



CONFIGURATION

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|---------------------------|--|
| L Control | Standard Screw Adjustment |
| D Adjustment Range | 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting |
| N Seal Material | Buna-N |

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.

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| Cavity | T-23A |
| Series | 3 |
| Capacity | 40 gpm |
| Factory Pressure Settings Established at | 0.25 gpm |
| Maximum Operating Pressure | 5000 psi |
| Maximum Valve Leakage at 110 SUS (24 cSt) | 4 in ³ /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. |
| Seal kit - Cartridge | Buna: 990023007 |
| Seal kit - Cartridge | EPDM: 990023014 |
| Seal kit - Cartridge | Polyurethane: 990023002 |
| Seal kit - Cartridge | Viton: 990023006 |
| Model Weight | 1.47 lb. |

CONFIGURATION OPTIONS

Model Code Example: PSHBLDN

| CONTROL | (L) ADJUSTMENT RANGE | (D) SEAL MATERIAL | (N) |
|---|---|--------------------------|------------|
| L Standard Screw Adjustment | D 200 - 800 psi (14 - 55 bar), 400 psi (28 bar) Standard Setting | N Buna-N | |
| C Tamper Resistant - Factory Set | A 750 - 3000 psi (50 - 210 bar), 1000 psi (70 bar) Standard Setting | E EPDM | |
| K Handknob | B 300 - 1500 psi (20 - 105 bar), 500 psi (35 bar) Standard Setting | V Viton | |
| | E 100 - 400 psi (7 - 28 bar), 200 psi (14 bar) Standard Setting | | |
| | S 50 - 200 psi (3,5 - 14 bar), 100 psi (7 bar) Standard Setting | | |
| | W 1100 - 4500 psi (76 - 315 bar), 1100 psi (76 bar) Standard Setting | | |

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.
- 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

