



ADJUSTABLE DIRECT-ACTING PRESSURE REDUCER

Model 1.5-PRV

The BERMAD Adjustable Direct Acting Pressure Reducer is actuated by a pressure responsive diaphragm, which seeks to reach equilibrium between hydraulic and set spring force. The BERMAD Model 1½"-PRV is built of composite materials that endows it with excellent hydraulic performance capabilities and high mechanical strength. It reduces higher upstream pressure to lower constant downstream pressure regardless of fluctuating demand or varying upstream pressure.



[1] BERMAD Model 1½"-PRV protects laterals and fittings from excessive pressure and ensures dripper flow per design.

Features & Benefits

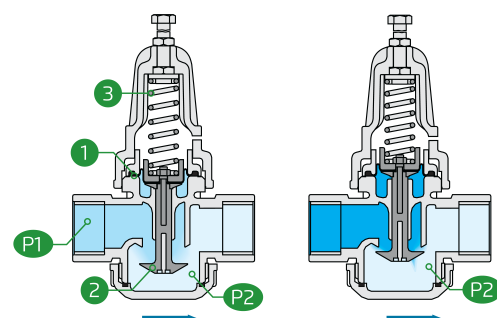
- Advanced Construction Materials
 - High mechanical strength
 - Proven pressure, flow and weather resistance
- Adjustable Direct Acting Pressure Reducer
 - Constant downstream pressure
 - Immediate response
 - Adjustable according to season and stage
- Composite Body and Trim
 - Highly durable, chemical and cavitation resistant
 - Minimizes friction
- Unitized Rolling Diaphragm and Guided Plug
 - Accurate and stable regulation
 - Prevents diaphragm distortion
- User-Friendly Design
 - Can be installed at any orientation
 - Simple in-line inspection and service

Typical Applications

- Distribution Line Lateral Risers
- Non-Compensating Drip-Line Flow Fixation
- Lateral Final Burst Protection
- Pressure Reduction for Marginal Plots
- Irrigation Machine Sprinkler Flow Control
- Single Sprinkler Flow Fixation

Operation:

The Upstream Pressure [P1] applies balanced opening and closing hydraulic forces under the Diaphragm [1] and above the Plug [2]. The Downstream Pressure [P2] applies hydraulic closing force under the plug, which seeks to reach equilibrium with the Set Spring [3] force. Should [P2] rise above setting, the hydraulic closing forces rise above the mechanical force of the spring, pushing the plug to modulate closed, and reducing [P2] back to setting.





1.5-PRV

Technical Data

Pressure Rating:

10 bar

Operating Pressure Range:

0.7-9 bar

Temperature:

Water up to 60°C

Flow Range:

0.5-8 m³/h

Materials
Body & Cover:

Polyamide 6 & 30% GF

Diaphragm:

NR, Nylon fabric reinforced
& NBR

Spring:

Stainless Steel

Setting Springs Selection Table:

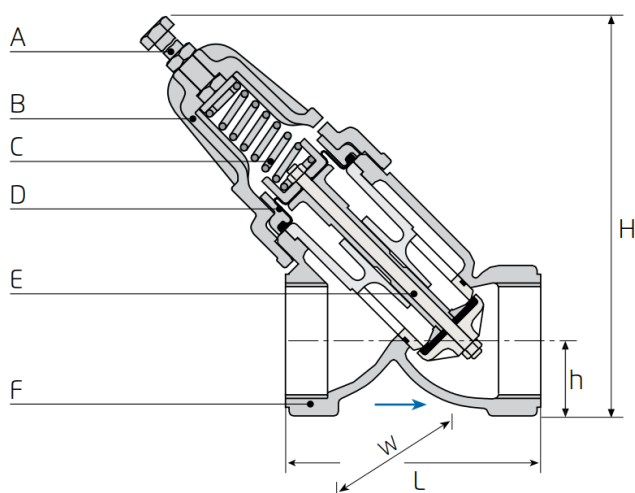
Spring	Spring Color	Setting range
A	Yellow	0.5-0.9 bar
B	White	1-1.5 bar
C	Red	1.6-2.4 bar
D	Black	2.5-3.7 bar
Q	Brown	3.8-5.2 bar

Technical Specifications

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

Size (DN)	Model	End Connection	Weight (Kg)	L (mm)	H (mm)	h (mm)	W	KV
1½" ; 40	1½"-PRV	Threaded	0.48	114	155	30	65	11

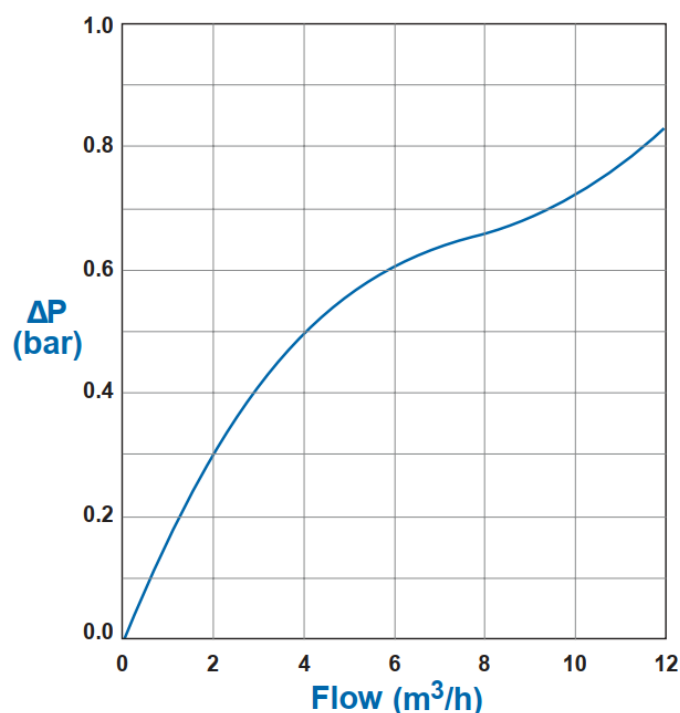
Inlet & outlet Threaded: Female BSP ; Female NPT



1.5-PRV Cross Section

Part	Description
A	Setting Screw
B	Cover
C	Setting Spring
D	Rolling Diaphragm
E	Actuator Assembly
F	Body

Flow Chart



To calculate the minimum required supply pressure, add the ΔP in the Flow Chart to PRV desired set point.

Differential Pressure & Flow Calculation

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

$K_v = \text{m}^3/\text{h} @ \Delta P \text{ of } 1 \text{ bar}$
 $Q = \text{m}^3/\text{h}$
 $\Delta P = \text{bar}$