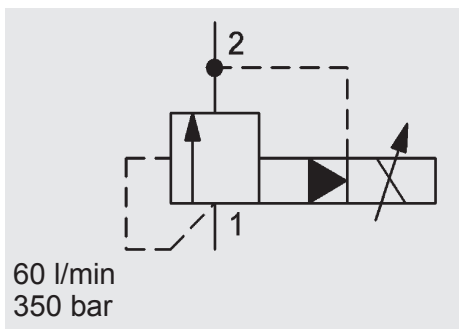
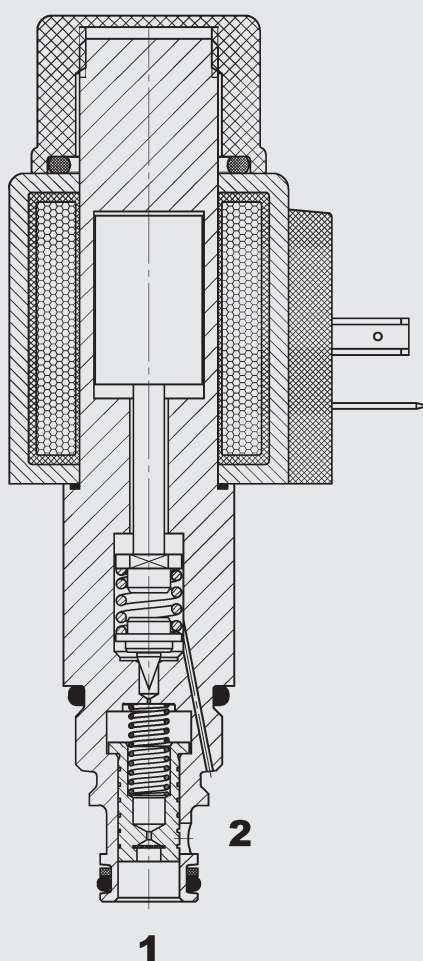




FUNCTION



The PDB08P is a pilot-operated, spool type proportional pressure relief valve. If pressure at port 1 exceeds the setting defined by the electrical signal, 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. As a function of the electrical signal the relief pressure at port 1 can be changed steplessly.

Proportional Pressure Relief Valve Spool Type, Pilot-Operated SAE-08 Cartridge – 350 bar PDB08P-01

FEATURES

- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Low pressure drop due to CFD optimized flow path
- Screen-protected metering orifice enhances safety
- Hydrodynamic damping available as an option

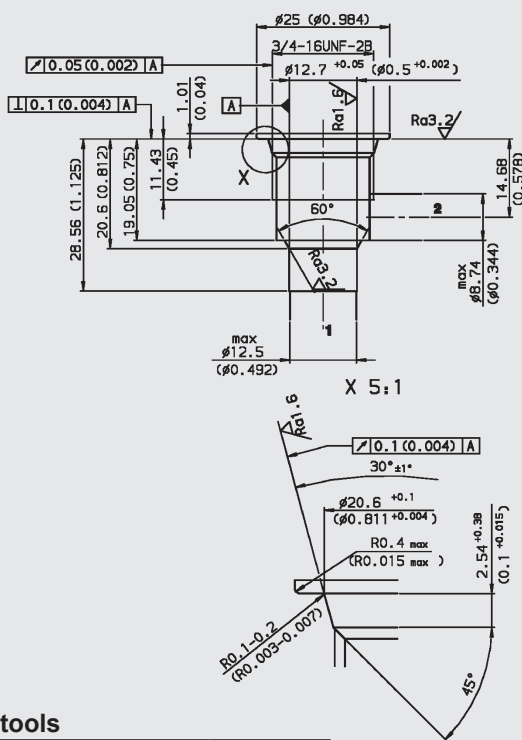
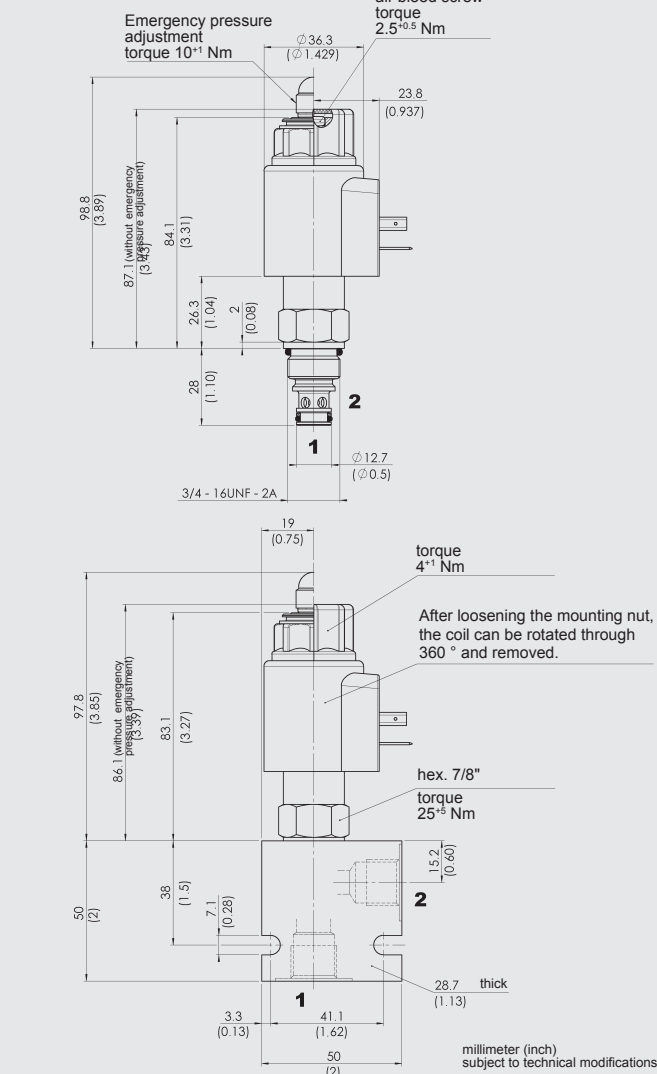
SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	max. 60 l/min
Operating pressure ranges:	up to 60 bar up to 230 bar up to 350 bar
Internal leakage:	< 0.5 l/min at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. +60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity range:	7.4 to 420 mm ² /s
Filtration:	Class 18/16/13 to class 19/17/14 to ISO 4406 or cleaner
MTTF _d :	150 years (see "Conditions and instructions for valves" in brochure 5.300)
Installation:	No orientation restrictions
Material:	Valve body: free-cutting steel Spool: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to +120 °C) Coil: steel / polyamide
Cavity:	FC08-2
Weight:	Valve complete: 0.43 kg Coil only: 0.23 kg

Electronic data:

Control current range:	1050 mA, 8.8 Ohm (24 Volt) 2100 mA, 2.2 Ohm (12 Volt)
Dither frequency:	180 – 250 Hz
Response time:	Energized: approx. 50 ms De-energized: approx. 30 ms
Hysteresis with dither:	2 – 4 % of the max. control current
Repeatability:	1.5 % of max. pressure range
Reversal error:	≤ 2% of I _{nom}
Response sensitivity:	≤ 1 % of I _{nom}
Coil type:	Coil...40-1836

The PDB08P can also be supplied with an emergency pressure adjustment (version -01M). This allows a manual pressure adjustment of the valve if the electrical signal is interrupted. This adjustment should be used only in the case of electrical failure since the manual setting would be additive to the electrical setting and the system could be damaged when power is restored. In order to achieve optimal function, any trapped air should be vented using the air bleed screw on the face of the pole tube (not fitted to version -02M).



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

millimeter (inch)
subject to technical modifications

PDB08P-01 M - C - N - 330 - 24 PG - 8.8

Basic model

Proportional pressure relief valve UNF

Manual override

no details = without manual override

M = manual override

Body and ports*

C = cartridge only

SB3 = G3/8 ports, steel body

AB3 = G3/8 ports, aluminium body

Seals

N = NBR (standard)

$$V = FKM$$

Pressure range

87 = to 60 ba

330 = to 230 bar

500 = to 350 bar

Coil voltage

12 = 12 V DC (2.2 Ohm)

24 = 24 V DC (8.8 Ohm)

Coil connectors (type 40-1836)

DC: PG = DIN connector to EN175301-803

PU = AMP Junior Timer, 2-pole, axial

PL = 2 flying leads, 457 mm long; 0.75 mm²

PN = Deutsch connector, 2-pole, axial, DT04-22P-EF 04

Other connectors on request

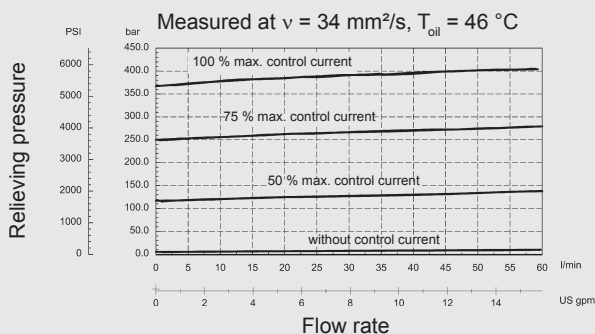
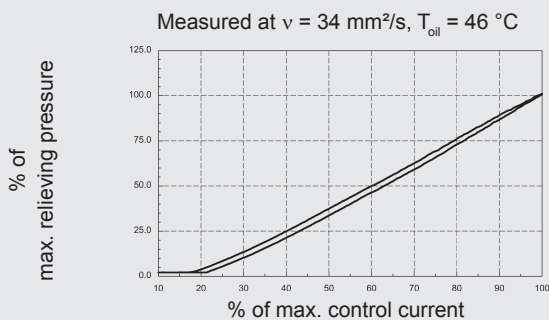
Coil resistance

 $2.2 = 2.2 \Omega (12 \text{ V})$
$$8.8 = 8.8 \, \Omega \, (24 \, \text{V})$$

Model code	Part No.
PDB08P-01-C-N-87-12PG-2.2	3144426
PDB08P-01-C-N-330-12PG-2.2	3144427
PDB08P-01-C-N-500-12PG-2.2	3144458
PDB08P-01-C-N-87-24PG-8.8	3144459
PDB08P-01-C-N-330-24PG-8.8	3144460
PDB08P-01-C-N-500-24PG-8.8	3144461

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

Code	Material	Part No.
FH082-N SEAL KIT	NBR	3033920
FH082-V SEAL KIT	FKM	3051756



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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