

## Pilot operated, pressure reducing valve

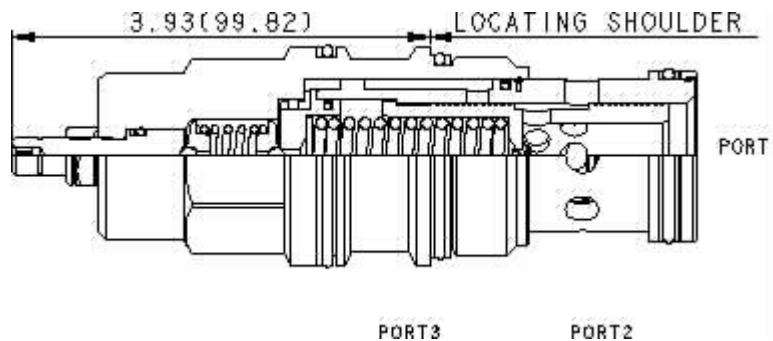
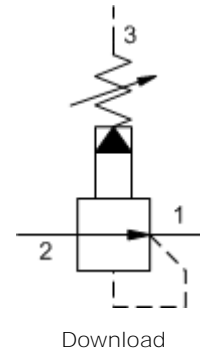
Capacity:  
80 gpm (320 L/min.)

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

Model:  
PBJB-LBN

### 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

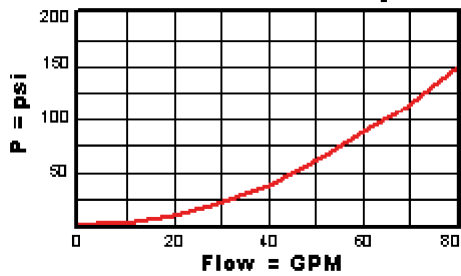
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Pilot operated valves exhibit exceptionally flat pressure/flow characteristics, are very stable and have low hysteresis.
- Pilot operated reducing, reducing/relieving valves by nature are not fast acting valves. For superior dynamic response, consider direct acting valves.
- 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 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.
- 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.

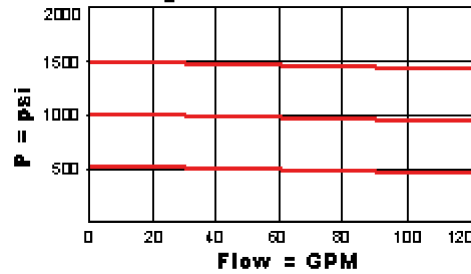
Technical Data

	U.S. Units	Metric Units
Model Weight	2.86 lb.	1.30 kg.
Cavity	T-19A	
Capacity	80 gpm	320 L/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Control Pilot Flow	15 - 20 in <sup>3</sup> /min.	0,25 - 0,33 L/min.
Factory Pressure Settings Established at	blocked control port (dead headed)	
Maximum Operating Pressure	5000 psi	350 bar
Series (from Cavity)	Series 4	
Valve Hex Size	1 5/8 in.	41,3 mm
Valve Installation Torque	350 - 375 lbf ft	465 - 500 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: 990-019-007	
Seal Kits	Viton: 990-019-006	

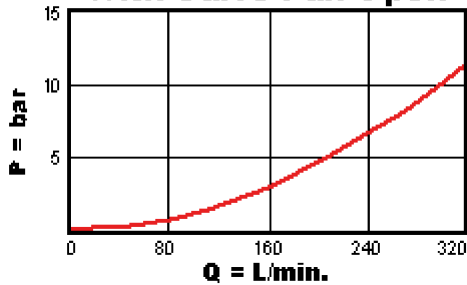
**No Load Pressure Drop with Valve Full Open**



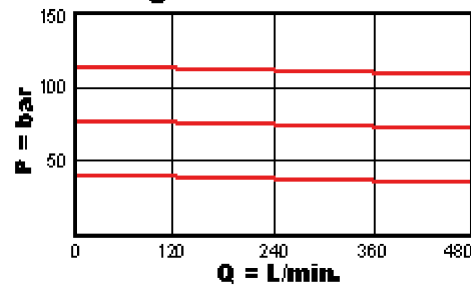
**Regulated Pressure**



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



**Regulated Pressure**



PBJB-LBN

Control

Adjustment Range

External Material/Seal Material

L Standard Screw Adjustment	+0.00	50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting	+0.00	N Buna-N +0.00
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Customer specified setting stamped on hex \$1.10

Related Models

PJB8

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

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