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QDS6

Auxiliary Valves

Sequence Valve, 3-way

ENGINEERING YOUR SUCCESS.

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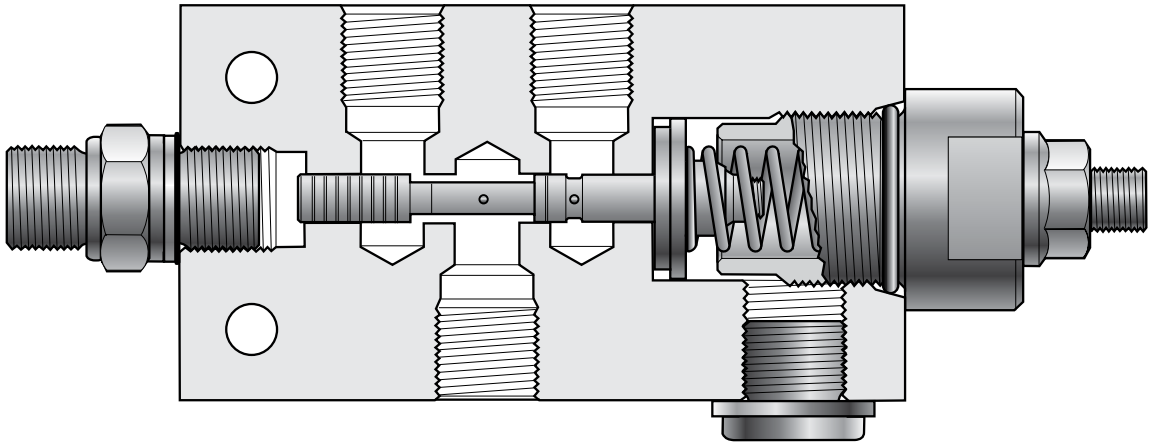


Applications

The QDS6 sequence valve is designed to open or close a hydraulic pilot signal (that comes from an external source) when it reaches a predetermined pressure level. Common applications of the valve are in pilot logic circuits and sequence-control sub-circuits. One example of use is as a means of load-moment limitation (overload protection) in the lifting functions of mobile cranes, in conjunction with hydraulic remote control. In such cases, the QDS6 is used to break the pilot signal between the control valve and the directional valve when the signal pressure reaches a predetermined value set on the QDS6.

Construction and function

The QDS6 is a three-way, pilot-operated valve. Its directional function is normally open or normally closed.

The valve housing is manufactured from continuously-cast grey iron and contains a precision-ground spool and pilot section.

When the pilot signal exceeds the preset switching pressure, the spool changes position, thus blocking P and connecting S with T. Alternatively, T is blocked and S connected with P (see figure on page 4). The spool is positively overlapped, i.e. it closes the one connection before opening the other. The pilot section can be drained either internally or externally. Pilot sections with external drainage can be fed with an external pressure in the drainage connection to obtain a higher switching pressure than the one preset.

Advantages

- Compact - easy to install.
- Several pressure ranges available - enables high setting precision.
- Easy to adjust pressure within specified pressure range - facilitates fine tuning.
- Can be factory-set and sealed - prevents unauthorized pressure changing.
- Withstands high pressure shocks in the tank connection - gives long service life in systems with high intermittent tank pressure.
- Simple design - gives great reliability.

Optional equipment

Numerous other options are available for the QDS6. For further information, please contact your Parker representative.

- Hand wheel for easy changing of pressure setting.
- Flanged version of QDS6 for flanging directly to, e.g. a valve block.

Possible pressure setting ranges
(applicable range will depend on pressure setting you specify)

Switching pressure
4-10 bar
11-20 bar
21-30 bar
31-45 bar
46-150 bar
150-250 bar

Working pressure
Max. 250 bar

Tank pressure
Max. 250 bar in pressure shocks.

Recommended flow rate
Max. 20 l/min

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
At pressure differential of 100 bar and viscosity of 30 mm/s^2:
P to S max. 12 cm^3/min
S to T max. 12 cm^3/min
P to X max. 5 cm^3/min

Weight
Approx. 1.0 kg

Hydraulic fluids

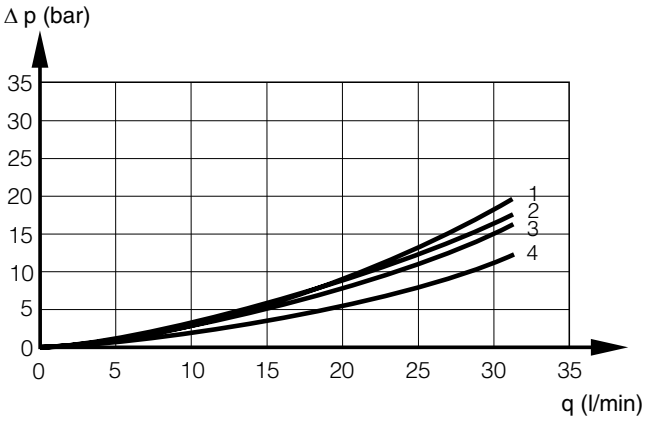
Best performance is obtained using mineral-base oil of high quality and cleanness in the hydraulic system. HLP hydraulic fluids (DIN 51524), automatic-gearbox oil type A and API CD engine oils can be used. If in doubt, please contact Parker for further information.

For best function, oil viscosity should be between 15 and 45 mm/s^2 (cSt).

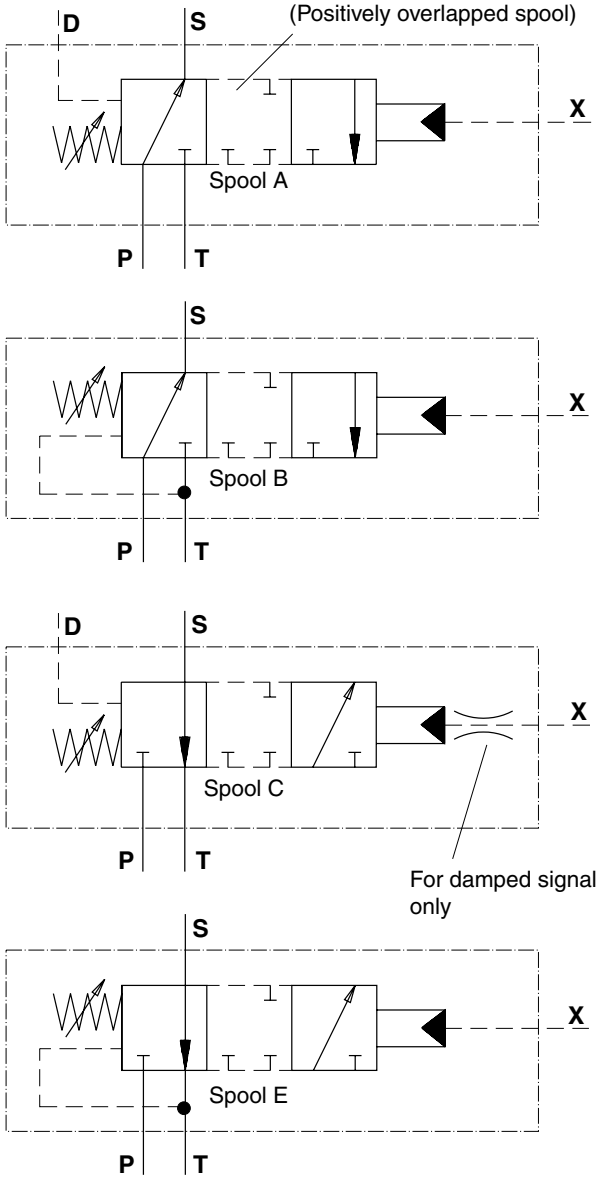
Filtration
Filtration should be arranged so that Target Contamination Class 18/16/13 according to ISO 4406 is not exceeded.

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 mm^2/s and temperature of 50 °C.



Pressure drop for QDS6
1 = Pressure drop P-S for spool A and B
2 = Pressure drop S-T for spool C and E
3 = Pressure drop P-S for spool C and E
4 = Pressure drop S-T for spool A and B



Functional symbols for QDS6

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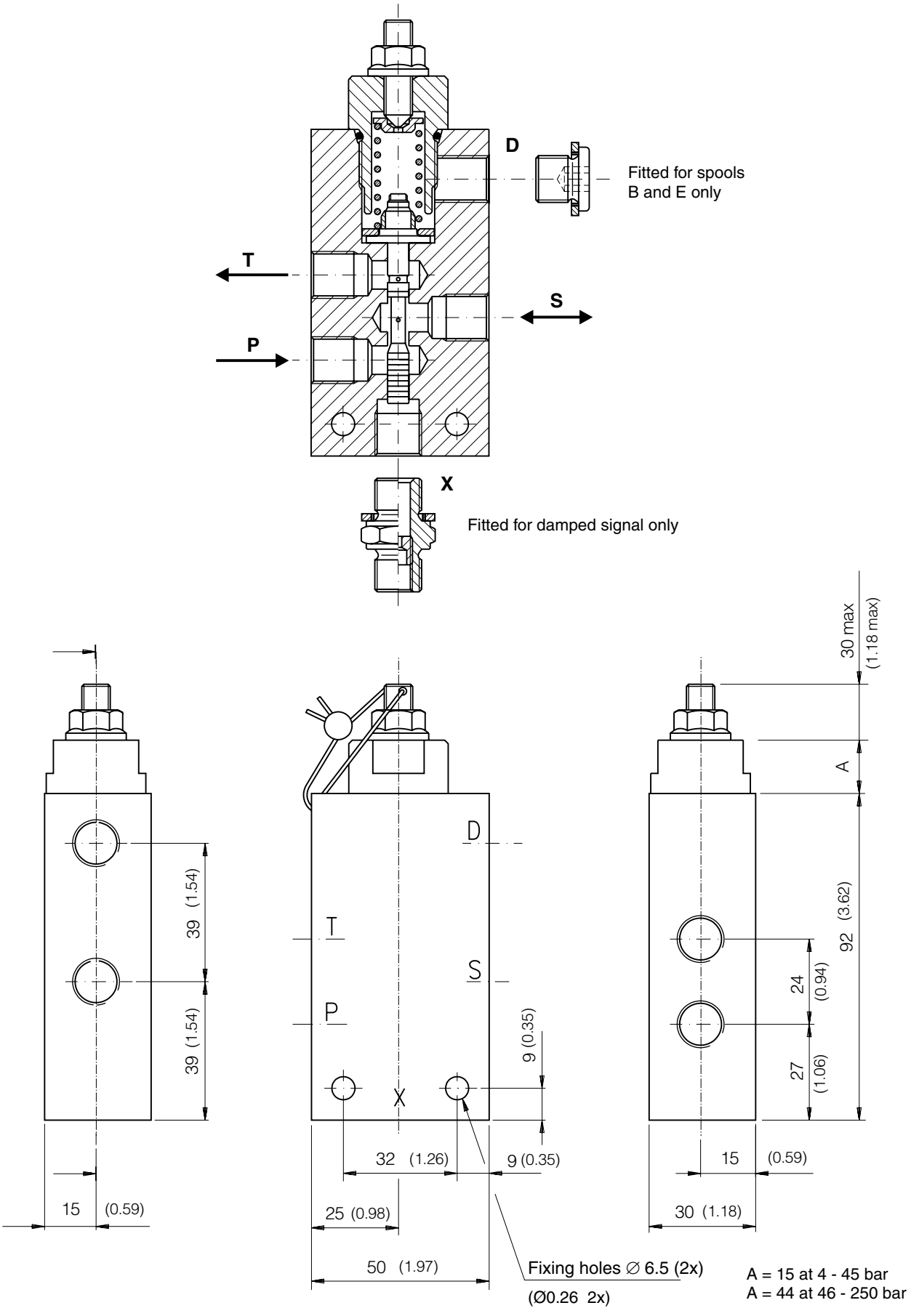

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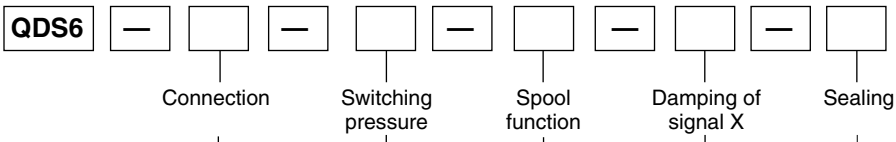
When ordering your QDS6 sequence valve, please make use of the ordering-code system as per the example given in the chart below. For certain standard valve settings, however, there are direct ordering numbers, which are given in the table below.

Code	Ordering number
QDS6G-05-B-O-O	8234 8905 75
QDS6G-15-E-O-O	8234-8905 92
QDS6G-25-B-O-O	8234 8905 91
QDS6G-100-B-O-O	8234 8905 83
QDS6G-250-E-O-O	8234 8905 88

Ordering code



Code	Sealing
O	Not sealed
P	Valve sealed with sealing wire and seal

Code	Damping of signal X
O	Not damped
D	Damped

Code	Spool function
A	P to S normally open. External drainage of pilot section.
B	P to S normally open. Internal drainage of pilot section.
C	P to S normally closed. External drainage of pilot section.
E	P to S normally closed. Internal drainage of pilot section.

Code	Switching pressure
	Valve is delivered preset at specified switching pressure. Pressure range 4 - 250 bar.

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

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