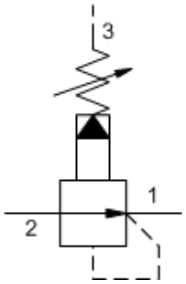
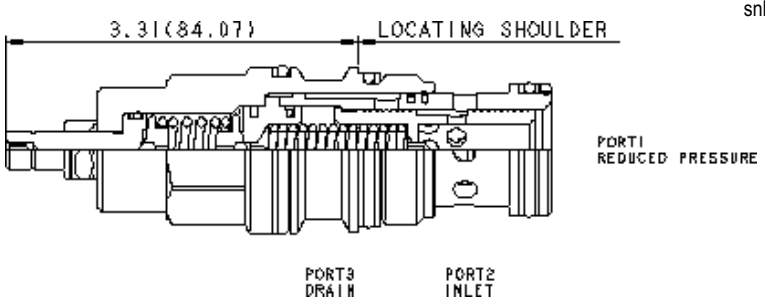
MODEL
**PBHB**

Pilot-operated, pressure reducing valve
**SERIES 3 / CAPACITY: 40 gpm / CAVITY: T-17A**

snhy.com/PBHB




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.

## CONFIGURATION

| | | |
|---|---|---|
| **L** | Control | Standard Screw Adjustment |
| **A** | Adjustment Range | 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting |
| **N** | Seal Material | Buna-N |
| **(none)** | Material/Coating | Standard Material/Coating |

## TECHNICAL DATA

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

| | |
|---|---|
| Cavity | T-17A |
| Series | 3 |
| Capacity | 40 gpm |
| Factory Pressure Settings Established at | blocked control port (dead headed) |
| Maximum Operating Pressure | 5000 psi |
| Control Pilot Flow | 15 - 20 in³/min. |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5 |
| Valve Hex Size | 1 1/4 in. |
| Valve Installation Torque | 150 - 160 lbf ft |
| Adjustment Screw Internal Hex Size | 5/32 in. |
| Locknut Hex Size | 9/16 in. |
| Locknut Torque | 80 - 90 lbf in. |
| Seal kit - Cartridge | Buna: 990017007 |
| Seal kit - Cartridge | EPDM: 990017014 |
| Seal kit - Cartridge | Polyurethane: 990017002 |
| Seal kit - Cartridge | Viton: 990017006 |
| Model Weight | 1.26 lb. |

## NOTES

Maximum pressure differentials for spring ranges: A and B are 3000 psi (210 bar) N and Q are 2000 psi (140 bar) W is 5000 psi (350 bar)inlet pressure

## CONFIGURATION OPTIONS

**Model Code Example: PBHBLAN**

**CONTROL (L)**

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

**ADJUSTMENT RANGE (A)**

- **A** 100 - 3000 psi (7 - 210 bar), 200 psi (14 bar) Standard Setting
- **W** 150 - 4500 psi (10,5 - 315 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

**SEAL MATERIAL (N)**

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

**MATERIAL/COATING**

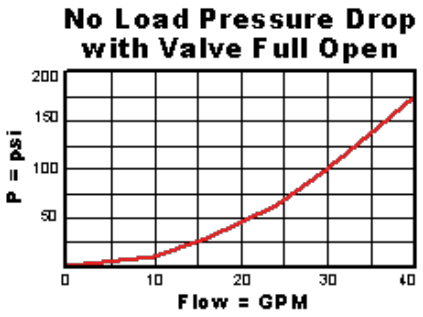
- Standard Material/Coating
- **/AP** Stainless Steel, Passivated
- **/LH** Mild Steel, Zinc-Nickel

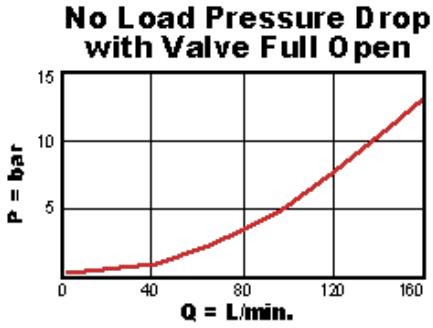
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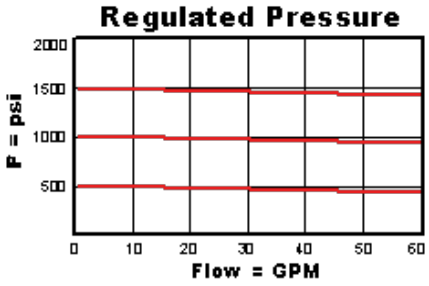
## TECHNICAL FEATURES

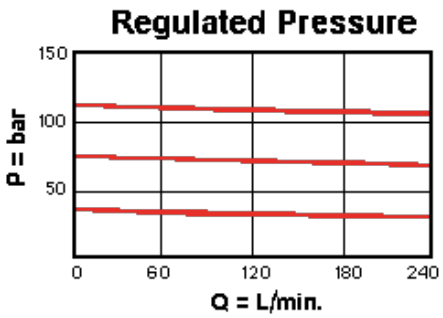
- Full reverse flow from reduced pressure (port 1) to inlet (port 2) may cause the main spool to close. If reverse free flow is required in the circuit, consider adding a separate check valve to the circuit.
- If pilot flow consumption is critical, consider using direct acting reducing/relieving valves.
- 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.
- W and Y controls (where applicable) can be specified with or without a special setting. When no special setting is specified, the valve is adjustable throughout its full range using the W or Y control. When a special setting is specified, this setting represents the maximum setting of the valve.
- Cartridges configured with EPDM seals are for use in systems with phosphate ester fluids. Exposure to petroleum based fluids, greases and lubricants will damage the seals.
- 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.

## PERFORMANCE CURVES




## RELATED MODELS

- PBHB8 Pilot-operated, pressure reducing main stage with integral T-8A control cavity

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