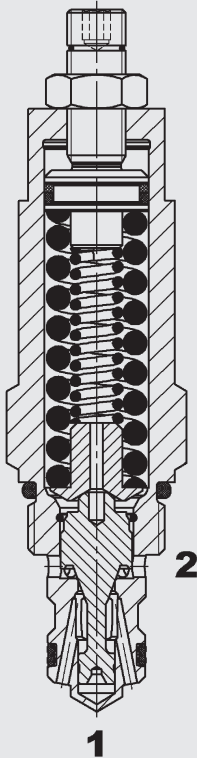


Up to 60 l/min  
Up to 350 bar

## FUNCTION



The pressure relief valve DB10-01 is a direct-acting, spring-loaded poppet valve. Its function is to relieve pressure in the system. 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. Only if the hydraulic force exceeds the pre-set spring tension does the valve open and flow is diverted to tank via 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!

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

## 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 due to CFD optimized flow path
- Adjustable throughout the entire pressure range
- Various pressure ranges up to 345 bar

## SPECIFICATIONS\*

Operating pressure:	max. 350 bar max. 150 bar at port 2 (tank)
Nominal flow:	60 l/min
Setting pressure ranges:	Up to 90 bar Up to 236 bar Up to 345 bar
Leakage:	Leakage-free, max. 5 drops/min
Media operating temperature range:	min. -30 °C to max. +100 °C
Ambient temperature range:	min. -30 °C to max. +100 °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>a</sub> :	150 years
Installation:	No orientation restrictions
Materials:	Valve body: free-cutting steel Poppet: hardened and ground steel Seals: NBR (standard) FKM (optional, temperature range -20 °C to +120 °C) Back-up rings: PTFE
Cavity:	FC10-2
Weight:	0.25 kg

\* see "Conditions and Instructions for Valves" in brochure 53.000

## MODEL CODE

**DB10 - 01 - C - N - 130 V 130**

### Basic model

Pressure relief valve, UNF

### Type

01 = standard

### Body and ports\*

C = cartridge type

See table for in-line body versions

### Seals

N = NBR (standard)

V = FKM (optional)

### Setting pressure ranges

130 = up to 90 bar (1300 PSI)

340 = up to 236 bar (3400 PSI)

500 = up to 345 bar (5000 PSI)

Other pressure ranges on request

### Type of adjustment

V = Allen head (standard)

F = factory preset, non adjustable

Other types of adjustment on request

### Opening pressure setting

No details = no setting, spring relaxed

130 = factory-set opening pressure, on request

## Standard models

Model code	Part No.
DB10-01-C-N-130V	3170442
DB10-01-C-N-340V	3170443
DB10-01-C-N-500V	3170444

Other models on request

## \*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH102-SB4	3037594	Steel, zinc-plated	G 1/2	420 bar
FH102-AB4	3037777	Aluminium, anodized	G 1/2	210 bar

Other line bodies on request

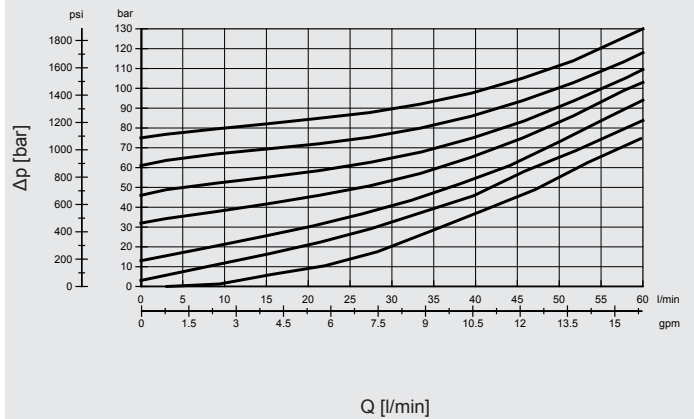
## Seal kits

Code	Material	Part No.
FS102-N Seal Kit	NBR	3033872
FS102-V Seal Kit	FKM	3051757

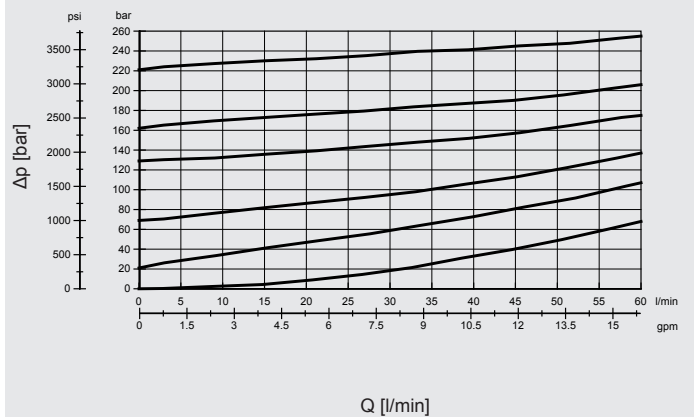
## PERFORMANCE

Measured at  $v = 33 \text{ mm}^2/\text{s}$ ,  $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$

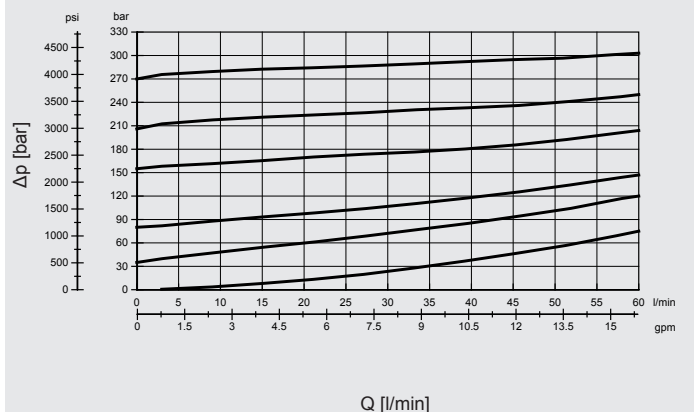
Setting pressure range 1300 psi (90 bar)



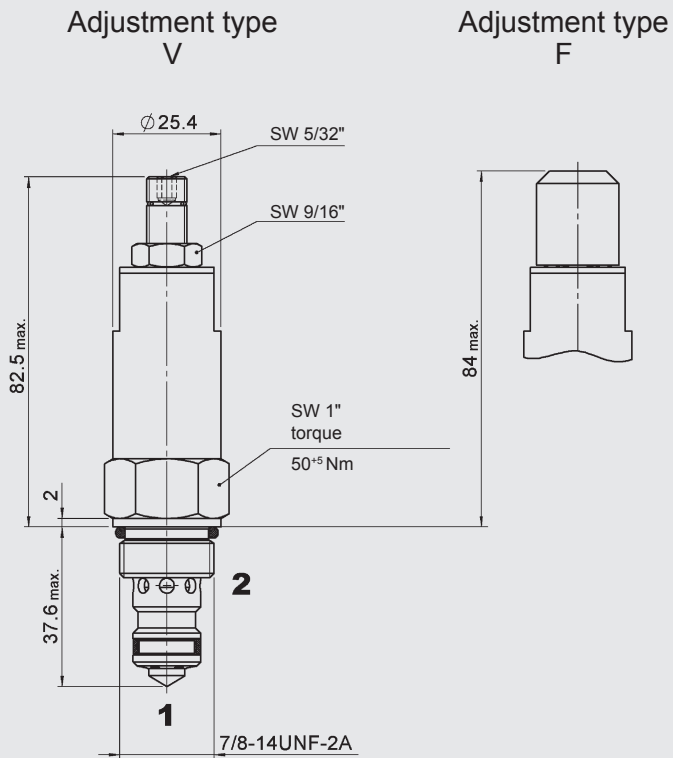
Setting pressure range 3400 psi (236 bar)



Setting pressure range 5000 psi (345 bar)

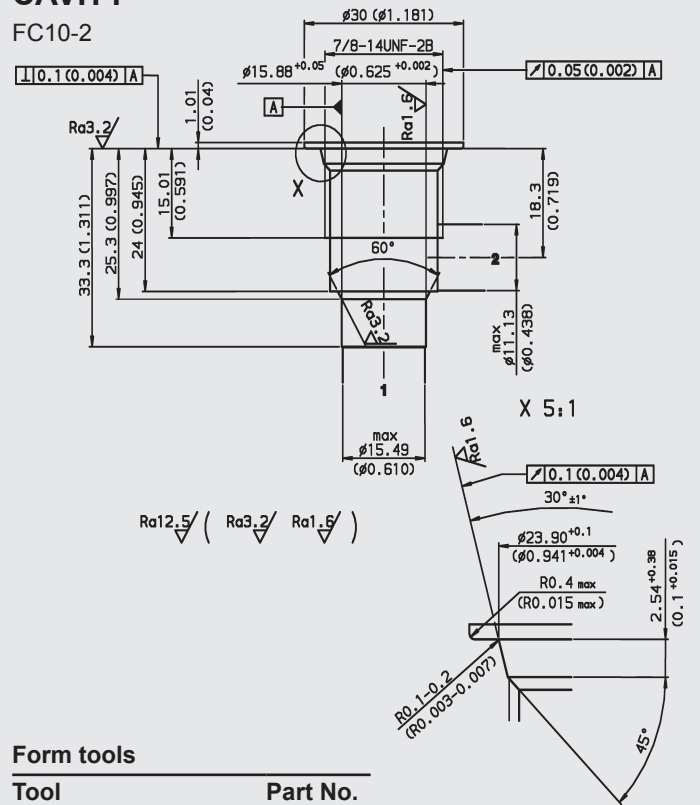


## DIMENSIONS



## CAVITY

FC10-2



### Form tools

Tool	Part No.
Countersink FC10-2	176379
Reamer FC10-2	165706

### 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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