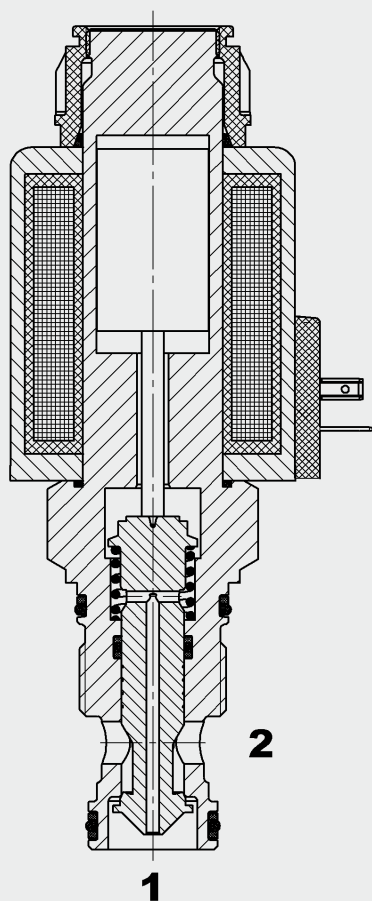


up to 100 l/min  
up to 210 bar

## FUNCTION



The WSM16520W is a direct acting directional poppet valve – in the normal position, the valve is closed in both directions. When the solenoid is energized, the valve opens and allows flow in both directions.

Caution: No orifice is permitted just before port 1. Only "diffuser orifices" may be used.

## 2/2 Solenoid Directional Valve Poppet Type, Direct Acting Normally Closed Metric Cartridge – 210 bar WSM16520W

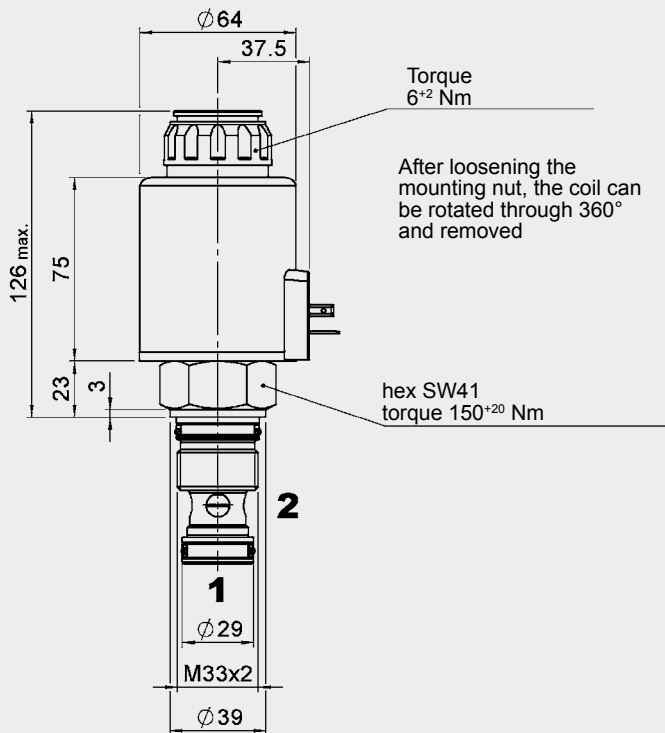
### FEATURES

- Main application is in fast-switching applications e.g. in injection moulding machines
- High flow with low  $\Delta p$
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Coil seals protect the solenoid system
- Low pressure drop due to CFD optimized flow path

### SPECIFICATIONS

Operating pressure:	max. 210 bar
Nominal flow:	max. 100 l/min
Internal leakage:	Leakage-free
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. +50 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity range:	min. 7.4 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTF <sub>d</sub> :	150 years (see "Conditions and instructions for valves" in brochure 5.300)
Installation:	No orientation restrictions
Materials:	Valve body: hardened steel Piston: hardened and ground steel Seals: NBR (standard) FKM (optional) Back-up rings: PTFE
Cavity:	Metric 16520
Weight:	Valve complete 2.05 kg Coil only 1.05 kg
<b>Electrical data:</b>	
Type of voltage:	DC solenoid, AC voltage can be rectified using a bridge rectifier, e.g. Z4 (not supplied)
Current draw at 20 °C:	2.9 A at 12 V DC; 1.45 A at 24 V DC
Voltage tolerance:	± 15% of nominal
Coil duty rating:	Continuous up to max. 115% of the nominal voltage at 50 °C ambient temperature
Response time:	On: approx. 70 ms Off: approx. 50 ms
Coil type:	Coil... -75-3164

## DIMENSIONS



millimeter (inch)  
subject to technical modifications

## MODEL CODE

**WSM 16520 W - 01 M - C - N - 24 DG**

**Basic model** \_\_\_\_\_  
Directional poppet valve, metric

**Cavity** \_\_\_\_\_  
16520 = 2-way cavity

**Function symbol** \_\_\_\_\_

**Type** \_\_\_\_\_  
01 = standard

**Manual override** \_\_\_\_\_  
no details = without manual override  
M = manual override

**Body and ports\*** \_\_\_\_\_  
C = cartridge only  
Versions with bodies on request

**Seals** \_\_\_\_\_  
N = NBR (standard)  
V = FKM (optional)

**Coil voltage** \_\_\_\_\_  
DC: 12 = 12 Volt DC  
24 = 24 Volt DC  
Other voltages on request

**Coil connectors (type 75-3164)** \_\_\_\_\_  
DC: DG = DIN connector to EN175301-803  
DT = AMP Junior Timer, 2-pole, radial  
Other connectors on request

### Standard models

Model code	Part No.
WSM16520W-01-C-N-12DG	3432838
WSM16520W-01-C-N-24DG	3134104

Other models on request

### \*Standard in-line bodies

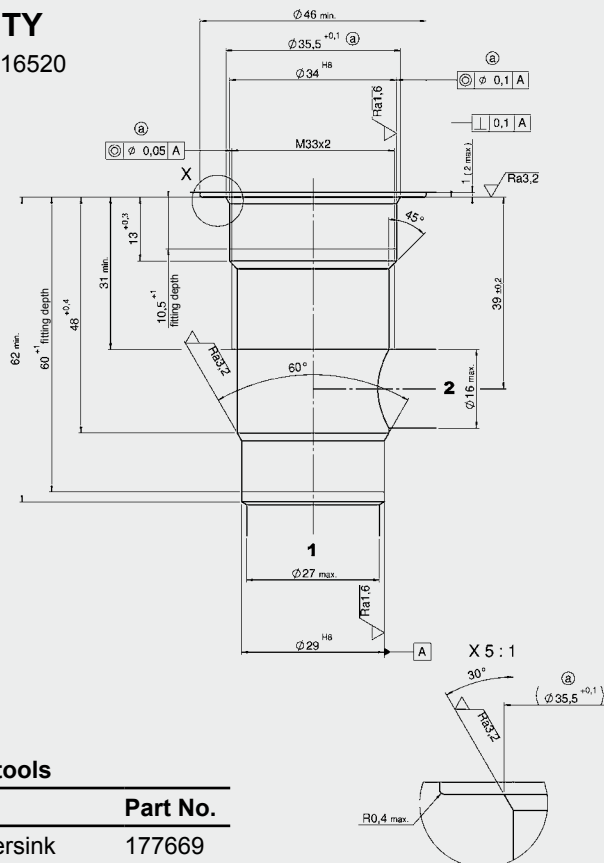
Code	Part No.	Material	Ports	Pressure
R16520-01X-01	3132532	Steel, zinc-plated	1 BSP	350 bar

### Seal kits

Code	Part No.
SEAL KIT WSM16520 -NBR	3286856

## CAVITY

Metric 16520



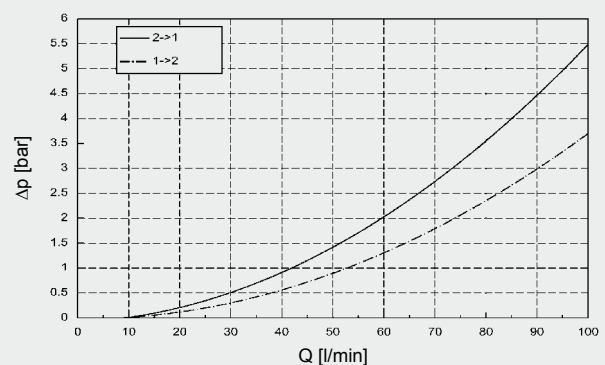
millimeter (inch)  
subject to technical modifications

### Form tools

Tool	Part No.
Countersink	177669
Reamer	1014952

## PERFORMANCE

Measured at  $v = 33 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



### NOTE

The information in this brochure relates to the operating conditions and applications described. For applications and operating conditions not described, please contact the proper HYDAC department.  
Subject to technical modifications.

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