Pilot operated, balanced piston relief valve

Functional Group:
Products : Cartridges : Relief : 2 Port : Pilot Operated, Balanced Piston

Product Description
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 Features
- 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.
- Not suitable for use in load holding applications due to spool leakage.
- All 2-port relief cartridges (except pilot reliefs) are physically and functionally interchangeable (same flow path, same cavity for a given frame size).
- Main stage orifice is protected by a 150 micron stainless steel screen.
- Back pressure on the tank port (port 2) is directly additive to the valve setting at a 1:1 ratio.
- Stainless steel cartridge options P or W are intended for use within corrosive environments with all external components manufactured in stainless steel or titanium. Internal working components remain the same as the standard valves.
- 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.

Technical Data

<table>
<thead>
<tr>
<th></th>
<th>U.S. Units</th>
<th>Metric Units</th>
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</thead>
<tbody>
<tr>
<td>Model Weight</td>
<td>0.38 lb.</td>
<td>0.17 kg.</td>
</tr>
<tr>
<td>Cavity</td>
<td>T-10A</td>
<td></td>
</tr>
<tr>
<td>Capacity</td>
<td>25 gpm</td>
<td>95 L/min.</td>
</tr>
<tr>
<td>Adjustment - Number of</td>
<td>4 gpm</td>
<td>15 L/min.</td>
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<tr>
<td>Clockwise Turns to</td>
<td></td>
<td></td>
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<tr>
<td>Increase Setting</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Factory Pressure</td>
<td></td>
<td></td>
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<tr>
<td>Settings Established at</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Maximum Operating</td>
<td>5000 psi</td>
<td>350 bar</td>
</tr>
<tr>
<td>Pressure</td>
<td></td>
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</tbody>
</table>
Maximum Valve Leakage at 110 SUS (24 cSt) 2 in³/min.@1000 psi 30 cc/min.@70 bar
Response Time - Typical 10 ms
Series (from Cavity) Series 1
Valve Hex Size 7/8 in. 22.2 mm
Valve Installation Torque 30 - 35 lbf ft 45 - 50 Nm
Adjustment Screw Hex Socket Size 5/32 in. 4 mm
Adjustment Nut Hex Size 9/16 in. 15 mm
Adjustment Nut Torque 108 lbf in. 12 Nm
Seal Kits Buna: 990-010-007
Seal Kits Viton: 990-010-006

**RPEC-KDN**

### Control Adjustment Range

<table>
<thead>
<tr>
<th>Control</th>
<th>Adjustment Range</th>
<th>External Material/Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>K Handknob +5.00</td>
<td>25 - 800 psi (1.7 - 55 bar), 400 psi (30 bar) +1.00</td>
<td>N Buna-N +0.00</td>
</tr>
</tbody>
</table>

If the material/seal is P, the control must be L or C
If the material/seal is W, the control must be L or C

* Special Setting required, specify at time of order
Customer specified setting stamped on hex $1.10

**Related Models**
- RPEC8

- Explanation of Sun cartridge control options - US units.
• Explanation of Sun cartridge control options - metric units.
• Two-piece, floating cartridge construction.

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