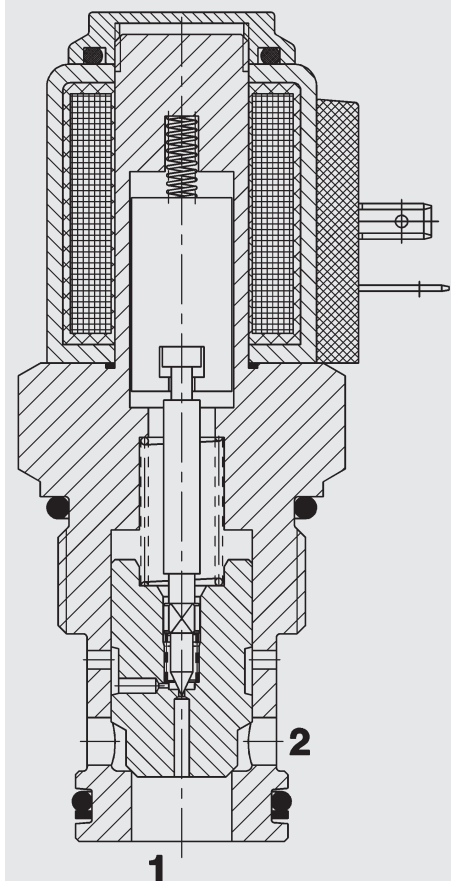


FUNCTION



The directional valve is a pilot operated valve in poppet style. When the solenoid coil is not energized, the valve is closed from port 2 to port 1. Flow is permitted from port 1 to port 2. When energized, there is free flow through the valve from port 2 to port 1. Return flow from port 1 to 2 is prevented. Please mind: In pilot operated solenoid valves, shift performance and response times depend i.a. very much on pressure drop and volume flow during actuation.

2/2 Solenoid Directional Valve Poppet Type, Pilot Operated Normally Closed UNF Cartridge – 350 bar WS16Z-01

FEATURES

- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid
- Exposed surfaces zinc-nickel plated for increased corrosion protection (1.000 h Salt spray test)

SPECIFICATIONS*

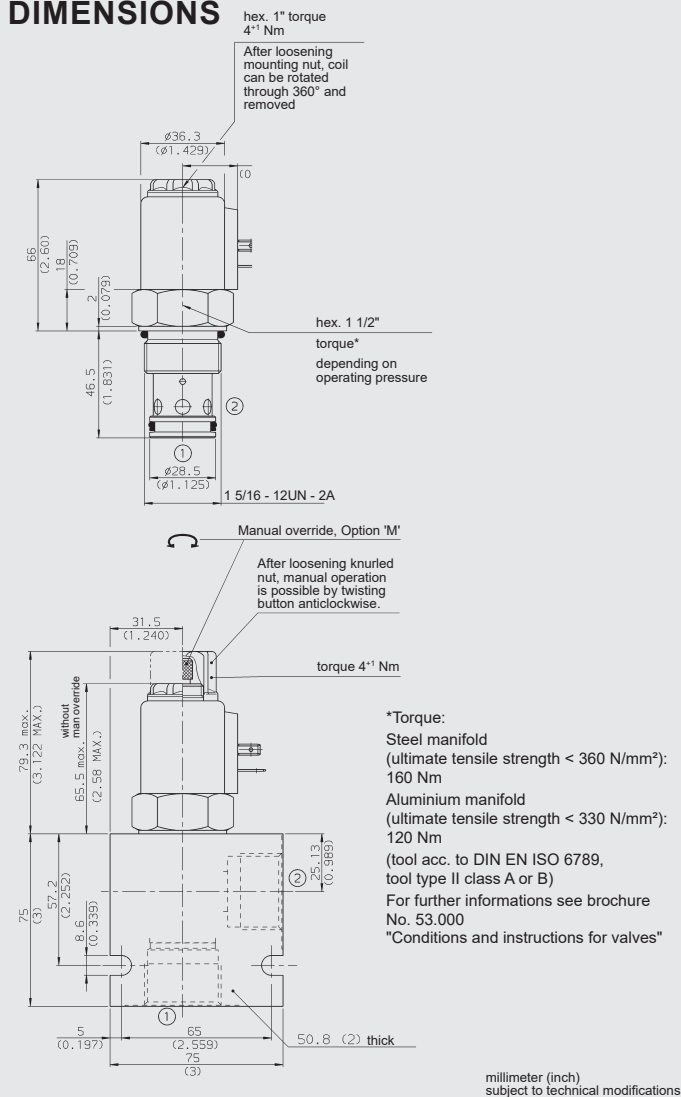
Operating pressure:	350 bar
Nominal flow:	max. 150 l/min up to 280 bar max. 100 l/min from 280 to 350 bar
Internal leakage:	Leakage-free max. 5 drops (0.25 cm ³ /min) at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. + 60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3
Viscosity range:	7.4 to 420 mm ² /s
Filtration:	Class 21/19/16 according to ISO 4406 or cleaner
MTTF _d :	150 - 1200 years, according to DIN EN ISO 13849-1
Installation:	No orientation restrictions
Material:	Valve body: steel Poppet: hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20 °C to 120 °C)
	Coil: Steel/Polyamide
Cavity:	FC16-2
Weight:	Valve complete: 0.62 kg Coil only: 0.19 kg

Electrical data

Response time:	energized: approx. 50 ms de-energized: approx. 35 ms substantially extended response times possible at other operating conditions
Type of voltage:	DC: direct current solenoid AC: alternating current solenoid with a bridge rectifier built into the coil
Current draw at 20 °C:	1.5 A at 12 V DC 0.8 A at 24 V DC
Voltage tolerance:	± 15 % of nominal voltage
Coil duty rating:	Continuous up to max. 115 % of nominal voltage at max. 60 °C ambient temperature
Coil type:	Coil...-40-1836

* see "Conditions and instructions for valves" in brochure 53.000

DIMENSIONS



MODEL CODE

WS16Z - 01 M - C - N - 24 DG

Basic model

Directional poppet valve, UNF

Type

01 = standard

Manual override

No details = without manual override

M = manual override

Body and Ports*

C = Cartridge only

Seals

N = NBR (standard)

V = FKM

Coil voltage

DC voltages

12 = 12 V DC

24 = 24 V DC

AC voltages (bridge rectifier built into the coil)

115 = 115 V AC

230 = 230 V AC

Other voltages on request

Coil connectors (type 40-1836)

DC: DG = DIN connector type A to EN 175301-803

DK = KOSTAL threaded connection M27x1

DL = 2 flying leads, 457 mm long, 0.75 mm²

DN = Deutsch connector, 2-pole, axial

DT = AMP Junior Timer, 2-pole, radial

AC: AG = DIN connector type A to EN 175301-803

Other connectors on request

Standard models

Model code	Part No.
WS16Z-01-C-N-12DG	3049464
WS16Z-01-C-N-24DG	3049480
WS16Z-01-C-N-230AG	3049517

Other models on request

*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH162-SB8	3032496	Steel, zinc-plated	G1"	350 bar
FH162-AB8	3037193	Aluminium, anodized	G1"	210 bar

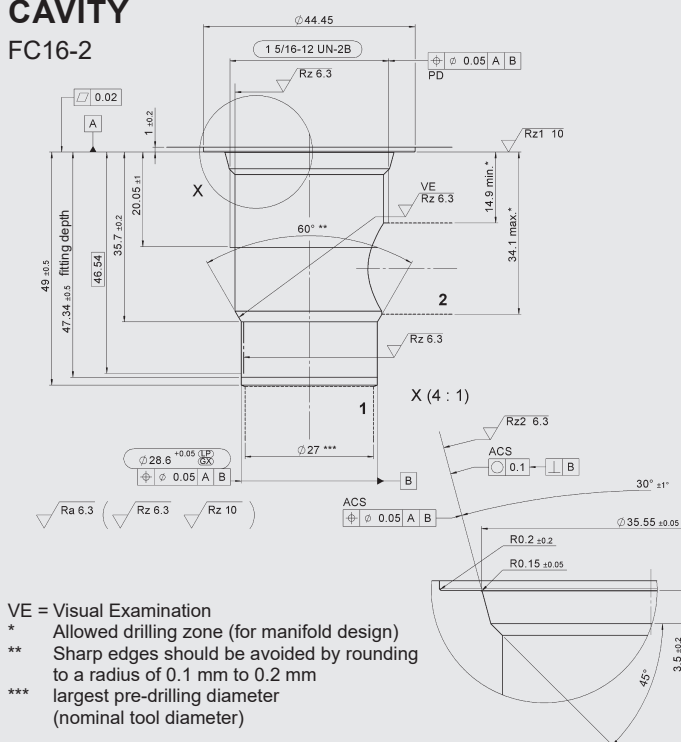
Other models on request

Seal kits

Code	Material	Part No.
FS UNF 16/N	NBR	3651395
FS UNF 16/V	FKM	3651396

CAVITY

FC16-2



Form tools

Tool	Part No.
Countersink	176218
Reamer	176219

millimeter (inch)
subject to technical modifications

TYPICAL PERFORMANCE

Measured at $v = 34 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46^\circ \text{C}$

