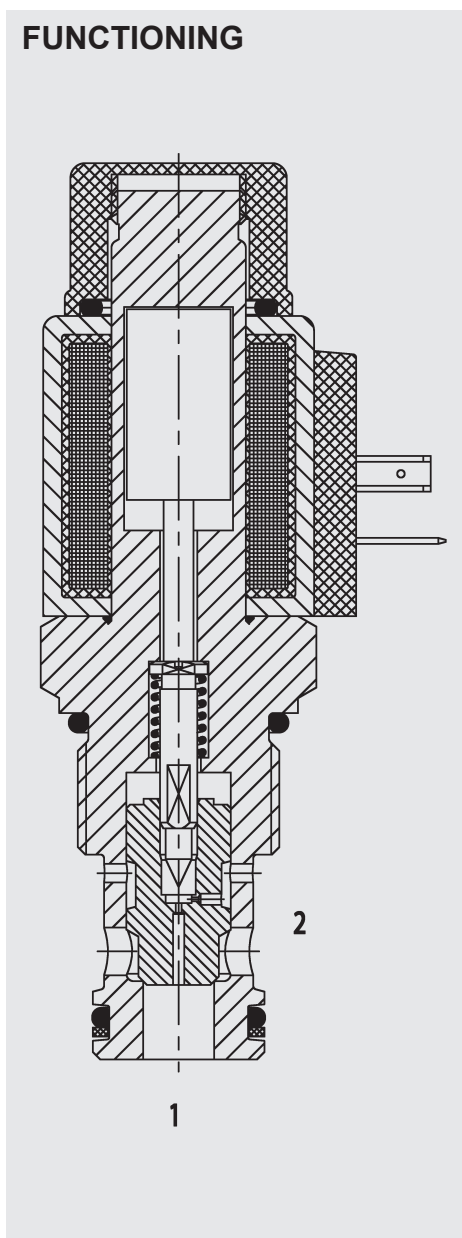


FUNCTIONING



When de-energized, there is free flow through the valve from port 2 to 1. Flow in the opposite direction is not permitted.

When energized, the valve is closed from port 2 to port 1.

In the reverse direction there is free flow through the valve when the hydraulic force on the poppet exceeds the solenoid force (approx. 9 to 20 bar).

2/2 Solenoid Directional Valve Poppet Type, Pilot-Operated Normally Open Metric Cartridge – 350 bar WSM12120Y

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

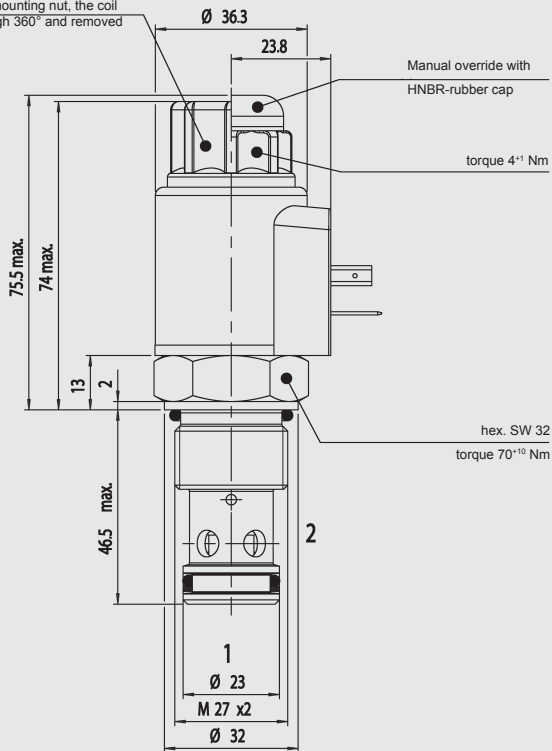
Operating pressure:	max. 350 bar	
Nominal flow:	max. 110 l/min	
Internal leakage:	Leakage-free (max. 5 drops \approx 0,25 cm ³ /min at 350 bar)	
Media operating temperature range:	min. -20 °C to max. +100 °C	
Ambient temperature range:	min. -20 °C to max. +60 °C	
Operating fluid:	Hydraulic oil to DIN 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	
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	0.49 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	
Voltage tolerance:	\pm 15% of the nominal voltage	
Response time:	energized:	approx. 90 ms
	de-energized:	approx. 25 ms
Coil duty rating:	Continuous up to max. 115% of the nominal voltage at 60 °C ambient temperature	
Coil type:	Coil...40-1836	

DIMENSIONS

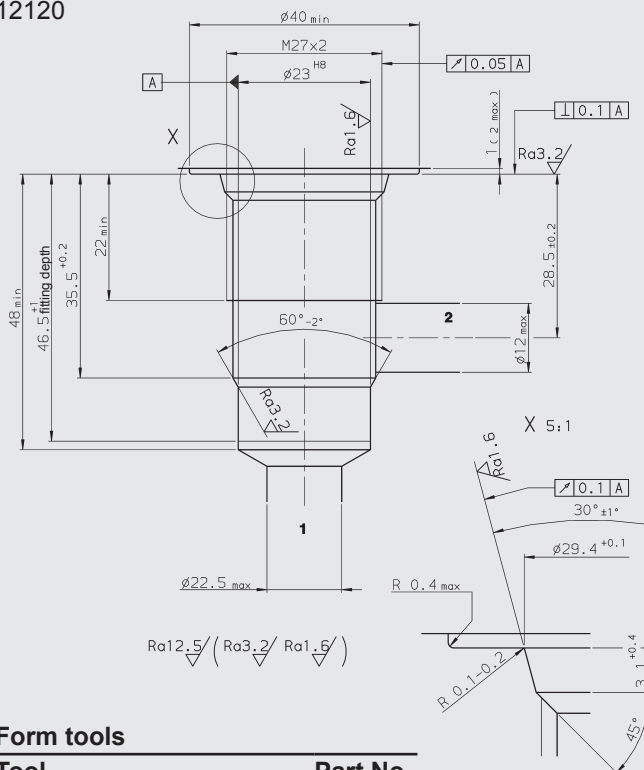
After loosening the mounting nut, the coil can be rotated through 360° and removed



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

WSM12120Y - 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.
WSM12120Y-01-C-N-12DG	3230826
WSM12120Y-01-C-N-24DG	3230834
WSM12120Y-01-C-N-230AG	3230833

Other models on request

Standard in-line bodies

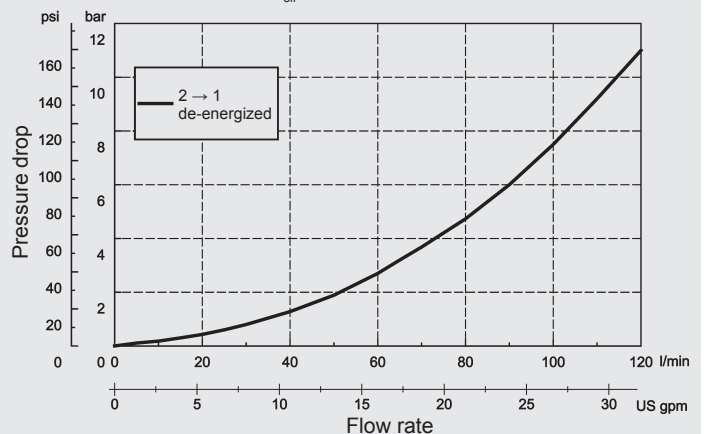
Code	Part No.	Material	Ports	Pressure
R12120-10X-01	396708	Steel, zinc-plated	G 3/4	max. 420 bar
R12120-01X-01	396707	Steel, zinc-plated	M 27 x 2	max. 420 bar

Seal kits

Code	Material	Part No.
SEAL KIT 12120-NBR	NBR	3454001
SEAL KIT 12120-FKM	FKM	3454002

PERFORMANCE

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



NOTE

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

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