



Auxiliary Valve

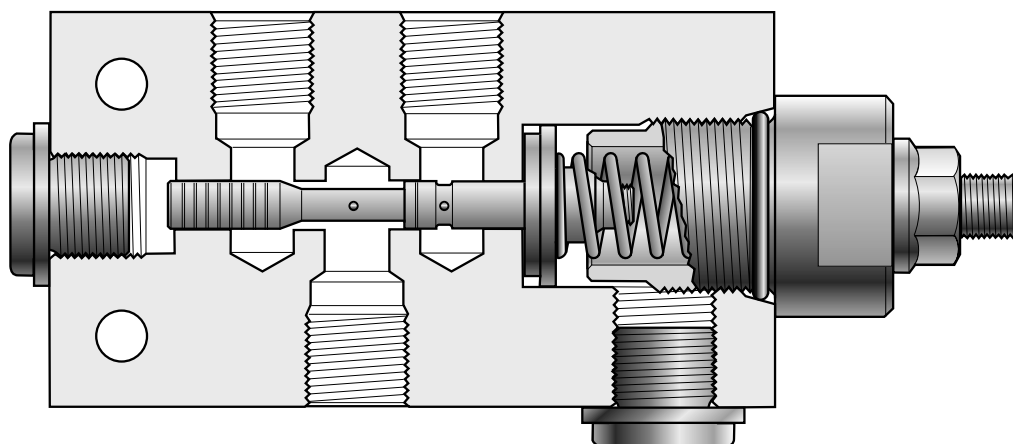
PRS6

Pressure Reducing Valve

Catalogue HY17-8541/UK
September 2005



Subject to alteration without prior notice. The curves and diagrams in this catalogue are typical examples only. While the contents of the catalogue are updated continuously, the validity of the information given should always be confirmed. For more detailed information, please contact Parker.



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.

Technical Data

**Auxiliary Valves
PRS6**

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 mm²/s.

Weight

Approx. 1.0 kg

Hydraulic fluids

Best performance is obtained using mineral-base oil of high quality and cleanness 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 mm²/s (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:

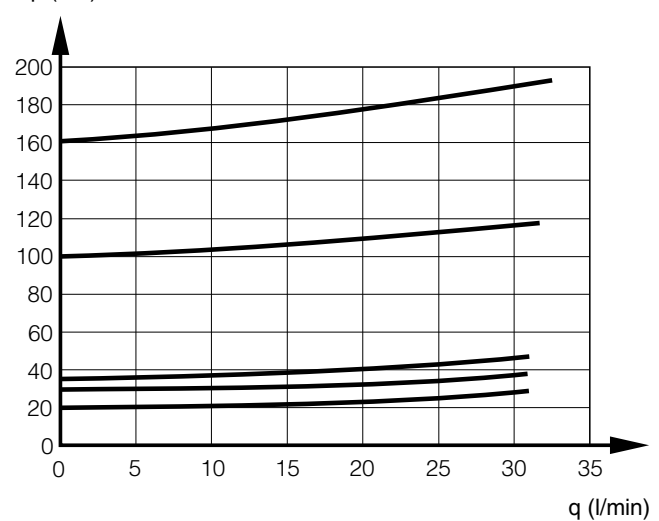
-40 °C to +70 °C

Temperature-shock resistance: max. 100 °C/second

General

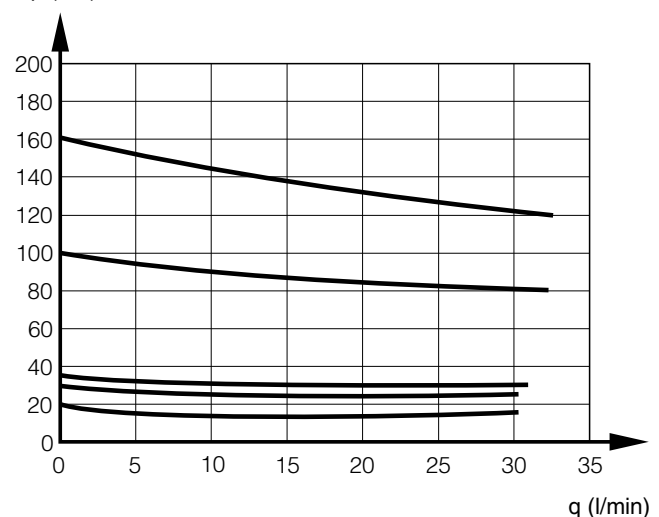
Technical data in this catalogue is applicable using mineral base oil according to DIN 51524 at a viscosity of 30 mm²/s and temperature of 50 °C.

Δ p (bar)

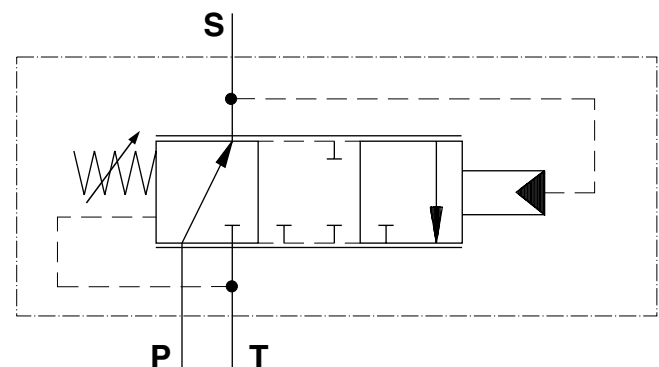


Pressure limiting characteristic for PRS6

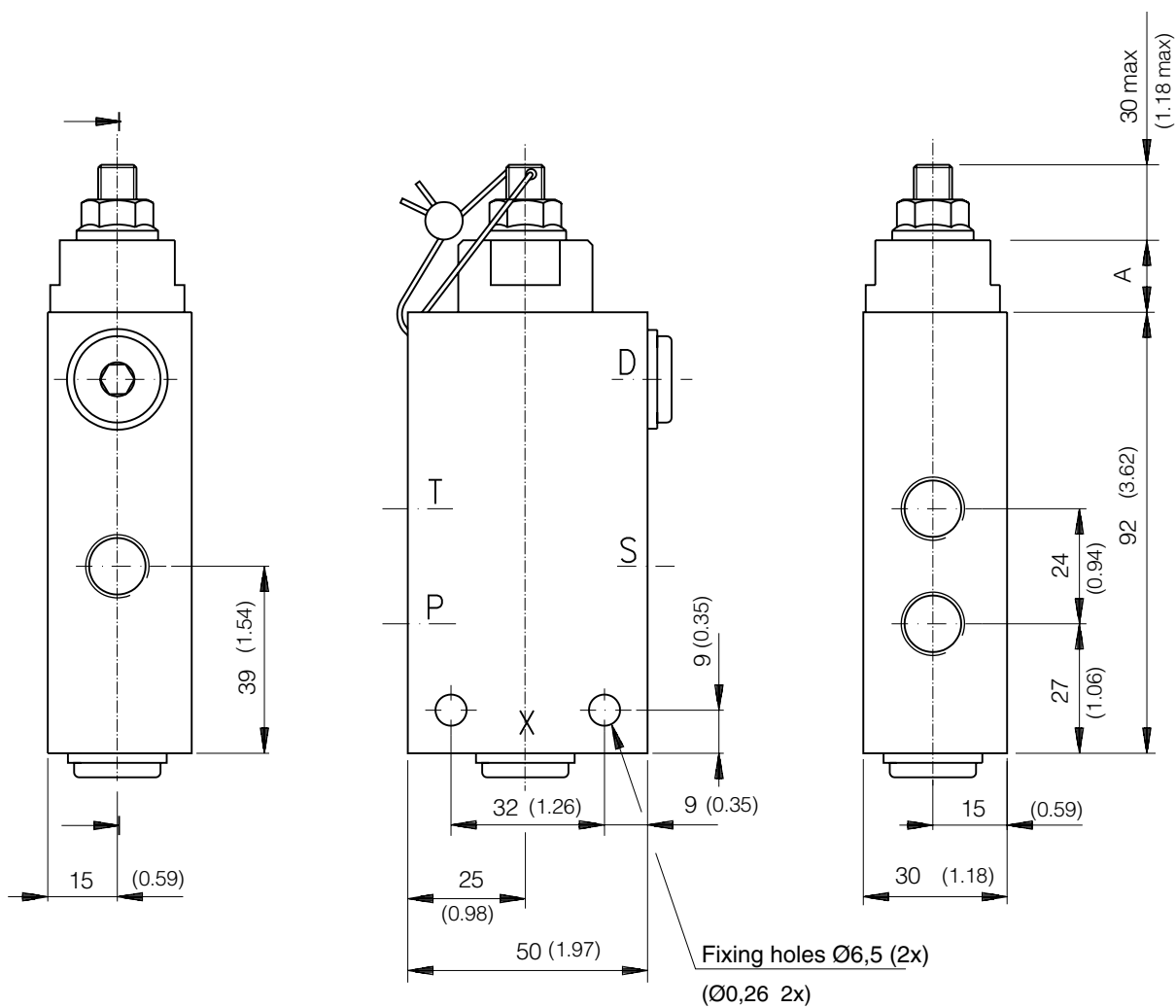
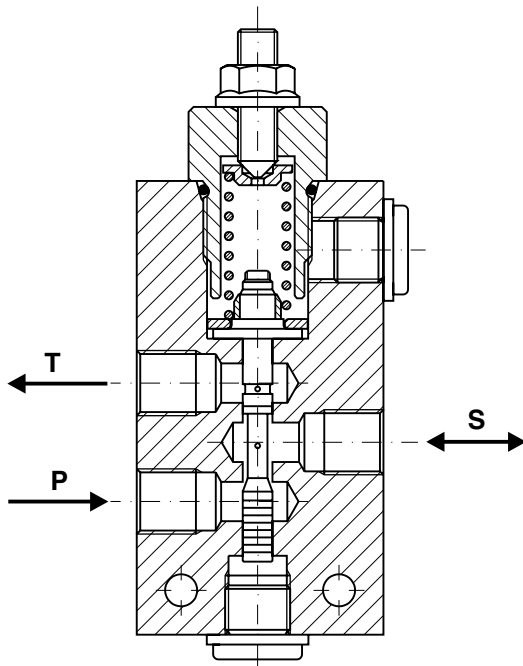
Δ p (bar)



Pressure reducing characteristic for PRS6



Functional symbol for PRS6



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

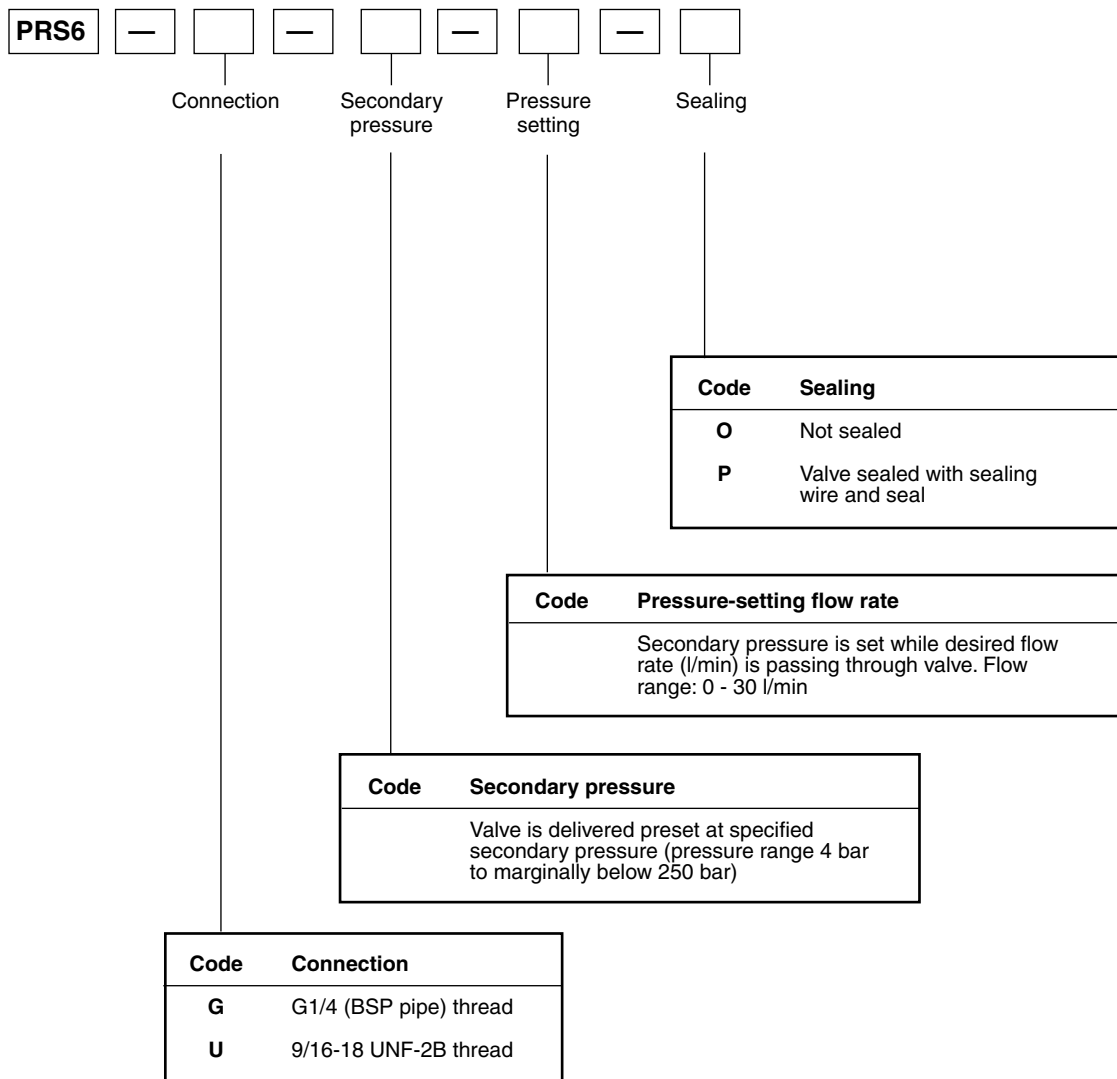
Ordering

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.

Code	Ordering number
PRS6G-10-01-O	8234 8906 35
PRS6G-20-01-O	8234 8906 25
PRS6G-30-01-O	8234 8906 33
PRS6G-40-01-O	8234 8906 34
PRS6G-100-01-O	8234 8907 08

Ordering code





WARNING

FAILURE OR IMPROPER SELECTION OR IMPROPER USE OF THE PRODUCTS AND/OR SYSTEMS DESCRIBED HEREIN OR RELATED ITEMS CAN CAUSE DEATH, PERSONAL INJURY AND PROPERTY DAMAGE.

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