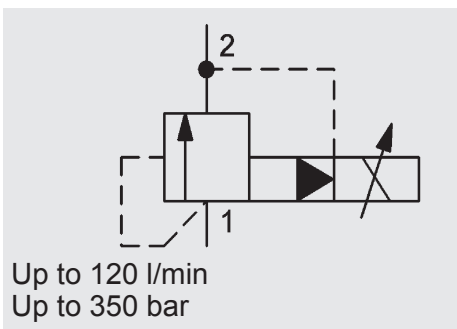
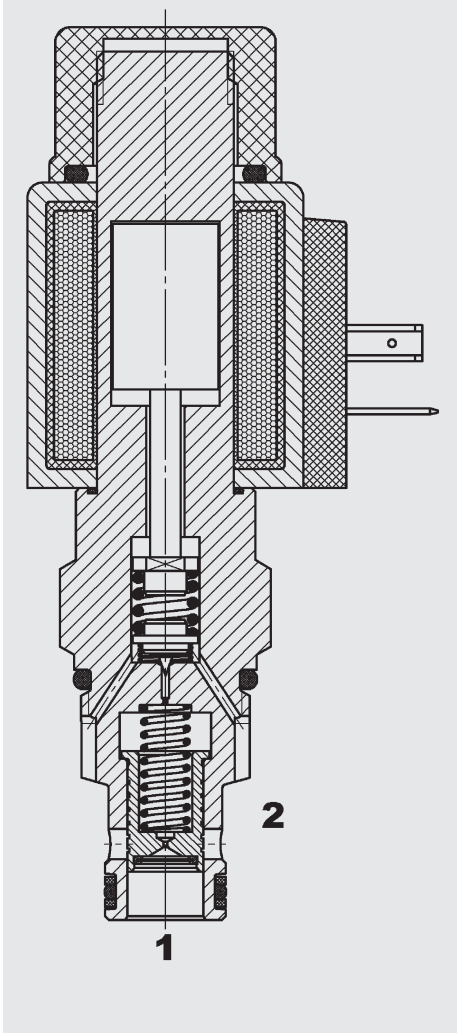




FUNCTION



The PDB10P 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-10 Cartridge – 350 bar PDB10P-01

FEATURES

- External surfaces zinc-plated and corrosion-proof
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- 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. 120 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:	min. 7.4 mm²/s to max. 420 mm²/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
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 Coil: steel / polyamide
Cavity	FC10-2
Weight:	Valve complete 0.49 kg Coil only 0.23 kg

Electronic data:

Control currents:	1050 mA, 8.8 Ohm (24 Volt) 2100 mA, 2.2 Ohm (12 Volt)
Dither frequency:	approx. 160 Hz - 250 Hz
Response time:	Energized: approx. 50 ms De-energized: approx. 30 ms
Hysteresis with dither:	2 - 4% of I _{nom}
Repeatability:	≤ 1.5 % of I _{nom}
Reversal error:	≤ 2 % of I _{nom}
Response sensitivity:	≤ 1 % of I _{nom}
Coil type:	Coil ...-40-1836

The PDR08 can also be supplied with an emergency pressure adjustment (version -02M). 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.

torque 4⁺¹ Nm

air bleed screw torque 2.5^{+0.5} Nm

After loosening the mounting nut, the coil can be rotated through 360 ° and removed.

hex. 1" torque 45⁺¹⁰ Nm

2

1

$\phi 36.3$
(Ø1.429)

26.6
(1.05)

97
(3.82)

84.8
(3.34)

81.8
(3.22)

24
(0.945)

2
(0.078)

33
(1.299)

$\phi 15.88$
(Ø0.625)

7/8-14 UNF

$\phi 25.4$
(Ø1.0)

emergency pressure adjustment torque 10+1 Nm

2

1

22
(0.866)

96.5 max.
(3.8 max.)

85 without manual override
(3.34)

81.3
(3.2)

55
(2.125)

38.1
(1.5)

7.1
(0.28)

18.8
(0.74)

32 thick
(1.25)

5
(0.177)

45
(1.77)

55
(2.125)

millimeter (inch)
subject to technical modifications

[illegible]

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

E 5.991.1/09.13