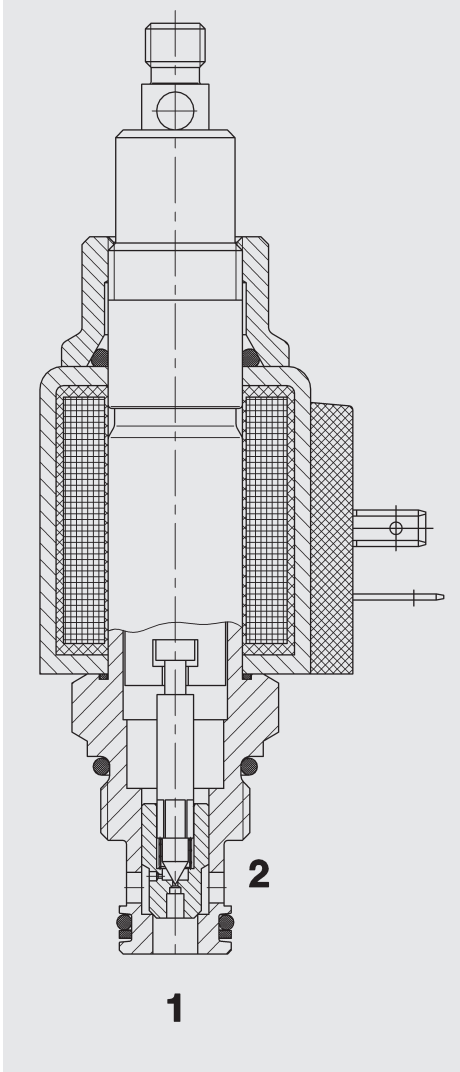


FUNCTION



When the solenoid coil is not energized, the valve is closed from port 2 to port 1. Flow is permitted from port 1 to port 2. The valve piston opens at a differential pressure of approx. 1.5 bar (check function). When energized, there is free flow through the valve from port 2 to 1. Flow from port 1 to 2 is prevented. Please mind: In pilot operated solenoid valves, shift performance and response times depend i.a. very much on pressure drop and volume flow during actuation.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Spring-Return Manual Override Normally Closed Metric Cartridge – 350 bar WSM06020Z-01J

FEATURES

- With spring return manual override e.g. for cable-pull
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h Salt spray test)

SPECIFICATIONS*

Operating pressure:	max. 350 bar
Nominal flow:	max. 40 l/min
Internal leakage:	Leakage-free max. 5 drops/min (0.25 cm³/min) at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. + 60 °C
Operating fluid:	Hydraulic oil to DIN 51524 part 1, 2 and 3
Viscosity range:	min. 10 mm²/s to max. 420 mm²/s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTF _d :	150 - 1200 years, according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Materials:	Valve body: free-cutting steel Poppet: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Back-up rings: PTFE Coil: steel / polyamide
Cavity:	06020
Weight:	Valve complete: 0.36 kg Coil only: 0.19 kg

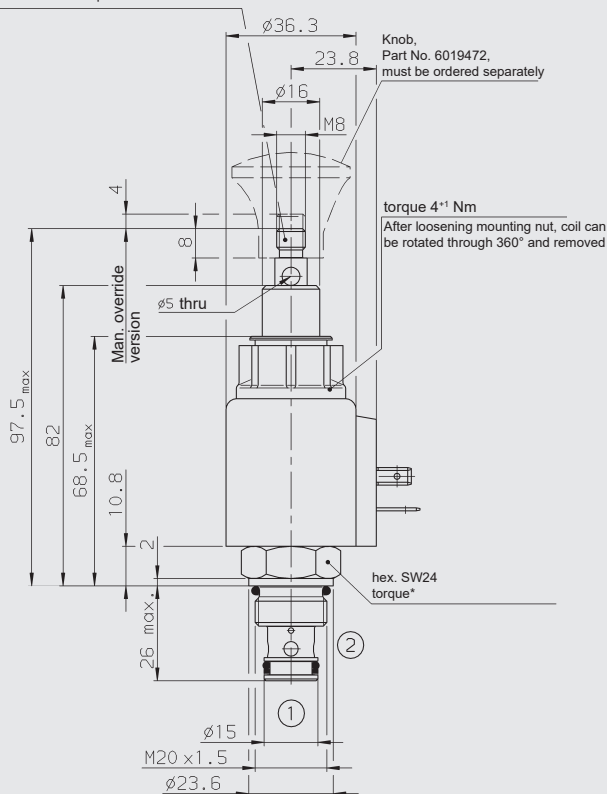
Electrical data

Type of voltage:	DC: direct current solenoid AC: alternating current solenoid with a bridge rectifier built into the coil
Current draw at 20 °C:	1.5 A at 12 V DC 0.8 A at 24 V DC
Voltage tolerance:	± 15 % of the nominal voltage
Coil duty rating:	Continuous up to max. 115 % of the nominal voltage at 60 °C ambient temperature
Manual override:	The pull-force required is dependent on the operating pressure – max. approx. 150 N. The max. permitted pull-force is 180 N.
Response time: (at p _{max} , Q _{max} , v = 34 mm²/s)	energized: approx. 35 ms de-energized: approx. 50 ms substantially extended response times possible at other operating conditions
Coil type:	Coil...-40-1836

* see "Conditions and instructions for valves" in brochure 53.000

DIMENSIONS

Manual override
spring-return
pull and hold to operate



*Torque:

Steel manifold
(ultimate tensile strength < 360 N/mm²): 50 Nm
Aluminium manifold
(ultimate tensile strength < 330 N/mm²): 35 Nm
(tool acc. to DIN EN ISO 6789, tool type II class A or B)
For further informations see brochure No. 53.000
"Conditions and instructions for valves"

millimeter
subject to technical modifications

MODEL CODE

WSM06020Z - 01 J - C - N - 24 DG

Basic model

Directional poppet valve, metric

Type

01 = standard

Manual override

J = pull-type,
spring-return manual override

Body and ports*

C = cartridge only

Seals

N = NBR (standard)

V = FKM

Coil voltage

DC voltages

12 = 12 V DC

24 = 24 V DC

AC voltages (bridge rectifier built into the coil)

115 = 115 V AC

230 = 230 V AC

Other voltages on request

Coil connectors (type 40-1836)

DC: DG = DIN connector type A to EN 175301-803

DK = KOSTAL threaded connection M27x1

DL = 2 flying leads, 457 mm long, 0.75 mm²

DN = Deutsch connector, 2-pole, axial

DT = AMP Junior Timer, 2-pole, radial

AC: AG = DIN connector type A to EN 175301-803

Other connectors on request

Standard models

Model code	Part No.
WSM06020Z-01J-C-N-24DG	3123455
WSM06020Z-01J-C-N-230AG	3123456

* Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R06020-01X-01	275266	Steel, zinc-plated	G 3/8	350 bar

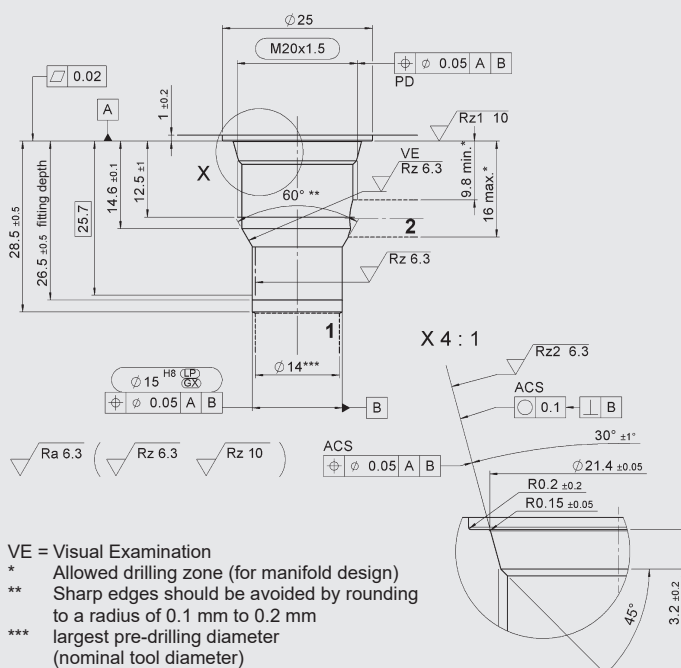
For other connection housings, see brochure no. E 5.252.

Seal kits

Code	Material	Part No.
SEAL KIT 06020-NBR	NBR	3119017
SEAL KIT 06020-FKM	FKM	3262477

CAVITY

06020



VE = Visual Examination

* Allowed drilling zone (for manifold design)
** Sharp edges should be avoided by rounding to a radius of 0.1 mm to 0.2 mm

*** largest pre-drilling diameter (nominal tool diameter)

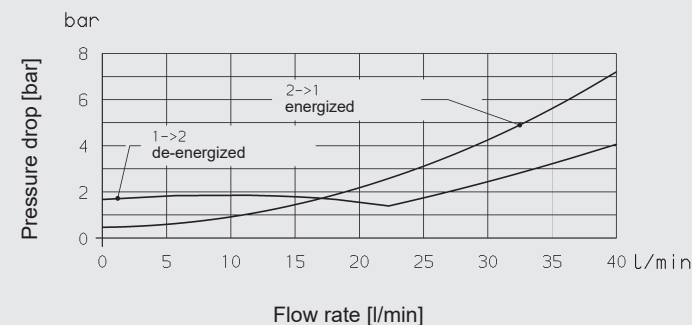
Form tools

Tool	Part No.
Countersink (shank MK3)	170033
Reamer (shank MK2)	1000768

millimeter
subject to technical modifications

TYPICAL PERFORMANCE

measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46^\circ \text{C}$



NOTE

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

HYDAC Fluidtechnik GmbH

Justus-von-Liebig-Str.

D-66280 Sulzbach/Saar

Tel: 0 68 97 /509-01

Fax: 0 68 97 /509-598

E-Mail: valves@hydac.com