Directional spool valves are a type of directional valve. They control the direction of movement and the velocity of single and double-acting hydraulic consumers.

The directional spool valve type NSWP and SWP is available as a manifold mounting valve. Type NSWP is available with a nominal size 6 hole pattern (NG 6). Type SW is available as a single valve for pipe connection. The directional spool valve type NSWP can be flexibly adapted to different control tasks by means of additional functions in the pump line and/or on the consumer side (e.g. restrictors, restrictor check valves).

Intended applications for the directional spool valve type NSWP, SWP and SW include industrial hydraulics, in particular machine tools.

**Features and benefits:**
- Compact valve banks possible
- Proportional functions easy to control
- Large range of variants
- Can be combined with NG6 sub-plates (type BA2)

**Intended applications:**
- Machine tools
- Construction and construction materials machinery
- Offshore and marine technology
- Road vehicles

**Design and order coding example**

```
NSWP2 G /M /R / ABR1,0 /50 /G24 - 3/8

Single connection block
for direct installation in the pipe G 3/8 (type NSWP and SWP2)

Voltage of the actuation solenoids
12V DC, 24V DC, 110V AC, 230V AC
- Solenoids with various plug versions

Pressure switch or pressure gauge at A or B

Additional elements at A and/or B
Restrictor check valve or orifice

Additional elements at P
Check valve or orifice

Solenoid version
- black/white solenoid or proportional solenoid
- Solenoid with detent
- Solenoid version conforming ATEX ($p_{max} = 210$ bar)

Function
- Indiv. valve with check valve or orifice in gallery P and/or check valve in gallery R (type SWP)
- Indiv. valve with 6/2-way function

Basic type, size
Directional spool valve SW, SWP size 1 and 2
NSWP size 2, connection hole pattern NG 6 (CETOP)
```
Function

Individual connection blocks:

- 1/4 S(R)

- 3/8

1) Only for type SWP 1
2) Only for type NSWP and SWP 2

Valve sections:

Basic symbol

Individual valve

Valve sections:

Circuit symbol

May be connected either in parallel or in series within a valve bank

Only connected in series within a valve bank (only type SW1)

Spool for proportional adjustment

3) Only for type SWR 1
General parameters and dimensions

<table>
<thead>
<tr>
<th>Q_{\text{max}} [lpm]</th>
<th>P_{\text{max}} [bar]</th>
<th>Ports</th>
<th>Dimensions [mm]</th>
<th>m [kg]</th>
<th>Individual directional spool valve</th>
<th>Sub-plate</th>
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<tr>
<td>12</td>
<td>315</td>
<td>G 1/4</td>
<td>77 ... 90</td>
<td>40</td>
<td>40 ... 44</td>
<td>1.1 ... 1.5</td>
</tr>
<tr>
<td>25</td>
<td>315</td>
<td>G 3/8, G 1/4</td>
<td>78 ... - 82.5</td>
<td>60 ... 70</td>
<td>40 ... 45</td>
<td>1.1 ... 2.4</td>
</tr>
<tr>
<td>NSWP2</td>
<td></td>
<td>NG 6</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Circuit example 1:

BA2-A5
-NSWP2G/M/03/NZP16V/PQ20/0
-NSWP2G/M/R/B1,0
-NSWP2K/M/20/0
-NSWP2K/M/20/NZP16Q33/0
-2-L24
Circuit example 2:

HKF44V9LD/1-Z16
- AL21D10V-F60/80-2
- BA2-NSMD2K/G/B2/0
- NSMD2G/GRK/B2/0
- NSWP2W/M/B1.0/06/S/0
- NG6X/0
- NSWP2W/M/B1.0/06/S/0
- NSMD2G/GRK/B2/0
- NG6X/0
- NSMD2K/G/B2/0
- 80-AC2001/40-X24

Combinable products:
- Valve bank type BA: D 7788
- Intermediate plate type NZP: D 7788 Z
- 6/2-directional spool valve: Sk 7951-3-6/2

Similar products:
- Valve banks type SWR, SWS: D 7451
- Clamping modules type NSMD: D 7787

Associated technical data sheets:
- Directional spool valve type SW: D 7451
- Directional spool valve type NSWP 2: D 7451 N

Male connectors:
- Line connector type MSD and others: D 7163
- With economy circuit: D 7813, D 7833