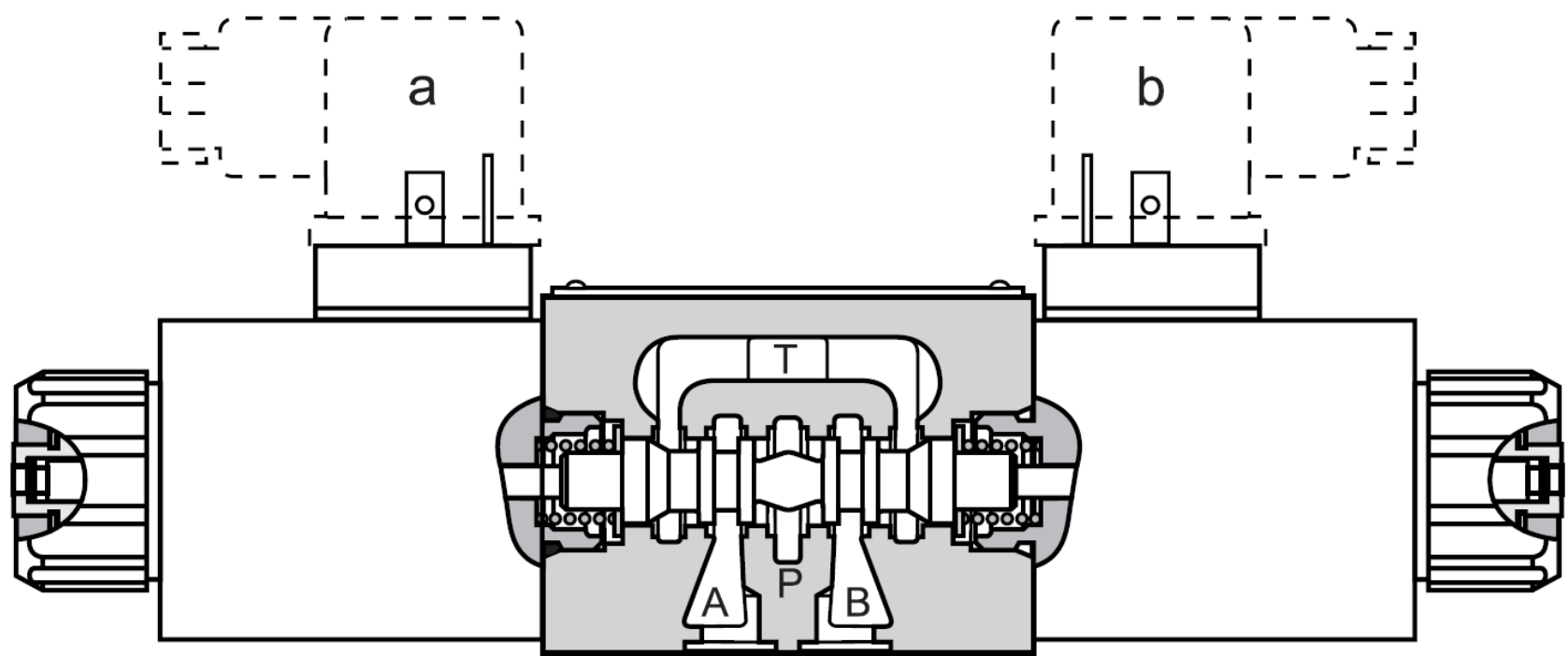


### FLUID POWER SYMBOL



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### APPLICATION

Solenoid operated directional control valves are mainly used for changing direction of movement hydraulic actuators. Depending on the various spool types and their position, various kinds of movement can be effected in a hydraulic circuits. These valves are most common for industrial systems such as machine tools, hydraulic presses and SPMs but are also used in mobile hydraulic systems.

### OPERATION

**4/2-way spool valve, detented:**  
2 solenoids and 2 spool positions. With the solenoids deenergised the spool remains in the last switched position.

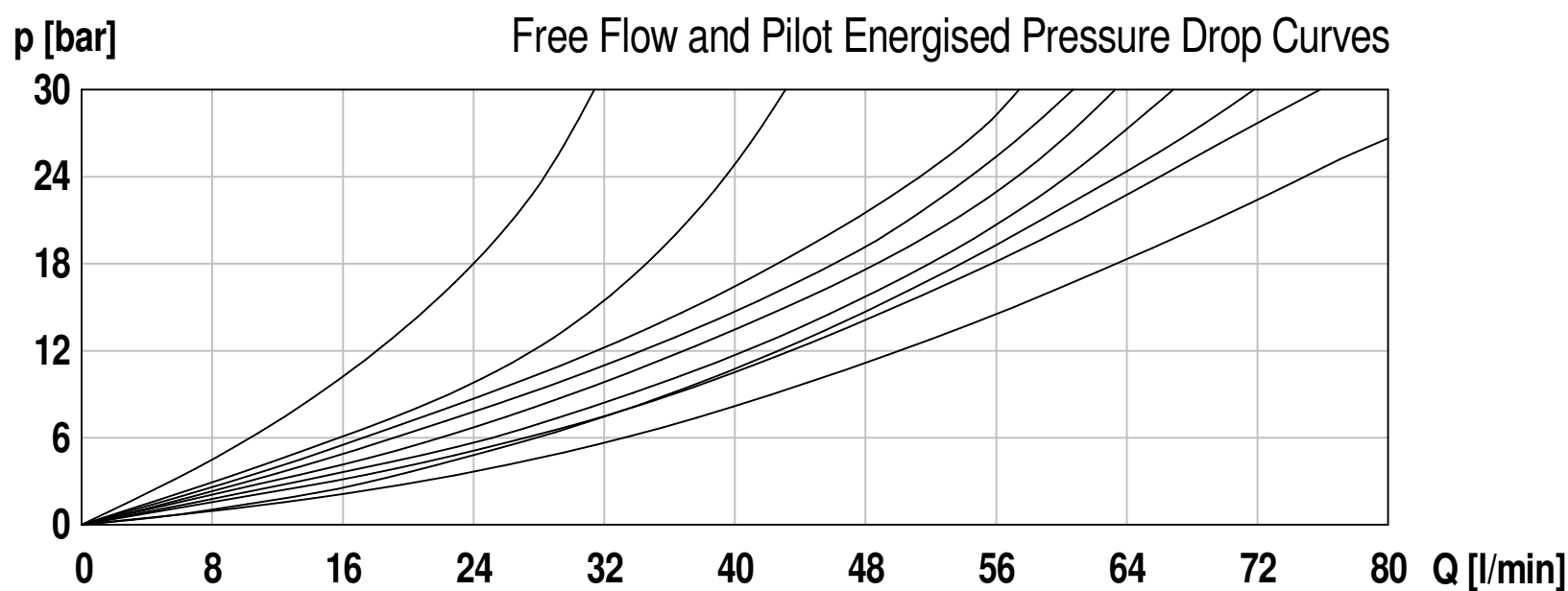
**4/2-way spool valve, spring offset:**  
1 solenoid and 2 spool positions. With the solenoid deenergised the spool returns to the offset position.

**4/3-way spool valve, spring centered:**  
2 solenoids and 3 spool positions. With the solenoids deenergised the spool returns to the center position..

### FEATURES

Low leakage and long product life due to precise fitment of spools. The spools are made from heat treated steel with a cast body featuring an automotive paint coat for better appearance and protection from he elements. These are Direct operated solenoid valves with a 4 port and 5 chamber design. They can be spool detented or with spring reset.

### CHARACTERISTICS. Figures Based on: Oil Temp = 40°C, Viscosity = 40 cSt



| Spool Symbol | Flow Direction |     |     |     |
|--------------|----------------|-----|-----|-----|
|              | P>A            | P>B | A>T | B>T |
| A, B         | 3              | 3   | -   | -   |
| C            | 1              | 1   | 3   | 1   |
| D, Y         | 5              | 5   | 3   | 3   |
| E            | 3              | 3   | 1   | 1   |
| F            | 1              | 3   | 1   | 1   |
| H            | 2              | 4   | 2   | 2   |
| J            | 1              | 1   | 2   | 1   |
| M            | 2              | 4   | 3   | 3   |
| G            | 6              | 6   | 9   | 9   |

### General Specifications

|                       |   |
|-----------------------|---|
| Description           | 4/2-, 4/3-spool valve   |
| Construction          | direct operated spool valve   |
| Mounting              | NG6 flange to ISO 4401 / 7790   |
| Installation Position | any   |
| Tightening Torque     | 5,5 Nm, M5 x 4 nos  |
| Ambient Temp.         | -20°C to +50°C  |
| Construction Material | Working parts: Hardened, ground steel<br>External surfaces: Zinc plated |
| Cavity Number         | Not applicable  |
| Weight                | 2 solenoid version: 2.40 kg<br>1 solenoid version: 1.90 kg              |

### Hydraulic Specifications

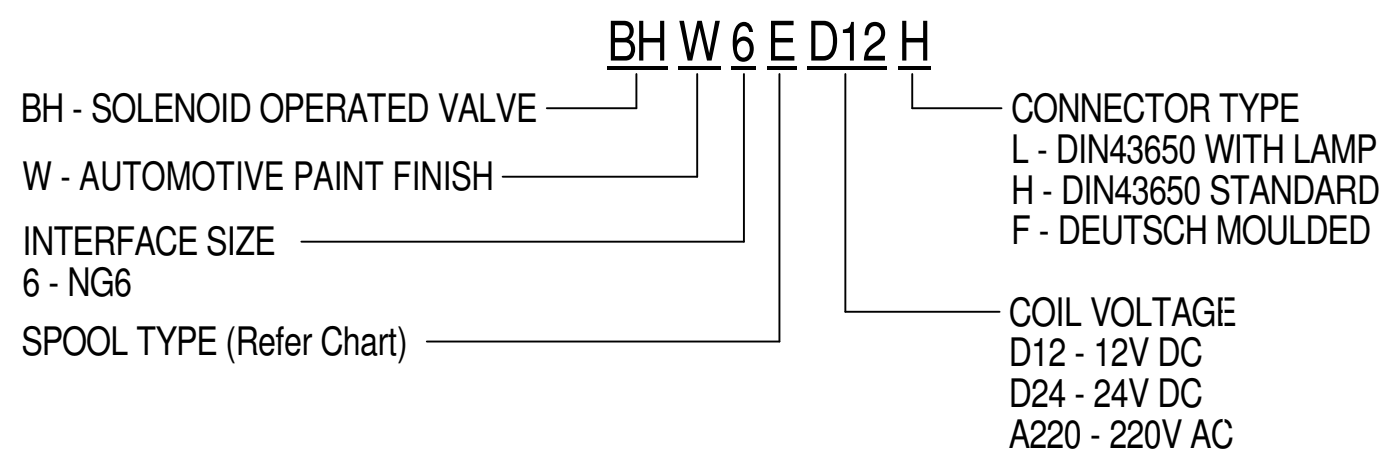
|                          |  |
|--------------------------|--|
| Hydraulic Fluid          | Mineral oils. Contact sales office for other fluids. |
| Max. Operating Pressure  | 350 bar  |
| Max. Tank Pressure       | 160 bar  |
| Rated Flow               | see chart  |
| Max. Contamination Level | BS5540/4 Class 18/16/13 (25µ nominal)                |
| Viscosity Range          | 5 to 500 cSt   |
| Leakage Volume Flow      | on request   |
| Hydraulic Fluid Temp.    | -20°C to +90°C (Standard Seals)                      |
| Mounting                 | Line   |
| Peak Pressure            | 350 bar  |
| Max. Flow                | 80 lpm   |
| Seal Kit Number          | see chart  |

### Electrical Specifications

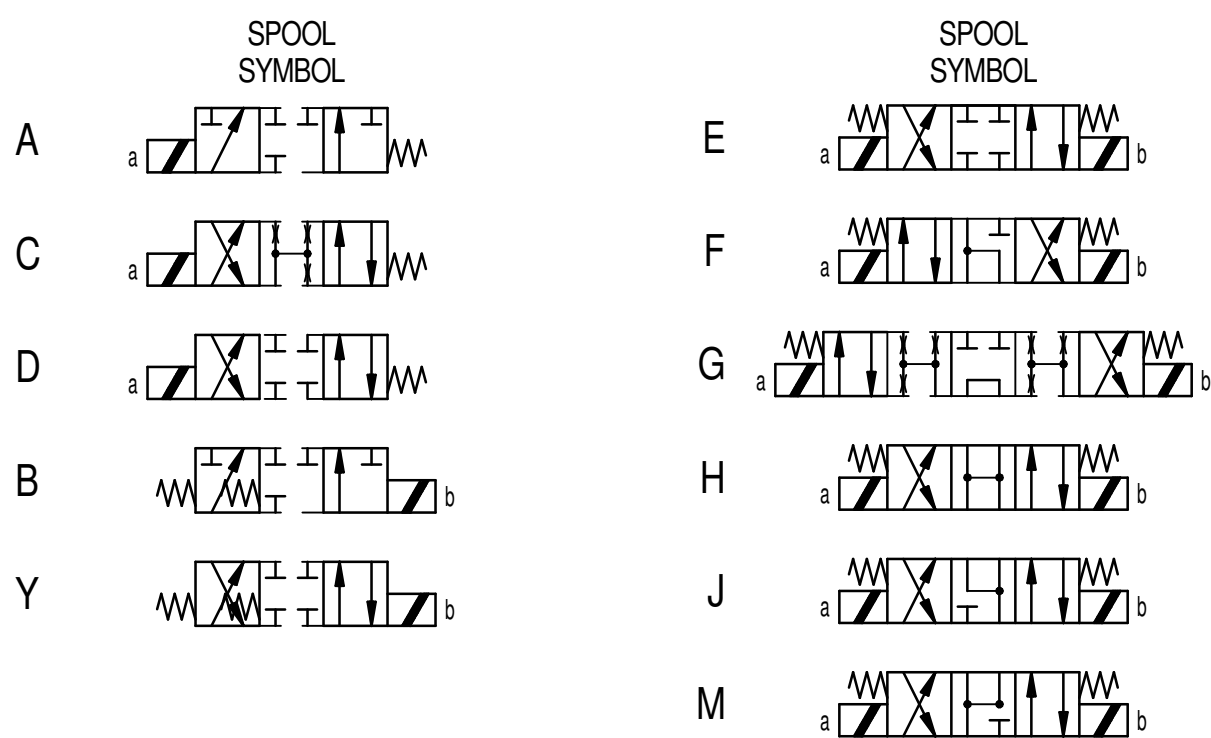
|                           |  |
|---------------------------|--|
| Construction              | solenoid, wet pin push type, pressure tight  |
| Voltage tolerance         | ±10 % of nominal voltage   |
| Protection class          | IP 65 to EN 60 529   |
| Switching cycles          | 15 000/h   |
| Operating life            | 10 <sup>6</sup> (number of switching cycles, theoretically)                                |
| Connection / Power supply | Over device plug connection to ISO 4400 / DIN 43650, (2P+E), other connections on request. |

# Solenoid Operated Spool Valve

## ORDERING CODE

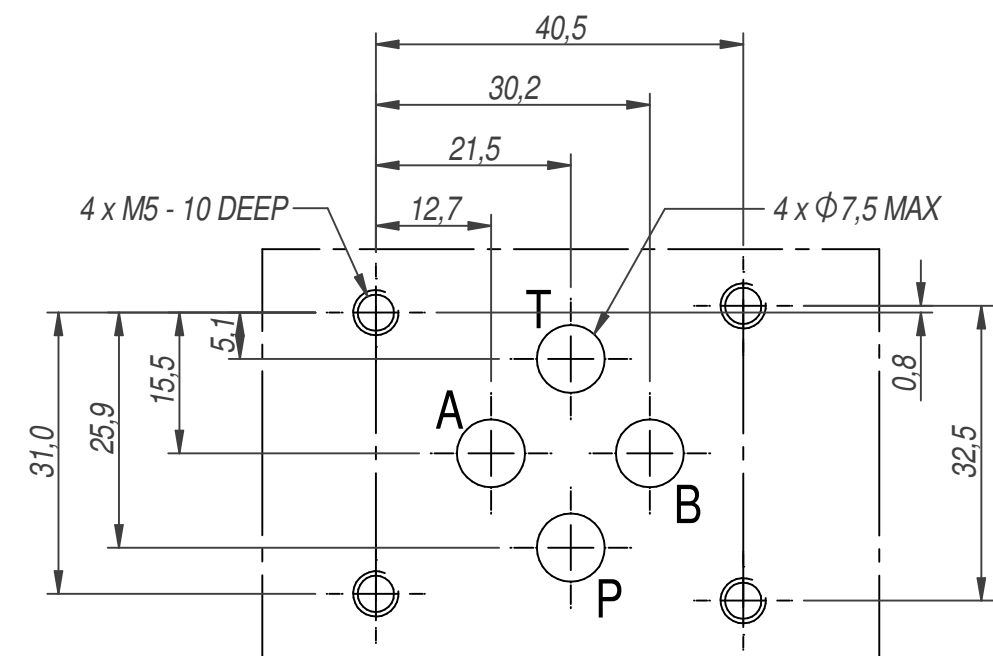


## SPOOL TYPES



## INTERFACE

As per ISO 4401/7790 for NG6



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## DIMENSIONS

