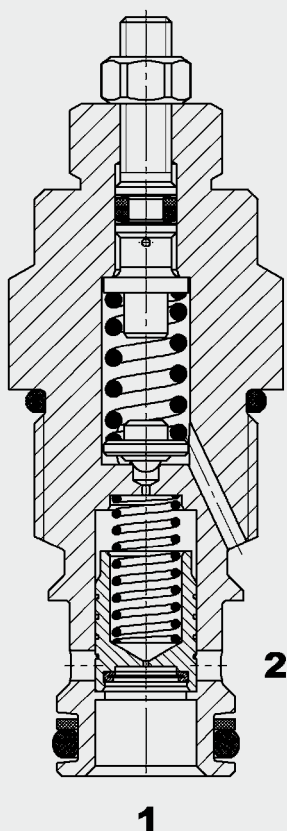


Up to 100 l/min
Up to 350 bar

FUNCTION



The pressure relief valve DB10120A is a pilot-operated, spring-loaded poppet valve. Its function is to relieve pressure in the system. It is normally closed. If the pressure at port 1 exceeds the pre-set spring tension, the pilot stage opens and oil flows from behind the main piston to tank port 2. The resulting pressure differential causes the main piston to move against the return spring and allows oil to flow from port 1 to port 2. This continues until the system pressure is equal to the spring tension and the valve closes again.

Important: Pressures at port 2 are additive to the opening pressure! If the connections are incorrect or if the pressure has been set above the operating pressure, the safety function of the valve is disabled.

Pressure Relief Valve Poppet Type, Pilot-Operated Metric Cartridge – 350 bar DB10120A

FEATURES

- Excellent stability throughout the entire flow range
- Low hysteresis and accurate pressure control
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Low pressure drop by CFD optimized flow path
- Various pressure ranges up to 350 bar

SPECIFICATIONS

Operating pressure:	min. 5 to max. 350 bar max. 100 bar at port 2 (tank)
Nominal flow:	max. 100 l/min
Pressure setting ranges:	5 to 100 bar 5 to 250 bar 5 to 350 bar
Leakage:	Leakage-free
Media operating temperature range:	min. -20 °C to max. +120 °C
Ambient temperature range:	min. -20 °C to max. +120 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
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 years (see "Conditions and instructions for valves" in brochure 5.300)
Installation:	No orientation restrictions
Materials:	Valve body: high tensile steel Piston: hardened and ground steel Seals: FKM (standard) NBR (optional, media temperature range -30 °C to +100 °C)
	Back-up rings: PTFE
Cavity:	10120A
Weight:	0.13 kg

MODEL CODE

DB 10120A - 02 X - 250 V 210

Basic model

Pressure relief valve

Cavity to ISO

10120A = 2-way, metric

Type

02 = standard, zinc-plated

Series

(determined by manufacturer)

Pressure setting range

100 = 5 to 100 bar

250 = 5 to 250 bar

350 = 5 to 350 bar

Other pressure ranges on request

Type of adjustment

V = Allen head

P = can be lead-sealed, adjustable with tool

Other types of adjustment on request

Opening pressure setting

No details = no setting, spring relaxed

210 = opening pressure in bar, factory-set

Other pressure settings on request

(Pre-set versions are factory-set at a flow rate of 6 l/min)

Standard models

Model code	Part No.
DB10120A-02X-100V	561040
DB10120A-02X-250V	561041
DB10120A-02X-350V	561076

Other models on request

Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R10120A-01X-01	395232	Steel, zinc-plated	G1/2	420 bar
R10120A-01X-02	395233	Steel, zinc-plated	M 22 x 1.5	420 bar

Other line bodies on request

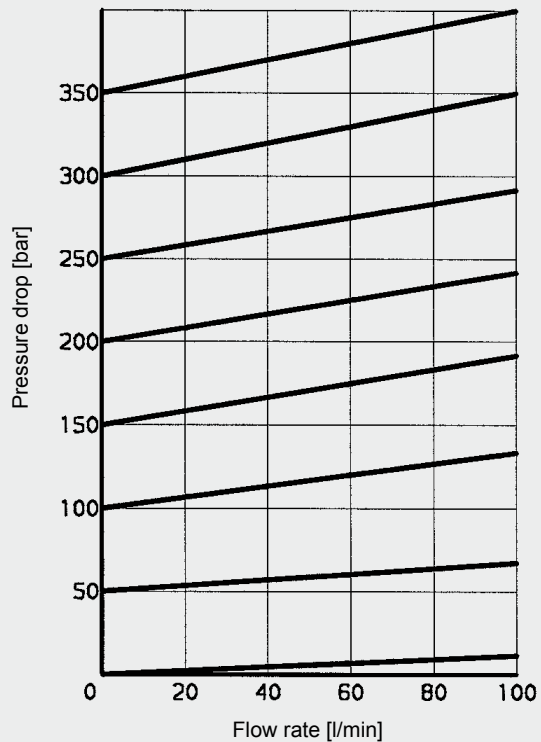
Seal kits

Code	Material	Part No.
SEAL KIT DB10120A	NBR	3085499
SEAL KIT DB10120A	FKM	560222

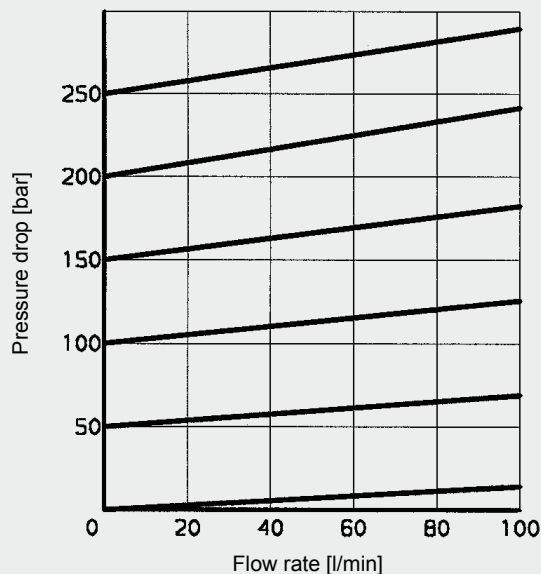
PERFORMANCE

Measured at $v = 36 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 50^\circ\text{C}$

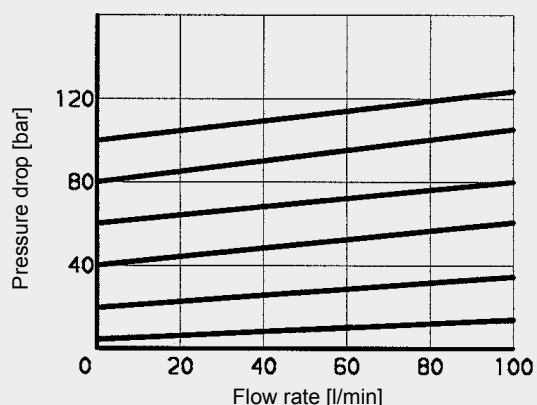
350 V



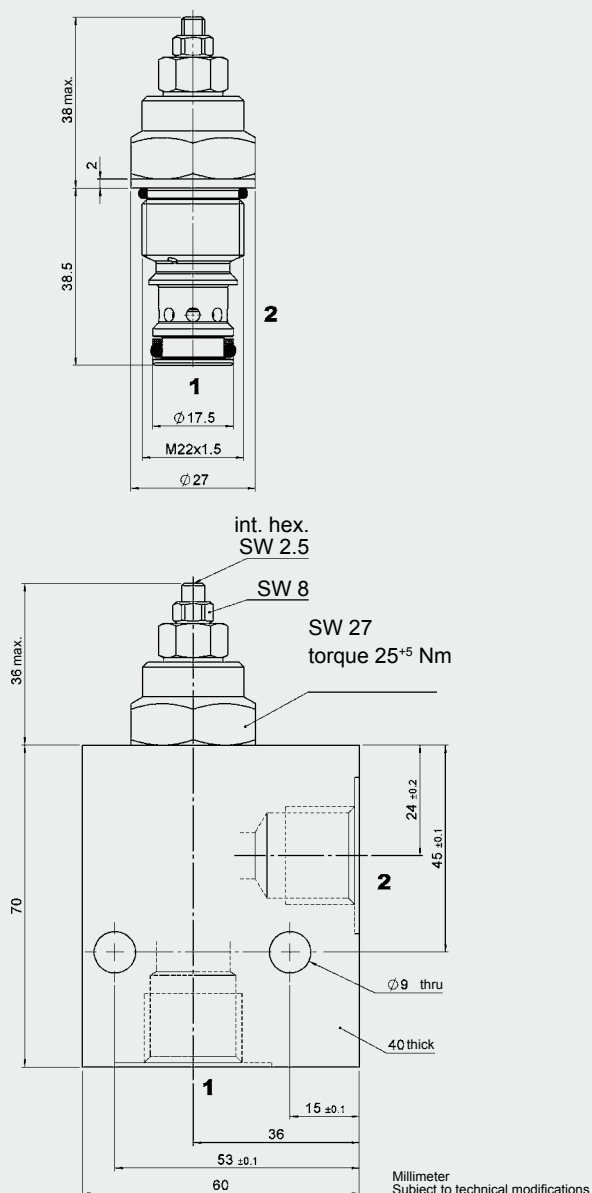
250 V



100 V

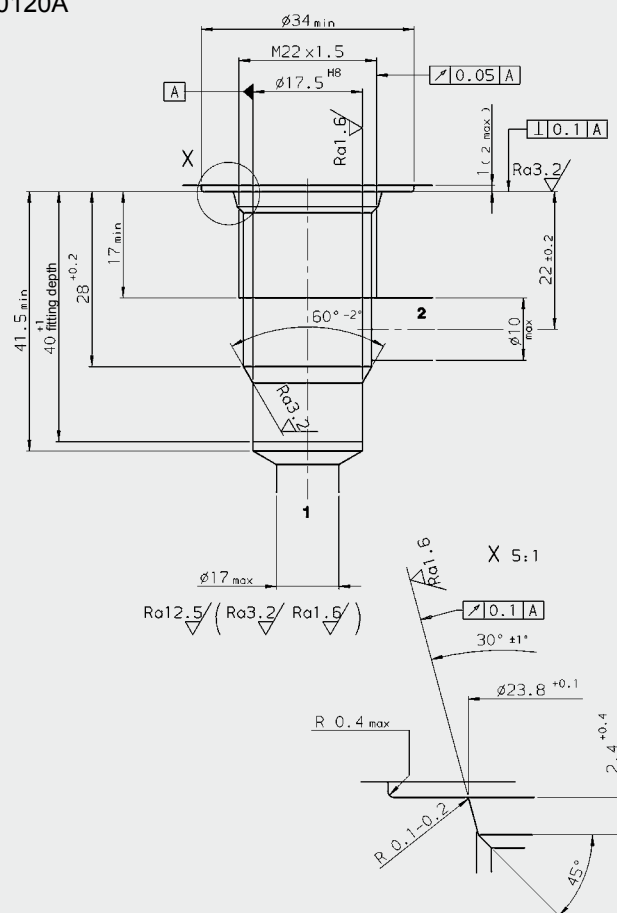


DIMENSIONS



CAVITY

10120A



Form tools

Tool	Part No.
Countersink HE25	166284
Reamer MK2	166285
Tap	1002627
Plug gauge	166286

Millimeter
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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