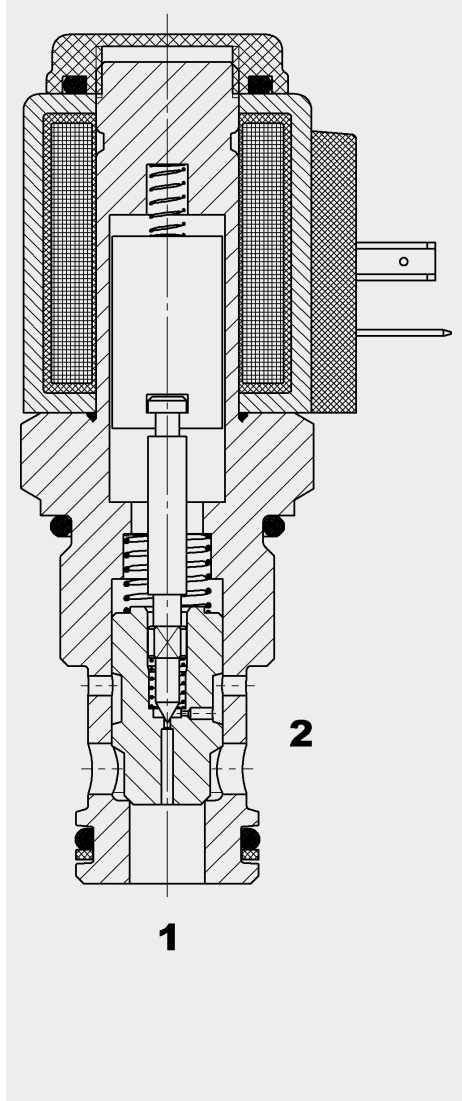


FUNCTION



When the solenoid coil is not energized, the valve is closed from port 2 to 1. In the opposite direction, oil can flow freely through the valve. 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 port 1. Return flow from port 1 to 2 is not possible.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Normally Closed Metric Cartridge Valve – 350 bar

WSM12120Z

FEATURES

- External surfaces zinc-plated and corrosion-proof
- Hardened and ground control piston to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Excellent switching performance by high power HYDAC solenoid
- Low pressure drop due to CFD optimized flow path

SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	max. 110 l/min	
Internal leakage:	Leakage-free (max. 5 drops \approx 0,25 cm ³ /min at 350 bar)	
Media operating temperature range:	min. -30 °C to max. +100 °C	
Ambient temperature range:	min. -30 °C to max. +60 °C	
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2	
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s	
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner	
MTTF _d :	150 years (see "Conditions and instructions for valves" in brochure 5.300)	
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:	12120	
Weight:	Valve complete	0.46 kg
	Coil only	0.19 kg

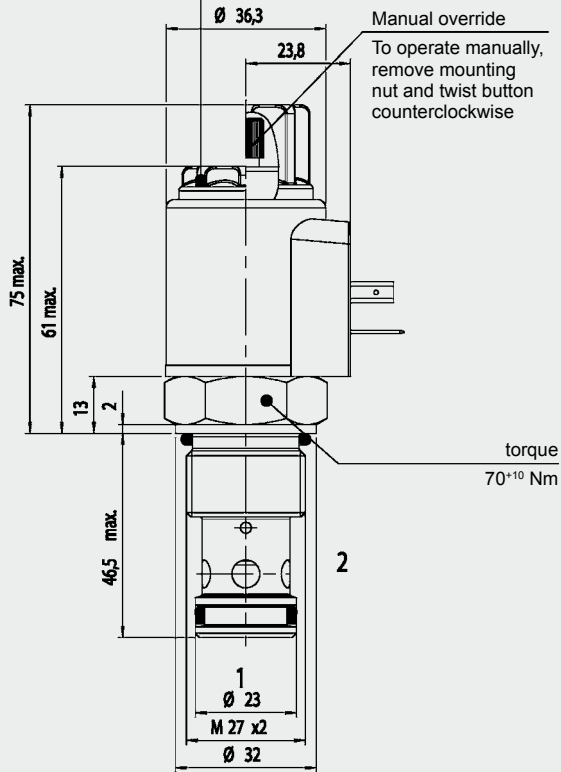
Electrical data:

Type of voltage:	DC solenoid, AC voltage is rectified using 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	
Response time:	energized:	approx. 35 ms
	de-energized:	approx. 70 ms
Voltage tolerance:	\pm 15% of the nominal voltage	
Coil duty rating:	Continuous up to max. 115% of the nominal voltage at 60 °C ambient temperature	
Coil type:	Coil...-40-1836	

DIMENSIONS

torque 4⁺² Nm

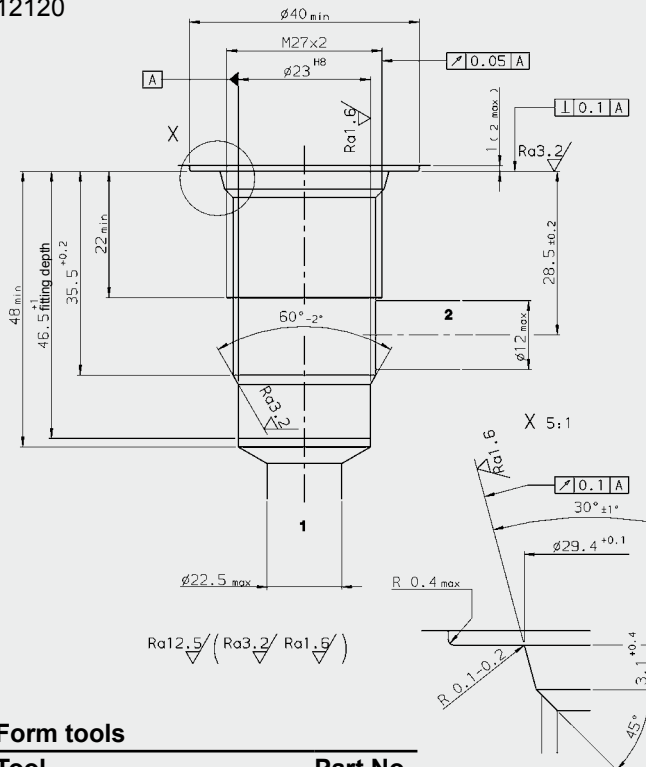
After loosening the mounting nut, the coil can be rotated through 360° and removed



millimeter
subject to technical modifications

CAVITY

12120



Form tools

Tool	Part No.
Countersink (shank MK3)	172880
Reamer	1014207

millimeter
subject to technical modifications

MODEL CODE

WSM12120Z - 01 M - C - N - 24 DG

Basic model

Directional poppet valve, metric

Type

01 = standard

Manual override

No details = without manual override

M = manual override

Body and ports

C = cartridge only

Seals

N = NBR (standard)

V = FKM (optional)

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 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 to EN 175301-803

Other connectors on request

Standard models

Model code	Part No.
WSM12120Z-01-C-N-12DG	3230865
WSM12120Z-01-C-N-24DG	3230870
WSM12120Z-01-C-N-230AG	3230869

Other models on request

Standard in-line bodies

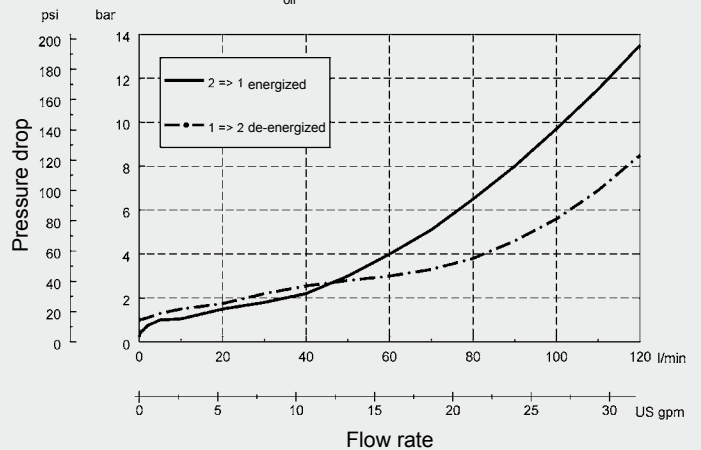
Code	Part No.	Material	Ports	Pressure
R12120-10X-01	396708	Steel, zinc-plated	G 3/4	420 bar
R10120-01X-01	396707	Steel, zinc-plated	M 27 x 2	420 bar

Seal kits

Code	Material	Part No.
SEAL KIT 10120-NBR	NBR	3454001
SEAL KIT 10120-FKM	FKM	3454002

PERFORMANCE

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



Note

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

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