Pilot operated, pressure reducing valve with drilled piston orifice

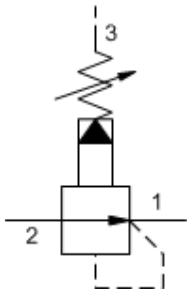
Capacity:
10 gpm (40 L/min.)

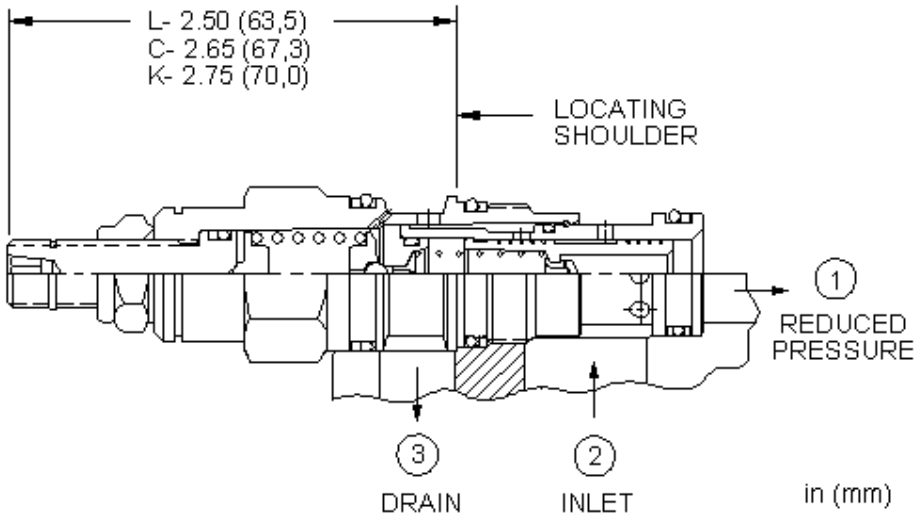
Functional Group:
Products : Cartridges : Corrosion Resistant : Reducing : Port Pilot Operated

Model:
PBDF

Product Description

Pilot-operated, pressure reducing valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, allowing circuits with multiple pressure requirements to be operated using a single pump.



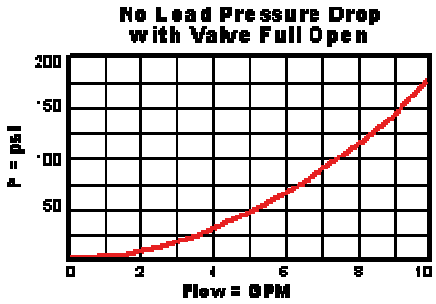


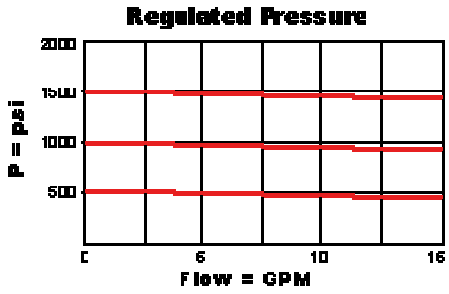
Technical Features

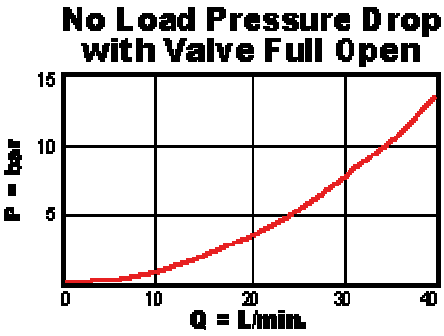
- These valves have the main stage orifice drilled into the piston rather than a staked-in orifice. This allows the valve to survive physically demanding applications.
- All three-port pressure reducing and reducing/relieving cartridges are physically interchangeable (i.e. same flow path, same cavity for a given frame size). When considering mounting configurations, it is sometimes recommended that a full capacity return line (port 3) be used with reducing/relieving cartridges.
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- If pilot flow consumption is critical, consider using direct acting reducing/relieving valves.
- Recommended maximum inlet pressure is determined by the adjustment range. Ranges D, E, N, and Q are tested with a 2000 psi (140 bar) maximum differential between inlet and reduced pressure. Ranges A, B, and H are tested with a 3000 psi (210 bar) maximum differential between inlet and reduced pressure. Ranges C and W are tested with 5000 psi (350 bar) of inlet pressure.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP (see Option Selection below). External parts are made from stainless steel with titanium or brass components, where applicable. Internal parts are made from carbon steel leaded alloy, the same as standard valves. For further details, please see the Materials of Construction page.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding due to excessive installation torque and/or cavity/cartridge machining variations.

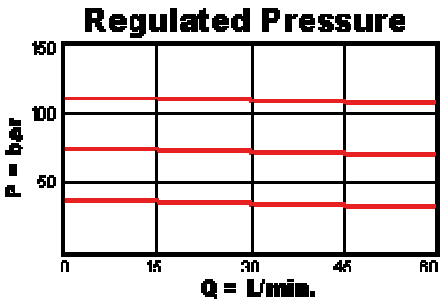
Technical Data

	U.S. Units	Metric Units
Series (from Cavity)	Series 1	
Model Weight	0.35 lb.	0.16 kg.









PBDF-LAN

Control

Standard Options

- **C*** Tamper Resistant - Factory Set
- **K** Handknob
- **L** Standard Screw Adjustment

Adjustment Range

Standard Options

- **A** 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting
- **B** 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting
- **N** 60 - 800 psi (4 - 55 bar), 200 psi (14 bar) Standard Setting
- **Q** 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting
- **W** 150 - 4500 psi (10,5 - 315 bar), 200 psi (14 bar) Standard Setting

Seal Material

Standard Options

- **N** Buna-N
- **V** Viton

Additional Options

Control

- **O** Handknob with Panel Mount
- **W*** Max. Setting Limiter

Adjustment Range

- **C** 150 - 6000 psi (10,5 - 420 bar), 200 psi (14 bar) Standard Setting

* Special Setting required, specify at time of order
Customer specified setting stamped on hex.