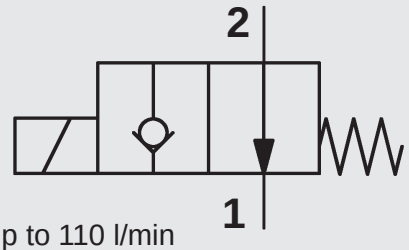
HYDAC INTERNATIONAL

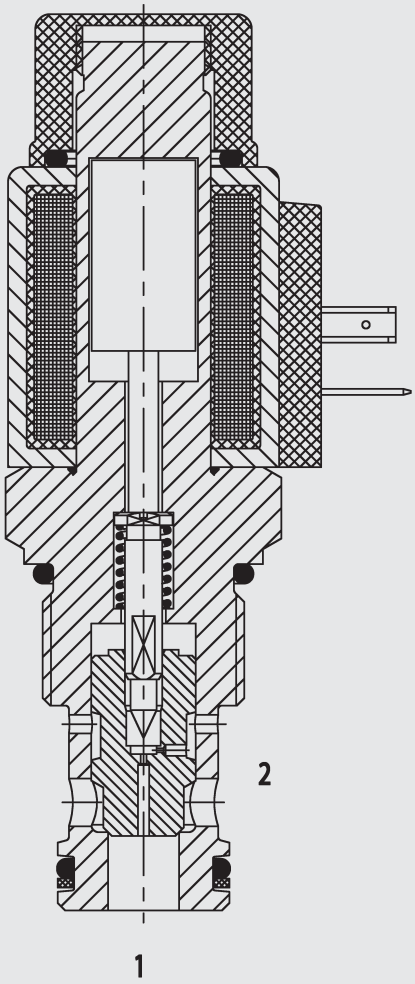
2/2 Solenoid Directional Valve Poppet Type - Pilot Operated Normally Open Metric Cartridge Valve – 350 bar

WSM12120Y



up to 110 l/min
up to 350 bar

FUNCTION



In the de-energized mode, there is free flow through the valve from port 2 to port 1. Flow in the reverse direction is severely restricted.

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

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

GENERAL

- All surfaces zinc-plated and corrosion-proof.
- Minimal wear and long service life due to hardened and ground valve components.
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Rigid design using one-piece body minimises the effect of eccentricities in cavity and maximises reliability.
- Excellent switching performance by high power Hydac solenoid.
- Low pressure drop due to CFD optimised flow-path.

SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	max. 110 l/min	
Internal leakage:	leakage-free	
Media operating temperature range:	min. -20 °C to max. +120 °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 mm²/s to max. 420 mm²/s	
Filtration:	max. permissible contamination level of the operating fluid to ISO 4406 Class 21/19/16 or cleaner	
Installation:	optional	
Materials:	valve body: piston: seals: back-up rings:	high tensile steel hardened and ground steel NBR (standard) FKM (optional) PTFE
Cavity:	12120	
Weight:	Valve complete: Coil only:	0.49 kg 0.19 kg
Response time:	on: approx. 90 ms off: approx. 25 ms	
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 the nominal voltage	
Switch-on time:	100% (continuous) up to max. 115% of the nominal voltage at 60 °C ambient temperature	

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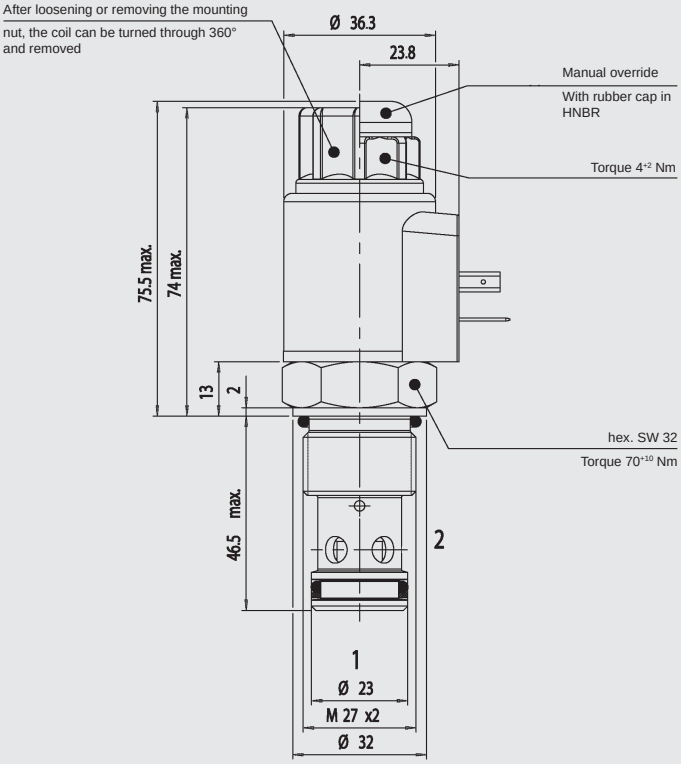
DIMENSIONS



Millimetre
Subject to technical modifications

MODEL CODE

WSM 12120 Y - 01 M - C - N - 24 DG

Designation
Directional poppet valve, metric

Cavity
12120 = 2-way cavity

Function code

Type
01 = standard

Manual override
no details= without manual override
M = with manual override

Body and ports
C = cartridge only

Seals
N = NBR (standard)
V = FKM (optional)

Coil voltage
DC: 12 = 12 V DC
24 = 24 V DC
AC: 115 = 115 V AC (bridge rectifier built into the coil)
230 = 230 V AC (bridge rectifier built into the coil)
other voltages on request

Coil connectors
DC: DG = DIN plug to EN175301-803
DK = KOSTAL threaded connection
DL = plug with 2 flying leads, 0.75 mm²
DN = Deutsch plug
DT = AMP Junior Timer, 2-pole, radial
AC: AG = DIN plug to EN175301-803
other connection types 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

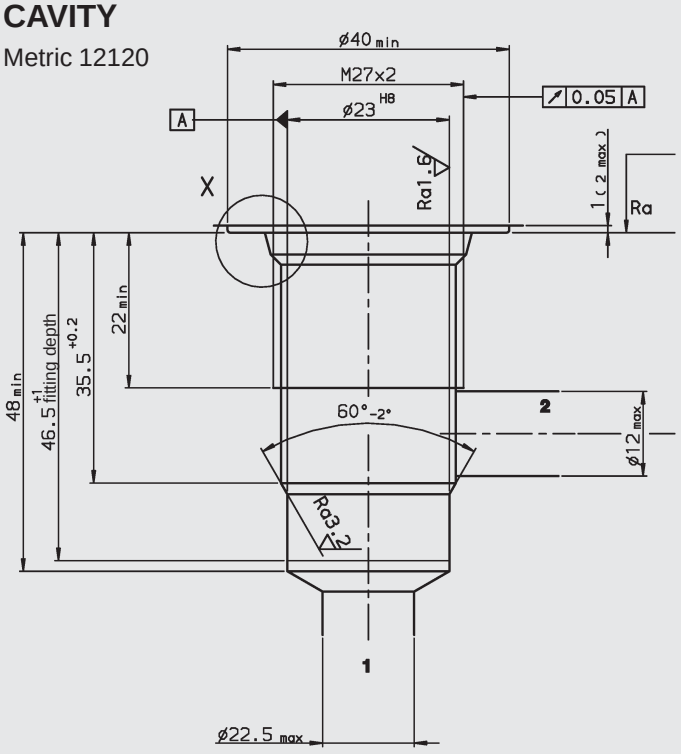
other models on request

Inline connection housings

Code	Part no.	Material	Ports
R12120-10X-01	396708	Steel, zinc-plated	G 3/4
R12120-10X-02	396707	Steel, zinc-plated	M 27 x 2

CAVITY

Metric 12120

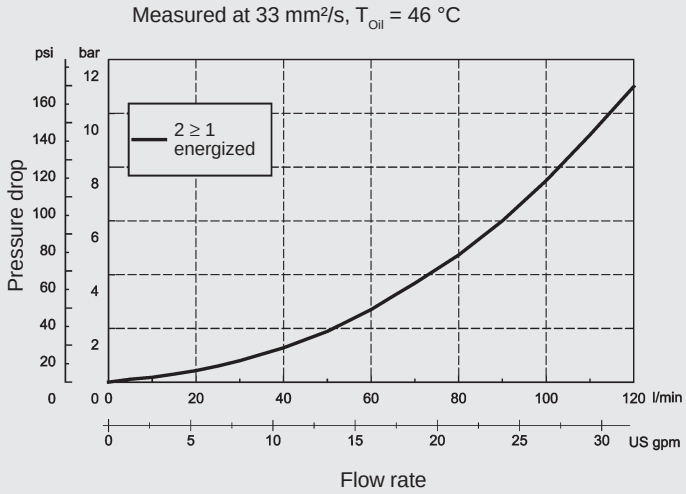


Cartridge form tools

Tool	Part no.
Countersink MK3	172880
Reamer	1014207

Millimetre
Subject to technical modifications

PERFORMANCE



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.
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