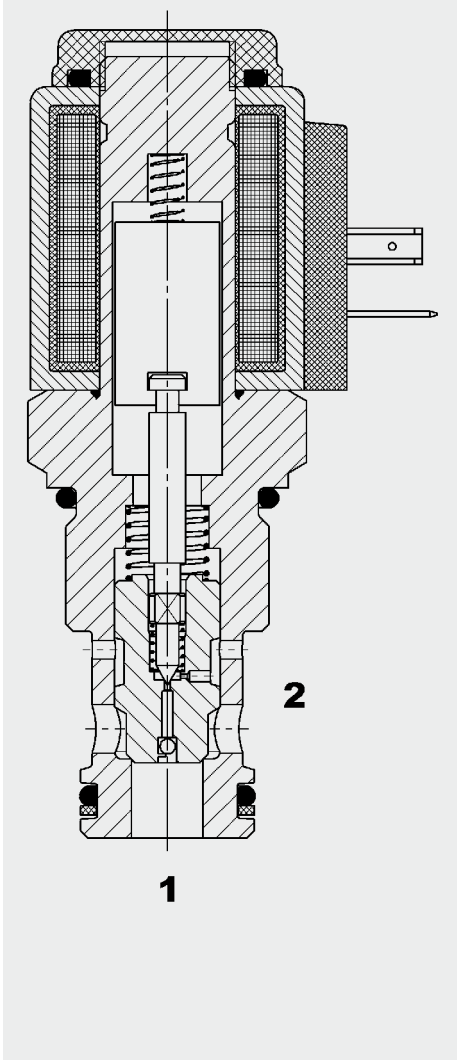


FUNCTION



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

2/2 Solenoid Directional Valve Metric Cartridge – 350 bar

Normally Closed (Reverse Flow)

WSM12120ZR

Poppet Type - Pilot Operated

FEATURES

- Exposed surfaces zinc-plated and corrosion-proof
- All valve parts made of high-strength steel with hardened and ground components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of coils and 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/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
Fluids:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity:	min 7.4 mm ² /s to max. 420 mm ² /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
Installation:	no orientation restrictions
Material:	Valve body: high tensile steel Piston: hardened and ground steel Seals: NBR (standard) FKM (optional) Back-up rings: PTFE
Cavity:	12120
Weights:	Valve complete: 0.46 kg Coil only: 0.19 kg

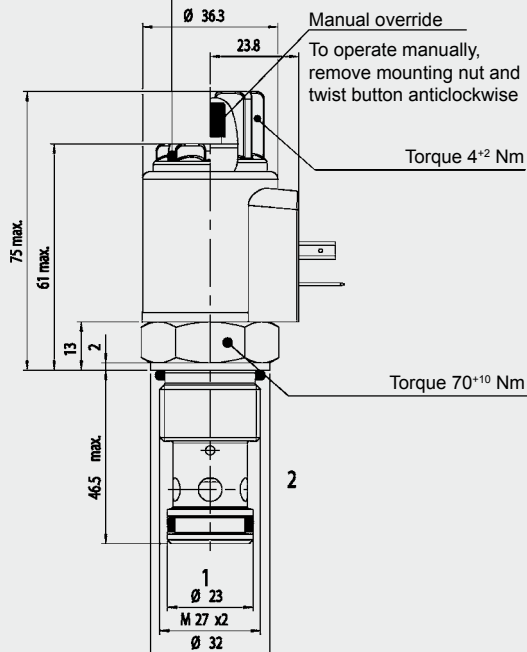
Electrics

Response time:	Energized: approx. 30 ms De-energized: approx. 70 ms typical 24 V DC-coil
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:	±15% of nominal
Coil duty rating:	Continuous up to 115% of nominal voltage at max. 60 °C ambient temperature

DIMENSIONS

Torque 4⁺² Nm

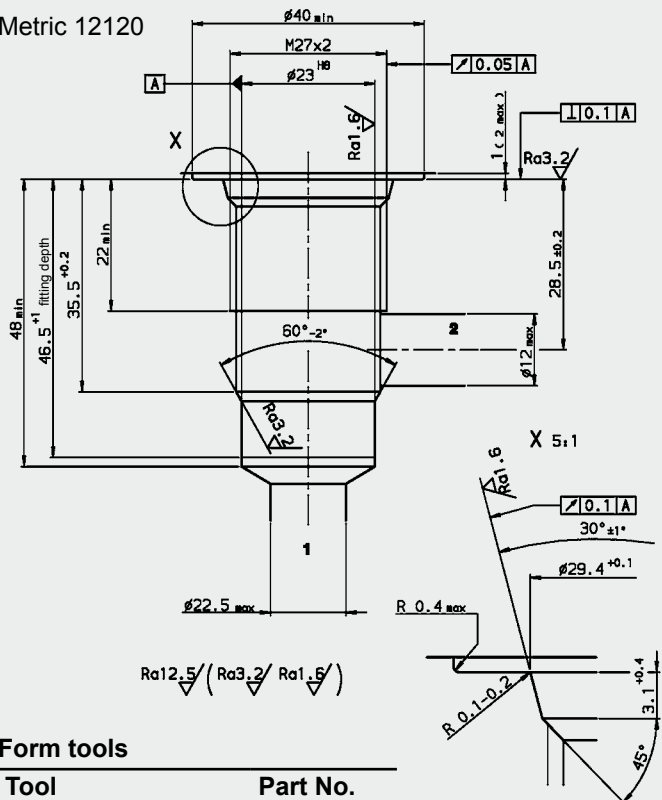
After loosening or removing the mounting nut, the coil can be turned through 360° or removed



Millimetre
Subject to technical modifications

CAVITY

Metric 12120



Millimetre
Subject to technical modifications

Form tools

Tool	Part No.
Countersink MK3	172880
Reamer	1014207

MODEL CODE

WSM12120ZR - 01 M - C - N - 24 DG

Basic model

Directional poppet valve,
metric cavity, Function code ZR

Type

01 = standard

Option

Omission = no option

M = manual override

C = Cartridge only

Body and Ports*

N = NBR (standard)

V = FKM (optional)

Coil voltage

DC: 12 = 12 V DC

24 = 24 V DC

AC: 115 = 115 V AC (internally full wave rectified)

230 = 230 V AC (internally full wave rectified)

other voltages on request

Coil connector

DC: DG = DIN connector to EN175301-803

DT = AMP Junior Timer, 2 pole, radial

DK = Kostal threaded connector M27 x 1

DL = Leadwires (2) - 475mm (18") long

DN = Deutsch connector, 2 pole

AC: AG = DIN connector to EN175301-803

other connection types 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 line bodies

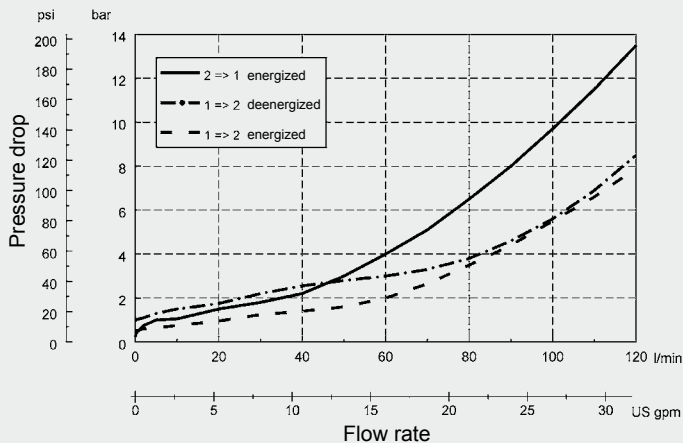
Code	Part No.	Material	Ports
R12120-10X-01	396708	Steel, zinc-plated	G 3/4
R12120-10X-02	396707	Steel, zinc-plated	M27 x 2

Seal kits

Code	Part No.
Seal kit 12120-NBR	3454001
Seal kit 12120-FKM	3454002

PERFORMANCE

Measured at 34 mm²/s
 T_{Oil} = 46 °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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