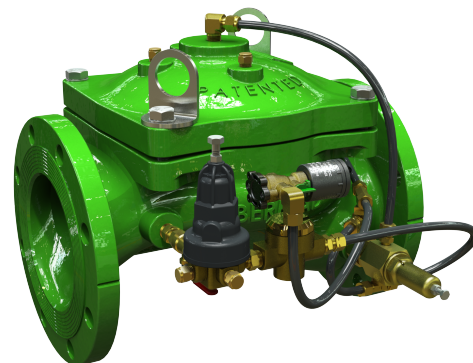




FLOW CONTROL & PRESSURE REDUCING VALVE

Model IR-472-55-2W-RV

The BERMAD Flow Control and Pressure Reducing Valve with Solenoid Control is a hydraulically operated, diaphragm actuated control valve that performs three independent functions. It limits the flow to a preset maximum; it reduces downstream pressure to a constant preset maximum, and it either opens or shuts in response to an electric signal from an irrigation computer.



- [1] BERMAD Model IR-472-55-RV opens in response to an electric signal, limits fill-up rate and consumer over-demand, and reduces system pressure.
- [2] Strainer Model 70-F
- [3] Combination Air Valve Model C30
- [4] Water Meter Model Turbo-IR
- [5] Kinetic Air Valve Model K10

Features & Benefits

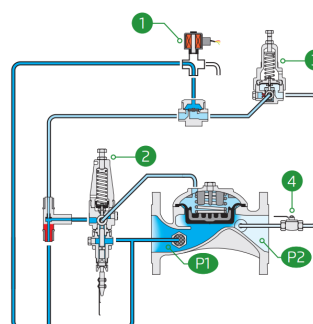
- Line Pressure Driven, Hydraulically Controlled
 - Limits fill-up rate and consumer excessive demand
 - Protects downstream systems
 - Electrically controlled On/Off
- Advanced Hydro-Efficient Globe Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low actuation pressure
 - Excellent low flow regulation performances
 - Prevents diaphragm distortion
- Paddle-Type Hydro-Mechanical Flow Pilot
 - Negligible head loss
 - Easy flow and pressure setting
 - Wide setting range
- Simple In-Line Inspection and Service

Typical Applications

- Automated Irrigation Systems
- Line Fill-Up Control
- Multiple Independent Consumer Systems
- Irrigation Machines
- Filter Stations

Operation:

Commanding the Solenoid [1] to switch opens the valve. The Flow Pilot [2] commands the valve to throttle closed should demand rise above setting, and to modulate open when demand drops. The Pressure Reducing Pilot [3] controls the valve, preventing Downstream Pressure [P2] from rising above setting. Commanding the solenoid to switch back shuts the valve. The downstream Cock Valve [4] enables manual closing.





Technical Data

Pressure Rating:

16 bar

Operating Pressure Range:

0.5-16 bar

Materials

Body & Cover:

Cast iron (up to 8") Ductile iron (10" & 12")

Diaphragm:

NR, Nylon fabric reinforced

Spring:

Stainless Steel

**Other materials are available on request*

Control Loop Accessories

PR Pilot: PC-20-A-MP

FC Pilot: PC-70-MP

Pilot Spring Range:

Spring	Spring Color	Setting range
N	Natural	0.8-6.5 bar
V	Blue & White	1.0-10.0 bar

Standard spring - marked in bold

Tubing and Fittings:

Reinforced Nylon and Brass

AC solenoid:

S-400-3W

DC latch solenoid:

S-402-3W M.B.

S-982-3W P.B.

Flow Pilot spring range:

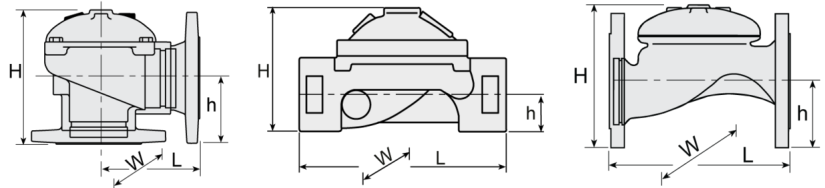
Spring: E-Purple

Flow Velocity (m/sec): 1.5-3.5

Technical Specifications

For other end connection types,

Please refer to [BERMAD](#) full engineering page.



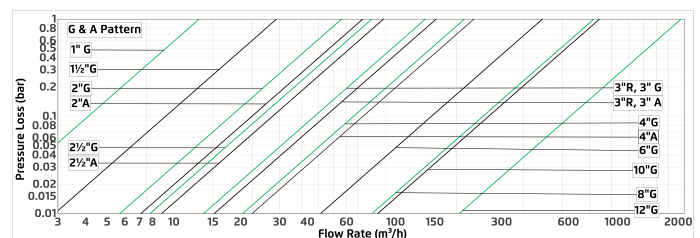
Size	Pattern	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	CCDV (Lit)	KV
1" ; DN25	Globe	Threaded	1.1	115	68	34	71	0.02	13
1½" ; DN40	Globe	Threaded	2	153	87	29	98	0.06	29
2" ; DN50	Globe	Threaded	4	180	114	39	119	0.113	57
2" ; DN50	Globe	Flanged	9	205	155	78	155	0.113	57
2" ; DN50	Globe	Grooved	5	205	108	31	119	0.113	57
2" ; DN50	Angle	Threaded	4.4	86	136	61	119	0.113	71
2" ; DN50	Angle	Flanged	9	120	160	83	155	0.113	71
2½" ; DN65	Globe	Threaded	5.7	210	132	45	129	0.179	78
2½" ; DN65	Globe	Flanged	10.5	205	178	89	178	0.179	78
2½" ; DN65	Angle	Threaded	5.8	110	180	93	131	0.179	88
3R" ; DN80R	Globe	Threaded	5.8	210	140	53	129	0.291	136
3R" ; DN80R	Globe	Flanged	12.1	210	200	100	200	0.291	136
3R" ; DN80R	Angle	Threaded	7	110	178	91	131	0.291	152
3" ; DN80	Globe	Threaded	13	255	165	55	170	0.291	136
3" ; DN80	Globe	Flanged	19	250	210	100	200	0.291	136
3" ; DN80	Globe	Grooved	10.6	250	155	46	170	0.291	136
3" ; DN80	Angle	Threaded	11	110	184	80	170	0.291	152
3" ; DN80	Angle	Flanged	17	153	205	101	200	0.291	152
3" ; DN80	Angle	Grooved	10	120	194	90	170	0.291	152
4" ; DN100	Globe	Flanged	28	320	242	112	223	0.668	204
4" ; DN100	Globe	Grooved	16.2	320	191	61	204	0.668	204
4" ; DN100	Angle	Flanged	26	160	223	112	223	0.668	225
4" ; DN100	Angle	Grooved	16	160	223	112	204	0.668	225
6" ; DN150	Globe	Flanged	68	415	345	140	306	1.973	458
6" ; DN150	Globe	Grooved	49	415	302	85	306	1.973	458
8" ; DN200	Globe	Flanged	125	500	430	170	365	3.858	781
10" ; DN250	Globe	Flanged	140	605	460	202	405	3.858	829
12" ; DN300	Globe	Flanged	290	725	635	242	580	13.75	1932

CCDV = Control Chamber Displacement Volume • Threaded = BSP & NPT are available.

Additional Features

Code	Description	Size Range
F	Large Control Filter	1½"-12" / DN40-300
I	Position Indicator Assembly	1½"-12" / DN40-300
M	Flow Stem	1½"-12" / DN40-300

Flow Chart



2-Way circuit "Added Head Loss" (for "V" below 2 m/s): 0.3 bar

Differential Pressure & Flow Calculation

$$\Delta P = \left(\frac{Q}{K_v} \right)^2$$

$K_v = m^3/h$ @ ΔP of 1 bar

$Q = m^3/h$

$\Delta P = \text{bar}$