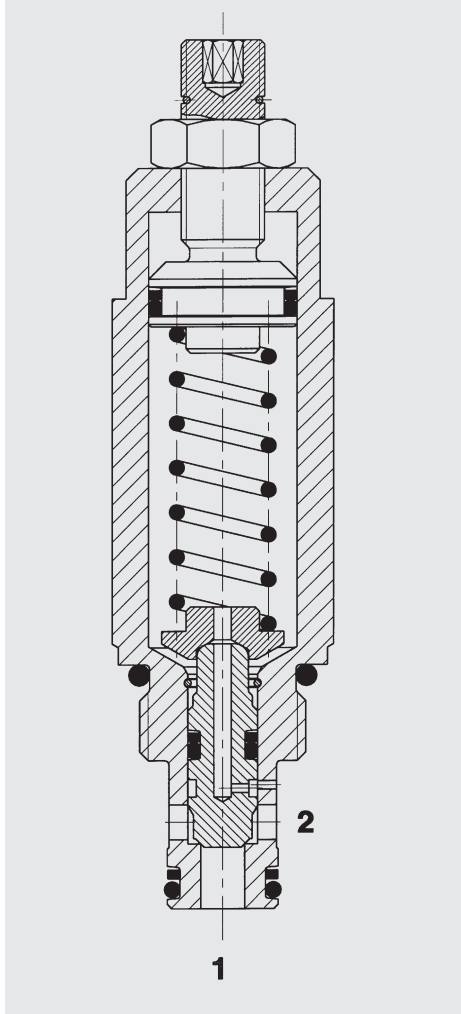


FUNCTION



The pressure relief valve 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. 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. Attention: A pressure at port 2 increases the pre-set pressure!

Pressure Relief Valve Poppet Type, Direct-Acting UNF Cartridge – 420 bar DB08A-01

FEATURES

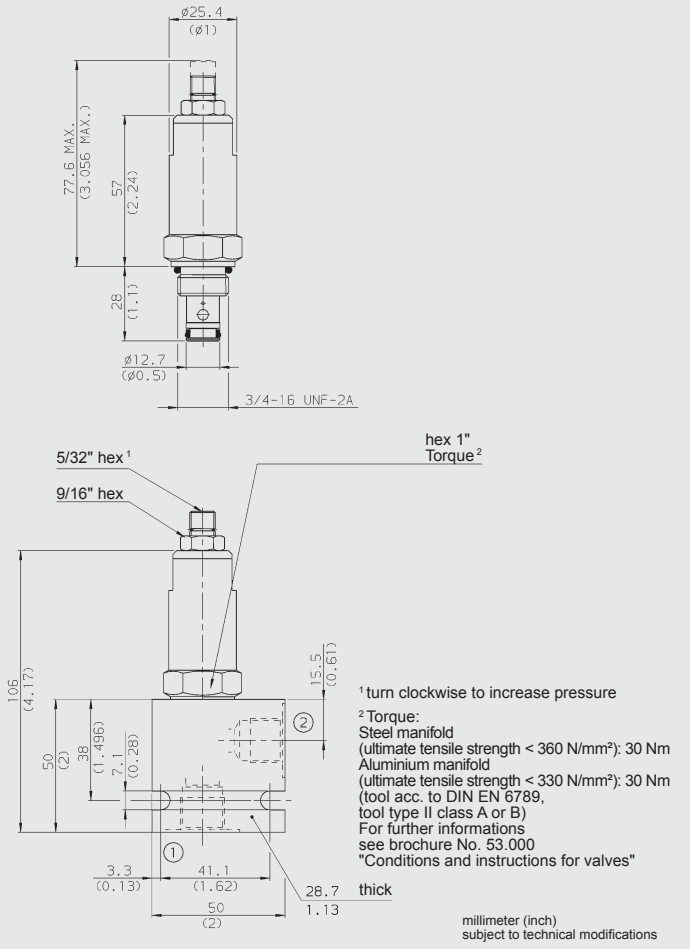
- Quick response
- Max. stroke limiter
- Variety of pressure ranges up to 420 bar
- Adjustable throughout flow range
- Compact design
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h Salt spray test)

SPECIFICATIONS*

Operating pressure:	max. 420 bar
Tank pressure:	max. 100 bar
Nominal flow:	max. 38 l/min
Operating pressure ranges:	5 to 35 bar 8 to 62 bar 10 to 124 bar 10 to 228 bar 20 to 345 bar 25 to 420 bar
Leakage:	leak-free max. 5 drops/min (0.25 cm ³ /min) at 80% of setting pressure
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, 2 and 3
Viscosity range:	min. 7.4 mm ² /s to max. 420 mm ² /s
Filtration:	Class 21/19/16 to ISO 4406 or cleaner
MTTF _d :	150 years
Installation:	No orientation restrictions
Materials:	Valve body: free-cutting steel Poppet: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Back-up rings: PTFE
Cavity:	FC08-2
Weight:	0.22 kg

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

DIMENSIONS



MODEL CODE

DB08A-01 - C - N - 330 V 300

Basic model

Pressure relief valve, UNF

Body and ports*

C = Cartridge only

SB3 = G3/8 ports, steel body

AB3 = G3/8 ports, aluminium body

Seals

N = NBR (standard)

V = FKM

Setting pressure range

050 = 5 to 35 bar (500 PSI)

090 = 8 to 62 bar (900 PSI)

180 = 10 to 124 bar (1800 PSI)

330 = 10 to 228 bar (3300 PSI)

500 = 20 to 345 bar (5000 PSI)

600 = 25 to 420 bar (6000 PSI)

Other pressure ranges on request

Adjustment option

V = Allen head (hex 5/32")

H = Knob adjustment

F = Factory preset, non-adjustable

Opening pressure setting

No details = no setting, spring relaxed

300 = opening pressure in bar pre-set by manufacturer

Setting on request

Standard models

Model code	Part No.
DB08A-01-C-V-50V	560416
DB08A-01-C-V-90V	560417
DB08A-01-C-V-180V	560418
DB08A-01-C-V-330V	560419
DB08A-01-C-V-500V	560420
DB08A-01-C-V-600V	560421

*Standard in-line bodies

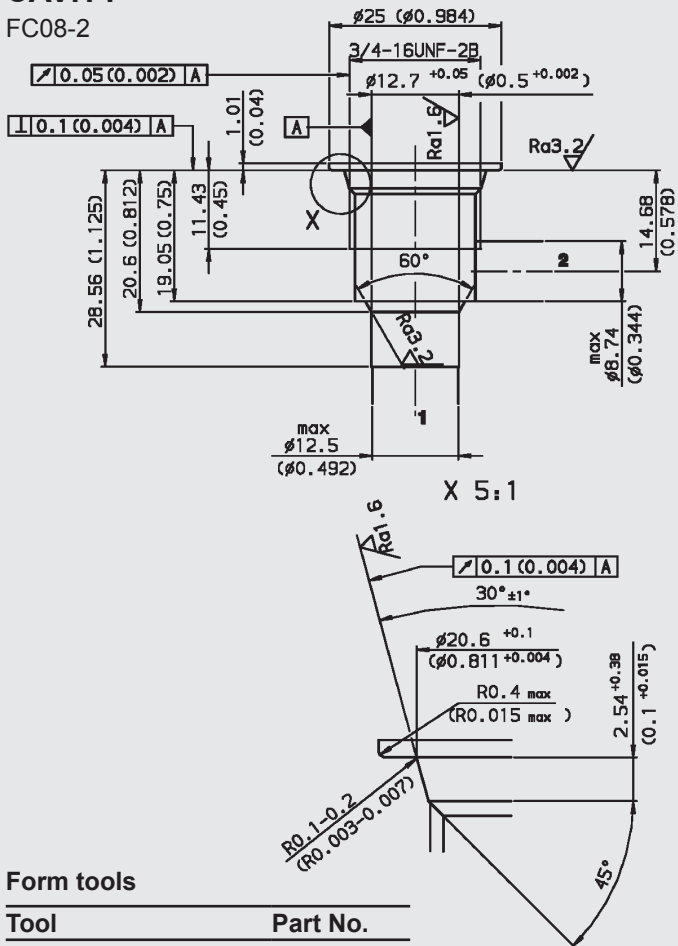
Code	Part No.	Material	Ports	Pressure
FH082-SB3	560919	Steel, zinc-plated	G3/8"	420 bar
FH082-AB3	3011423	Aluminium, clear anodized	G3/8"	210 bar

Seal kits

Code	Material	Part No.
SEAL KIT FS UNF 08/N	NBR	3651385
SEAL KIT FS UNF 08/V	FKM	3651356

CAVITY

FC08-2

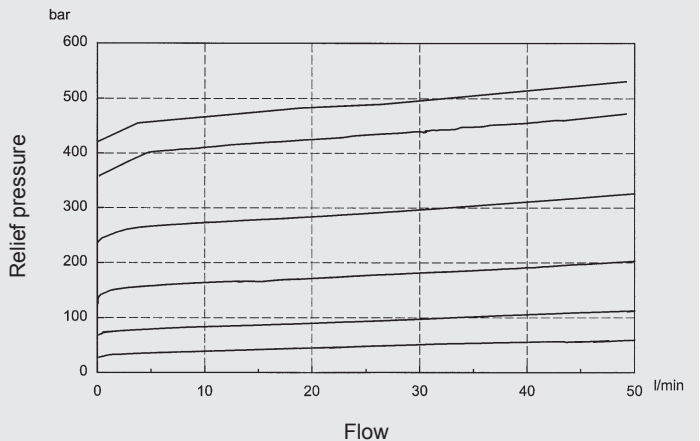


Form tools

Tool	Part No.
Rougher FC08-2	175473
Reamer FC08-2	175474

PERFORMANCE

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46 \text{ }^\circ\text{C}$



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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