

# Pressure Reducing Valve

with Solenoid Control  
for Drip-Tape Applications

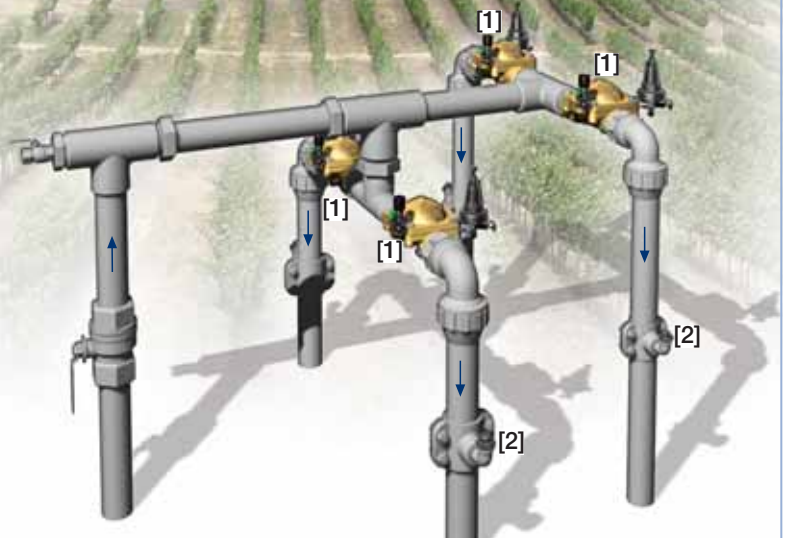
GR-420-55-bK

The BERMAD Pressure Reducing Valve with Solenoid Control is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to very low and stable preset downstream pressure regardless of fluctuating demand, or varying upstream pressure. The BERMAD Model GR-420-55-b either opens or shuts in response to an electric signal.



## Features and Benefits

- Line Pressure Driven, Electrically Controlled On/Off
  - Protects downstream systems
- Pressure Reducing Servo Pilot Controlled
  - Progressive needle valve
  - Settable to 0.5 bar; 7 psi
  - Very low hysteresis
- Advanced Globe Hydro-Efficient Design
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
- Fully Supported & Balanced Diaphragm
  - Requires low opening and actuation pressure
  - Excellent low flow regulation performances
  - Progressively restrains valve closing
  - Prevents diaphragm distortion
- User-Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service



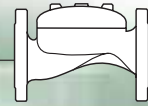
## Typical Applications

- Computerized Irrigation Systems
- Drip-Tape Systems
- Low Set Pressure Applications
- Distanced and/or Elevated Plots
- Distribution Centers
- Low Supplied Pressure Irrigation Systems

[1] BERMAD Model GR-420-55-bK opens in response to electric signal, and establishes reduced pressure zone protecting laterals and distribution line.

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

# BERMAD Irrigation



## GR-420-55-bK

For full technical details, refer to Engineering Section.

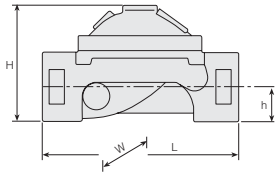
## 400 Series

Pressure Reducing

### Technical Specifications

#### Dimensions and Weights

Size	DN	40	50
	inch	1½	2
L	mm	150	180
	inch	5.9	7.1
H	mm	83	110
	inch	3.3	4.3
h	mm	28	38
	inch	1.1	1.5
W	mm	90	120
	inch	3.5	4.7
Weight	Kg.	1.5	4
	lb.	3.3	8.8



### Technical Data

**Valve Available Sizes:** 1½ & 2"; DN40 & 50

**End Connections:** Threaded 1½ & 2"; DN20, 25, 40 & 50

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

**Operating Pressure Range:** 0.5-10 bar; 7-145 psi

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

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

#### Materials:

**Body and Cover:** Brass

**Spring:** Stainless Steel

**Diaphragm:** NR

**Bolts, Studs and Nuts:** Zinc-Cobalt Plated Steel

**Control Accessories:** Plastic

**Tubing and Fittings:** Plastic

**Solenoid Voltage Range:**

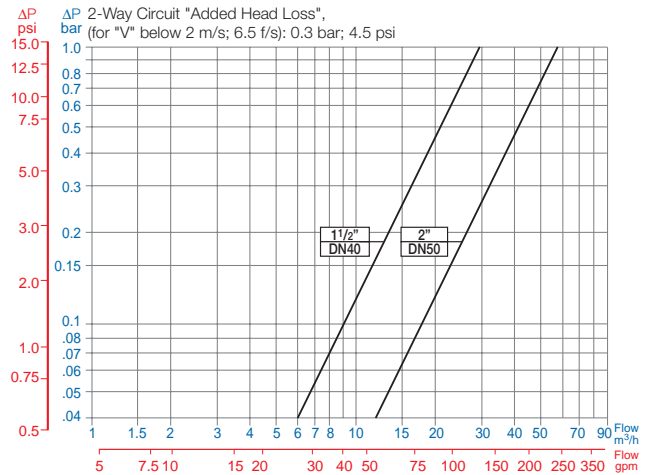
**S-390 & S-400:** 24 VAC, 24VDC

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

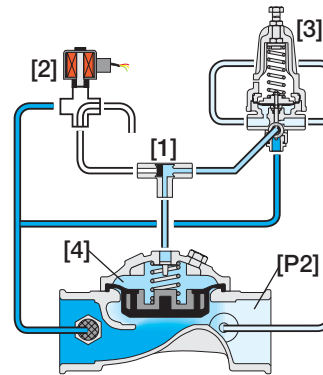
**S-982 & S-985:** 12-50 VDC, Latch

Other voltages available. For full electric data, refer to Accessories Section.

### Flow Chart



### Operation



The Shuttle Valve [1] hydraulically connects the Solenoid [2] or the Pressure Reducing Servo Pilot (PRSP) [3] to the Valve Control Chamber [4]. When the solenoid is closed, the PRSP commands the Valve to throttle closed, preventing Downstream Pressure [P2] from rising above pilot setting. In response to an electric signal, the solenoid switches, directing line pressure through the shuttle valve into the control chamber. This causes the Valve to shut. The solenoid also features local manual closing.

### 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	Pilot Material	Additional Attributes	Voltage -Main Valve Position
GR	1½-2"	420	55	G	R	BP	2W/3W	PCP	bK	4AC
Globe		G	BSP NPT Other end connections available on request		BP NP	Plastic Brass	PCP PCM	b K	9VDC - 12VDC - 24VDC - 24VDC - 24VAC - 24VAC - 24VAC, Lightning Proof - N.C. 24VAC, Lightning Proof - N.O.	Latch 9DS Latch 1DS N.C. 4DC N.O. 4DC N.C. 4AC N.O. 4AO N.C. 4RC N.O. 4RO

Other electrical rating are available



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