### Graphical Symbols For Hydraulic Circuits

#### Basic symbols
- **PRESSURE OR RETURN LINE**
- **PLUNGER LINE**
- **TWO OR MORE FUNCTIONS IN ONE UNIT**
- **FLEXIBLE HOSE**
- **LEAK**
- **CROSS**
- **CLOSED CONNECTION**
- **DIRECTION OF MOVEMENT**
- **LOOKING AT SHAFT**
- **SHUT-OFF VALVE**
- **PLUGGED PORT**
- **ROTARY UNION**
- **CHECK VALVE**
- **FLUID LEVEL IN ONE UNIT**
- **PNEUMATIC THROTTLE**
- **TEST POINT**
- **HYDRAULIC PILOT**
- **PRESSURE OR RETURN LINE**

#### Spool controls
- **CLOSED CENTRE**
- **CLOSED CENTRE WITH LS**
- **PRESSURE OR RETURN LINE**
- **DIRECTION OF MOVEMENT**
- **IN OPPOSITE DIRECTIONS**
- **RETURN ABOVE/BELOW**
- **DIRECTION OF ROTATION**
- **REGULATION POSSIBLE**
- **DIRECTION OF ROTATION**
- **LOOKING AT SHAFT**
- **SHUT-OFF VALVE**
- **PLUGGED PORT**
- **ROTARY UNION**
- **CHECK VALVE**
- **FLUID LEVEL**

#### Energy transformation
- **Spool controls**
- **INTERMEDIATE POSITION**
- **DOUBLE-ACTING PEDAL**
- **PUSH/PULL SOLENOID**
- **SINGLE-ACTING PEDAL**
- **PROPORTIONAL SPOOL**
- **OTHER CONTROL UNIT**
- **LEVER WITH ROLLER**
- **STROKE LIMITATION**
- **PUSH-PULL KNOB**
- **GENERAL SYMBOL**
- **SINGLE SOLENOID**
- **ELECTRIC MOTOR**
- **PLUNGER WITH EXTERNAL PILOT**
- **INTERNAL PILOT**
- **OPERATED PLUNGER**
- **ROLLER**
- **SPRING**
- **LEVER**

#### Energy control
- **SPOOL TYPE FLOW DIVIDER**
- **CHECK VALVE WITH SPRING**
- **PILOT OPERATED CHECK**
- **LOWERING VALVE WITH REVERSE FLOW CHECK**
- **ROTARY FLOW DIVIDER**
- **PILOT OPERATED CHECK**
- **REVERSE FLOW CHECK**
- **VALVE WITHOUT DRAIN**
- **FLOW CONTROL WITH ADJUSTABLE 3-WAY**
- **FLOW CONTROL WITH ADJUSTABLE 2-WAY**
- **ADJUSTABLE 2-WAY**
- **PRESSURE RELIEF VALVE**
- **DIAGNOSTIC CHANGEOVER VALVE**
- **PILOT OPERATED RELIEF VALVE**
- **SEQUENCE VALUE**
- **LEAK-PROOF RELIEF VALVE WITH EXTERNAL DRAIN**
- **REDUCING VALVE**
- **DIRECT ACTING SEATED RELIEF VALVE**
- **DIRECT ACTING PROPORTIONAL RELIEF VALVE**
- **PILOT OPERATED RELIEF VALVE**
- **SERIES DIRECTIONAL CONTROL VALVE (E.g. 1APA...)**
- **SERIES DIRECTIONAL CONTROL VALVE (E.g. 3RAP...)**
- **SERIES DIRECTIONAL CONTROL VALVE (FOR USE WITH SPOOL FORM 1**
- **SERIES DIRECTIONAL CONTROL VALVE (FOR USE WITH SPOOL FORM 2**
- **RELIEF VALVE (E.G. 3RL...)**
- **RELIEF VALVE (E.G. 3RR...)**
- **RELIEF VALVE (E.G. 3RD...)**
- **CHECK VALVE (E.G. 3RP...)**
- **RELIEF VALVE (E.G. 9525)**
- **RELIEF VALVE (E.G. 9526)**
- **RELIEF VALVE (E.G. 3RL...)**
- **RELIEF VALVE (E.G. 3RR...)**
- **RELIEF VALVE (E.G. 3RD...)**
- **CHECK VALVE (E.G. 3RP...)**

#### Fluid treatment
- **BREATHER WITH FILTER**
- **FILTER**
- **FILTER WITH Indicator**
- **AIR/OIL COOLER**
- **HEATER**
- **TEMPERATURE CONTROLLER**

#### Measuring instruments
- **PRESSURE TRANSDUCER**
- **PRESSURE GAUGE**
- **DIFFERENTIAL PRESSURE GAUGE**
- **FLOW LEVEL GAUGE**
- **FLOW LEVEL TRANSDUCER**
- **THERMOMETER**
- **FLOW METER**
- **TACHOMETER**
- **TORQUE METER**
- **HEATER**
- **PRESSURE SWITCH**

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