

Pilot operated, pressure reducing valve

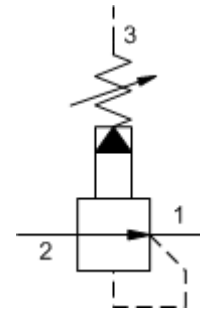
Capacity:
40 gpm (160 L/min.)

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

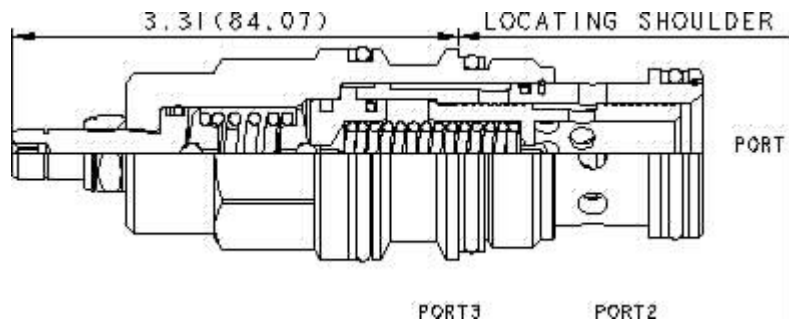
Model:
PBHB-LWN

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.



[Download](#)



Technical Features

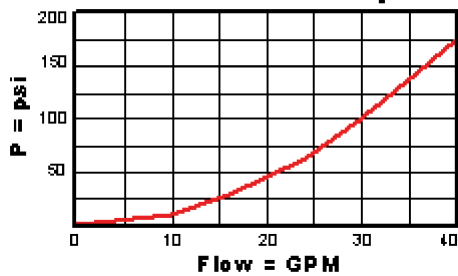
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Pilot operated valves 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.
- Incorporates the Sun floating style construction to minimize the possibility of internal parts binding
- 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.

due to excessive installation torque and/or cavity/cartridge machining variations.

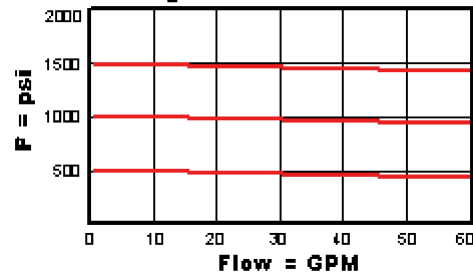
Technical Data

	U.S. Units	Metric Units
Model Weight	1.25 lb.	0.57 kg.
Cavity	T-17A	
Capacity	40 gpm	160 L/min.
Adjustment - Number of Clockwise Turns to Increase Setting	5	
Control Pilot Flow	15 - 20 in ³ /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 3	
Valve Hex Size	1 1/4 in.	31,8 mm
Valve Installation Torque	150 - 160 lbf ft	200 - 215 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: 990-017-007	
Seal Kits	Viton: 990-017-006	

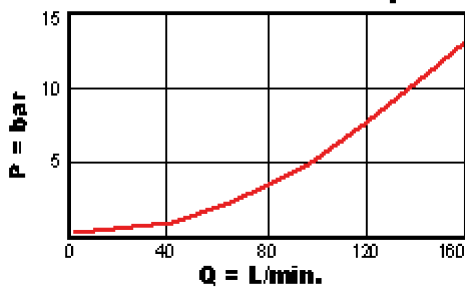
No Load Pressure Drop with Valve Full Open



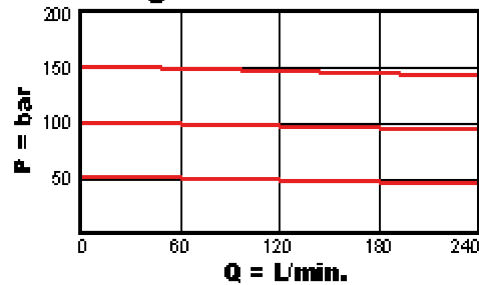
Regulated Pressure



No Load Pressure Drop with Valve Full Open



Regulated Pressure



PBHB-LWN

Control

Adjustment Range

External Material/Seal Material

L Standard Screw Adjustment	+0.00	150 - 4500 psi (10,5 - 315 bar), 200 psi (14 bar) Standard Setting	+0.00	N Buna-N +0.00
-----------------------------	-------	--	-------	----------------

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

Related Models

PBHB8

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

Copyright © 2007-2008 Sun Hydraulics Corporation. All rights reserved.
Terms and Conditions - ISO Certification - Statement of Privacy