



Pilot-operated, balanced-piston relief cartridges are normally closed pressure regulating valves. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to regulate the pressure. These valves are accurate, have low pressure rise vs. flow, they are smooth and quiet, and are moderately fast.

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

|  |                                   |
|--|-----------------------------------|
| Cavity   | T-18A                             |
| Series   | 4                                 |
| Capacity   | 200 gpm                           |
| Maximum Operating Pressure                             | 5000 psi                          |
| Factory Pressure Settings Established at               | 4 gpm                             |
| Maximum Valve Leakage at 110 SUS (24 cSt)              | 5 in <sup>3</sup> /min. @1000 psi |
| Response Time - Typical                                | 10 ms                             |
| Adjustment - No. of CW Turns from Min. to Max. setting | 5                                 |
| Valve Hex Size   | 1 5/8 in.                         |
| Valve Installation Torque                              | 350 - 375 lbf ft                  |
| Adjustment Screw Internal Hex Size                     | 5/32 in.                          |
| Locknut Hex Size                                       | 9/16 in.                          |
| Locknut Torque   | 80 - 90 lbf in.                   |
| Model Weight   | 2.59 lb.                          |
| Seal kit - Cartridge                                   | Buna: 990-018-007                 |
| Seal kit - Cartridge                                   | EPDM: 990-018-014                 |
| Seal kit - Cartridge                                   | Polyurethane: 990-018-002         |
| Seal kit - Cartridge                                   | Viton: 990-018-006                |

## OPTION SELECTION EXAMPLE: RPKCLAN

| CONTROL  | (L)                            | ADJUSTMENT RANGE | (A)   | SEAL MATERIAL | (N)    | MATERIAL/COATING                       |
|----------|--------------------------------|------------------|---|---------------|--------|--|
| <b>L</b> | Standard Screw Adjustment      | <b>A</b>         | 100 - 3000 psi (7 - 210 bar), 1000 psi (70 bar) Standard Setting    | <b>N</b>      | Buna-N | Standard Material/Coating              |
| <b>C</b> | Tamper Resistant - Factory Set | <b>B</b>         | 50 - 1500 psi (3,5 - 105 bar), 1000 psi (70 bar) Standard Setting   | <b>E</b>      | EPDM   | <b>/AP</b> Stainless Steel, Passivated |
| <b>K</b> | Handknob                       | <b>C</b>         | 150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting | <b>V</b>      | Viton  | <b>/LH</b> Mild Steel, Zinc-Nickel     |
| <b>W</b> | Hex Wrench Adjustment          | <b>D</b>         | 25 - 800 psi (1,7 - 55 bar), 400 psi (28 bar) Standard Setting      |               |        |  |
| <b>Y</b> | Tri-Grip Handknob              | <b>E</b>         | 25 - 400 psi (1,7 - 28 bar), 200 psi (14 bar) Standard Setting      |               |        |  |
|          |                                | <b>N</b>         | 60 - 800 psi (4 - 55 bar), 400 psi (28 bar) Standard Setting        |               |        |  |
|          |                                | <b>Q</b>         | 60 - 400 psi (4 - 28 bar), 200 psi (14 bar) Standard Setting        |               |        |  |
|          |                                | <b>W</b>         | 150 - 4500 psi (10,5 - 315 bar), 1000 psi (70 bar) Standard Setting |               |        |  |

### TECHNICAL FEATURES

- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Will accept maximum pressure at port 2; suitable for use in cross port relief circuits. If used in cross port relief circuits, consider spool leakage.
- Main stage orifice is protected by a 150-micron stainless steel screen.
- Not suitable for use in load holding applications due to spool leakage.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- 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.
- 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.
- Corrosion resistant cartridge valves are intended for use in corrosive environments and are identified by the model code suffix /AP for external stainless steel components, or /LH for external zinc-nickel plated components. See the CONFIGURATION section for all options. For further details, please see the Materials of Construction page located under TECH RESOURCES.
- 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

