

## Pressure Reducing Valve

### IR-420-XZ

The BERMAD Model IR-420-XZ Pressure Reducing Valve 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.



### Features and Benefits

- 3-Way Hydraulically Actuated Pressure Reducing Valve
  - Protects downstream systems
  - Opens fully upon line pressure drop
- 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
  - Easy addition of control features

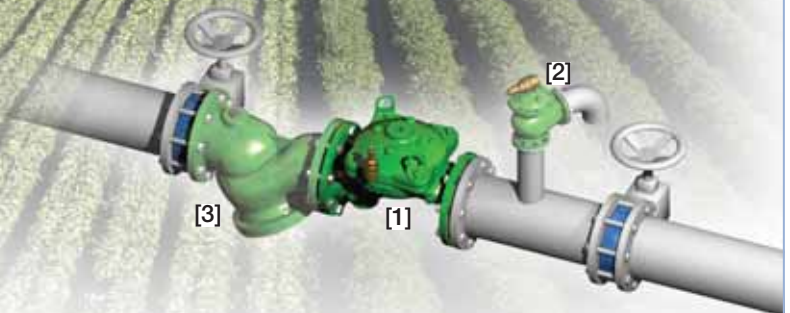
### Typical Applications

- Pressure Reducing Stations
- Flow and Leakage Reduction
- Systems Subject to Varying Supply Pressure
- Energy Saving Irrigation Systems
- Downhill Supply Lines
- Pressure Zoning
- System Maintenance Savings

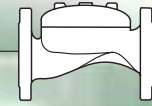
[1] BERMAD Model IR-420-XZ reduces line pressure, protecting downhill line and consumers.

[2] BERMAD Pressure Relief Valve Model 73Q

[3] BERMAD Strainer Model 70F



# BERMAD Irrigation



## IR-420-XZ

For full technical details, refer to Engineering Section.

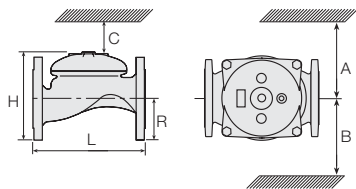
## 400 Series

Pressure Reducing

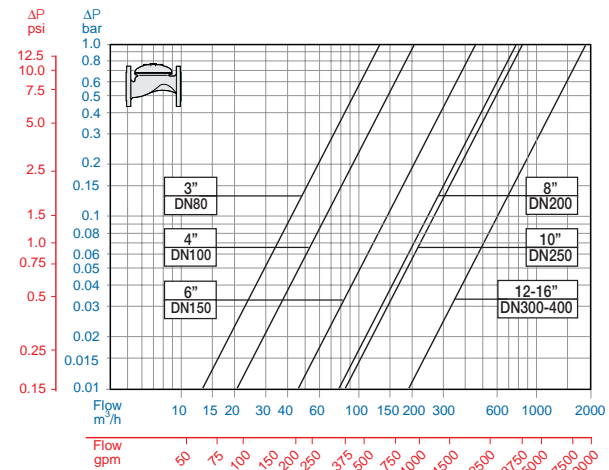
### Technical Specifications

#### Dimensions and Weights

Size	DN Inch	80 3	100 4	150 6	200 8	250 10	300 12	350 14	400 16
L	mm	250	320	415	500	605	725	742	742
	inch	9.8	12.6	16.3	19.8	23.8	28.5	29.2	29.2
H	mm	210	242	345	430	460	635	655	965
	inch	8.3	9.5	13.6	16.9	18.1	25	25.8	38
C	mm	125	145	207	258	276	381	393	579
	inch	5	5.7	8.2	10.2	10.9	15	15.5	22.8
R	mm	100	112	140	170	202	242	260	300
	inch	3.9	4.4	5.5	6.7	8	9.5	10.2	11.8
A; B	mm	300	312	353	383	403	490	494	500
	inch	11.8	12.3	13.9	15.1	15.9	19.3	19.4	19.7
Weight	Kg	19	28	68	125	140	290	358	377
	lb.	41.9	61.7	149.9	275.6	308.6	639.3	789.2	831.1



#### Flow Chart



### Technical Data

**Patterns and Sizes:** Globe: 3-16"; DN80-400 Angle: 3-4"; DN80-100

**End Connections:**

Size		3"	4"	6"	8-16"
		DN80	DN100	DN150	DN200-400
Threaded	Globe	■			
	Angle	■			
Flanged	Globe	■	■	■	■
	Angle	■	■		
Grooved	Globe	■	■	■	
	Angle	■	■		

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

**Operating Pressure Range:** 0.5-16 bar; 7-232 psi

For lower pressure requirements, consult factory.

**Setting Range:** 1.5-16 bar; 22-232 psi

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

**Materials:**

**Body and Cover:**

Polyester Coated Cast or (10"; DN250 and larger) Ductile Iron

**Spring:** Stainless Steel

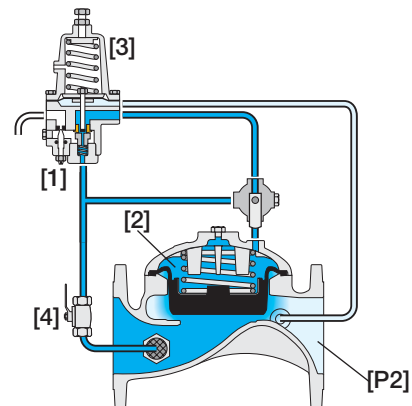
**Diaphragm:** Nylon fabric Reinforced NR with rugged insert

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

**Control Accessories:** Brass

**Tubing and Fittings:** Reinforced Plastic and Brass

#### Operation



The Pressure Reducing Pilot [1] senses Downstream Pressure [P2]. It diverts line pressure into the Control Chamber [2] should [P2] rise above setting. Pressure then accumulates in the control chamber causing the Valve to throttle closed, decreasing [P2] to pilot setting.

The pilot releases accumulated pressure to the atmosphere when [P2] falls below setting, thereby causing the Valve to open. Should line pressure remain below setting - the Valve opens fully. The Manual Selector [2] 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	3-16"	420	00	-	G	I	16	PG	-	PB	XZ	
Other sizes available on request. Globe Angle (up to 4"; DN100)		G A	ISO-16 ISO-10 IS 14 (ISO 10/4 Holes) ANSI-125 ANSI-150 JIS-10 BST-D Grooved (3-6"; DN80-150 only)	16 10 14 A1 A5 J1 BD VI	Plastic Tubing & Brass Fittings Copper Tubing & Brass Fittings	PB CB	3-Way Control Loop Manual Selector Large Control Filter Valve Position Indicator <sup>(1)</sup> Flow Stem <sup>(1)</sup>	X Z F I M				
Cast Iron (up to 8"; DN200) Ductile Iron (10"; DN250 & above)		I C	(1) Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M. Other attributes available on request.									

Other end connections available on request



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