

Pressure Reducing Valve

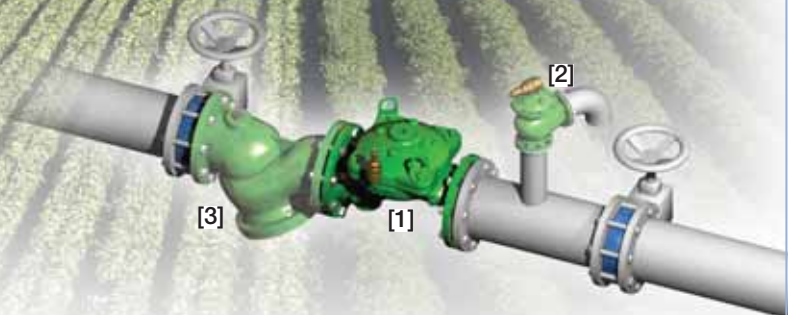
IR-420

The BERMAD Model IR-420 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 or varying upstream pressure.



Features and Benefits

- Line Pressure Driven Pressure Reducing Valve
 - Protects downstream systems
- 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

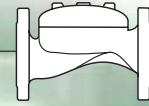
- Pressure Reducing Stations
- Flow and Leakage Reduction
- Cavitation Damage Protection
- Pressure Zoning
- Downhill Supply Lines
- System Maintenance Savings

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

[2] BERMAD Pressure Relief Valve Model 73Q

[3] BERMAD Strainer Model 70F

BERMAD Irrigation



IR-420

For full technical details, refer to Engineering Section.

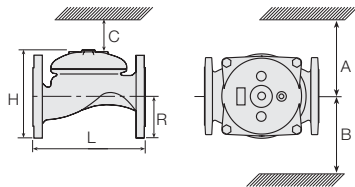
400 Series

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



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

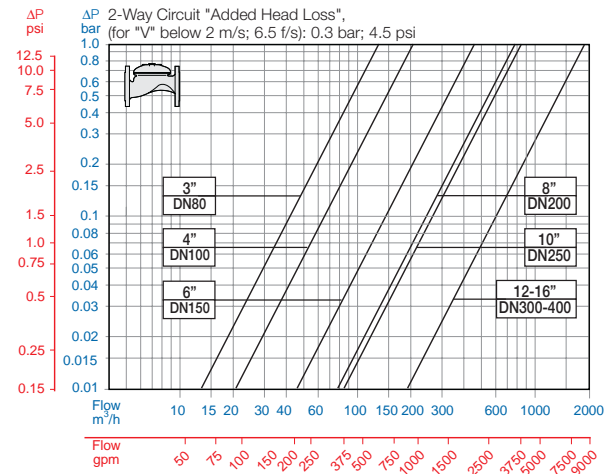
How to Order

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

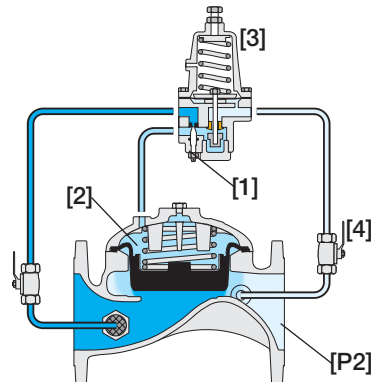
Sector	Size	Primary Feature	Additional Feature	Additional Feature	Pattern	Construction Materials	End Connections	Coating	Voltage -Main Valve Position	Tubing & Fittings	Additional Attributes
IR	3-16" <small>Other sizes available on request.</small>	420	00	-	G	I	16	PG	-	PB	-
	Globe Angle (up to 4"; DN100)	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	Metal Control Accessories Large Control Filter Valve Position Indicator ⁽¹⁾ Flow Stem ⁽¹⁾		R 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

Flow Chart



Operation



The Needle Valve [1] continuously allows line pressure into the Control Chamber [2]. The Pressure Reducing Pilot [3] senses Downstream Pressure [P2], and throttles when it rises 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 when [P2] falls below setting, thereby causing the Valve to modulate open. The needle valve controls the closing speed. The Downstream Cock Valve [4] enables manual closing.



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