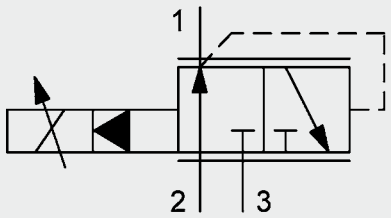


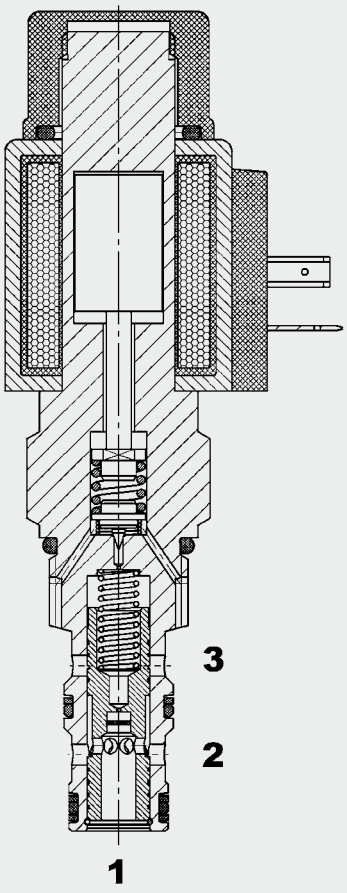
Up to 100 l/min
Up to 350 bar

3-Way Proportional Pressure Reducing Valve Spool Type, Pilot-Operated SAE-10 Cartridge – 350 bar

UNF

PDR10P-01

FUNCTION



The proportional pressure reducing valve PDR10P is a pilot-operated, 3-way spool-type valve. Its function is to maintain a constant pressure at consumer port 1. As a function of the electrical control signal the regulated pressure can be changed steplessly - irrespective of the pump pressure.
If the pressure at port 1 rises above the setting, the pilot stage opens and oil flows from behind the main spool to tank port 3 to maintain the set pressure.
Any pressure at tank port 3 is additive to the pre-set control pressure!

FEATURES

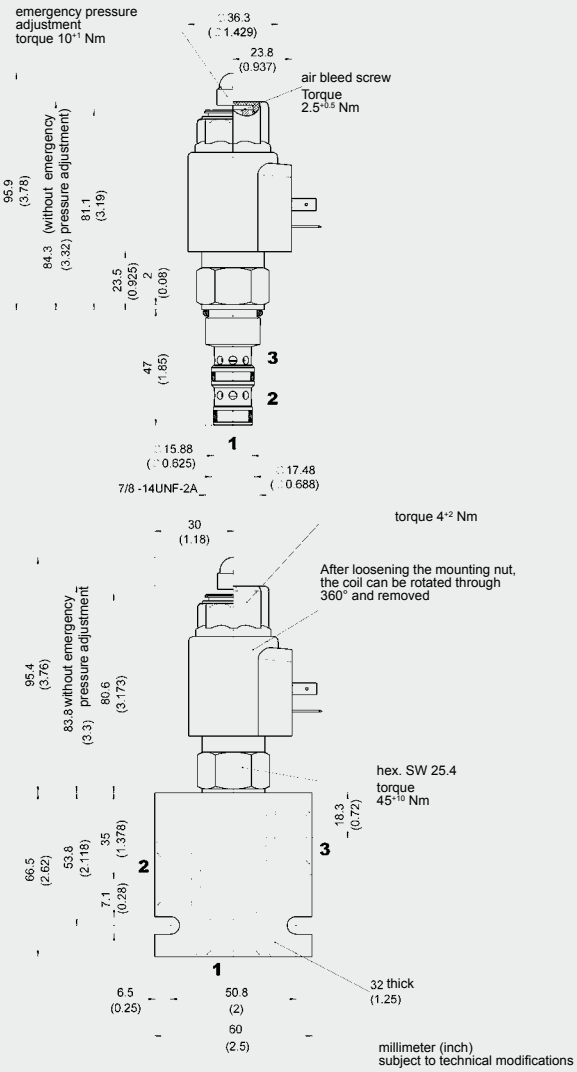
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- Screen-protected metering orifice enhances safety

SPECIFICATIONS

Operating pressure:	max. 350 bar	
Nominal flow:	max. 100 l/min	
Setting pressure range:	up to 60 bar up to 180 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:	FC10-3	
Weight:	Valve complete	0.49 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:	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}	
Hysteresis:	≤ 2 % of I_{nom}	
Response sensitivity:	≤ 1 % of I_{nom}	
Coil type:	Coil...-40-1836	

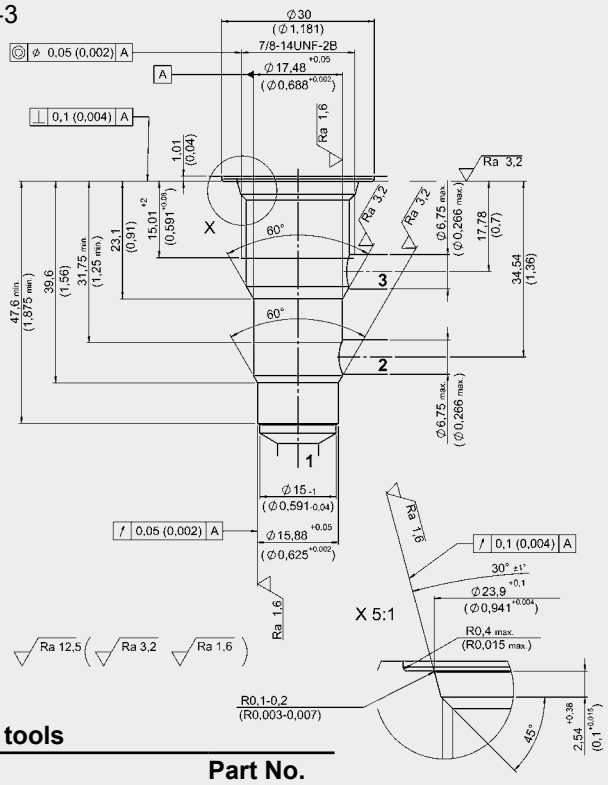
The PDR10P can also be supplied with an emergency pressure adjustment (version –01M). This allows a manual pressure adjustment of the valve if the electrical signal is interrupted. This adjustment should be used only in the case of electrical failure since the manual setting would be additive to the electrical setting and the system could be damaged when power is restored.

DIMENSIONS



CAVITY:

FC10-3



Form tools

Tool	Part No.
Countersink FC10-3	176282
Reamer FC10-3	176283

MODEL CODE

PDR10P–01 M - C - N - 330 - 24 PG - 8.8

Basic model
Proportional pressure reducing valve, UNF

Manual override
no details = without manual override
M = manual override

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

Seals
N = NBR (standard)
V = FKM

Pressure range
87 = up to 60 bar (870 PSI)
260 = up to 180 bar (2600 PSI)
330 = up to 230 bar (3300 PSI)
500 = up to 350 bar (5000 PSI)

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 Ohm (12 V)
8.8 = 8.8 Ohm (24 V)

Standard models

Model code	Part No.
PDR10P-01-C-N-87-12PG-2.2	3124431
PDR10P-01-C-N-260-12PG-2.2	3124432
PDR10P-01-C-N-330-12PG-2.2	3124433
PDR10P-01-C-N-330-12PG-2.2	3124433
PDR10P-01-C-N-500-12PG-2.2	3124434

Other models on request

*Standard in-line bodies

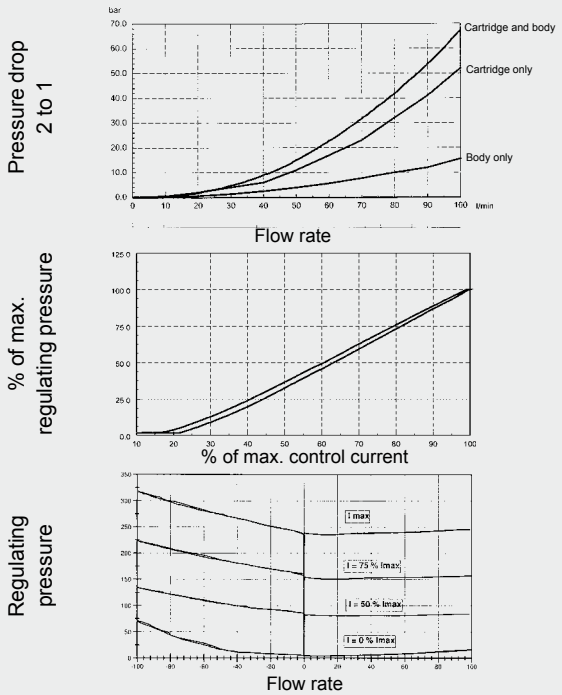
Code	Part No.	Material	Ports	Pressure
FH103-SB4	3037697	Steel, zinc-plated	G1/2	420 bar
FH103-AB4	3038092	Aluminium, anodized	G1/2	210 bar

Seal kits

Code	Material	Part No.
FS103-N SEAL KIT	NBR	3071274
FS103-V SEAL KIT	FKM	3049443

PERFORMANCE

Measured at ν = 34 mm²/s, T_{oil} = 46 °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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