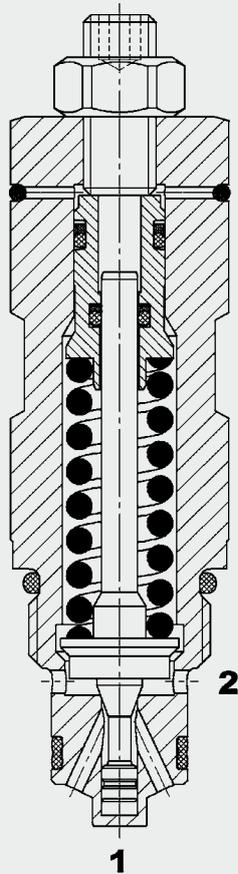


Up to 30 l/min  
Up to 350 bar

## FUNCTION



The pressure relief valve DB4E-25X is a direct-acting, spring-loaded poppet valve with atmospheric relief. The spring exerts a force on the poppet and presses it on the valve seat. On the opposite side, the system pressure exerts force on port 1 of the valve. If the hydraulic pressure is below the pre-set spring tension, the valve is closed. When the hydraulic force exceeds the pre-set spring tension the valve opens and allows flow to tank via port 2. This continues until the system pressure is equal to the spring tension and the valve closes again.

The pressures at port 2 have practically no effect on the opening pressure as the valve is vented to atmosphere in the spring chamber.

To ensure that stable operation is maintained, the poppet is securely located in the damping piston which produces a damping force, opposing the direction of movement, and this has a stabilizing effect.

## FEATURES

- Excellent stability throughout flow range
- Low hysteresis and accurate pressure control
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground valve components to ensure minimal wear and extended service life
- Adjustable throughout flow range
- Various pressure ranges up to 350 bar
- Pressure-resistant up to 350 bar at port 2

## SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	30 l/min
Pressure setting ranges:	20 to 350 bar
Leakage:	leakage-free (max. 5 drops $\hat{=}$ 0,25 cm <sup>3</sup> /min at 350 bar)
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 <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTF <sub>d</sub> :	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) Seal ring: PU
Cavity:	06020
Weight:	0.24 kg

## MODEL CODE

**DB4E - 25 X - 350 F 315**

### Basic model

Pressure relief valve, metric

### Type

25 = standard with atmospheric relief

### Series

(determined by manufacturer)

### Pressure setting range

350 = up to 350 bar

Other pressure ranges on request

### Type of adjustment

V = Allen head (standard)

F = fixed setting, cannot be adjusted

P = can be lead-sealed, adjustable with tool

M = maximum pressure relief, adjustable with tool

Other types of adjustment on request

### Opening pressure setting

No details = no setting, spring relaxed

315 = opening pressure in bar, factory pre-set,

Setting on request

## Standard models

Code	Part No.
DB4E-25X-350V	3475344

Other models on request

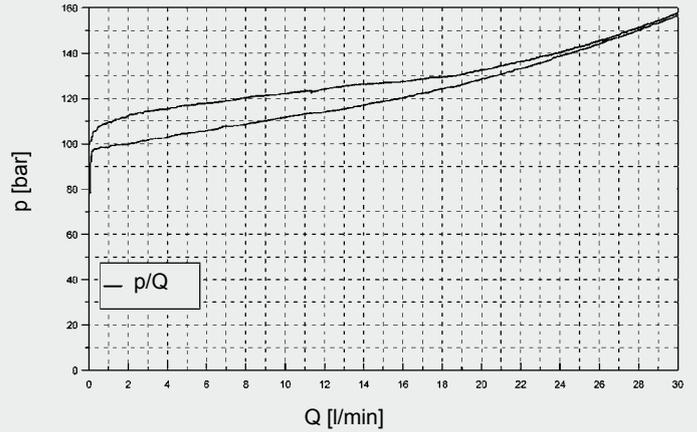
## Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
R06020-01X-01	275266	Steel, zinc-plated	G 3/8	420 bar

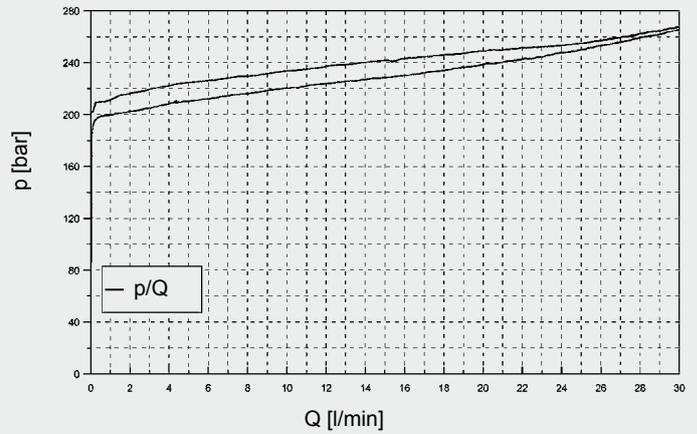
Other line bodies on request

## PERFORMANCE

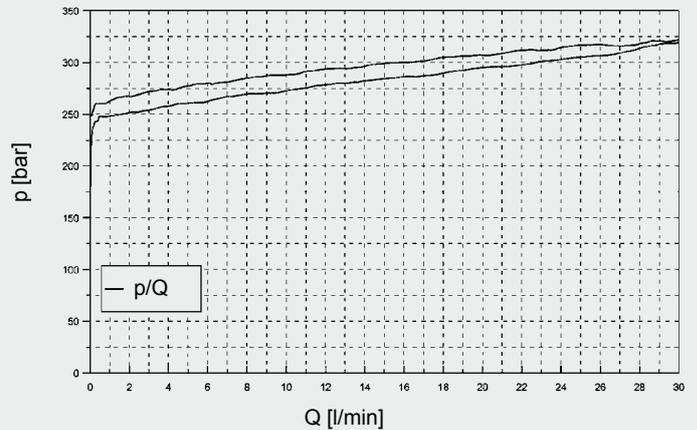
$p_o = 100$  bar, tank pressure = 100 bar,  $\nu = 33$  mm<sup>2</sup>/s



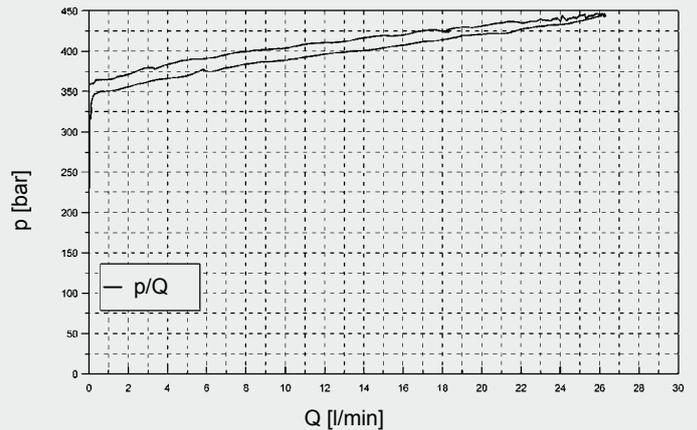
$p_o = 200$  bar, tank pressure = 200 bar,  $\nu = 33$  mm<sup>2</sup>/s



$p_o = 250$  bar, tank pressure = 250 bar,  $\nu = 33$  mm<sup>2</sup>/s



$p_o = 350$  bar, tank pressure = 350 bar,  $\nu = 33$  mm<sup>2</sup>/s



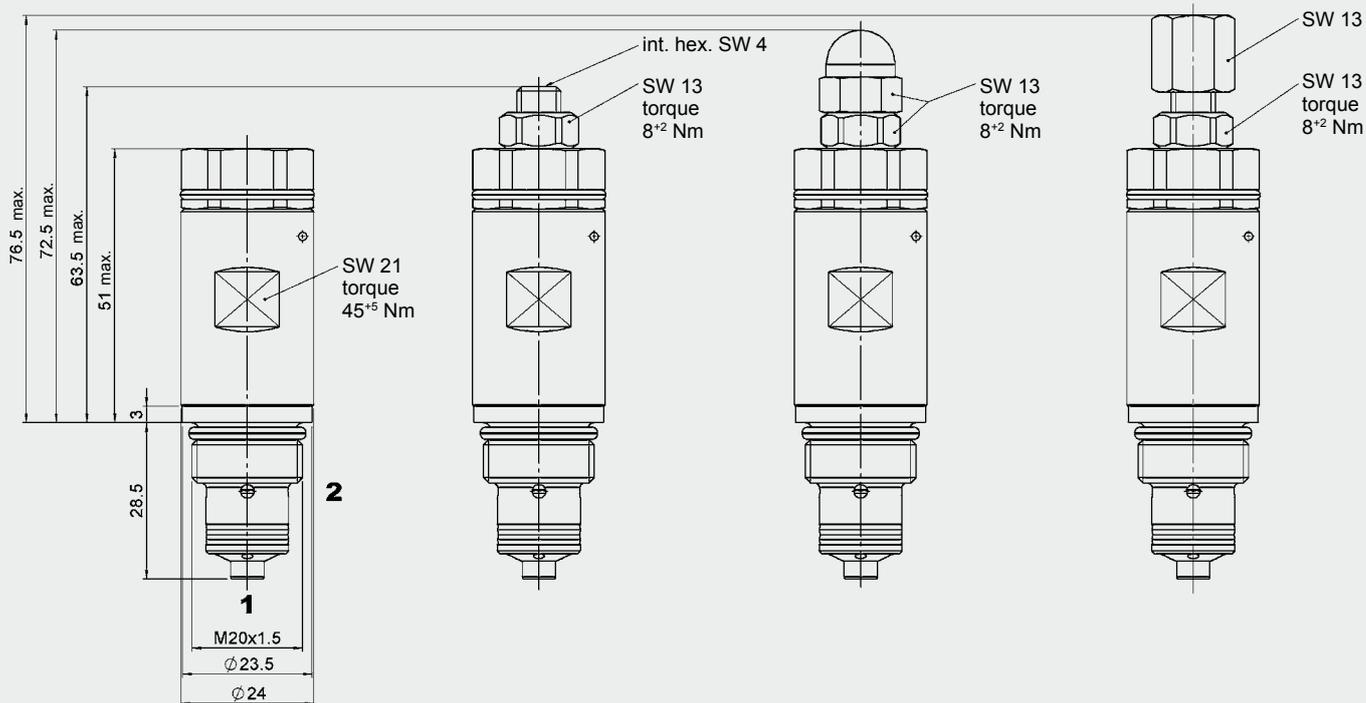
# DIMENSIONS

Adjustment type F

Adjustment type V

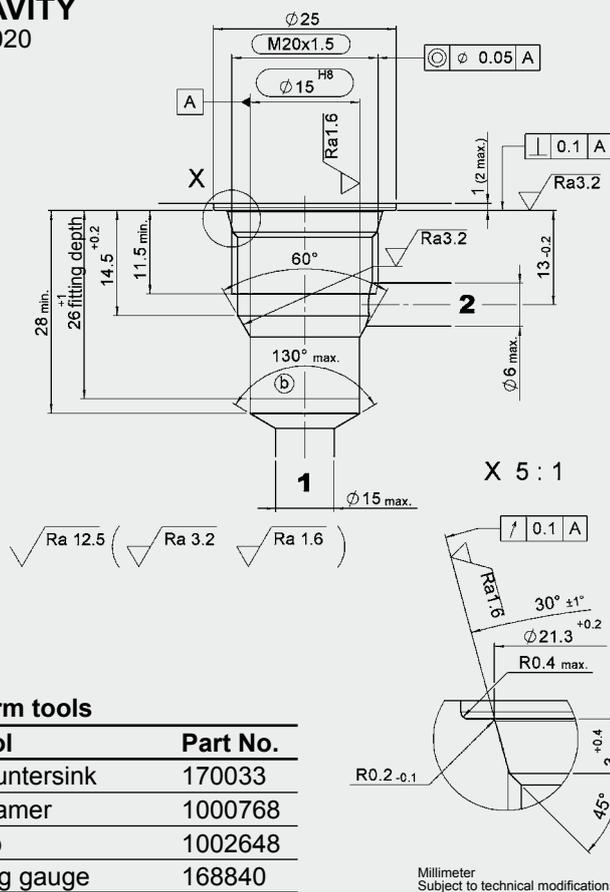
Adjustment type P

Adjustment type M



Millimeter  
Subject to technical modifications

## CAVITY 06020



Millimeter  
Subject to technical modifications

### Form tools

Tool	Part No.
Countersink	170033
Reamer	1000768
Tap	1002648
Plug gauge	168840

### 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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