For directional, pressure, flow-control and check valves

**Cartridge Valves**

**Market**  
Applications are demanding:  
- Higher system pressures and flow rates  
- Lower power losses  
- More favorable cost/performance ratios

**Cartridge valves**  
Our cartridge valve line covers a large area of valve functions and cavities for both ANSI (SAE) and DIN (EN) standards.

The high level of functional reliability and the great stability of our components are used in different applications:  
- Mobile hydraulics with vast experience in construction, agricultural and municipal machinery  
- Industrial hydraulics with its stringent safety requirements  
- Equipment for wind power generation

**Your benefits**  
- Maximum flow rate and pressure, low pressure loss  
- Save space and weight with compact design  
- Long life at maximum performance levels  
- High functional stability throughout the entire pressure and flow rate range  
- Flexibility, availability and good cost/performance ratio  
- Safety: All valves are tested before leaving the factory

**Actuators:**

- Proportional solenoid
- Manual adjustment
- Manual operation
- Solenoid and manual override
- Hydraulic pilot operated

**Up to 6000 psi / 420 bar**
Functions

**Directional Valve**
- 2/2 way valve
- 3/2 way valve
- 4/2 way valve
- 3/3 way valve
- 4/3 way valve

**Pressure Valve**
- Pressure relief
- Pressure reducing
- Pressure compensator
- Pressure controlled

**Flow Valve**
- Throttle valve
- Flow control valve
- Flow divider / combiner
- Shut-off

**Check Valve**
- Spring loaded check valve
- Pilot operated check valve

**Safety Valve**
- Load control valve
- Pipe rupture valve

Sizes

<table>
<thead>
<tr>
<th>Nominal Flow</th>
<th>&lt; 2.5 gpm</th>
<th>&lt; 5 gpm</th>
<th>&lt; 11 gpm</th>
<th>&lt; 19 gpm</th>
<th>&lt; 37 gpm</th>
<th>&lt; 50 gpm</th>
<th>&lt; 90 gpm</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>&lt; 10 l/min</td>
<td>&lt; 20 l/min</td>
<td>&lt; 40 l/min</td>
<td>&lt; 70 l/min</td>
<td>&lt; 140 l/min</td>
<td>&lt; 190 l/min</td>
<td>&lt; 350 l/min</td>
</tr>
</tbody>
</table>

**Size SAE**
- AN 04
- AN 08
- AN 10
- AN 12
- AN 16

**Thread SAE**
- M20 x 1.5
- M20 x 1.5
- M20 x 1.5
- M24 x 1.5
- M42 x 2

**Size ISO**
- NG 1...4
- NG 5
- NG 6
- NG 10
- NG 16

Subject to change without notice