PRS6
Auxiliary Valves
Pressure Reducing Valves
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Parker Hannifin
Mobile Hydraulic Systems Division Europe
Borås, Sweden
Applications
The PRS6 is a three-way pressure reducing valve that has been developed to give reduced pressure in a particular part of a hydraulic system. The valve maintains the secondary pressure setting constantly, regardless of pressure variations on the primary side. A common application is in pilot circuits in hydraulic and electro-hydraulic servo systems, where the pressure is taken from the main system and reduced by the PRS6 to a level that is suitable for the pilot circuit.

Construction and function
The valve housing is manufactured from continuously-cast grey iron and contains a precision-ground spool. To keep oil consumption at a low level, the spool has positive overlapping. This gives a certain difference in secondary pressure at different flow take-off rates. For this reason, the valve setting should be made with the desired flow rate passing through the valve. When a high primary pressure is reduced to a low secondary pressure (pressure differential over 150 bar), pressure reduction should be effected in two stages using two PRS6 valves connected in series.

Advantages
- Compact and easy to install.
- Easy to adjust within respective pressure range.
- Can be factory-set and sealed to prevent unauthorized pressure changing.
- Highly suited for use as a reducing valve in pilot circuits where the pilot pressure is taken from the main circuit.
- Withstands high pressure shocks in the tank connection.

Optional equipment
Numerous other options are available for the PRS6. For further information, please contact your Parker representative.
- Spool for two-way function.
- Hand wheel for easy changing of pressure setting.
- Flanged version of PRS6 for flanging directly to, e.g. a valve block.
- Adjuster device for external control of secondary pressure by means of a pilot pressure.
Possible pressure setting ranges
(applicable range will depend on pressure setting you specify)
Secondary pressure
4-10 bar
11-20 bar
21-30 bar
31-45 bar
46-150 bar
150 bar to any value below 250 bar.

Primary pressure
Max. 250 bar

Tank pressure
Max. 250 bar in pressure shocks.

Recommended reduction
(differential between primary and secondary pressure)
Max. 150 bar

Pressure-setting flow rate
Pressure should be set with desired flow rate (l/min) flowing through the valve.

Recommended flow rate
Max. 30 l/min depending on secondary pressure.
See diagram.

Connections
All connections are available in two versions:
- G1/4 (BSP pipe thread) for flat seal (type Tredo) according to ISO 228/1.
- 9/16-18 UNF-2B for O-ring seal according to SAE J1926/1.

Leakage
Connection P to connection T max. 0.15 l/min at pressure differential of 100 bar and oil viscosity of 30 mm/s².

Weight
Approx. 1.0 kg

Hydraulic fluids
Best performance is obtained using mineral-base oil of high quality and cleanliness in the hydraulic system.
HLP hydraulic fluids (DIN 51524), automatic-gearbox oil type A and API CD engine oils can be used. If in doubt, please contact Parker for further information.
For best function, oil viscosity should be between 15 and 45 mm/s² (cSt).

Filtration
Filtration should be arranged so that Target Contamination Class 18/16/13 according to ISO 4406 is not exceeded.

Temperature
Temperature range, fluid:
-20 °C to + 70 °C
Temperature range, ambient:
-40 °C to +70 °C
Temperature-shock resistance: max. 100 °C/second

General
Technical data in this catalogue is applicable using mineral base oil according to DIN 51524 at a viscosity of 30 mm²/s and temperature of 50 °C.
Auxiliary Valves

PRS6

Dimensions

Catalogue MSG17-8541/UK

Fixing holes Ø6.5 (2x)
(Ø0.26 2x)

A = 15 at 4 - 45 bar
A = 44 at 46 - 250 bar

A = 15 at 4 - 45 bar
A = 44 at 46 - 250 bar

A = 15 at 4 - 45 bar
A = 44 at 46 - 250 bar
Please use ordering-code system in chart below to specify your PRS6 valve.
The ordering numbers in the table below apply to certain standard settings (please cross-reference with ordering-code system chart) and can be used directly when ordering.

<table>
<thead>
<tr>
<th>Code</th>
<th>Ordering number</th>
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<tbody>
<tr>
<td>PRS6G-10-01-O</td>
<td>8234 8906 35</td>
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<tr>
<td>PRS6G-20-01-O</td>
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<tr>
<td>PRS6G-30-01-O</td>
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<tr>
<td>PRS6G-100-01-O</td>
<td>8234 8907 08</td>
</tr>
</tbody>
</table>

### Ordering code

**PRS6**

- **Connection**
  - G: G1/4 (BSP pipe) thread
  - U: 9/16-18 UNF-2B thread

- **Secondary pressure**

- **Pressure setting**

- **Sealing**
  - O: Not sealed
  - P: Valve sealed with sealing wire and seal

- **Secondary pressure**
  - Valve is delivered preset at specified secondary pressure (pressure range 4 bar to marginally below 250 bar)

- **Pressure-setting flow rate**
  - Secondary pressure is set while desired flow rate (l/min) is passing through valve. Flow range: 0 - 30 l/min
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