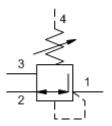
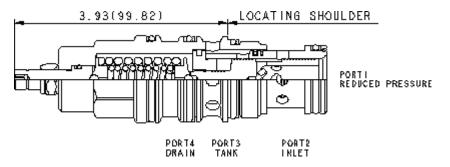
Direct-acting, pressure reducing/relieving valve with drain to port 4

CAPACITY: 40 gpm / CAVITY: T-23A



sunhydraulics.com/model/PSHB





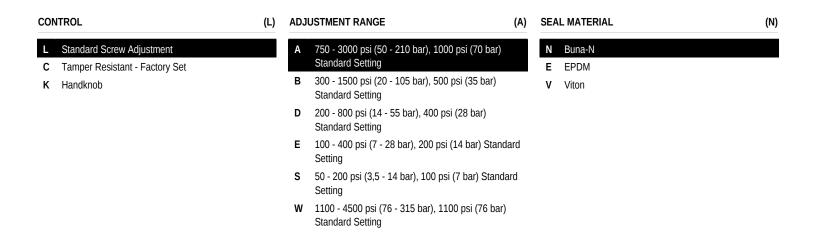
Direct-acting, pressure reducing/relieving valves reduce a high primary pressure at the inlet (port 2) to a constant reduced pressure at port 1, with a full-flow relief function from port 1 to tank (port 3). Draining port 4 makes the valve insensitive to pressure at port 3. These valves incorporate a damped construction for stable operation allowing the use of high reduced pressure.

## **TECHNICAL DATA** NOTE: DATA MAY VARY BY CONFIGURATION. SEE CONFIGURATION SECTION.

| Cavity   | T-23A                     |
|--|---------------------------|
| Series   | 3                         |
| Capacity   | 40 gpm                    |
| Maximum Operating Pressure                             | 5000 psi                  |
| Factory Pressure Settings Established at               | 0.25 gpm                  |
| Maximum Valve Leakage at 110 SUS (24 cSt)              | 4 in³/min.@1000 psi       |
| 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.           |
| Model Weight   | 1.49 lb.                  |
| Seal kit - Cartridge                                   | Buna: 990-023-007         |
| Seal kit - Cartridge                                   | EPDM: 990-023-014         |
| Seal kit - Cartridge                                   | Polyurethane: 990-023-002 |
| Seal kit - Cartridge                                   | Viton: 990-023-006        |

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## **OPTION SELECTION EXAMPLE: PSHBLAN**

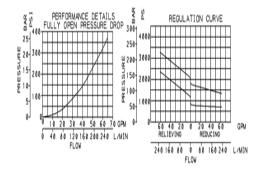


## **TECHNICAL FEATURES**

- Maximum pressure at port 3 should be limited to 3000 psi (210 bar).
- All spring ranges are tested for correct operation with 5000 psi (350 bar) inlet pressure.
- Suitable for accumulator circuits since the absence of pilot control flow results in reduced secondary circuit leakage.
- Direct acting concept provides highly reliable operation in contaminated systems, especially at dead headed conditions.
- Unlike pilot operated versions, direct acting valves exhibit a transitional step between reducing and relieving modes. This step equals 5% of the high end of the adjustment range, independent of the valve setting. Therefore, these valves may not be suitable for counterbalancing applications.
- Direct operated version offers superior dynamic response compared to equivalent pilot operated models.
- Pressure on the drain (port 4) is directly additive to the valve setting at a 1:1 ratio and should not exceed 5000 psi (350 bar).
- Leakage specified in Technical Data is out of port 3 with a supply pressure of 2000 psi (140 bar) and the valve set at mid range. This leakage is directly proportional to pressure differential and inversely proportional to viscosity expressed in centistokes.
- 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.
- 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.
- By controlling the pressure at the drain (port 4), the effective setting of the valve can be increased over the nominal valve setting.
- 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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