Pressure Relief Valve, Spool Type, Pilot Operated, Modular

VPN2-10/M(R)

Technical Features

› Pressure relief valve, spool type, pilot operated, with mounting interface acc. to ISO 4401, DIN 24340 (CETOP 05) or in-line design
› Low hysteresis, accurate pressure control and low pressure drop
› Wide pressure range up to 350 bar
› High flow capacity
› Hardened precision parts
› Ideal for use as control valve where accuracy and repeatability is required
› Adjusted by allen key or hand screw, optionally sealable (lockwire holes)
› In the standard version, the valve housing is phosphated and steel parts are zinc-coated for 240 h protection acc. to ISO 9227

Functional Symbols

Notice: The orientation of the symbol on the name plate corresponds with the valve function.

Technical Data

<table>
<thead>
<tr>
<th>Valve size</th>
<th>10 (D05)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. flow</td>
<td>Q [l/min (GPM)] 150 (40)</td>
</tr>
<tr>
<td>Max. operating pressure</td>
<td>p [bar (PSI)] 350 (5080)</td>
</tr>
<tr>
<td>Fluid temperature range (NBR)</td>
<td>°C (°F) -30 ... +100 (-22 ... 212)</td>
</tr>
<tr>
<td>Fluid temperature range (FPM)</td>
<td>°C (°F) -20 ... +120 (-4 ... 248)</td>
</tr>
<tr>
<td>Mass   - models MA (B, P) 10 2.15 (4.74)</td>
<td></td>
</tr>
<tr>
<td>- models MC (D) 10 3.0 (6.61)</td>
<td></td>
</tr>
<tr>
<td>- models RA2, RB2, RC2 (3) 2.7 (5.95)</td>
<td></td>
</tr>
</tbody>
</table>

Datasheet

<table>
<thead>
<tr>
<th>Type</th>
<th>General information GL_0060 Products and operating conditions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mounting interface</td>
<td>SMT_0019 Size 10</td>
</tr>
<tr>
<td>Spare parts</td>
<td>SP_8010</td>
</tr>
</tbody>
</table>

Characteristics measured at v = 32 mm/s (156 SUS)

Relief pressure related to flow rate

<table>
<thead>
<tr>
<th>Pressure p [bar (PSI)]</th>
<th>Flow Q [l/min (GPM)]</th>
</tr>
</thead>
<tbody>
<tr>
<td>(5800)</td>
<td>(3630)</td>
</tr>
<tr>
<td>(5080)</td>
<td>(3340)</td>
</tr>
<tr>
<td>(4540)</td>
<td>(2890)</td>
</tr>
<tr>
<td>(2180)</td>
<td>(1450)</td>
</tr>
<tr>
<td>(725)</td>
<td>(350)</td>
</tr>
</tbody>
</table>

Minimum set and circulation pressure

<table>
<thead>
<tr>
<th>Flow Q [l/min (GPM)]</th>
<th>Models MC MP MA, MB RA, RB, RC</th>
</tr>
</thead>
<tbody>
<tr>
<td>(363)</td>
<td>1 2 3 4 5</td>
</tr>
<tr>
<td>(290)</td>
<td>(218)</td>
</tr>
<tr>
<td>(145)</td>
<td>(73)</td>
</tr>
<tr>
<td>(10.6)</td>
<td>(5.3)</td>
</tr>
<tr>
<td>(31.7)</td>
<td>(21.1)</td>
</tr>
<tr>
<td>(42.3)</td>
<td>(26.4)</td>
</tr>
<tr>
<td>(20)</td>
<td>(15)</td>
</tr>
<tr>
<td>(10)</td>
<td>(10.6)</td>
</tr>
</tbody>
</table>
**Model MA, MP**

![Diagram](https://via.placeholder.com/150)

**Model MB**

![Diagram](https://via.placeholder.com/150)

**Model RA2**

![Diagram](https://via.placeholder.com/150)

**Model RB2**

![Diagram](https://via.placeholder.com/150)

**Model RC2, RC3**

![Diagram](https://via.placeholder.com/150)

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**Ordering Code**

VPN2-10 / - - - -

Pressure relief valve, spool type, pilot operated, modular

**Model**
- modular, valve from A to TA
- modular, valve from B to TB
- modular, valve from P to TA
- modular, valve from A to B and B to A
- in-line valve, from A to TA and B to TB
- in-line valve, three ports, thread P1, P2-G3/4, T-G1
- in-line valve, two ports, thread P-G2/4, T-G1
- in-line valve, two ports, thread P-G3/4, T-G1, X-G1/4
- in-line valve, two ports, thread P-G3/4, T-G1, Y-G1/4

**Modular plate size**
- ISO 4401-05-04-0-05, DIN 24340 (CETOP 05), size 10

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**Surface treatment**
- body phosphated, steel parts
  - A: zinc-coated (ZnCr-3), ISO 9227 (240 h)
  - B: zinc-coated (ZnNi), ISO 9227 (520 h)

**Seals**
- NBR
- FPM (Viton)

**Adjustment option**
- allen key (hex. 6), without protective cap
- hand screw, plastic
- allen key (hex. 6), with protective cap
- hand screw, metal
- allen key (hex. 6), with protective cap, sealable (lockwire holes)

**Model with two pressure relief cartridges**
- A side, allen key (hex. 6), without protective cap
- B side, hand screw, metal

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**Pressure range**
- up to 63 bar (910 PSI)
- up to 100 bar (1450 PSI)
- up to 160 bar (2320 PSI)
- up to 210 bar (3050 PSI)
- up to 320 bar (4600 PSI)

**Model with two pressure relief cartridges**
- 320 bar (4600 PSI) in port A, 100 bar (1450 PSI) in port B

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**Subject to change · VPN2-10_M(R)_5164_1en_02/2016**

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