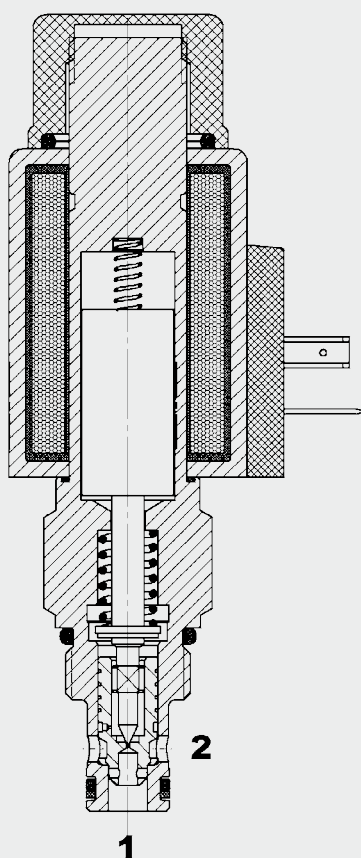


55 l/min
350 bar

FUNCTION



The proportional flow controller PWS08Z 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.

Proportional Flow Controller Poppet Type, Pilot-Operated, Normally Closed SAE-08 Cartridge – 350 bar

PWS08Z-01

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 internal valve components to ensure minimal wear and extended service life
- Low pressure drop by CFD optimized flow path
- On request: mechanical adjustment of one point of the curve (Version 01, without option M)
- Optional: Soft shift function with extended switching times possible

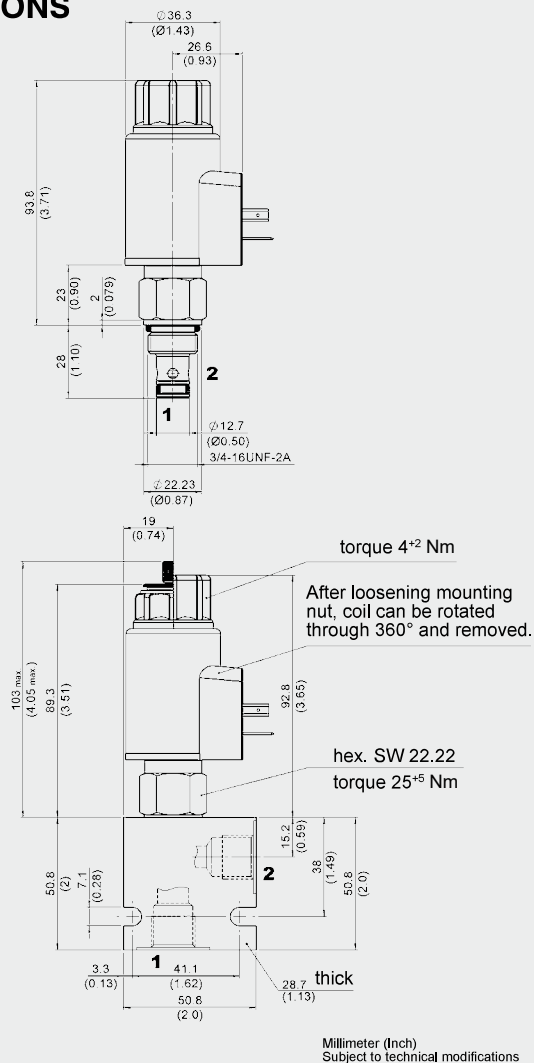
SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	max. 55 l/min
Internal leakage:	Leakage-free (max. 5 drops \approx 0,25 cm ³ /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 ² /s to max. 420 mm ² /s
Filtration:	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 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:	FC08-2
Weight:	0.5 kg
Electronic data:	
Control current:	850 mA, 18.0 Ohm (24 Volt) 1750 mA, 4.1 Ohm (12 Volt)
Dither frequency:	120 Hz – 250 Hz (120 Hz recommended)
Hysteresis with dither:	4-6% of I _{nom}
Repeatability:	\leq 1.5 % of I _{nom}
Reversal error:	\leq 2 % of I _{nom}
Response sensitivity:	\leq 1 % of I _{nom}
Type of coil:	Coil (12 or 24) P...-50-1836

NOTE

In order to achieve optimal function, any trapped air should be vented using the bleed screw on the face of the pole tube.

DIMENSIONS



MODEL CODE

PWS08Z - 01 M - C - N - 20 - 24 PG 18.0

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

20 = 20 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 mm²

PN = Deutsch connector, 2-pole, axial

Other connectors on request

Coil resistance

4.1 = 4.1 Ω (12 V)

18.0 = 18.0 Ω (24 V)

Standard models

Model code	Part No.
PWS08Z-01-C-N-20-12PG-4.1	3525174
PWS08Z-01-C-N-20-24PG-18.0	3486507

Other models on request

Standard in-line bodies

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

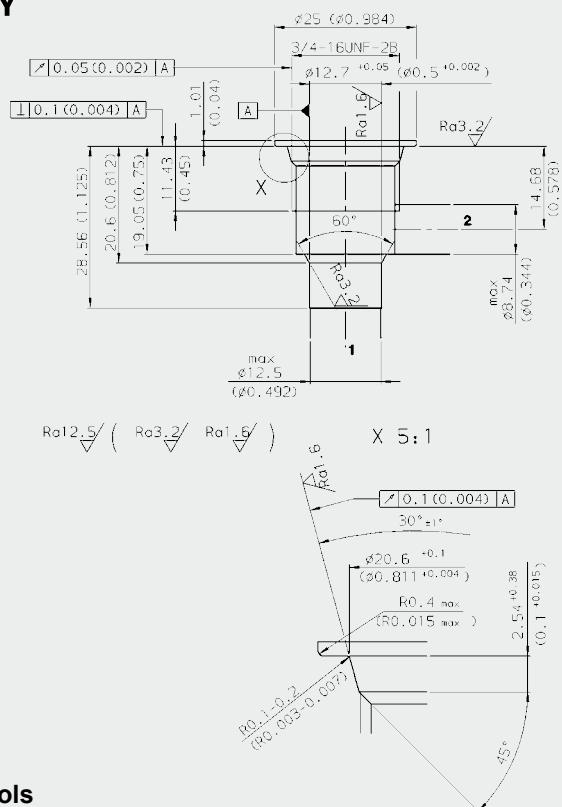
Other line bodies on request

Seal kits

Code	Material	Part No.
FS082-N SEAL KIT	NBR	3033920
FS082-V SEAL KIT	FKM	3051756

CAVITY

FC08-2



Form tools

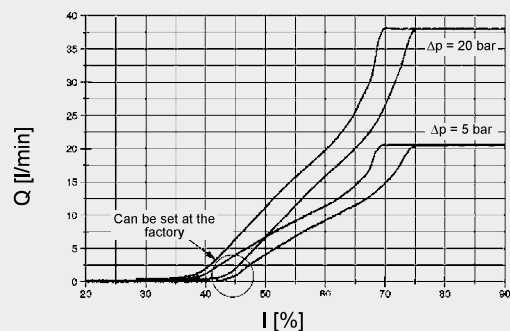
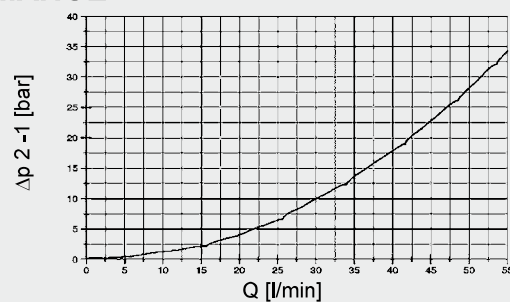
Tool	Part No.
Countersink	175473
Reamer	175474

PERFORMANCE

Measured at

$v = 34 \text{ mm}^2/\text{s}$,

$T_{\text{oil}} = 46^\circ\text{C}$



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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