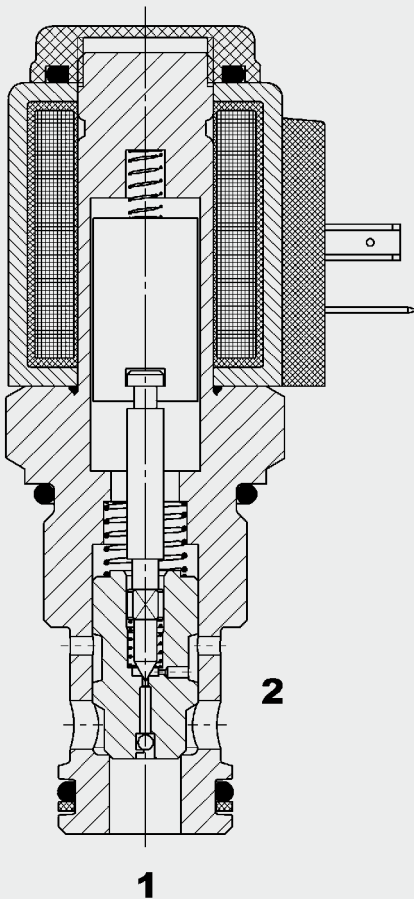


Up to 110 l/min
Up to 350 bar

FUNCTION



When the solenoid coil is de-energized, the valve is closed from port 2 to port 1. In the reverse direction there is free flow through the valve. The valve poppet opens at a differential pressure of approx. 1.5 bar (check function). When energized the valve allows flow in both directions.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Normally Closed (Reverse Flow) Metric Cartridge - 350 bar

WSM12120ZR

FEATURES

- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid

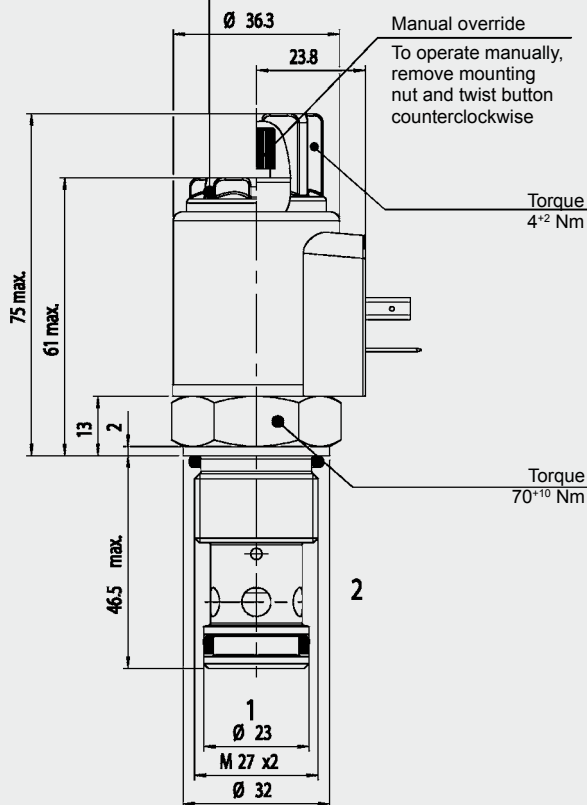
SPECIFICATIONS

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. -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 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	
Material:	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:	Metric 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. 30 ms
	De-energized:	approx. 70 ms
	typical 24 V DC-coil	
Voltage tolerance:	\pm 15 % of nominal voltage	
Coil duty rating:	Continuous up to max. 115% of nominal voltage at max. 60 °C ambient temperature	
Coil type:	Coil...-40-1836	

DIMENSIONS

torque 4⁺² Nm

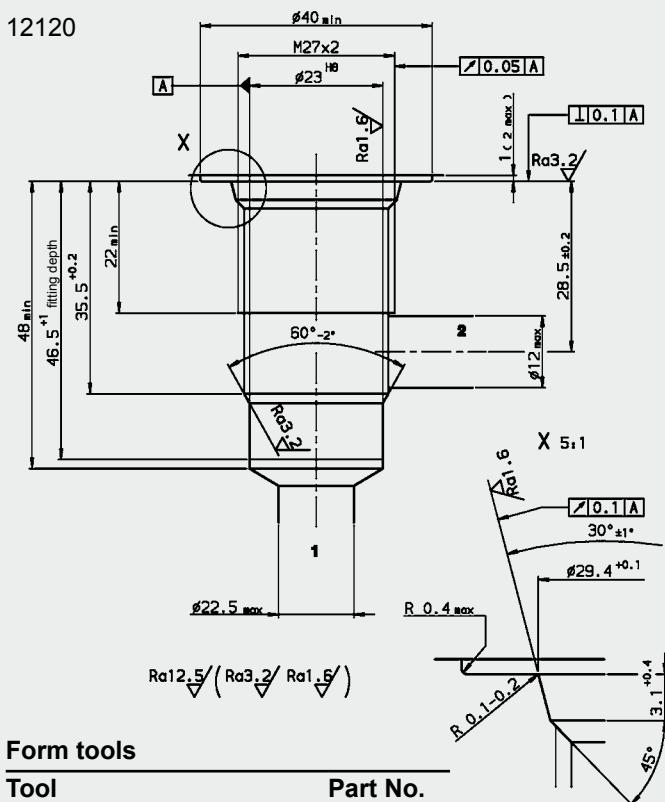
After loosening the mounting nut, the coil can be rotated through 360° and removed



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

WSM12120ZR - 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.
WSM12120ZR-01-C-N-12DG	3230893
WSM12120ZR-01-C-N-24DG	3230898
WSM12120ZR-01-C-N-230AG	3230897

Other models on request

*Standard in-line bodies

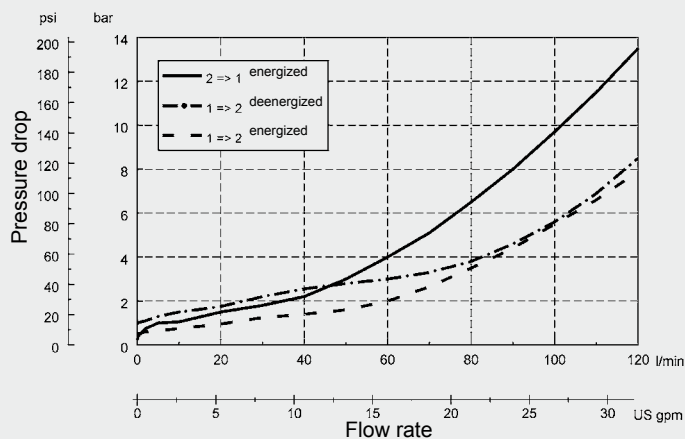
Code	Part No.	Material	Ports	Pressure
R12120-10X-01	396708	Steel, zinc-plated	G 3/4	max. 420 bar
R12120-10X-02	396707	Steel, zinc-plated	M27 x 2	max. 420 bar

Seal kits

Code	Material	Part No.
SEAL KIT 12120-NBR	NBR	3454001
SEAL KIT 12120-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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