

# Flow Control and Pressure Reducing Automatic Metering Valve (AMV)

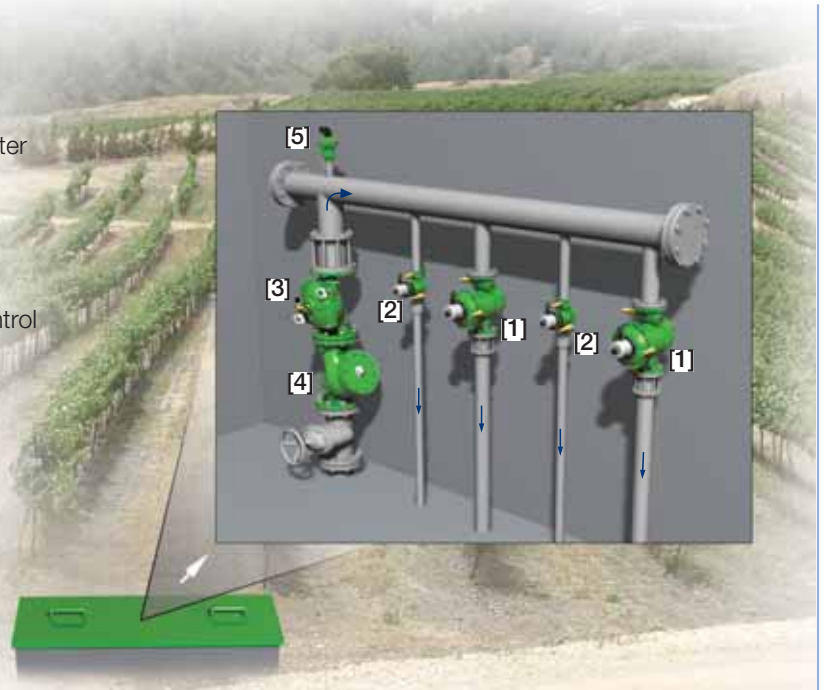
**IR-972-D2-RV**

The BERMAD Model IR-972-D2-RV integrates a vertical turbine Woltman-type water meter with a diaphragm actuated hydraulic control valve. The BERMAD AMV controls system demand to a preset maximum flow rate; reduces downstream pressure to a constant preset maximum, and 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
  - Limits fill-up rate and consumer over-demand
  - Protects downstream systems
  - Non-computerized quantity follow-up and control
- Internal Inlet & Outlet Flow Straighteners
  - Saves on straightening distances
  - Maintains accuracy
- Integrated Flow Metering Calibration Device
- Paddle-Type Hydro-Mechanic Flow Pilot
  - No added head loss
  - Wide setting range
- User-Friendly Design
  - Easy flow, pressure and dose setting
  - Simple in-line inspection and service

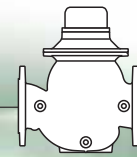


## Typical Applications

- Semi-Automatic Volumetric Irrigation
- Manual Irrigation intended for computerization
- Pressure Reducing Stations
- Multiple Independent Consumer Systems
- Line Fill-Up Control
- Filter Stations
- Distribution Centers

- [1] BERMAD Model IR-972-D2-RV limits fill-up rate and consumers over-demand, establishes pressure zone, and delivers precise water quantities.
- [2] BERMAD Pressure Reducing & Flow Control AMV Model IR-972-D2-RV (3"R; DN80R and smaller)
- [3] BERMAD Main Valve with Solenoid Control Model IR-410-R
- [4] BERMAD Strainer Model 70F
- [5] BERMAD Air Valve Model ARC-A-I-I

# BERMAD Irrigation



## IR-972-D2-RV

For full technical details, refer to Engineering Section.

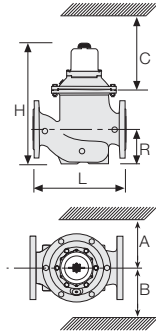
## 900 Series

Flow Control

### Technical Specifications

#### Dimensions and Weights

Size	DN Inch	80 3	100 4	150 6	200 8	250 10
L	mm	300	350	500	600	600
	inch	11.8	13.8	19.7	23.6	23.6
H	mm	405	470	625	640	640
	inch	15.9	18.5	24.6	25.2	25.2
C	mm	290	340	450	465	465
	inch	11.4	13.4	17.7	18.3	18.3
R	mm	123	137	216	228	228
	inch	4.8	5.4	8.5	9	9
A; B	mm	305	325	390	390	415
	inch	12	12.8	15.4	15.4	16.3
Weight	Kg	23	31	71	93	141
	lb.	57.7	68.3	156.5	205	310.9



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

Size	Accuracy	DN inch	80 3	100 4	150 6"	200 & 250 8 & 10
Q min (Minimum flow)	5%	m <sup>3</sup>	3.2	4.8	10	12
		gpm	14.1	21.1	44	52.8
Qn, ISO 4064-1 (Nominal flow)	2%	m <sup>3</sup>	40	60	150	250
		gpm	176	264	660	1100
Qper=Q3 (Permanent flow)	2%	m <sup>3</sup>	100	160	250	400
		gpm	440	704	1100	1760

#### Dial Options

Capacity	Cubic Meter (m <sup>3</sup> )										1000 Gallon										
	40	80	120	150	200	350	600	800	1,200	2,100	3,500	6,000	8,000	13	50	130	200	500	870	1,300	2,000
Graduation	Cubic Meter (m <sup>3</sup> )										Gallon										
	1	1	2	5	10	10	20	50	100	100	100	100	100	100	1000	2,500	5,000	10,000	20,000	25,000	25,000
3"	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
4"	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
6"	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■
8" & 10"	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■	■

### Technical Data

#### Patterns and Sizes:

Globe: 1½-4"; DN40-100  
Angle 90°: 2-4"; DN50-100  
Angle 120°: 4"; DN100

#### End Connections:

Threaded: 1½, 2 & 3"; DN40, 50 & 80R  
Flanged: 3R, 3 & 4"; DN80R, 80 & 100

**Pressure Ratings:** 10 bar; 145 psi

#### Minimum Operating Pressure:

0.5 bar; 7 psi  
For lower pressure requirements, consult factory

**Setting Range:** 1.5-10 bar; 22-145 psi

**Flow Setting Range:** 1.0-5.0 m/sec

#### Materials:

##### Body and Cover:

Polyester Coated Cast or Ductile Iron

##### Internals:

St. St. & Glass Fiber Reinforced Nylon

##### Impeller:

Polypropylene

##### Elastomers:

Reinforced NR & NBR

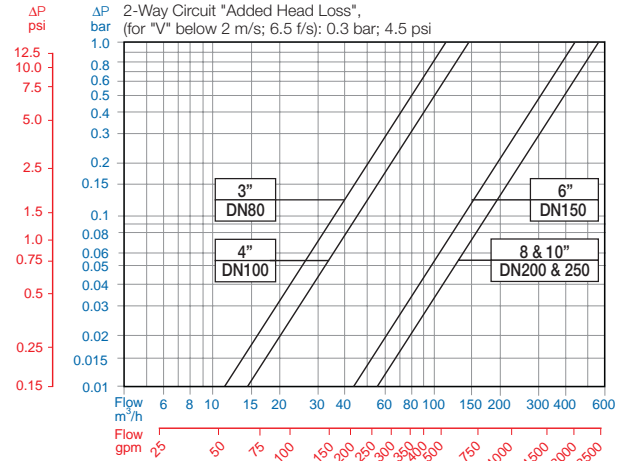
##### Pivots and Bearings:

Tungsten Carbide

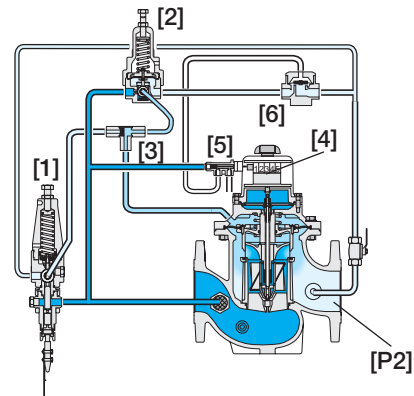
##### Control Accessories:

Brass

### Flow Chart



### Operation



The Flow Pilot [1] commands the AMV to throttle closed should demand rise above pilot setting, and to modulate open when demand drops. The Pressure Reducing Pilot [2] controls the AMV, preventing Downstream Pressure [P2] from rising above pilot setting. The Shuttle Valve [3] directs the pilots commands. Upon delivering the preset quantity of water, the AMV manually preset Control Head Mechanism [4] switches the Shut-Off Pilot [5] to close the Hydraulic Relay Valve [6], and thereby causing the AMV to shut.

### 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	3-10"	972	D2	00	G	I	16	PG	-	PB	800	NPS	RV	
Other sizes available on request.														
Globe		G		Plastic Tubing & Brass Fittings		PB	40 m <sup>3</sup>	040	6,000 m <sup>3</sup>	6K0			Metal Control Accessories	R
Angle		A		Copper Tubing & Brass Fittings		CB	80 m <sup>3</sup>	080	8,000 m <sup>3</sup>	8K0			Paddle Flow Control Pilot	V
120° (4"; DN100 only)		H					120 m <sup>3</sup>	120	13,000 Gal.	1G0			Homologation Approved	L
							150 m <sup>3</sup>	150	50,000 Gal.	5G0			Other attributes available on request	
							200 m <sup>3</sup>	200	130,000 Gal.	1K0				
							350 m <sup>3</sup>	350	200,000 Gal.	2K0				
							600 m <sup>3</sup>	600	510,000 Gal.	5K0				
							800 m <sup>3</sup>	800	875,000 Gal.	8K0				
							1,200 m <sup>3</sup>	1K0	1,300,000 Gal.	1MG				
							2,100 m <sup>3</sup>	2K0	2,100,000 Gal.	2MG				
							3,500 m <sup>3</sup>	3K0						



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