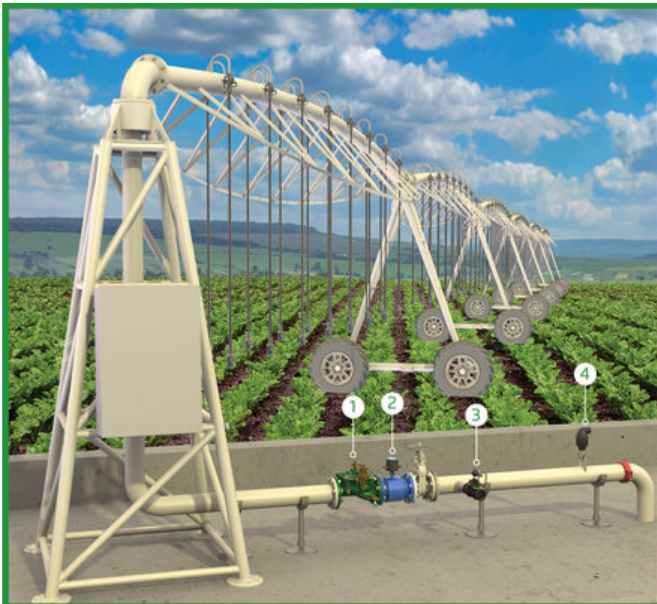
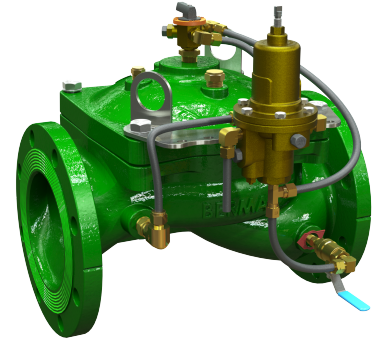




PRESSURE REDUCING VALVE

Model IR-420-3W-RXZ

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, and opens fully upon line pressure drop.



- [1] BERMAD Model IR-420-3W-RXZ establishes reduced pressure zone protecting laterals and distribution line.
- [2] Water Meter Model MUT2300
- [3] Pressure Relief Valve Model IR-13Q-HP
- [4] Combination Air Valve Model C30

Features & Benefits

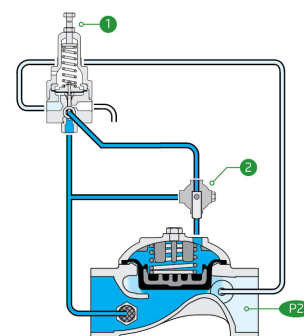
- Hydraulic Pressure Control, Line Pressure Driven
 - Protects downstream systems
 - Opens fully upon line pressure drop
- Metal Control Accessories
 - Damage resistant
 - High pressure rating
- Advanced Hydro-Efficient Globe Design
 - Unobstructed flow path
 - Single moving part
 - High flow capacity
- Fully Supported & Balanced Diaphragm
 - Requires low 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

- Pressure Reducing Systems
- Systems Subject to Varying Supply Pressure
- Irrigation Machines

Operation:

The Pressure Reducing Pilot [1] commands the main valve to throttle closed should Downstream Pressure [P2] rise above pilot setting and to open fully when it drops below pilot setting. The Manual Selector [2] enables local manual closing.





Technical Data

Pressure Rating:
250 psi

Operating Pressure Range:
7-250 psi

Materials

Body & Cover:
Cast iron (up to 8") Ductile iron (10" & 12")

Diaphragm:
NR, Nylon fabric reinforced

Spring:
Stainless Steel

**Other materials are available on request*

Control Loop Accessories

PR Pilot: PC-SHARP-X-MP

Pilot Spring Range:

Spring	Spring Color	Setting range
K	Gray	7-43 psi
N	Natural	12-95 psi
V	Blue & White	15-150 psi
P	White	15-230 psi

Standard spring - marked in bold

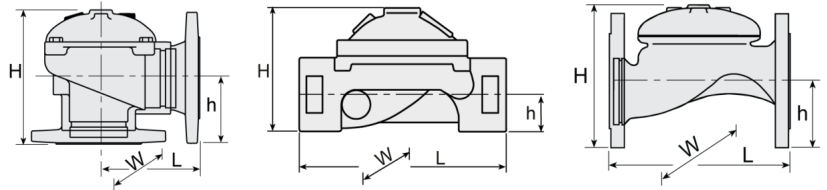
Tubing and Fittings:

Reinforced Nylon and Brass

**For other pilots please consult [BERMAD](#)*

Technical Specifications

For other end connection types,
Please refer to [BERMAD](#) full engineering page.



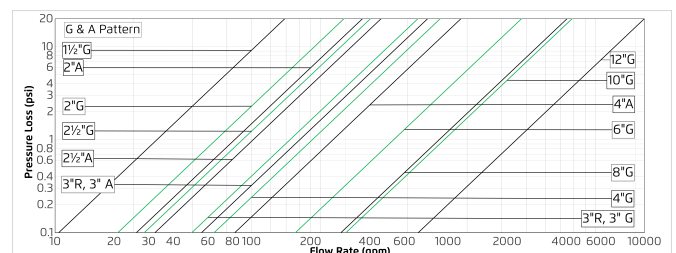
Size	Pattern	End Connection	Weight (Lb)	L (In)	H (In)	h (In)	W	CCDV (Gal)	CV
1" ; DN25	Globe	Threaded	2.4	4%	2 3/4	1 3/8	2 7/8	0.005	15
1 1/2" ; DN40	Globe	Threaded	4.4	6%	3%	1 1/4	3%	0.016	33
2" ; DN50	Globe	Threaded	8.8	7%	4 1/2	1 1/2	4%	0.03	66
2" ; DN50	Globe	Flanged	19.8	8%	6%	3 1/2	6%	0.03	66
2" ; DN50	Globe	Grooved	11	8%	4%	1 1/4	4%	0.03	66
2" ; DN50	Angle	Threaded	9.7	3 1/2	5%	2 1/2	4%	0.03	82
2" ; DN50	Angle	Flanged	19.8	4%	7%	3%	6%	0.03	82
2 1/2" ; DN65	Globe	Threaded	12.6	8%	5%	1%	5%	0.05	90
2 1/2" ; DN65	Globe	Flanged	23.1	8%	7	3 1/2	7	0.05	90
2 1/2" ; DN65	Angle	Threaded	12.8	4%	7%	3%	5%	0.05	102
3R" ; DN80R	Globe	Threaded	12.9	8%	5 1/2	2%	5%	0.08	157
3R" ; DN80R	Globe	Flanged	28	8%	7%	4	7%	0.08	157
3R" ; DN80R	Angle	Threaded	15.4	4%	7	3%	5%	0.08	176
3" ; DN80	Globe	Threaded	28.7	10%	6 1/2	2 1/4	6%	0.08	157
3" ; DN80	Globe	Flanged	41.9	9%	8%	4	7%	0.08	157
3" ; DN80	Globe	Grooved	23.4	9%	6%	1%	6%	0.08	157
3" ; DN80	Angle	Threaded	24.3	4%	7%	3%	6%	0.08	176
3" ; DN80	Angle	Flanged	37.5	6%	8%	4	7%	0.08	176
3" ; DN80	Angle	Grooved	22.1	4%	11	3%	6%	0.08	176
4" ; DN100	Globe	Flanged	61.7	12%	9%	4 1/2	8%	0.18	236
4" ; DN100	Globe	Grooved	35.7	12%	7%	2 1/2	8	0.18	236
4" ; DN100	Angle	Flanged	57.3	6%	8 3/4	4 1/2	8%	0.18	260
4" ; DN100	Angle	Grooved	35.3	6%	8 3/4	4 1/2	8%	0.18	260
6" ; DN150	Globe	Flanged	149.9	16%	13%	5 1/2	12%	0.52	529
6" ; DN150	Globe	Grooved	108	16%	11%	3%	12%	0.52	529
8" ; DN200	Globe	Flanged	275.6	19%	17	6%	14%	1.02	902
10" ; DN250	Globe	Flanged	308.6	23%	18%	8	16	1.02	957
12" ; DN300	Globe	Flanged	639.3	28%	25	9%	22%	3.63	2231

CCDV = Control Chamber Displacement Volume • Threaded = BSP & NPT are available.

Additional Features

Code	Description	Size Range
F	Large Control Filter	1 1/2"-12"
I	Position Indicator Assembly	1 1/2"-12"
M	Flow Stem	1 1/2"-12"

Flow Chart



Differential Pressure & Flow Calculation

$$\Delta P = \left(\frac{Q}{Cv} \right)^2$$

Cv = gpm @ ΔP of 1 psi
Q = gpm
ΔP = psi