**Fast-acting, pilot operated, balanced piston relief valve**

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

**Model:**
*RPEE-JCN*

---

**Product Description**

Fast-acting, pilot-operated, balanced piston relief cartridges are normally closed, pressure-limiting valves used to protect hydraulics components from pressure transients. Fast opening and closing is gained at the expense of smoothness. When the pressure at the inlet (port 1) reaches the valve setting, the valve starts to open to tank (port 2), throttling flow to limit the pressure rise. These valves have low pressure rise vs. flow and are very 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.
- 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>
</tr>
</thead>
<tbody>
<tr>
<td>Model Weight</td>
<td>0.27 lb.</td>
<td>0.12 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 Clockwise Turns to Increase Setting</td>
<td>5</td>
<td></td>
</tr>
<tr>
<td>Factory Pressure Settings Established at</td>
<td>4 gpm</td>
<td>15 L/min.</td>
</tr>
<tr>
<td>Maximum Operating Pressure</td>
<td>5000 psi</td>
<td>350 bar</td>
</tr>
<tr>
<td>Maximum Valve Leakage at 110 SUS (24 cSt)</td>
<td>2 in³/min.@1000 psi</td>
<td>30 cc/min.@70 bar</td>
</tr>
<tr>
<td>Response Time - Typical</td>
<td>2 ms</td>
<td></td>
</tr>
<tr>
<td>Series (from Cavity)</td>
<td>Series 1</td>
<td></td>
</tr>
<tr>
<td>Valve Hex Size</td>
<td>7/8 in.</td>
<td>22.2 mm</td>
</tr>
</tbody>
</table>
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

---

**RPEE-JCN**

<table>
<thead>
<tr>
<th>Control</th>
<th>Adjustment Range</th>
<th>External Material/Seal Material</th>
</tr>
</thead>
<tbody>
<tr>
<td>J Capped Screw Adjustment</td>
<td>150 - 6000 psi (10,5 - 420 bar), 1000 psi (70 bar) Standard Setting</td>
<td>Buna-N +0.00</td>
</tr>
</tbody>
</table>

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

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

Copyright © 2007-2008 Sun Hydraulics Corporation. All rights reserved.
Terms and Conditions - ISO Certification - Statement of Privacy