

# Pressure Reducing Valve

with Hydraulic Control, Metal Accessories

IR-420-50-RXZ

The BERMAD Pressure Reducing Valve with Hydraulic Control is a hydraulically operated, diaphragm actuated control valve that reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand, and opens fully upon line pressure drop. It either opens or shuts in response to a remote pressure command.



## Features and Benefits

- Line Pressure Driven, Hydraulically controlled On/Off
  - Protects downstream systems
  - Opens fully upon line pressure drop
- Metal Control Accessories
  - Damage resistant
  - High pressure rating
- Advanced Globe Hydro-Efficient Design
  - Unobstructed flow path
  - Single moving part
  - High flow capacity
- Fully Supported & Balanced Diaphragm
  - Requires low actuation pressure
  - Excellent low flow regulation performance
  - Progressively restrains valve closing
  - Prevents diaphragm distortion
- User-Friendly Design
  - Easy pressure setting
  - Simple in-line inspection and service



## Typical Applications

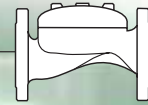
- Computerized Irrigation
- Pressure Reducing Stations
- Systems Subject to Varying Supply Pressure
- Distribution Centers

[1] BERMAD Model IR-420-50-RXZ opens upon pressure drop command, and establishes reduced pressure zone protecting laterals and distribution line.

[2] BERMAD Automatic Metering Valve Model IR-900-D2

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

# BERMAD Irrigation



## IR-420-50-RXZ

For full technical details, refer to Engineering Section.

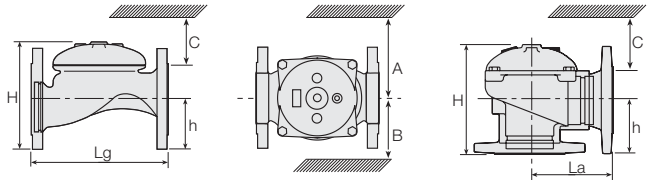
## 400 Series

Pressure Reducing Standard

### Technical Specifications

#### Dimensions and Weights

Pattern	Globe						Angle						
	Connections	Threaded					Fl.	Threaded				Fl.	
Size	DN	1 1/2"	2"	2 1/2"	3"R	3"	4"	50	65	80R	80	3"	4"
Lg	mm inch	153 6	180 7.1	210 8.3	210 8.3	255 10.0	320 12.6	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.
La	mm inch	N.A.	N.A.	N.A.	N.A.	N.A.	N.A.	86	110	110	110	160	
H	mm inch	87 3.4	114 4.5	132 5.2	140 5.5	165 6.5	242 9.5	136 5.4	180 7.1	178 7	184 7.2	223 8.8	
C	mm inch	52 2	68 2.7	80 3.1	84 3.3	100 3.9	145 5.7	82 3.2	108 4.2	107 4.2	110 4.3	134 5.3	
h	mm inch	29 1.1	39 1.5	45 1.8	53 2.1	55 2.2	112 4.4	61 2.4	93 3.7	91 3.6	80 3.1	112 4.4	
A; B	mm inch	130 5	130 5	130 5	140 6	175 7	312 12.3	130 5.1	130 5.1	140 5.5	175 6.9	312 12.3	
Weight	Kg lb.	2 4.4	4 8.8	5.7 12.6	5.8 12.8	13 28.7	28 61.7	4.4 9.7	5.8 12.8	7 15.4	11 24.3	26 57.3	



### Technical Data

#### End connections:

Size		1 1/2"	2"	2 1/2"	3"R	3"	4"
		DN40	DN50	DN65	DN80R	DN80	DN100
Threaded	Globe	■	■	■	■	■	■
	Angle		■	■	■	■	■
Flanged	Globe		■	■	■	■	■
	Angle		■			■	■
Grooved	Globe					■	■
	Angle					■	■

**Pressure Rating:** 16 bar; 232 psi

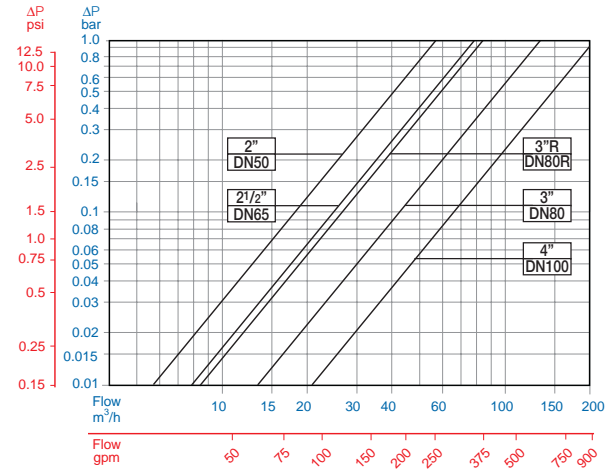
**Operating Pressure Range:** 0.5-10 bar; 7-145 psi

For lower pressure requirements, consult factory

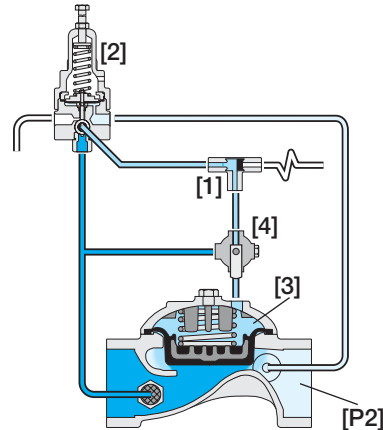
**Setting Range:** 1-10 bar; 15-145 psi

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

### Flow Chart



### Operation



The Shuttle Valve [1] hydraulically connects the Pressure Reducing Pilot (PRP) [2] to the Valve Control Chamber [3]. The PRP commands the Valve to throttle closed should Downstream Pressure [P2] rise above pilot setting and to open fully when it drops below pilot setting. Upon pressure rise command, the shuttle valve automatically switches, allowing pressurization of the control chamber, which causes the main Valve to shut. The Manual Selector [4] enables 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	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	1 1/2"-4" <small>Other sizes available on request.</small>	420	50	-	G	I	BP	PG	-	PP	RXZ
		G A	BSP NPT ISO-16 ISO-10 IS 14 (ISO 10/4 Holes) ANSI-125 JIS-10 BST-D Grooved		BP NP 16 10 14 A1 J1 BD VI	Plastic Tubing & Fittings Plastic Tubing & Brass Fittings		PP PB		Metal Control Accessories 3-Way Control Manual Selector Valve Position Indicator <sup>(1)</sup> Flow Stem <sup>(1)</sup>	R X Z I M

For available end connections/sizes, see End Connections Table above.

(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M. Other additional attributes are optional. Please consult full-stop



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