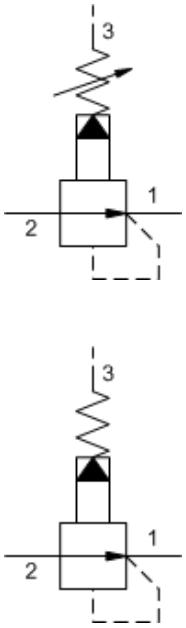
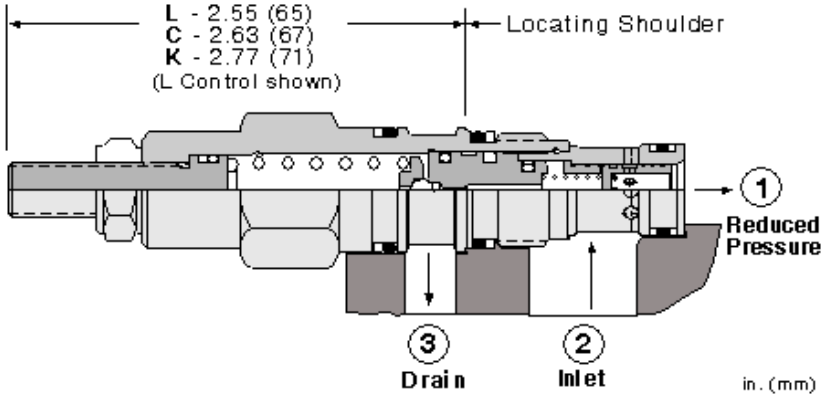
MODEL
PBBB

Pilot-operated, pressure reducing valve
CAPACITY: 5 gpm / CAVITY: T-163A

sunhydraulics.com/model/PBBB





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 DATA

NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

Cavity	T-163A
Series	0
Capacity	5 gpm
Maximum Operating Pressure	5000 psi
Factory Pressure Settings Established at	blocked control port (dead headed)
Control Pilot Flow	7 - 10 in³/min.
Adjustment - No. of CW Turns from Min. to Max. setting	5
Valve Hex Size	3/4 in.
Valve Installation Torque	20 - 25 lbf ft
Adjustment Screw Internal Hex Size	5/32 in.
Locknut Hex Size	1/2 in.
Locknut Torque	80 - 90 lbf in.
Seal kit - Cartridge	Buna: 990163007
Seal kit - Cartridge	Polyurethane: 990163002
Seal kit - Cartridge	Viton: 990163006
Model Weight	0.25 lb.

CONFIGURATION OPTIONS

Model Code Example: PBBBLAN

CONTROL (L)

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

ADJUSTMENT RANGE (A)

- **A** 75 - 3000 psi (5 - 210 bar), 200 psi (14 bar) Standard Setting
- **W** 75 - 4500 psi (5 - 315 bar), 200 psi (14 bar) Standard Setting
- **B** 75 - 1500 psi (5 - 105 bar), 200 psi (14 bar) Standard Setting
- **N** 75 - 800 psi (5 - 55 bar), 200 psi (14 bar) Standard Setting
- **Q** 75 - 400 psi (5 - 28 bar), 200 psi (14 bar) Standard Setting

SEAL MATERIAL (N)

- **N** Buna-N
- **E** EPDM
- **V** Viton

MATERIAL/COATING

- Standard Material/Coating
- **/AP** Stainless Steel, Passivated
- **/LH** Mild Steel, Zinc-Nickel

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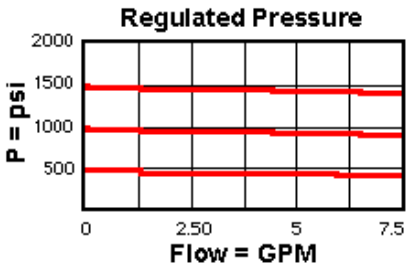
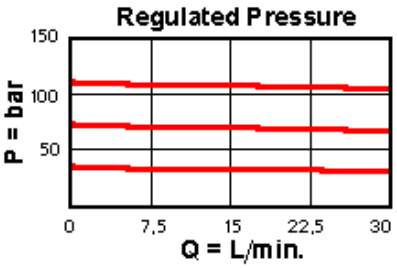
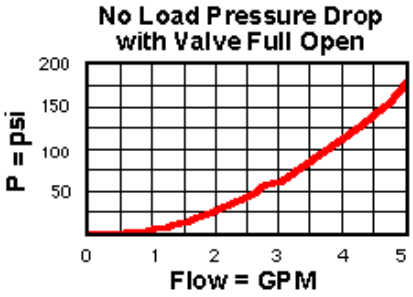
TECHNICAL FEATURES

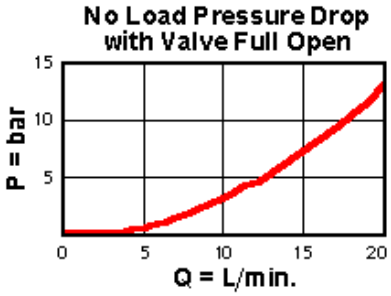
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- Minimum setting is 75 psi (5 bar) for all spring ranges.
- Pilot operated valves exhibit exceptionally 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).
- Recommended maximum inlet pressure is determined by the adjustment range. Ranges A, B, N, and Q are tested with a 3000 psi (210 bar) maximum differential between inlet and reduced pressure. Range W is tested with 5000 psi (350 bar) of inlet pressure.
- 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.

PERFORMANCE CURVES









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