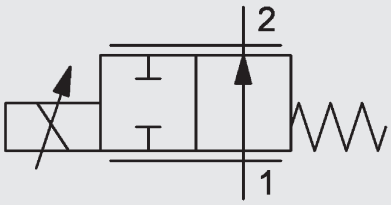
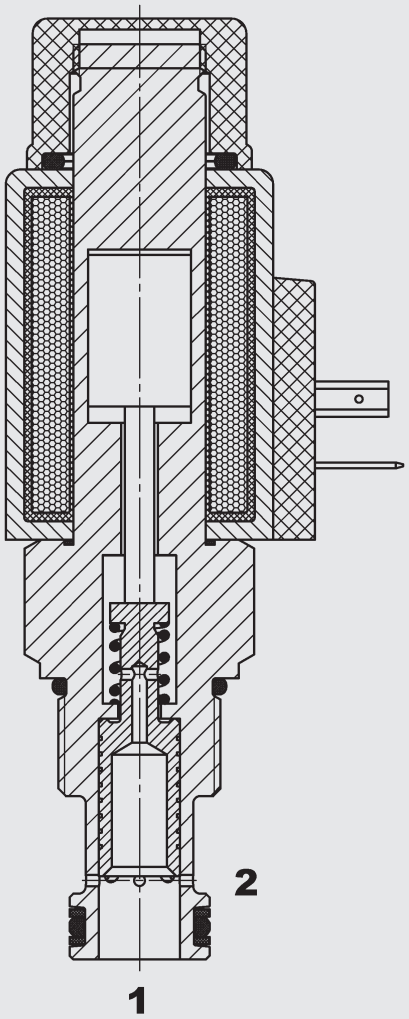


Up to 45 l/min
Up to 280 bar

Proportional Flow Control Valve Spool Type, Direct-Acting, Normally Open Metric Cartridge – 280 bar

PWK10120V-01

FUNCTION



The PWK10120V is a normally open, direct-acting, spool type, 2-way proportional flow control valve. Its function is to smoothly control the flow from port 1 to port 2. The electrical signal reduces or increases an orifice cross-section. Together with a pressure compensator it is used as a full flow regulator, for example to lift and lower variable loads at the same velocity.

FEATURES

- External surfaces zinc-nickel plated and corrosion-proof
- Stepless adjustment of the effective oil flow, depending on the coil current
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Low pressure drop due to CFD-optimized flow path

SPECIFICATIONS*

Operating pressure:	max. 280 bar	
Nominal flow:	max. 45 l/min	
Internal leakage:	max. 0.7 l/min at nominal pressure	
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 mm²/s to max. 420 mm²/s	
Filtration:	Class 19/17/14 according to ISO 4406 or cleaner	
$MTTF_d$:	150 years	
Installation:	No orientation restrictions	
Materials:	Valve body:	high tensile steel
	Spool:	hardened and ground steel
	Seals:	NBR (standard) FKM (optional, temperature range -20 °C to +120 °C)
	Back-up rings:	PTFE
Cavity:	Metric 10120	
Weight:	Valve complete Coil only	0.50 kg 0.22 kg
Electronic data:		
Control currents:	1750 mA; 4.1 Ohm (12 V) / 850 mA; 18 Ohm (24 V)	
Dither frequency:	120 Hz (60 - 250 Hz)	
Hysteresis with dither:	4 - 6 % of I_{nom}	
Repeatability:	≤ 1 % of I_{nom}	
Hysteresis:	≤ 1.5 % of I_{nom}	
Response sensitivity:	≤ 1 % of I_{nom}	
Coil type:	Coil P…-50-1836	

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

MODEL CODE

PWK10120V – 01 M – C – V – 20 – 24 PG – 18.0

Basic model
Proportional flow control valve
Normally open

Type
01 = standard

Manual override
No details = without manual override
M = manual override

Body and ports*
C = cartridge only
Combinations with body on request

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

Flow rate
20 = 20 l/min
Other flow rates on request

Coil voltage
DC: 12 = 12 Volt DC
24 = 24 Volt DC
Other voltages on request

Coil connectors (type… 50-1836)
DC: PG = DIN connector to EN175301-803
PT = AMP Junior Timer, 2-pole, radial
PL = 2 flying leads, 457 mm long
PN = Deutsch connector, 2-pole
Other connectors on request

Coil resistance
4.1 = 4.1 Ω (1750 mA, 12 V)
18.0 = 18.0 Ω (850 mA, 24 V)

Standard models

Model code	Part No.
PWK10120V-01-C-V-20-0 WITHOUT COIL	3187738
PWK10120V-01-C-V-20-24PG-18.0	3601775

***Standard in-line bodies**

Code	Part No.	Material	Ports	Pressure
R10120	395234	Steel, zinc-plated	G 1/2	420 bar

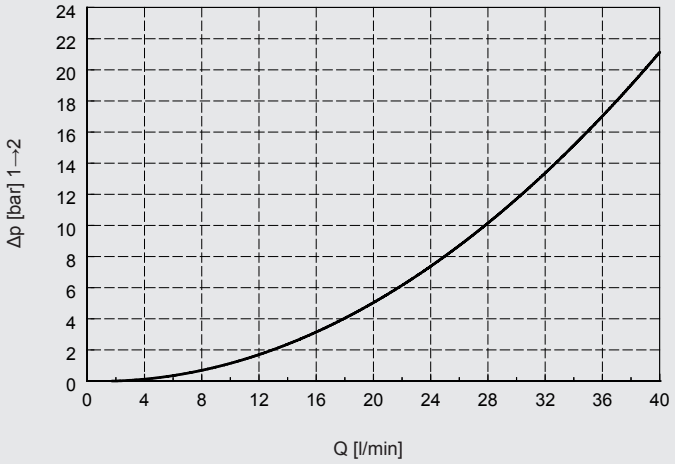
Other line bodies on request

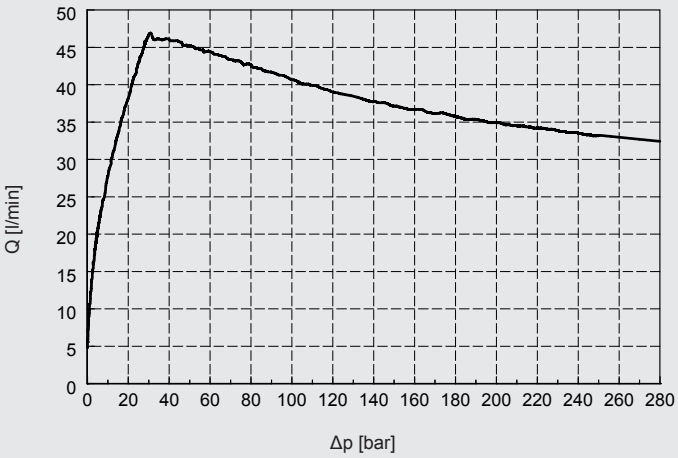
Seal kits

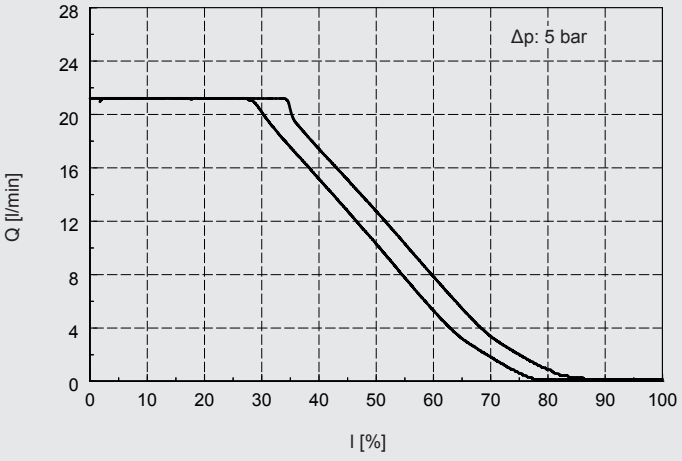
Code	Part No.
SEAL KIT 10120-NBR	3382346
SEAL KIT 10120-FKM	3178281

PERFORMANCE

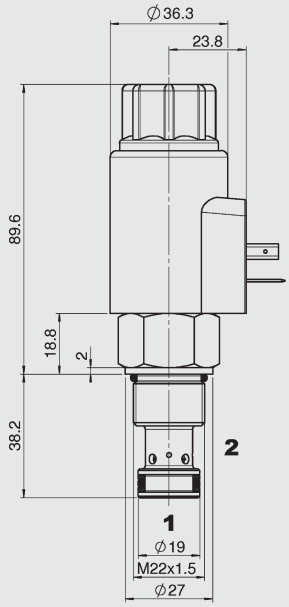
Measured at v = 33 mm²/s , T_{oil} = 46 °C, dither = 120 Hz

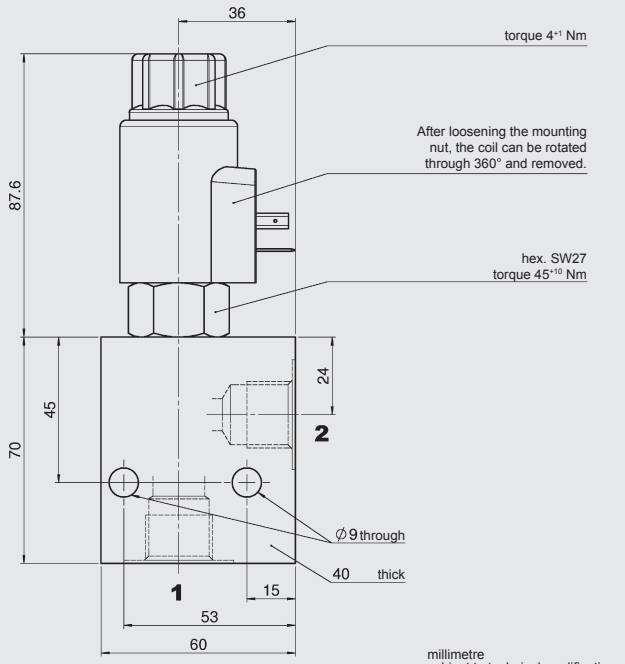






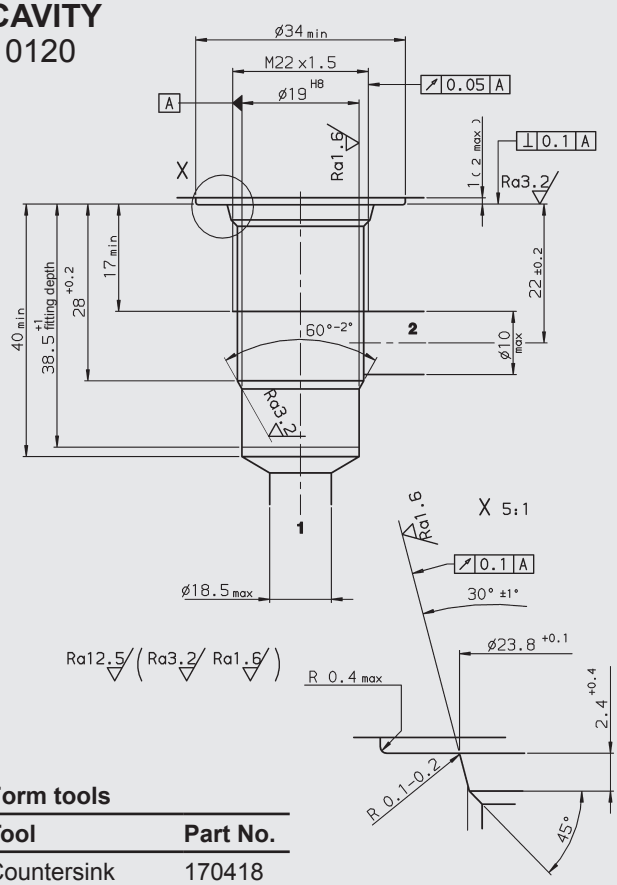
DIMENSIONS





millimetre
subject to technical modifications

CAVITY
10120



Form tools

Tool	Part No.
Countersink	170418
Reamer	1014206

millimetre
subject to technical modifications

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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