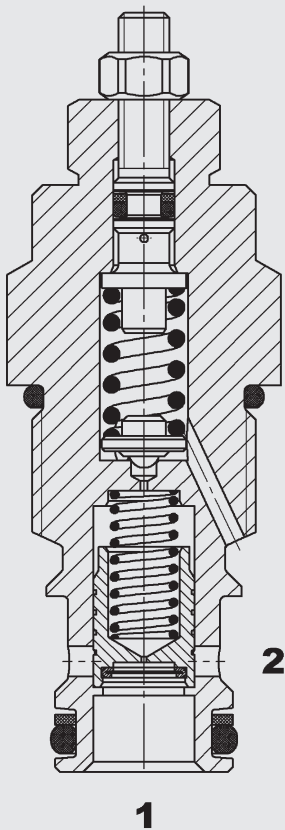


up to 100 l/min
up to 350 bar

FUNCTION



The pressure relief valve is a pilot-operated, spring-loaded spool type 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 Spool type, pilot operated Metric Cartridge – 350 bar DB10120A-02

FEATURES

- Various pressure ranges up to 350 bar
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h Salt spray test)

SPECIFICATIONS*

Operating pressure:	min. 5 to max. 350 bar
Tank pressure (port 2):	max. 100 bar
Nominal flow:	max. 100 l/min
Pressure setting ranges:	5 to 100 bar 5 to 250 bar 5 to 350 bar
Leakage:	< 0,5 l/min at 80% of setting pressure
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, 2 and 3
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s
Filtration: (according to ISO 4406)	≤ 210 bar: min. class 20/18/15 > 210 bar: min. class 19/17/14
MTTF _d :	150 - 1200 years, according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Materials:	Valve body: 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

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

MODEL CODE

DB10120A - 02 X - C - V - 250 V 210

Basic model

Pressure relief valve, metric

Type

02 = standard, zinc-plated

Series

determined by manufacturer

Body and ports

C = cartridge only

Sealing material

N = NBR

V = FKM

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

210 = opening pressure in bar, factory-set

No details = no setting, spring relaxed

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"	350 bar
R10120A-01X-02	395233	Steel, zinc-plated	M22x1.5	350 bar

Other line bodies on request

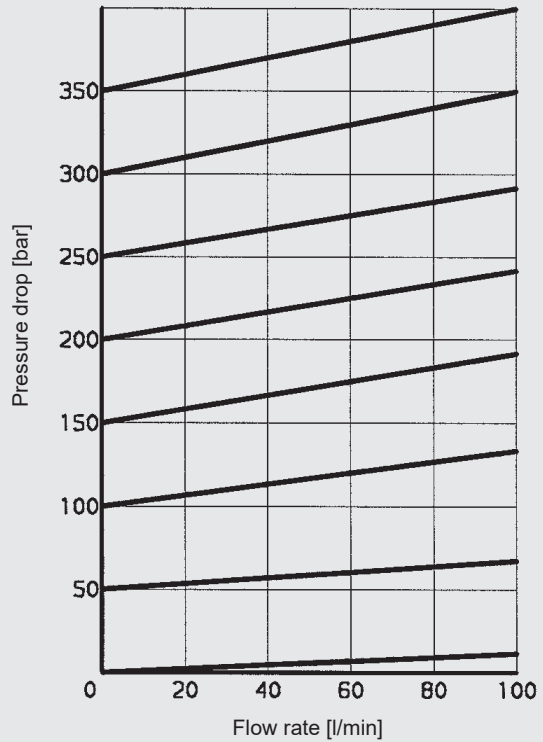
Seal kits

Code	Material	Part No.
FS METRISCH 101..A/N	NBR	3651583
FS METRISCH 101..A/V	FKM	3651584

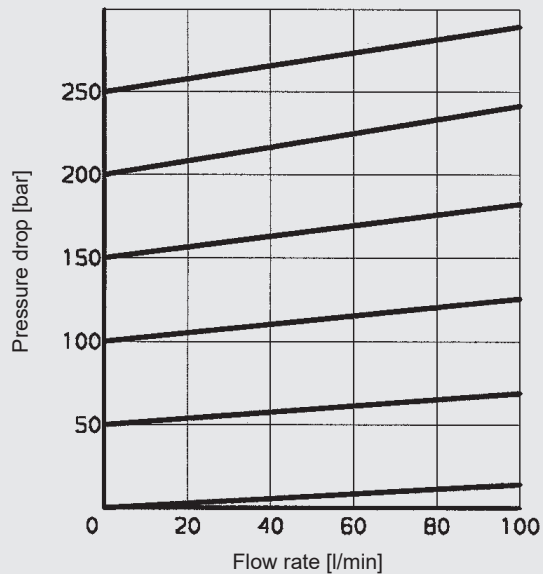
TYPICAL PERFORMANCE

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

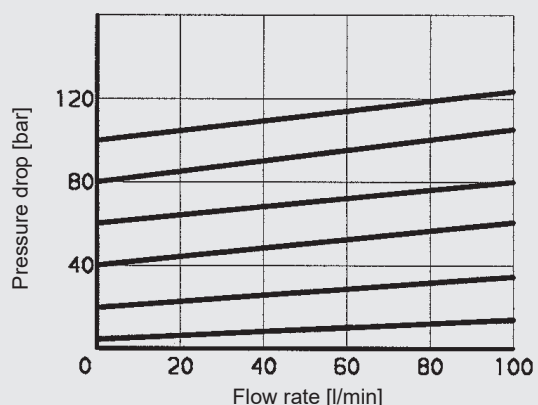
350 V



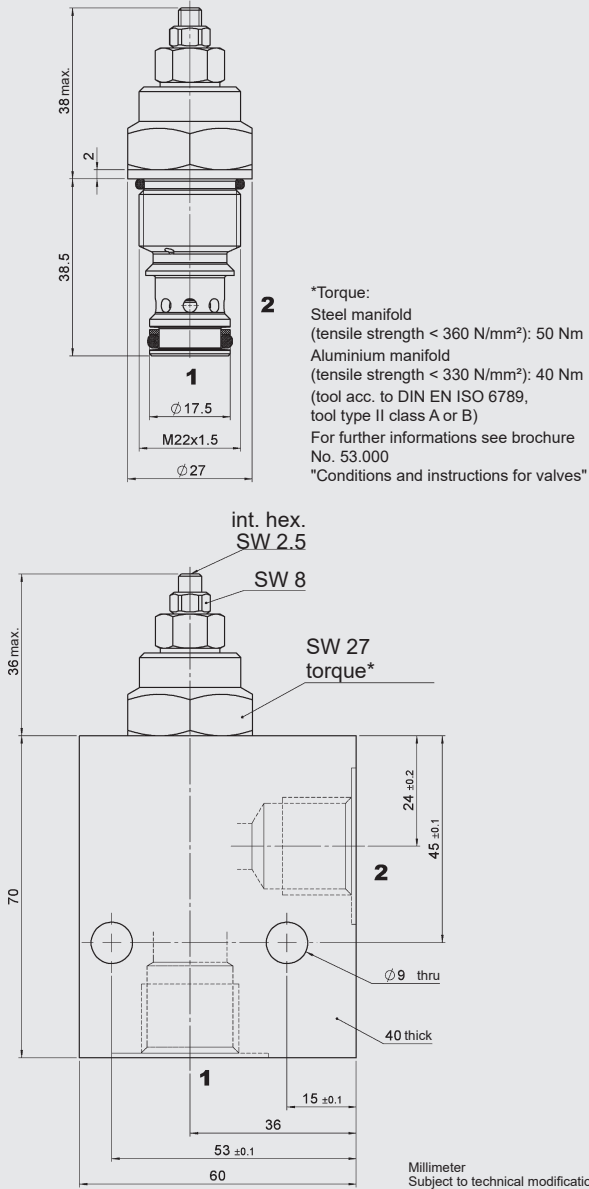
250 V



100 V

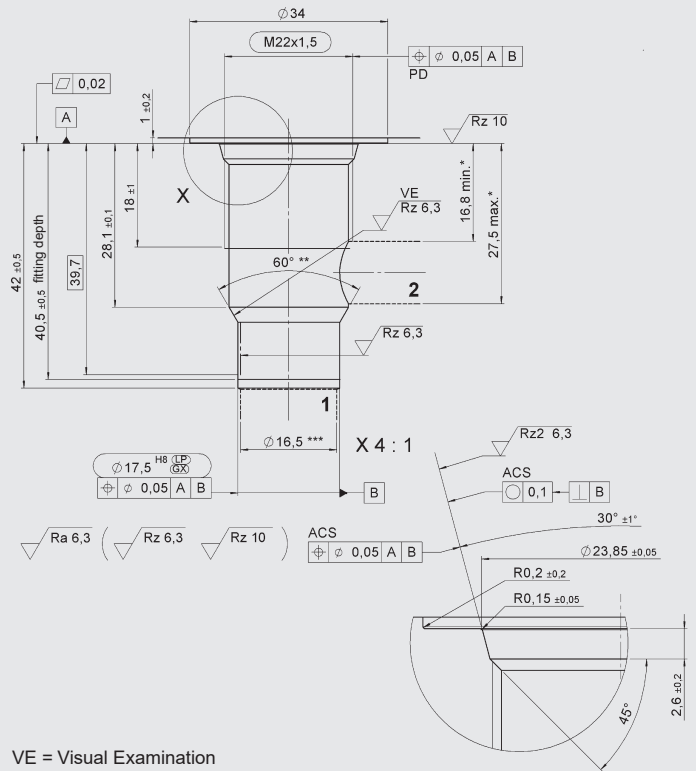


DIMENSIONS



CAVITY

10120A



VE = Visual Examination

* Allowed drilling zone (for manifold design)

** Sharp edges should be avoided by rounding to a radius of 0.1 mm to 0.2 mm

*** largest pre-drilling diameter (nominal tool diameter)

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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