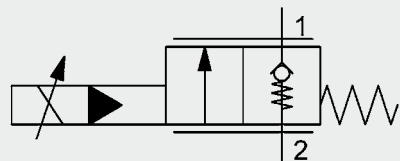


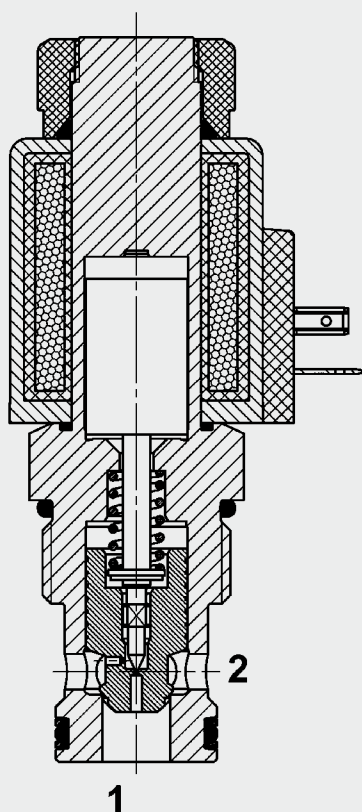
## Proportional Flow Controller Poppet Type, Pilot-Operated, Normally Closed SAE-16 Cartridge – 350 bar

PWS16Z-01



200 l/min  
350 bar

### FUNCTION



The proportional flow controller PWS16Z is a pilot-operated, normally closed, spring-loaded poppet-type flow control valve.

It is non-compensated and its function is to smoothly control the flow from port 2 to port 1.

The energization of the coil opens the pilot stage and oil flows across an orifice to the back of the main piston. The resulting pressure differential causes the main piston to follow the pilot stage. When combined with a pressure compensator the proportional flow controller can be used as a 2-way flow regulator – for example when required to lift/lower variable loads at the same velocity.

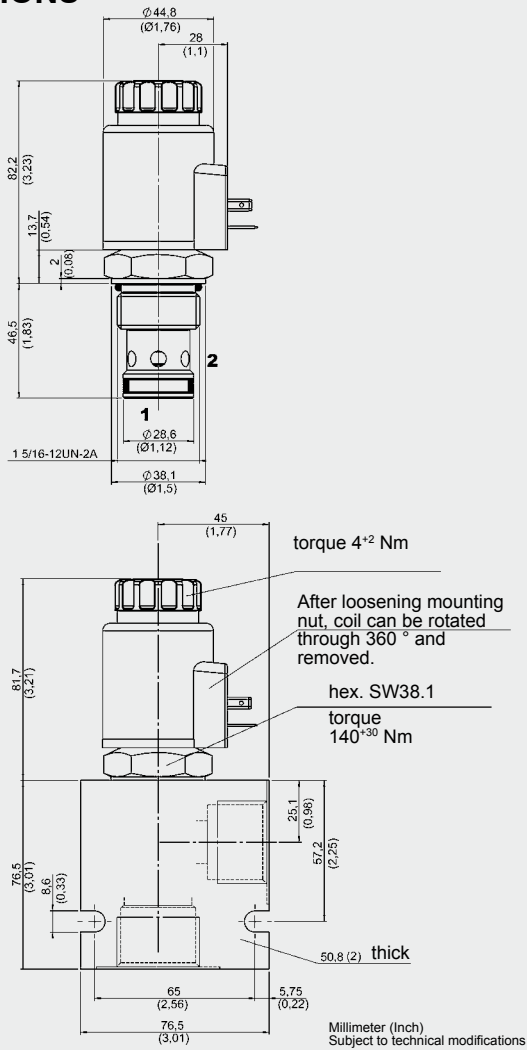
### FEATURES

- Stepless adjustment of the flow, depending on the coil current.
- Excellent stability throughout the entire flow range
- Excellent dynamic performance
- External surfaces zinc-plated
- Hardened and ground valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Low pressure drop by CFD optimized flow path
- Optional: Soft shift function with extended switching times possible

### SPECIFICATIONS

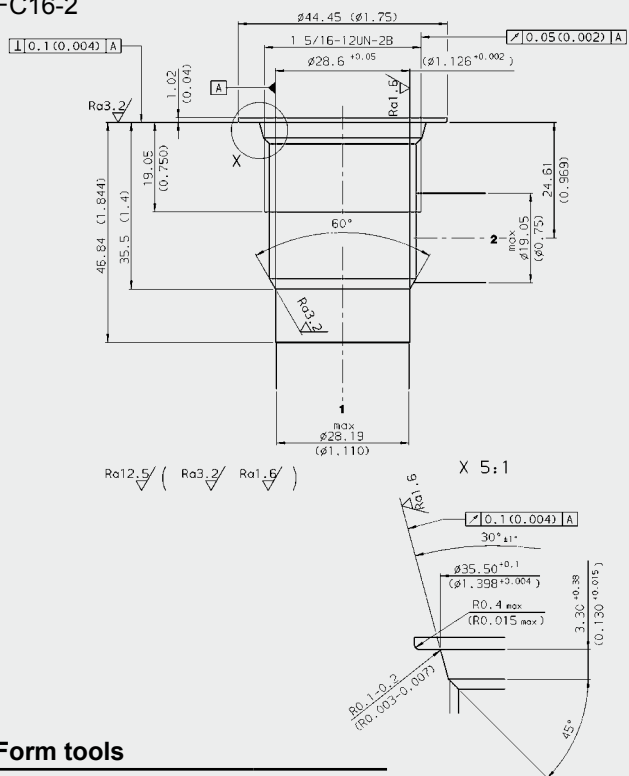
Operating pressure:	max. 350 bar
Nominal flow:	max. 200 l/min
Internal leakage:	Leakage-free (max. 5 drops $\approx$ 0,25 cm <sup>3</sup> /min at 350 bar)
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. +60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1 and 2
Viscosity range:	min. 10 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	Class 19/17/14 to ISO 4406 or cleaner
MTTF <sub>d</sub> :	150 years (see "Conditions and instructions for valves" in brochure 5.300)
Installation:	No orientation restrictions
Materials:	Valve body: free-cutting steel Piston: 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:	FC16-2
Weight:	0.9 kg
<b>Electronic data:</b>	
Control currents:	800 mA, 19.2 Ohm (24 Volt) 1600 mA, 5 Ohm (12 Volt)
Dither frequency:	120 Hz – 250 Hz (120 Hz recommended)
Hysteresis with dither:	6-8% of I <sub>nom</sub>
Repeatability:	$\leq$ 2 % of I <sub>nom</sub>
Reversal error:	$\leq$ 2 % of I <sub>nom</sub>
Response sensitivity:	$\leq$ 1 % of I <sub>nom</sub>
Type of coil:	Coil (12 or 24) P...-50-2345

## DIMENSIONS



## CAVITY

### FC16-2



### Form tools

Tool	Part No.
Countersink	176218
Reamer	165219

Millimeter (Inch)  
Subject to technical modifications

## MODEL CODE

**PWS16Z - 01 M - C - N - 80 - 24 PG 19.2**

### Basic model

Proportional flow control valve

### Type

01 = standard

### Manual override

No details = without manual override

M = manual override

### Body and ports

C = Cartridge only

\*Combinations with body on request

### Seals

N = NBR (standard)

V = FKM (optional)

### Flow rate

80 = 80 l/min

Other flow rates on request

### Coil voltage

DC: 12 = 12 Volt DC

24 = 24 Volt DC

Other voltages on request

### Coil connectors (type 50-1836)

DC: PG = DIN connector to EN175301-803

PT = AMP Junior Timer, 2-pole, radial

PL = 2 flying leads, 457 mm long; 0.75 mm<sup>2</sup>

PN = Deutsch connector, 2-pole, axial

Other connectors on request

### Coil resistance

5.0 = 5.0 Ω (12 V)

19.2 = 19.2 Ω (24 V)

## Standard models

Model code	Part No.
PWS16Z-01-C-N-80-12PG-5	3525225
PWS16Z-01-C-N-80-24PG-19.2	3525213

Other models on request

## Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH162-SB8	3032496	Steel, zinc-plated	G1	420 bar
FH162-AB8	3037193	Aluminium, anodized	G1	210 bar

Other line bodies on request

## Seal kits

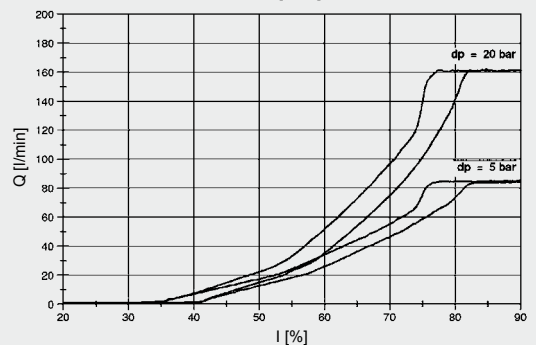
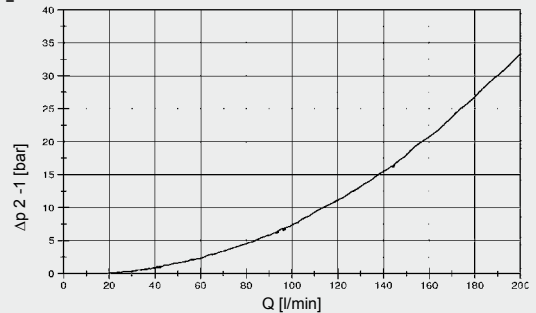
Code	Material	Part No.
FS162-N SEAL KIT	NBR	3052427
FS162-V SEAL KIT	FKM	3051758

## PERFORMANCE

Measured at v =

34 mm<sup>2</sup>/s

T<sub>coil</sub> = 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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