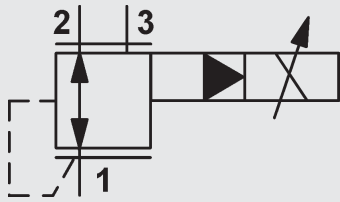


## Proportional Pressure Reducing Valve SAE 10-Cartridge – 350 bar

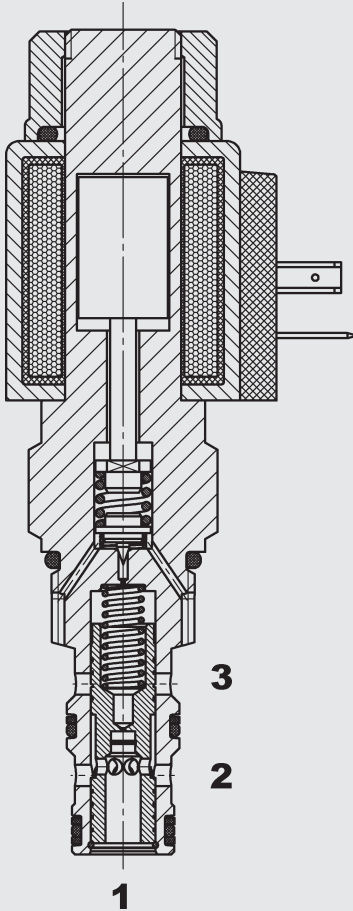
PDR10P-01

Spool Type – Pilot Operated



bis 60 l/min  
bis 350 bar

### FUNCTION



In the de-energized mode, the pilot poppet is held open by the spring force. Therefore the main spool closes and restricts flow from pump port 2, to the regulated port 1. When a control current is applied to the coil, the pilot poppet begins to restrict the pilot flow. This allows the main spool to travel to a position where the pressure at 2 is in connection to 1. The reduced pressure at 1 is now a direct function of the control current. As long as the control current is constant, the reduced pressure at 1 will remain fixed, without any changes to inlet flow or pressure at 2. If the control current increases or decreases, the reduced pressure at 1 will change in relation to this signal.

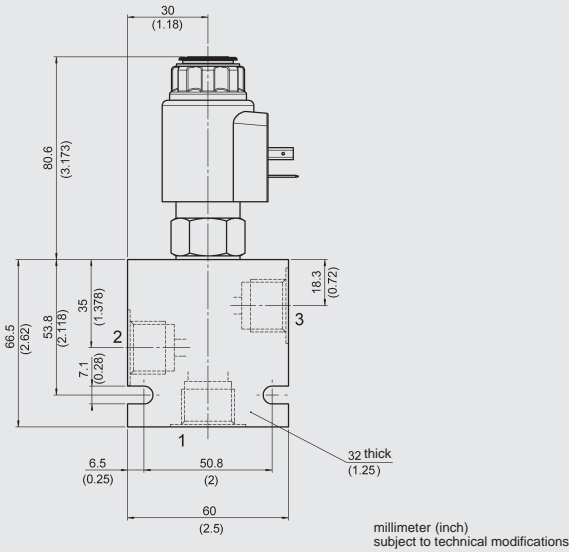
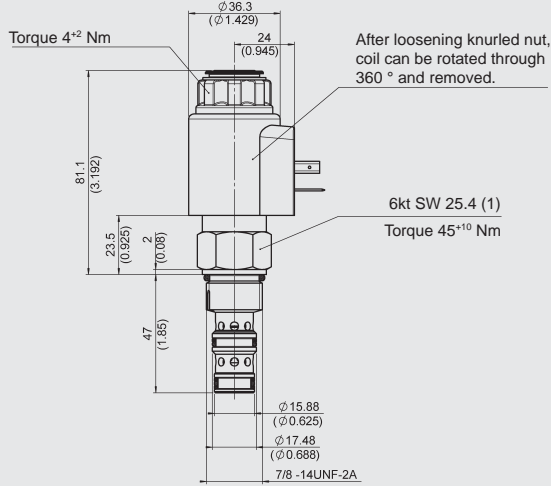
### FEATURES

- All surfaces zinc-plated and corrosion proof
- All valve parts made of high-strength steel with hardened and ground components to ensure minimal wear and to extend service life
- Wet armature solenoid
- Waterproof design standard
- Wide variety of connectors available
- Excellent stability throughout flow range
- Excellent dynamic performance
- Screen protected measuring orifice enhances safety
- One piece body design

### SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	max. 60 l/min
Operating pressure ranges:	up to 60 bar, up to 180 bar, up to 230 bar, up to 350 bar
Control current range (at 20 °C):	1050 mA, 8.8 Ω / 2100 mA, 2.2 Ω
Internal leakage:	less than 0.5 l/min at 350 bar
Media operating temperature range:	-20 °C to +120 °C
Ambient temperature range:	-20 °C to +60 °C
Dither frequency:	160 Hz - 250 Hz
Response time:	On: approx. 50 ms, Off: approx. 30 ms
Hysteresis with dither:	2 - 4 % of maximum control current
Repeatability:	1.5 % of maximum pressure range
Reversal error:	≤ 2 % of maximum control current
Response sensitivity:	≤ 1 % of maximum control current
Fluids:	Mineral-based or synthetics with lubricating properties
Viscosity:	7.4 to 420 cSt
Filtration:	Class 18/16/13 up to 19/17/14 according to ISO 4406 or cleaner
Installation:	no orientation restrictions
Material:	Valve body: carbon steel Spool: carbon steel Seals: NBR (standard) FKM (optional) Coil: Steel / Polyamide
Notes:	The PDR10P can also be supplied with an emergency pressure adjustment (version -01M). This allows a mechanical pressure adjustment of the valve if the electrical signal is interrupted. This adjustment should be used only in case of electrical failure since the manual setting would be additive to the electrical setting and the danger of equipment damage could develop. In order to achieve optimal function, any trapped air should be vented with the bleed screw on the face of the tube (not fitted to version -01M).
Cavity:	FC10-3
Weights:	Valve complete: 490 g Coil only: 230 g

## DIMENSIONS



## MODEL CODE

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

### Basic model

### Option

Omission = No option  
M = Emergency pressure adjustment

### Body and Ports\*

C = Cartridge only  
SB4 = 1/2 BSP ports, steel body  
SS8 = SAE-8 ports, steel body  
AB4 = 1/2 BSP ports, aluminium body  
AS8 = SAE-8 ports, aluminium body

### Seals

N = NBR  
V = FKM

### Pressure range

087 = up to 60 bar  
260 = up to 180 bar  
330 = up to 230 bar  
500 = up to 350 bar

### Coil voltage

12 = 12 V (2.2 Ω)  
24 = 24 V (8.8 Ω)

### Coil connector

PG = DIN connector (DIN 43650)  
PL = Leadwires (2) – 457 mm (18") long  
PN = Deutsch Connector DT04-2P-EP04 (axial)  
PU = AMP Junior Timer, 2 pole, axial

### Coil resistance

2.2 = 2.2 Ω (12 V)  
8.8 = 8.8 Ω (24 V)

## Standard models

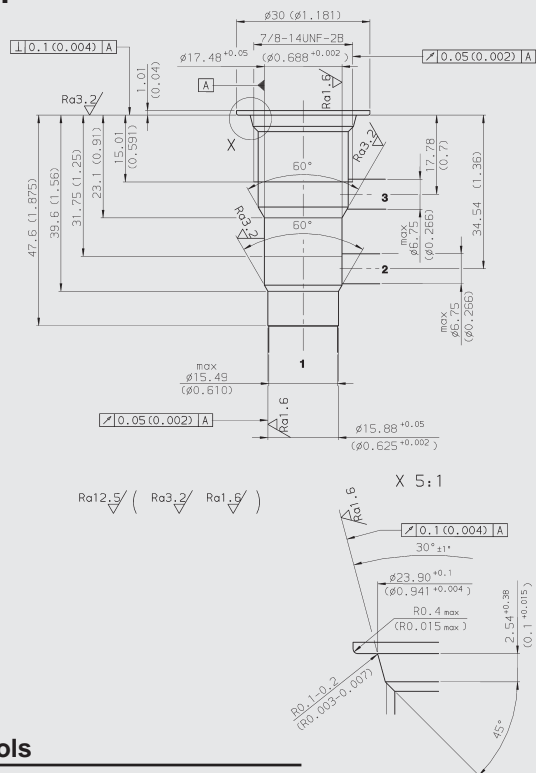
Model code	Stock no.
PDR10P-01-C-N-87-12PG-2.2	3124431
PDR10P-01-C-N-260-12PG-2.2	3124432
PDR10P-01-C-N-330-12PG-2.2	3124433
PDR10P-01-C-N-500-12PG-2.2	3124434
PDR10P-01-C-N-87-24PG-8.8	3124499
PDR10P-01-C-N-260-24PG-8.8	3124500
PDR10P-01-C-N-330-24PG-8.8	3120025
PDR10P-01-C-N-500-24PG-8.8	3124501

## \*Standard Line Bodies

Code	Part No	Material	Ports	Pressure
FH103-SB4	3037697	Steel, zinc-plated	1/2 BSP	420 bar
FH103-SS8	3037704	Steel, zinc-plated	SAE-8	420 bar
FH103-AB4	3038092	Aluminium, clear anodized	1/2 BSP	245 bar
FH103-AS8	3038095	Aluminium, clear anodized	SAE-8	245 bar

## CAVITY

FC10-3

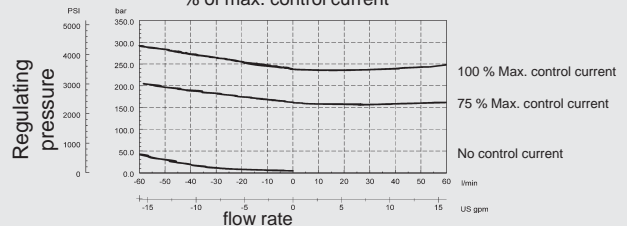
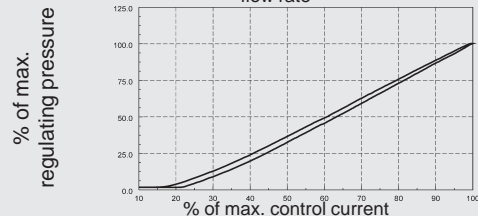
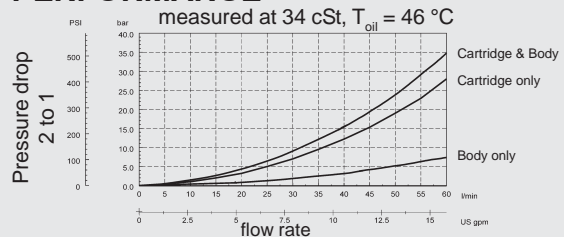


## Form tools

Tool	Part No
Rougher FC10-3	176282
Finisher FC10-3	176283

millimeter (inch)  
subject to technical modifications

## PERFORMANCE



## 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.

**HYDAC Fluidtechnik GmbH**  
Justus-von-Liebig-Str.  
**D-66280 Sulzbach/Saar**  
Tel: 0 68 97 /509-01  
Telefax: 0 68 97 /509-598  
E-Mail: flutec@hydac.com