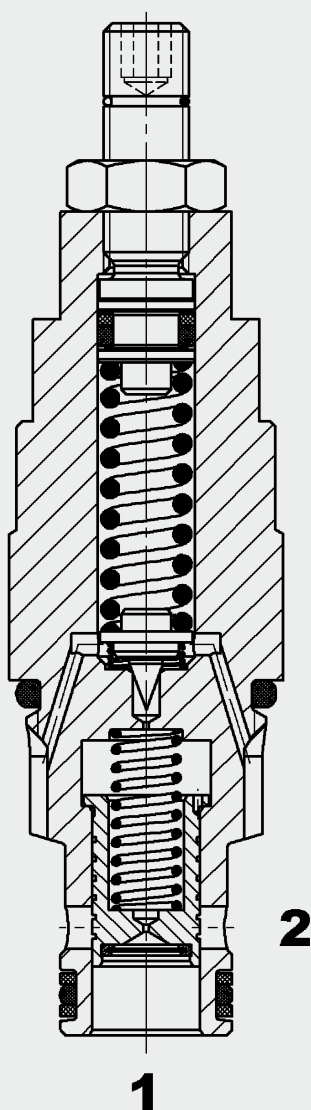


FUNCTION



The DB10P is a pilot-operated, spool type pressure relief valve. If pressure at port 1 exceeds the pressure setting, the pilot poppet opens and oil flows from behind the main spool to tank port 2. The resulting pressure differential causes the main spool to lift against the return spring and allows flow from port 1 to port 2.

Pressure Relief Valve Spool Type Pilot-Operated SAE-10 Cartridge – 420 bar DB10P

UNF

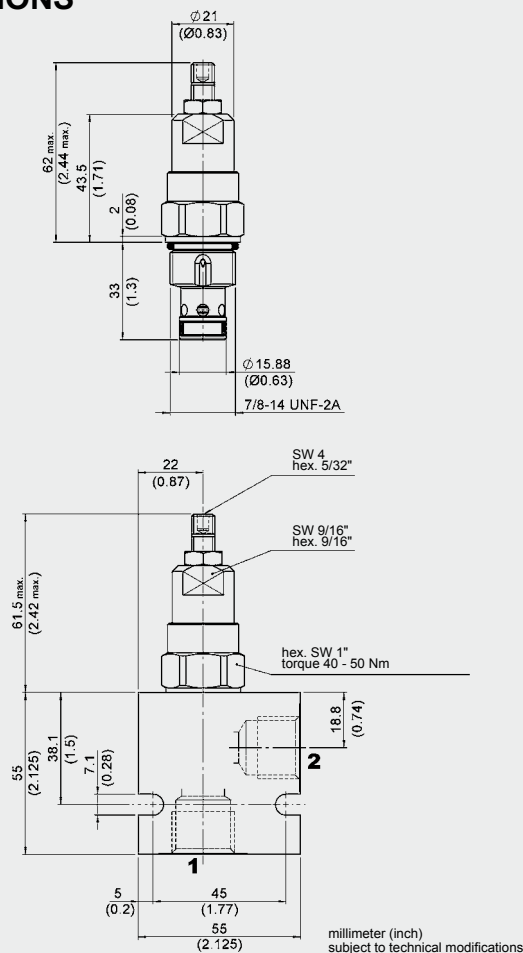
FEATURES

- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Screen protected metering orifice enhances safety
- Adjustable throughout flow range
- Guided pilot poppet
- Optional spring ranges up to 420 bar
- Quick response

SPECIFICATIONS

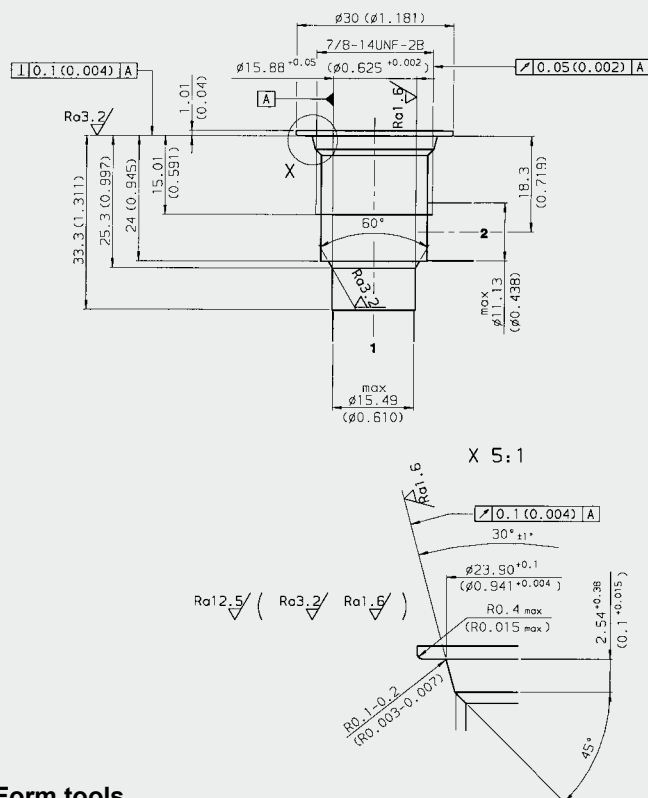
Operating pressure:	max. 420 bar
Nominal flow:	max. 120 l/min
Operating pressure ranges:	5 to 35 bar 5 to 62 bar 5 to 124 bar 5 to 228 bar 5 to 345 bar 5 to 420 bar
Internal leakage:	< 500 ml/min from 1 to 2 at 80% of p_{nom}
Media operating temperature range:	min. -30 °C to max. +100 °C
Ambient temperature 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 ² /s to max. 420 mm ² /s
Filtration:	Class 21/19/16 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: free-cutting steel Spool: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Back-up rings: PTFE
Cavity:	FC10-2
Weight:	0.20 kg

DIMENSIONS



CAVITY

FC10-2



Form tools

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

millimeter (inch)
subject to technical modifications

MODEL CODE

DB10P-01 – C – N – 180 V 100

Basic model _____
Pressure relief valve, UNF

Body and ports* _____
 C = cartridge only
 SB4= G1/2 ports, steel body
 AB4= G1/2 ports, aluminium body

Seals _____
N = NBR (standard)
V = FKM

Setting pressure range

050 = up to 35 bar (500 PSI)
090 = up to 62 bar (900 PSI)
180 = up to 124 bar (1800 PSI)
330 = up to 228 bar (3300 PSI)
500 = up to 345 bar (5000 PSI)
600 = up to 420 bar (6000 PSI)
Other pressure ranges on request

Adjustment option _____

V = Allen head (SW 4)

H = Knob adjustment

F = Factory preset, non adjustable

K = Allen head (SW 4) with protective cap

Opening pressure setting _____
No details = no setting
100 = customer-specific opening pressure on request

Standard models

Model code	Part No.
DB10P-01-C-N-050V	3010838
DB10P-01-C-N-090V	3010839
DB10P-01-C-N-180V	3010843
DB10P-01-C-N-330V	3010842
DB10P-01-C-N-500V	3010840

***Standard in-line bodies**

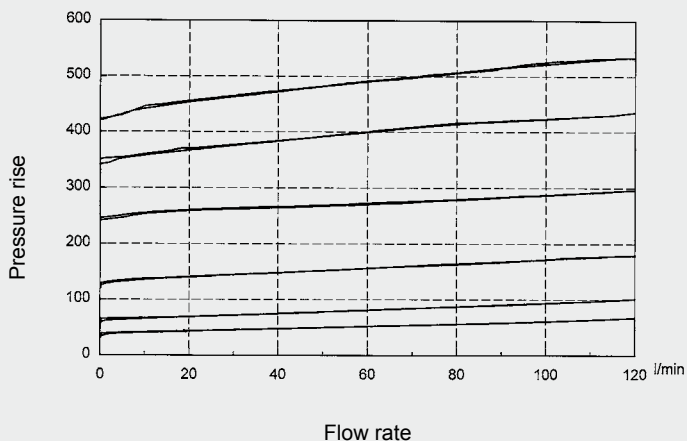
Code	Part No.	Material	Ports	Pressure
FH102-SB4	3037594	Steel, zinc-plated	G1/2	420 bar
FH102-AB4	3037777	Aluminium, anodized	G1/2	210 bar

Seal kits

Code	Material	Part No.
FS102-N SEAL KIT	NBR	3033872
FS102-V SEAL KIT	FKM	3051757

PERFORMANCE

Measured at $v = 34 \text{ mm}^2/\text{s}$

$$T_{\text{Öl}} = 46^{\circ}\text{C}$$


NOTE

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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