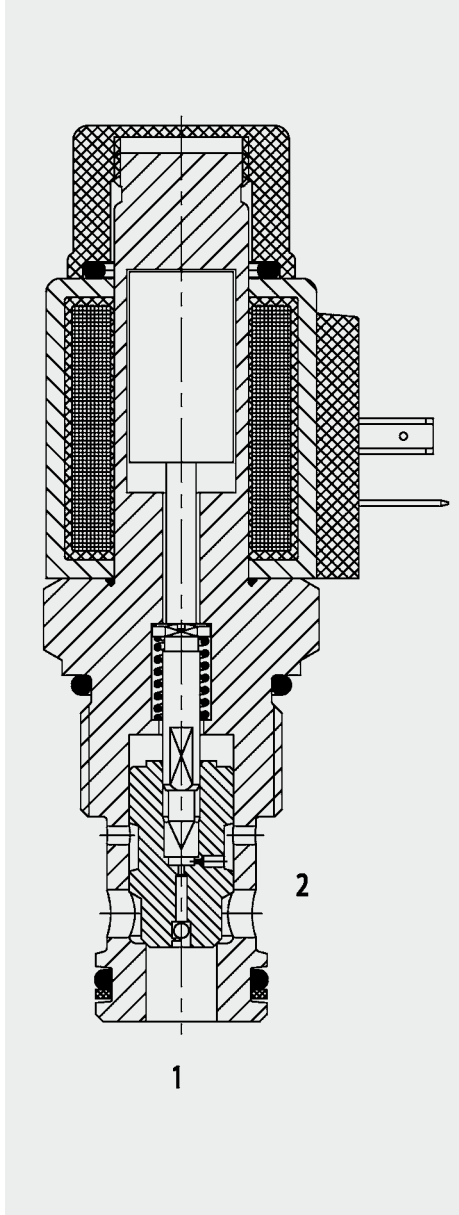


## FUNCTION



In the de-energized mode, there is free flow through the valve in both directions. 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).

## 2/2 Solenoid Directional Valve Poppet Type - Pilot Operated Normally Open (Reverse Flow) Metric Cartridge Valve – 350 bar WSM12120YR

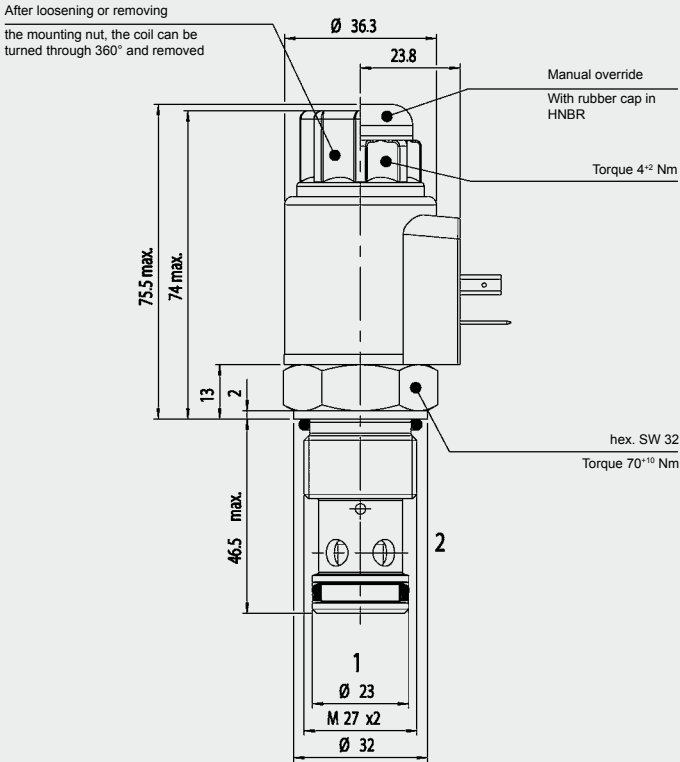
### GENERAL

- 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 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	max. permissible contamination level of the operating fluid to ISO 4406 Class 21/19/16 or cleaner
Installation:	optional
Materials:	valve body: high tensile steel piston: hardened and ground steel seals: NBR (standard) FKM (optional) back-up rings: PTFE
Cavity:	12120
Weight:	Valve complete: 0.49 kg Coil only: 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

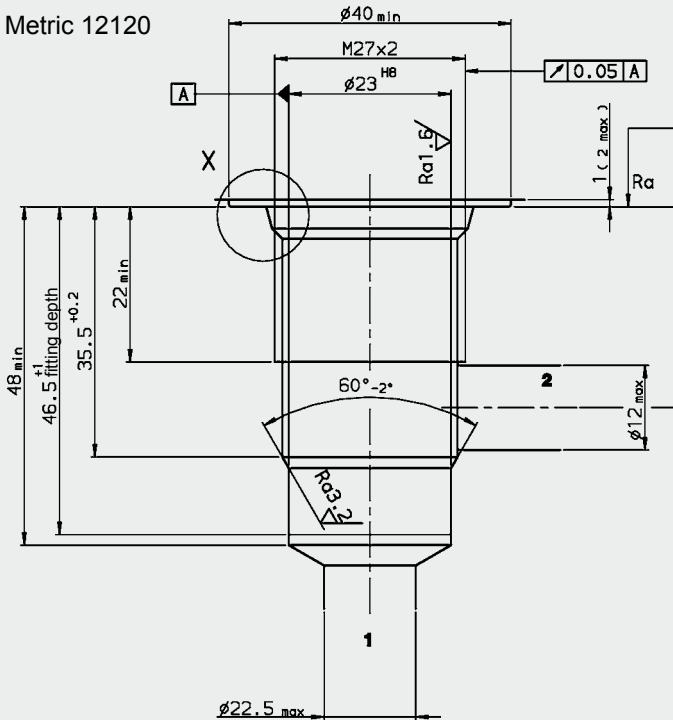
## DIMENSIONS



Millimetre  
Subject to technical  
modifications

## CAVITY

Metric 12120



### Cartridge form tools

Tool	Part no.
Countersink MK3	172880
Reamer	1014207

Millimetre  
Subject to technical  
modifications

## MODEL CODE

**WSM 12120 YR - 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 mm<sup>2</sup>  
 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.
WSM12120YR-01-C-N-12DG	3230846
WSM12120YR-01-C-N-24DG	3230852
WSM12120YR-01-C-N-230AG	3230851

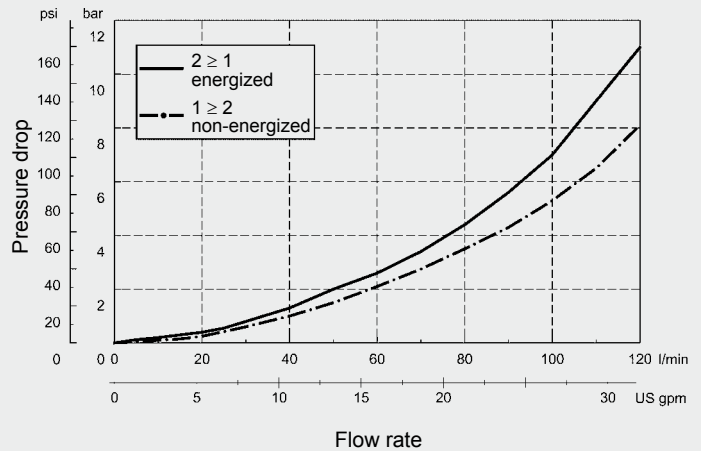
other models on request

### 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

## 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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