



# ADJUSTABLE DIRECT-ACTING LOW-FLOW PRESSURE REDUCING

## Model 0.75-PRV-05

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. It reduces higher upstream pressure to lower constant downstream pressure. The low flow version model IR-3/4" PRV-05 provide superior solution under conditions of near zero demand.



- [1] BERMAD Model 3/4"-PRV-05 protects laterals and compensates for line friction, ensuring dripper flow per design.
- [2] Solenoid Controlled Valve Model IR-21T
- [3] Vacuum Breaker Model IR-ARV
- [4] Combination Air Valve IR-C10

### Features & Benefits

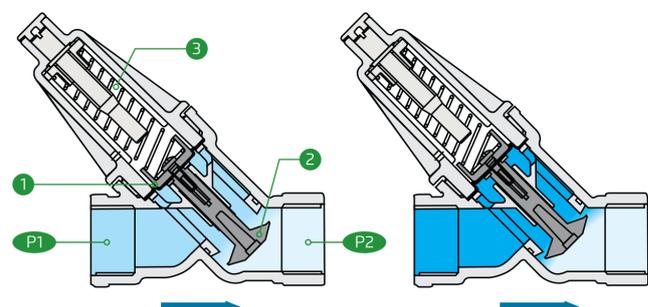
- Advanced Construction Materials
  - High mechanical strength
  - Proven pressure, flow and weather resistance
- Adjustable Direct Acting Pressure Reducer
  - Constant downstream pressure
  - Immediate response
  - Adjustable according to season and stage
- Composite Body and Trim
  - Highly durable, 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

### 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.





### Technical Data

**Pressure Rating:**  
10 bar

**Operating Pressure Range:**  
0.7-9 bar

**Temperature:**  
Water up to 60°C

**Flow Range:**  
0.01-3 m<sup>3</sup>/h (¾"-PRV)

### Materials

**Body & Cover:**  
Polyamide 6 & 30% GF

**Diaphragm:**  
NR, Nylon fabric reinforced & NBR

**Spring:**  
Stainless Steel

### Setting Springs Selection Table:

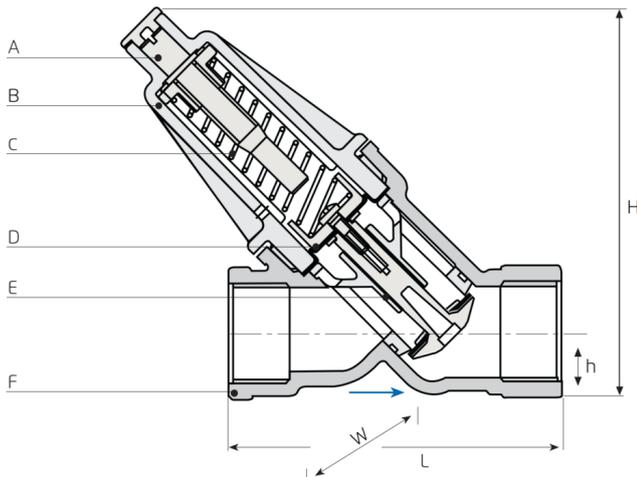
| Spring | Spring Color | Setting range |
|--------|--------------|---------------|
| B      | White        | 0.8-2.5 bar   |
| C      | Red          | 2-4 bar       |

### 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  |
|-----------|----------------------|----------------|-------------|--------|--------|--------|----|-----|
| ¾" ; 20   | ¾"-PRV-05 (Low Flow) | Threaded       | 0.13        | 88     | 100    | 17     | 45 | 3.6 |

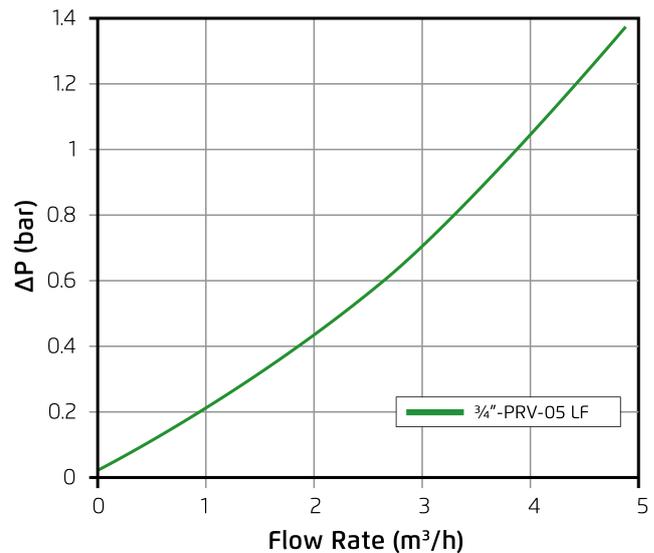
• **Inlet Threaded:** Female BSP; NPT • **Outlet Thaded:** Female BSP; NPT or Male BSPT; NPT



**0.75-PRV-05 Cross Section**

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

### Flow Chart



*P1 Minimum = P2 Setting + ΔP in Flow Chart*  
*\* For flow lower than 0.2 m<sup>3</sup>/h, use LF Model PRV-05*

### Differential Pressure & Flow Calculation

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

Kv = m<sup>3</sup>/h @ ΔP of 1 bar  
 Q = m<sup>3</sup>/h  
 ΔP = bar