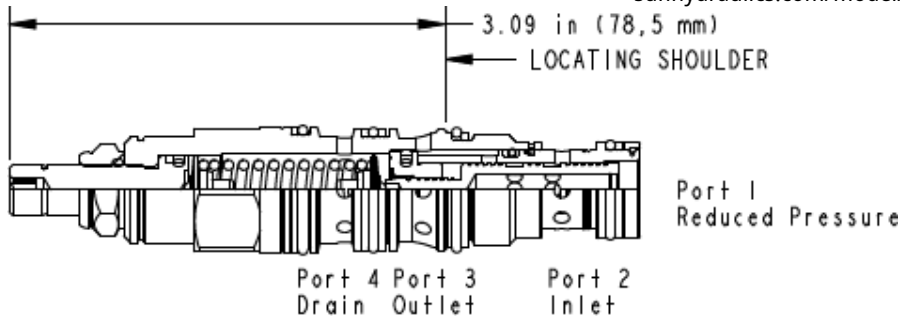
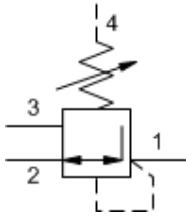




CONFIGURATION

|                         |                  |                                                                |
|-------------------------|------------------|----------------------------------------------------------------|
| L                       | Control          | Standard Screw Adjustment                                      |
| D                       | Adjustment Range | 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting |
| N                       | Seal Material    | Buna-N                                                         |
| (none) Material/Coating |                  |                                                                |

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-21A                            |
| Series                                                 | 1                                |
| Capacity                                               | 10 gpm                           |
| Maximum Operating Pressure                             | 5000 psi                         |
| Factory Pressure Settings Established at               | 0.25 gpm                         |
| Maximum Valve Leakage at 110 SUS (24 cSt)              | 2 in <sup>3</sup> /min.@1000 psi |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5                                |
| Valve Hex Size                                         | 7/8 in.                          |
| Valve Installation Torque                              | 30 - 35 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: 990021007                  |
| Seal kit - Cartridge                                   | Polyurethane: 990021002          |
| Seal kit - Cartridge                                   | Viton: 990021006                 |
| Model Weight                                           | 0.40 lb.                         |

**NOTES** For Series 1 cartridges configured with an O control (panel mount handknob), a .75 in. (19 mm) diameter hole is required in the panel.

CONFIGURATION OPTIONS

Model Code Example: PSDBArray

| CONTROL                          | (L) ADJUSTMENT RANGE                                                | (D) SEAL MATERIAL | (N) MATERIAL/COATING        |
|----------------------------------|---------------------------------------------------------------------|-------------------|-----------------------------|
| L Standard Screw Adjustment      | D 25 - 800 psi (1,7 - 55 bar), 200 psi (14 bar) Standard Setting    | N Buna-N          | Standard Material/Coating   |
| C Tamper Resistant - Factory Set | A 500 - 3000 psi (35 - 210 bar), 700 psi (50 bar) Standard Setting  | V Viton           | /LH Mild Steel, Zinc-Nickel |
| K Handknob                       | B 50 - 1500 psi (3,5 - 105 bar), 200 psi (14 bar) Standard Setting  |                   |                             |
| O Handknob with Panel Mount      | E 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting    |                   |                             |
|                                  | S 25 - 200 psi (1,7 - 14 bar), 100 psi (7 bar) Standard Setting     |                   |                             |
|                                  | W 750 - 4500 psi (50 - 315 bar), 1000 psi (70 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. 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.
- 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

