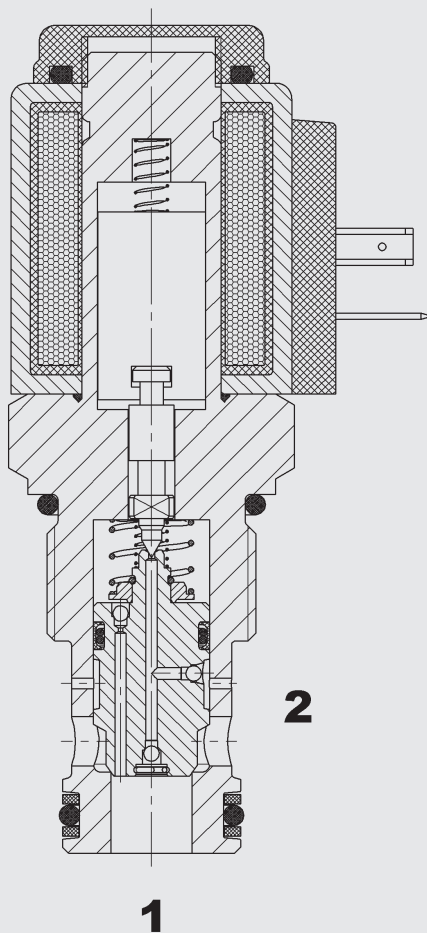


FUNCTION



When the solenoid coil is de-energized, the valve blocks flow in both directions. When energized the valve allows flow in both directions.

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. This applies particularly to valves with piston seals and/or position sensors.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Normally Closed Metric Cartridge Valve – 350 bar WSM12120W-01

FEATURES

- Coil seals protect the solenoid system
- 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*

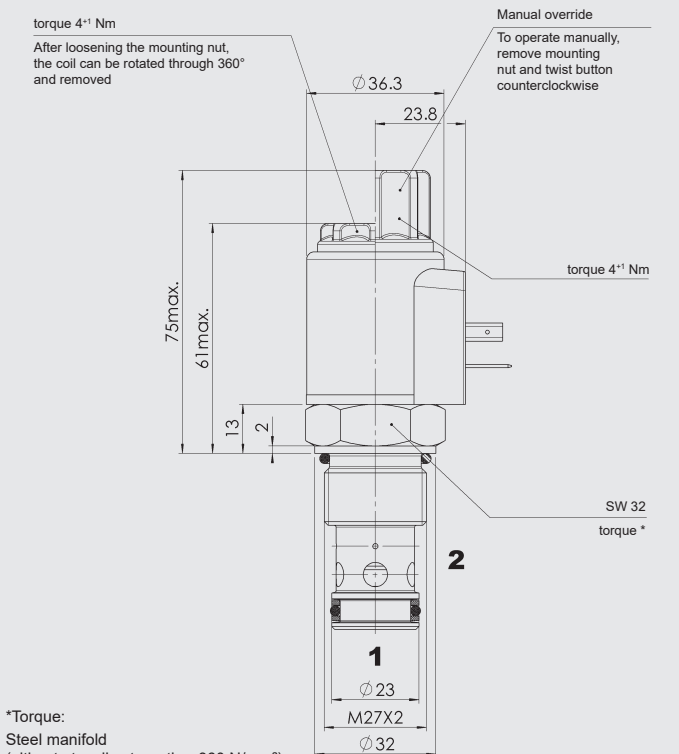
Operating pressure:	max. 350 bar
Nominal flow:	max. 110 l/min
Internal leakage:	leakage-free max. 5 drops/min (0.25 cm ³ /min) at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. + 60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3
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 - 1200 years, according to DIN EN ISO 13849-1
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
Cavity:	12120
Weight:	Valve complete: 0.46 kg Coil only: 0.19 kg

Electrical data

Response time:	energized: approx. 30 ms de-energized: approx. 70 ms substantially extended response times possible at other operating conditions
Type of voltage:	<u>DC</u> : direct current solenoid <u>AC</u> : 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 nominal voltage
Coil duty rating:	Continuous up to max. 115 % of the nominal voltage at 60 °C ambient temperature
Coil type:	Coil...-40-1836

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

DIMENSIONS

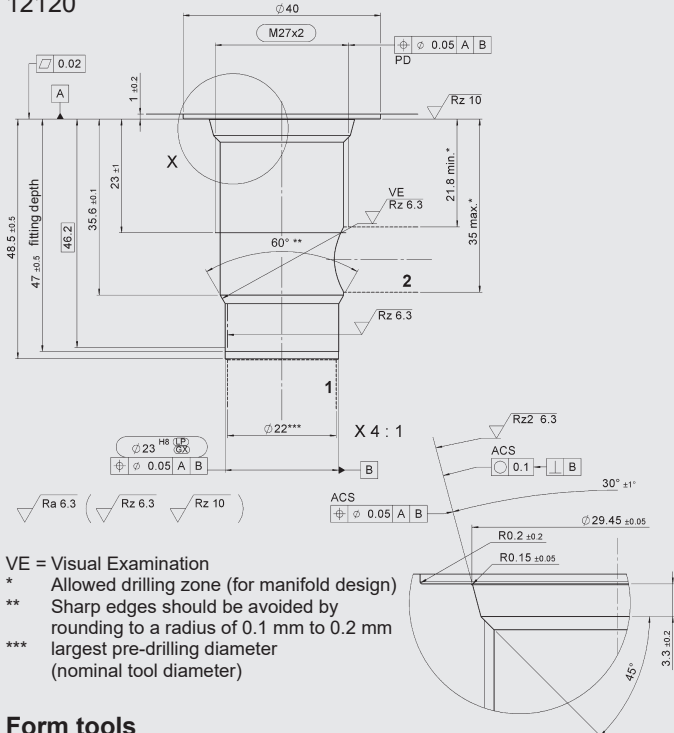


*Torque:
Steel manifold
(ultimate tensile strength < 360 N/mm²):
115 Nm
Aluminium manifold
(ultimate tensile strength < 330 N/mm²):
75 Nm
(tool acc. to DIN EN ISO 6789,
tool type II class A or B)
For further informations see brochure
No. 53.000
"Conditions and instructions for valves"

Millimeter
Subject to technical modifications

CAVITY

12120



Form tools

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

millimeter
subject to technical modifications

MODEL CODE

WSM12120W - 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

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.
WSM12120W-01-C-N-12DG	3354399
WSM12120W-01-C-N-24DG	3354400

Other models on request

* Standard in-line bodies

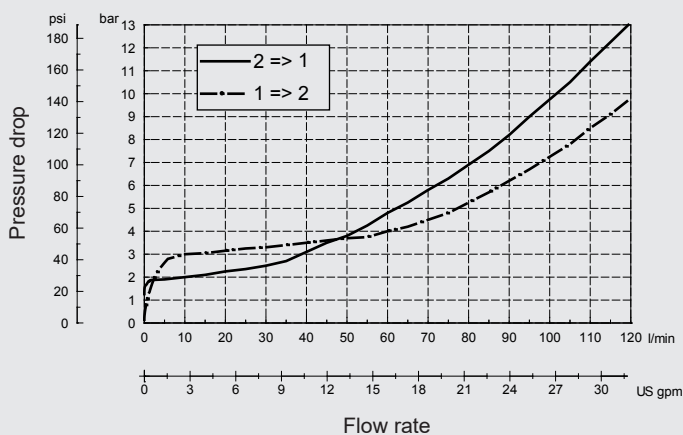
Code	Part No.	Material	Ports	Pressure
R12120-10X-01	396708	Steel, zinc-plated	G3/4"	350 bar
R12120-10X-02	396707	Steel, zinc-plated	M27 x 2	350 bar

Seal kits

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

TYPICAL 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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