

# Pressure Reducing Valve

with Solenoid Control

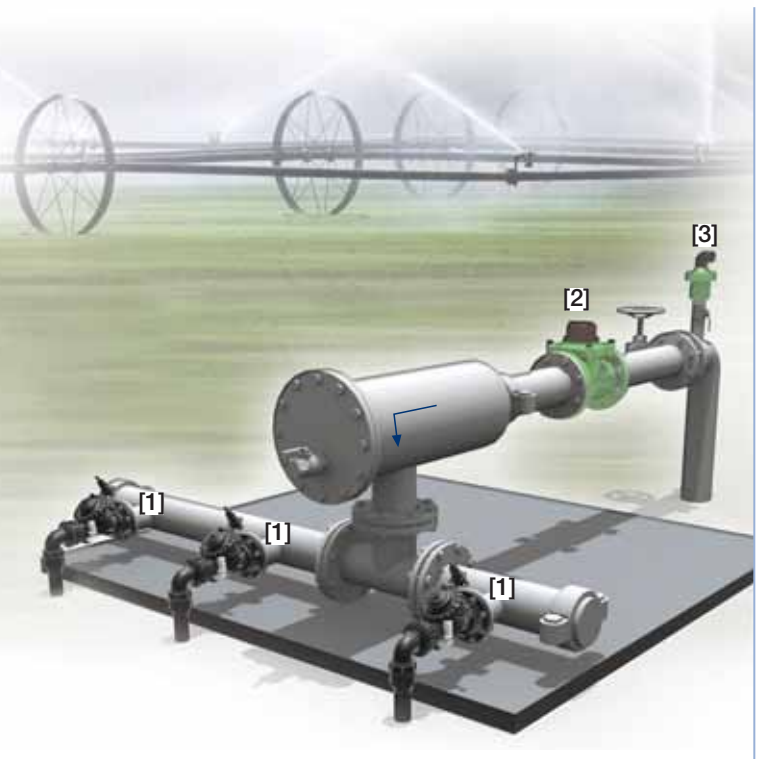
IR-120-55

The BERMAD Model IR-120-55 is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand or varying upstream pressure. It either opens or shuts in response to an electric signal.



## Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
  - Protects downstream systems
- Engineered Plastic Valve with Industrial Grade Design
  - Adaptable on-site to a wide range of end connection sizes and types
  - Articulated flange connections eliminate mechanical and hydraulic stresses
  - Highly durable, chemical and cavitation resistant
- hYflow 'Y' Valve Body with "Look Through" Design
  - Ultra-high flow capacity - Low pressure loss
- Unitized Flexible Super Travel (FST) Diaphragm and a Guided Plug
  - Accurate and stable regulation with smooth closing
  - Requires low actuation pressure
  - Prevents diaphragm erosion and distortion
- User-Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service



## Typical Applications

- Computerized Irrigation Systems
- Pressure Reducing Stations
- Remote and/or Elevated Plots
- Distribution Centers
- Low Supplied Pressure Irrigation Systems
- Energy Saving Irrigation Systems

- [1] BERMAD Model IR-120-55 opens in response to an electric signal establishing reduced pressure zone.
- [2] BERMAD Water Meter Model WPH
- [3] BERMAD Air Valve Model ARC-A-I-I

# BERMAD Irrigation



## IR-120-55

For full technical details, refer to Engineering Section.

## 100 Series hYflow

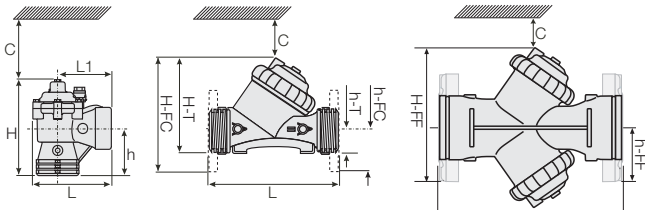
Pressure Reducing

### Technical Specifications

#### Dimensions and Weights

Pattern	Size	DN Inch	Angle		Y (Oblique)				Y "Boxer"		
			80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-T <sup>(1)</sup> 3-T <sup>(1)</sup>	80-FC <sup>(2)</sup> 3-FC <sup>(2)</sup>	80L-FC <sup>(2)</sup> 3L-FC <sup>(2)</sup>	100-FC <sup>(2)</sup> 4-FC <sup>(2)</sup>	150-FF <sup>(3)</sup> 6-FF <sup>(3)</sup>	mm	inch	
L (L1)			mm	187 (130)	298	308	310	350	480		
			inch	7.4 (5.1)	11.7	12.1	12.2	13.8	18.9		
H (Hf)			mm	235 (245)	180 (195)	240 (255)	280	294	285		
			inch	9.3 (9.6)	7.1 (7.7)	9.4 (10)	11	11.6	11.2		
C			mm	53	53	600	600	600	600		
			inch	2.1	2.1	4	4	4	23.6	23.6	
h			mm	117	50	100	100	112	145		
			inch	4.6	2	3.9	3.9	4.4	5.7		
Weight			Kg	1.6	1.6	4.4	5.9	7.6	12.5		
			lb.	3.5	3.5	9.7	13	16.7	27.6		

(1) "T" = Threaded end connections (2) "FC" = Flanged, Corona (Metal) end connections  
(3) "FF" = Flanged, Universal Plastic end connections



### Technical Data

**Sizes:** 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

**Patterns:**

Oblique: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

Angle: 3"; DN80

**End Connections:**

Threaded: 3 & 3"L; DN80 & 80L

Flanged: 3, 3L, 4 & 6"; DN80, 80L, 100 & 150

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

**Operating Pressure Range:** 0.35-10 bar; 5-145 psi

**Setting Range:** 1-7 bar; 15-100 psi

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

**Materials:**

**Body, Cover and Plug:** Glass-Filled Nylon

**Diaphragm:** NR, Nylon fabric reinforced

**Seals:** NR

**Spring:** Stainless Steel

**Control Accessories:** Plastic

**Tubing and Fittings:** Plastic

**Solenoid Voltage Range:**

S-390 & S-400: 24 VAC, 24 VDC

S-392 & S-402: 9-20 VDC, Latch

S-982 & S-985: 12-50 VDC, Latch

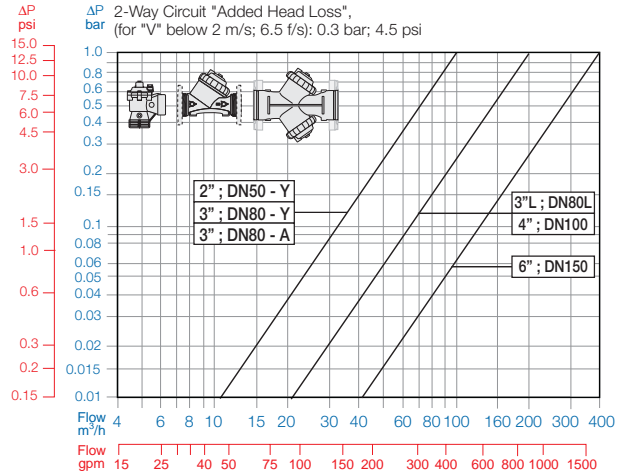
Other voltages available

### How to Order

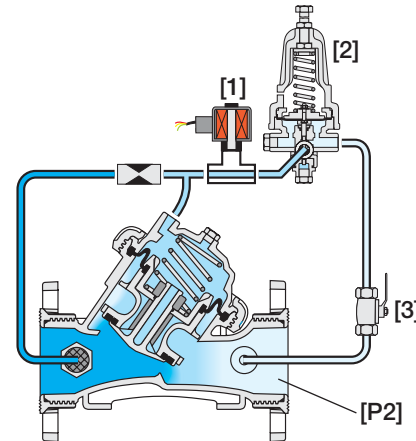
Please specify the requested valve in the following sequence: (for more options, refer to Ordering Guide.)

Sector	Size	Primary Feature	Additional Feature	Pattern	Construction Materials	End Connections	Control Type	Voltage -Main Valve Position	Additional Attributes
IR	3-6"	120	55	Y	P	FF	2W	4AC	-
	Other sizes available on request.								
Oblique		Y	Threaded BSP (Female)	BP	9VDC -	Latch	9DS	Low Preset Pressure (below 2 bar)	2
Angle (3"; DN80 Only)		A	Threaded NPT (Female)	NP	12VDC -	Latch	1DS	Plastic Pressure Test Point	5
			Plastic Flanges*	FF	24VDC -	N.C.	4DC	Other attributes available on request	
			Metal Flanges* ("Corona")	CC	24VDC -	N.O.	4DC		
			Grooved (6"; DN150 Only)	VI	24VAC -	N.C.	4AC		
			* Comply to: ISO PN10, ANSI #125/150, Jis K-10, BS-D		24VAC -	N.O.	4AO		
					24VAC, Lightning Proof -	N.C.	4RC		
					24VAC, Lightning Proof -	N.O.	4RO		
					Other electrical ratings available on request.				

### Flow Chart



### Operation



Opening the Solenoid [1] opens the Valve. The Pressure Reducing Pilot [2] commands the valve to throttle closed should Downstream Pressure [P2] rise above setting, and to modulate open when it drops below setting. Closing the solenoid causes the Valve to shut. The downstream Cock Valve [3] enables manual closing.



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