DESCRIPTION
A screw-in, cartridge-style, internally piloted, pilot unloading valve with an internal check valve with optional fixed reload pressure ratios of 70% and 80% for use in accumulator type hydraulic systems.

OPERATION
In its steady state, the UPCV10-F41 blocks flow from port 3 to 4 and allows flow from port 1 to 2. On attainment of a pre-determined pressure at ports 2 and 3, the spool shifts to allow free flow from port 3 to 4, unloading the port 3 pilot. If pressure at port 2 drops to a level below the ratio established reload value, the valve will close, blocking flow from ports 3 to 4. The spring chamber is vented to port 4.

FEATURES
- Internal check valve
- Optional fixed reload pressure ratios.
- Hardened precision spool and cage for long life.
- Choice of seal options.

RATINGS
Operating Pressure: 207 bar (3000 psi) at ports 1, 2 and 3; 104 bar (1500 psi) at port 4
Proof Pressure: 482.6 bar (7000 psi)
Burst Pressure: 965.3 bar (14000 psi)
Flow Rating: Port 3 to 4: 0.8 to 7.6 lpm (0.2 to 2 gpm) Factory recommendation 1.9 lpm (0.5 gpm); Port 1 to 2: 45.4 lpm (12 gpm)
Pressure Setting Range: 41.4 to 206.8 bar (600 to 3000 psi)
Loading and Unloading Pressure Ratio: ±5%
Temperature: -40 to 100°C (-40° to 212°F) with standard Buna seals; -26° to 204°C (-15° to 400°F) with fluorocarbon seals; -54 to 107°C (-65 to 225°F) with polyurethane seals; -54 to 107°C (-65 to 225°F) with standard urethane seals
Filtration: See page 9.010.1
Fluids: Mineral-based or synthetics with lubricating properties at viscosities of 7.4 to 420 cSt (50 to 2000 sus); See Temperature and Oil Viscosity, page 9.060.1
Installation: No restrictions; See page 9.020.1
Cavity: HVC10-F4; See page 9.110.1
Cavity Tool: HCT10-F4XX; See page 8.600.1
Seal Kit: SK10-F4X-BMM; SK10-F4X-B00 (urethane seals); See page 8.650.1

ISO SYMBOL

PERFORMANCE (Cartridge Only)

Check Valve Pressure Drop
Port 1 to 2 (Valve and Body)
32 cSt/150 sus oil at 40°C (104°F)

FLOW lpm/gpm

FILL RATE bar/psi

PRES. DROP bar/psi

11.03/160
8.27/120
5.52/80
2.76/40

3 4
11.4 22.7 34.1 45.4
**DIMENSIONS**

**MATERIALS**

Cartridge: Weight: 0.28 kg (0.61 lbs) Steel with hardened work surfaces. Zinc-plated exposed surfaces.

**TO ORDER**

<table>
<thead>
<tr>
<th><strong>UPCV10-F41</strong></th>
<th>-</th>
<th>-</th>
<th>-</th>
<th>-</th>
<th>-</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Adjustment Option</strong></td>
<td>1/4 in. Hex Allen Head</td>
<td>A</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Porting</strong></td>
<td>Cartridge Only</td>
<td>0</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Seals</strong></td>
<td>Buna N (Std.)</td>
<td>N</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Fluorocarbon</td>
<td>V</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Polyurethane</td>
<td>P</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Urethane</td>
<td>U</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Pressure Ratio</strong></td>
<td>80% Ratio</td>
<td>80</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Setting in bar**

†Adjustable valves will be preset to approx. 50% of spring max. potential.

**Setting in psi**

†Adjustable valves will be preset to approx. 50% of spring max. potential.

**Spring Range**

20.7 to 207 bar (300 to 3000 psi)