Hydraulic operated directional valves type SDP
ISO 4401 size 16, 25 and 32

Spool type hydraulic operated directional valves in three or four way, two or three position, designed to operate in oil hydraulic systems.
Available with single or double hydraulic actuator.

Mounting surface: ISO 4401 size 16, 25, 32
SDP-2 = size 16, flow up to 300 l/min
SDP-4 = size 25, flow up to 700 l/min
SDP-6 = size 32, flow up to 1000 l/min
Max pressure: 350 bar

MODEL CODE

<table>
<thead>
<tr>
<th>SDP-0</th>
<th>4</th>
<th>1</th>
<th>3</th>
<th>H</th>
<th>**</th>
</tr>
</thead>
</table>
|       |   |   |   |   | Series number
|       |   |   |   |   | Seals material, see section 3:
|       |   |   |   |   | - = NBR
|       |   |   |   |   | PE = FKM
|       |   |   |   |   | BT = HNBR

Options:
/H = adjustable chokes for controlling the main spool shifting time (meter-out to the pilot chambers of the main valve)
/S = main spool stroke adjustment

Spool type, see section 3

CONFIGURATIONS and SPOOLS valves type SDP-

<table>
<thead>
<tr>
<th>Configurations</th>
<th>Spools</th>
<th>Configurations</th>
<th>Spools</th>
</tr>
</thead>
<tbody>
<tr>
<td>41</td>
<td>1 0 2</td>
<td>43</td>
<td>1 0 2</td>
</tr>
<tr>
<td>47</td>
<td>0 2</td>
<td>50</td>
<td>1 2</td>
</tr>
<tr>
<td>51</td>
<td>1 0 2</td>
<td>56</td>
<td>1 0 2</td>
</tr>
</tbody>
</table>

NOTES:
- For SDP*-6 are available only spools: 0, 1, 1/2, 2, 3, 4, 5, 58, 6, 7, 19, 91
- Spools type 0 and 3 are also available as 0/1 and 3/1 with restricted oil passages in central position, from user ports to tank.
- Spools type 1 and 4 are also available as 1/1 and 4/8 are properly shaped to reduce water-hammer shocks during the switching.
4 MAIN CHARACTERISTICS, SEALS AND FLUIDS - for other fluids not included in below table, consult our technical office

<table>
<thead>
<tr>
<th>Assembly position / location</th>
<th>any position except for valves type SDP-*S0 (without springs) that must be installed with their longitudinal axis horizontal</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subplate surface finishing</td>
<td>roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)</td>
</tr>
<tr>
<td>MTTFd values according to EN ISO 13849</td>
<td>150 years, for further details see technical table P007</td>
</tr>
<tr>
<td>Ambient temperature range</td>
<td>standard execution = -30°C ÷ +70°C; /PE option = -20°C ÷ +70°C; /BT option = -40°C ÷ +70°C</td>
</tr>
<tr>
<td>Seals, recommended fluid temperature</td>
<td>NBR seals (standard) = -20°C ÷ +80°C, with HFC hydraulic fluids = -20°C ÷ +50°C</td>
</tr>
<tr>
<td></td>
<td>FKM seals (PE option) = -20°C ÷ +80°C</td>
</tr>
<tr>
<td></td>
<td>HNBR seals (BT option) = -40°C ÷ +80°C, with HFC hydraulic fluids = -40°C ÷ +50°C</td>
</tr>
<tr>
<td>Recommended viscosity</td>
<td>15÷100 mm²/s - max allowed range 2,8 ÷ 500 mm²/s</td>
</tr>
<tr>
<td>Fluid contamination class</td>
<td>ISO 4406 class 21/19/16 NAS 1638 class 10, achievable with in line filters of 25 μm (β 10 ≥ 75 recommended)</td>
</tr>
</tbody>
</table>

Hydraulic fluid | Suitable seals type | Classification | Ref. Standard |
--- | --- | --- | --- |
Mineral oils     | NBR, FKM, HNBR     | HL, HLP, HLPD, HVLP, HVLPD | DIN 51524 |
Flame resistant without water | FKM | HFDU, HFDR | ISO 12922 |
Flame resistant with water     | NBR, HNBR         | HFC                  |           |

5 Q/A DIAGRAMS

SDP-2 See note and diagrams on table SHE085 relating the SDP*-2 valve from which SDP-2* are derivated
SDP-4 See note and diagrams on table SHE085 relating the SDP*-4 valve from which SDP-4* are derivated
SDP-6 See note and diagrams on table SHE085 relating the SDP*-6 valve from which SDP-6* are derivated
**SDP-2**

ISO 4401: 2005  
**Mounting surface:** 4401-07-07-0-05  
Fastening bolts:  
4 socket head screws M10x50 class 12.9  
2 socket head screws M6x45 class 12.9  
Tightening torque = 15 Nm  
Diameter of ports A, B, P, T: Ø = 20 mm  
Diameter of ports X, Y: Ø = 7 mm  
Diameter of port L: Ø = 5 mm  
Seals: 4 OR 130, 2 OR 2043  

**Mass:** 10 Kg

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**SDP-4**

ISO 4401: 2005  
**Mounting surface:** 4401-08-08-0-05  
Fastening bolts:  
6 socket head screws M12x60 class 12.9  
Tightening torque = 125 Nm  
Diameter of ports A, B, P, T: Ø = 24 mm  
Diameter of ports X, Y: Ø = 7 mm  
Diameter of port L: Ø = 5 mm  
Seals: 4 OR 4112, 2 OR 3056  

**Mass:** 16.5 Kg
SDP-6
ISO 4401: 2005
Mounting surface: 4401-10-09-0-05
(port L optional)
Fastening bolts: 6 socket head screws M20x80 class 12.9
Tightening torque = 600 Nm
Diameter of ports A, B, P, T: Ø = 34 mm
Diameter of ports X, Y: Ø = 7 mm
Diameter of port L: Ø = 5 mm
Seals: 4 OR 144, 2 OR 3056

Valve's bottom view

Only for option /H

Mass: 38 Kg

Option /S

P = PRESSURE PORT
A, B = USE PORT
T = TANK PORT
X = EXTERNAL OIL PILOT PORT
Y = DRAIN PORT