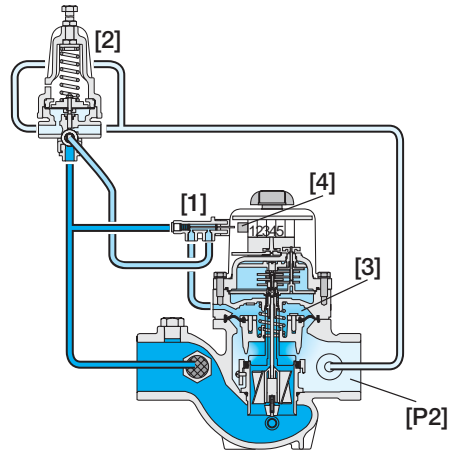
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

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

Flow Chart



Operation



Manual setting of the AMV switches the Shut-Off Pilot (SOP) [1] to hydraulically connect the Pressure Reducing Servo Pilot (PRSP) [2] to the AMV Control Chamber [3]. The PRSP commands the AMV to throttle closed, preventing Downstream Pressure [P2] from rising above pilot 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, and thereby causing the AMV to shut.



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