**PC10-30 Check, Pilot-to-Open**

**DESCRIPTION**
A screw-in, cartridge-style, pilot-operated, hydraulic check valve for use in blocking or load-holding circuits.

**OPERATION**
The PC10-30 allows flow passage from 2 to 3, while normally blocking flow from 3 to 2. Flow will be allowed from 3 to 2 when pressure is applied at 1. The cartridge has a 4:1 pilot ratio, meaning that at least one-fourth of the load pressure held at 3 is required at 1 to open the valve. The check is spring-biased to assure holding in static or no-load conditions. A sealed pilot piston option is available. Note: Special higher bias spring values available. Consult factory.

**FEATURES**
- Hardened seat for long life and low leakage.
- Optional sealed piston.
- Optional spring ranges.
- Industry common cavity.

**RATINGS**
- **Operating Pressure:** 241 bar (3500 psi)
- **Flow:** See Performance Chart
- **Maximum Internal Leakage** at 207 bar (3000 psi):
  - 3 to 2: 0.10 ml/minute (2 drops/minute)
  - 2 to 1 without sealed piston: 115 ml/minute (7 cu. in./minute)
  - 2 to 1 with sealed piston: zero leakage
- **Pilot Ratio:** 4:1
- **Check Bias Spring:** 2.07 bar (30 psi);
  - With sealed piston option: 6.2 bar (90 psi) minimum
- **Temperature:** -40 to 120°C (-40 to 248°F) with standard Buna 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:** VC10-3; See page 9.110.1
- **Cavity Tool:** CT10-3XX; See page 8.600.1
- **Seal Kit:** SK10-3X-TM (Buna N); SK10-3V-TM (Viton); SK10-3P-TM (Polyurethane) See page 8.650.1

**PERFORMANCE** (Cartridge Only)

![Pressure Drop vs. Flow Graph](image)

**ISO SYMBOL**

![ISO Symbol Diagram](image)

**PERFORMANCE** (Cartridge Only)

<table>
<thead>
<tr>
<th>Pressure Drop vs. Flow</th>
<th>3 to 2 —— (p); 2 to 3 —— (r)</th>
</tr>
</thead>
<tbody>
<tr>
<td>32 cSt/150 sus oil at 40°C</td>
<td></td>
</tr>
<tr>
<td>6.9/150</td>
<td></td>
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<tr>
<td>10.4/150</td>
<td></td>
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<tr>
<td>13.8/200</td>
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</tbody>
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**FLOW lpm/gpm**

<table>
<thead>
<tr>
<th>PRESSURE DROP bar/psi</th>
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</thead>
<tbody>
<tr>
<td>3.4/50</td>
</tr>
<tr>
<td>6.9/100</td>
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**DIMENSIONS**

**MATERIALS**

Cartridge: Weight: 0.09 kg. (0.20 lbs.)
Steel with hardened work surfaces.
Zinc-plated exposed surfaces.
Buna N O-rings and back-ups standard.

Standard Ported Body: Weight: 0.36 kg. (0.80 lbs.)
Anodized high-strength aluminum alloy, rated to 207 bar (3000 psi). Ductile iron bodies available; dimensions may differ. See page 8.010.1

**TO ORDER**

PC10-30-

Bias Spring
(Blank) 2.1 bar/30 psi (Std.)*
70 4.8 bar/70 psi
90 6.2 bar/90 psi
120 8.3 bar/120 psi
270 18.6 bar/270 psi

Note: Other bias spring pressures available for OEM applications. Consult factory.
* PC10-30 valves built with standard 30 psi spring are not stamped with spring rating. Other spring ratings are stamped on valve.

Seals
N Buna N (Std.)
NS Buna N with Sealed Piston: 6.2 bar (90 psi) minimum spring
V Fluorocarbon
VS Fluorocarbon with Sealed Piston: 6.2 bar (90 psi) minimum spring
P Polyurethane
PS Polyurethane with Sealed Piston: 6.2 bar (90 psi) minimum spring

Porting
Cartridge Only 0
SAE 6 6T
SAE 8 8T
1/4 in. BSP* 2B
3/8 in. BSP* 3B

*BSP Body; U.K. Mfr. Only

Note: Other bias spring pressures available for OEM applications. Consult factory.
* PC10-30 valves built with standard 30 psi spring are not stamped with spring rating. Other spring ratings are stamped on valve.