

Pressure Reducing Valve

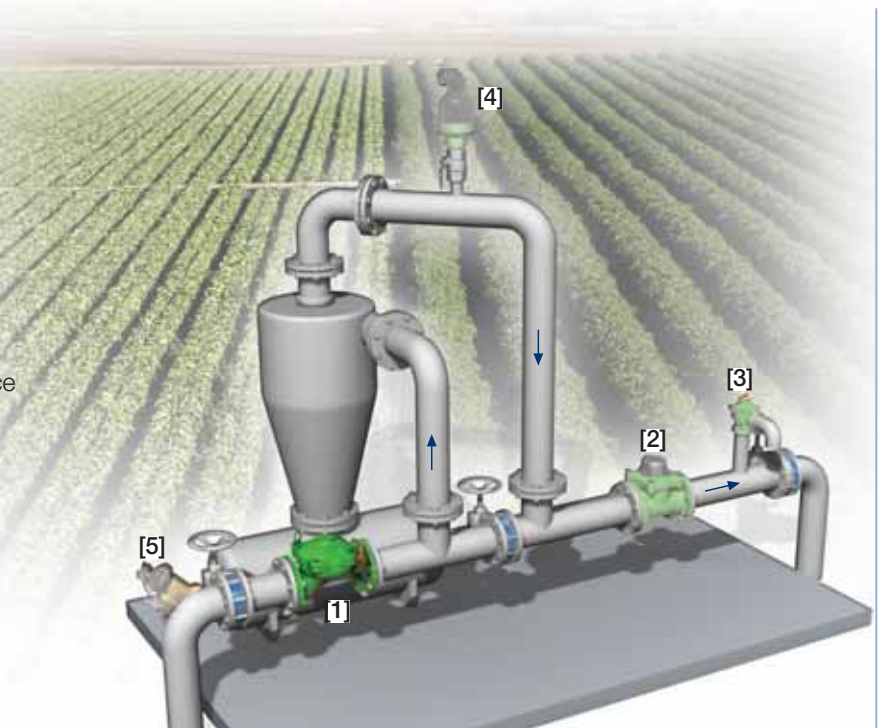
IR-420-R

The BERMAD 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

- Hydraulic Pressure Control
 - Line pressure driven
 - 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

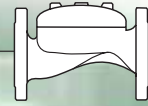


Typical Applications

- Pressure Reducing Stations
- Low Supplied Pressure Irrigation Systems

- [1] BERMAD Model IR-420-R protecting the System
- [2] BERMAD Water Meter Model WPH
- [3] BERMAD Relief Valve Model IR-43Q-R
- [4] BERMAD Air Valve Model ARC-A-P-I
- [5] BERMAD Sediment Tank Flashing Valve Model IR 310-B

BERMAD Irrigation



IR-420-R

For full technical details, refer to Engineering Section.

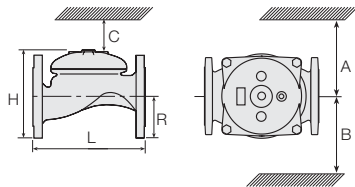
400 Series

Pressure Reducing

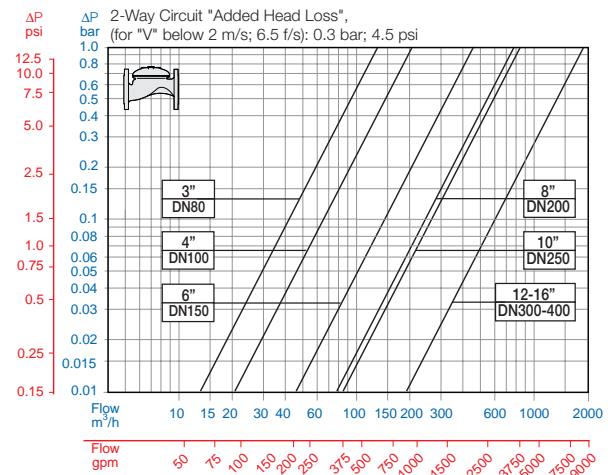
Technical Specifications

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: 1-10 bar; 15-145 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

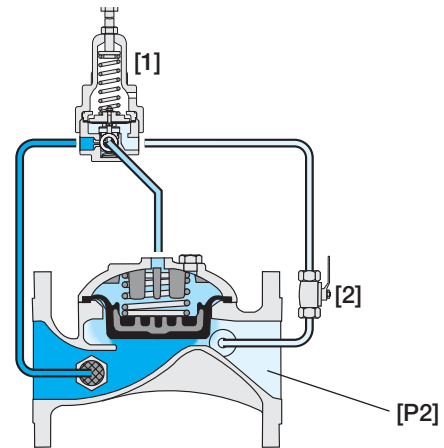
Diaphragm: Nylon fabric Reinforced NR with rugged insert

Bolts, Studs and Nuts: Zinc-Cobalt plated Steel

Control Accessories: Brass

Tubing and Fittings: Reinforced Plastic and Brass

Operation



The Pressure Reducing Pilot [1] commands the main Valve to throttle closed should Downstream Pressure [P2] rise above setting, and to modulate open when it drops below setting. The downstream Cock Valve [2] enables 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 | R |
| Other sizes available on request. | | | | | | | | | | | |
| Globe | | G | ISO-16 | | 16 | Plastic Tubing & Brass Fittings | | PB | | Metal Control Accessories | R |
| Angle (up to 4"; DN100) | | A | ISO-10 | | 10 | Copper Tubing & Brass Fittings | | CB | | Large Control Filter | F |
| | | | IS 14 (ISO 10/4 Holes) | | 14 | | | | | Valve Position Indicator ⁽¹⁾ | I |
| | | | ANSI-125 | | A1 | | | | | Flow Stem ⁽¹⁾ | M |
| | | | ANSI-150 | | A5 | | | | | ⁽¹⁾ Standard Irrigation Cover & Diaphragm are unfitted to Attributes I, M. | |
| | | | JIS-10 | | J1 | | | | | Other attributes available on request. | |
| | | | BST-D | | BD | | | | | | |
| | | | Grooved (3-6"; DN80-150 only) | | V1 | | | | | | |
| | | | Other end connections available on request | | | | | | | | |



info@bermad.com • www.bermad.com

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