

## Pilot operated, pressure reducing valve

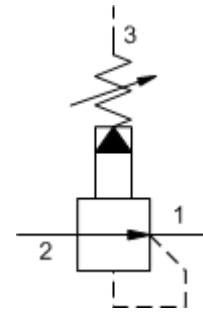
Capacity:  
20 gpm (80 L/min.)

Functional Group:  
Products : Cartridges : Reducing : 3 Port : Pilot Operated Reducer

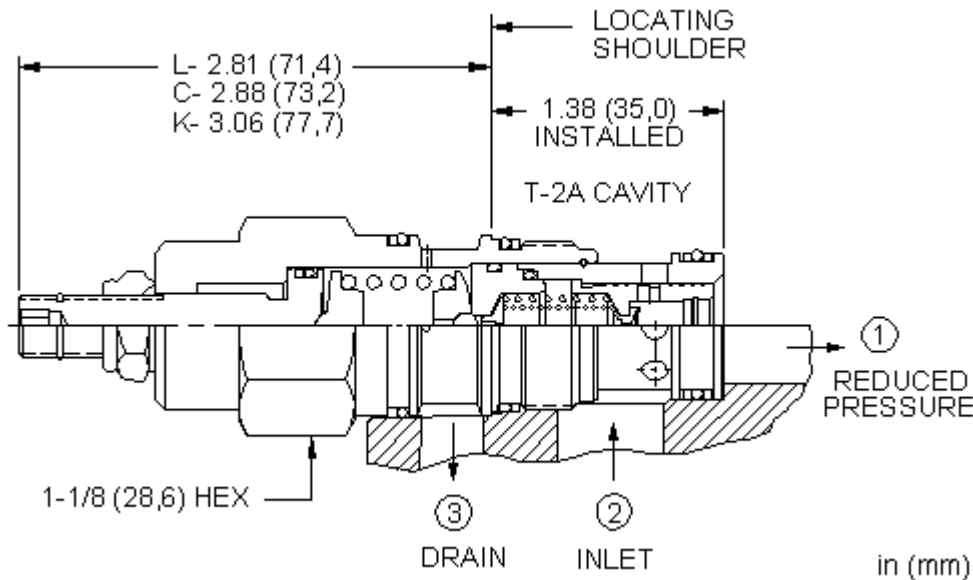
Model:  
PBFB-FBN

### 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.



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### Technical Features

- 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.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and
- 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 (200 bar) maximum differential between inlet and reduced pressure. Ranges C and W are tested with 5000 psi (350 bar) of inlet pressure.
- Pressure at port 3 is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000

have low hysteresis.

- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- 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.

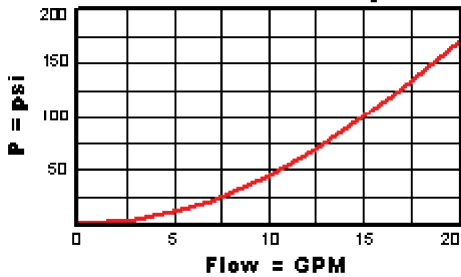
psi (350 bar).

- 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.

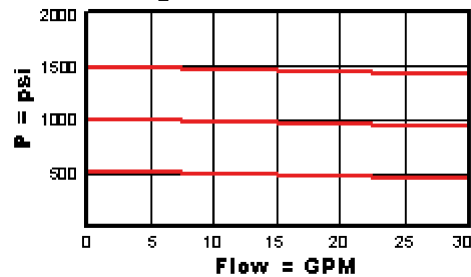
Technical Data

	U.S. Units	Metric Units
Model Weight	0.50 lb.	0.23 kg.
Cavity	T-2A	
Capacity	20 gpm	80 L/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Control Pilot Flow	10 - 15 in <sup>3</sup> /min.	0,16 - 0,25 L/min.
Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	5000 psi	350 bar
Series (from Cavity)	Series 2	
Valve Hex Size	1 1/8 in.	28,6 mm
Valve Installation Torque	45 - 50 lbf ft	60 - 70 Nm
Adjustment Screw Hex Socket Size	5/32 in.	4 mm
Adjustment Nut Hex Size	9/16 in.	15 mm
Adjustment Nut Torque	108 lbf in.	12 Nm
Seal Kits	Buna: 990-202-007	
Seal Kits	Viton: 990-202-006	

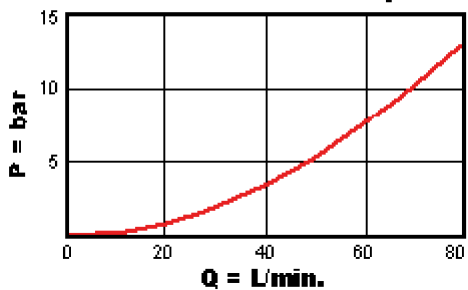
**No Load Pressure Drop with Valve Full Open**



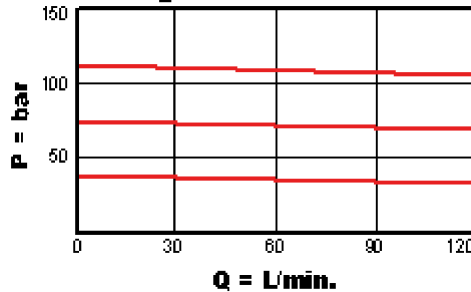
**Regulated Pressure**



**No Load Pressure Drop with Valve Full Open**



**Regulated Pressure**



# PBFB-FBN

Control		Adjustment Range		External Material/Seal Material
F Hex Head Screw with Locknut	- 4.00	50 - 1500 psi (3,5 - B 105 bar), 200 psi (14 bar) Standard Setting	+0.00	N Buna-N +0.00

If the material/seal is P, the control must be L or C  
If the material/seal is W, the control must be L or C

\* Special Setting required, specify at time of order  
Customer specified setting stamped on hex \$1.10

Related Models  
PBFB8

- Explanation of Sun cartridge control options - US units.
- Explanation of Sun cartridge control options - metric units.

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