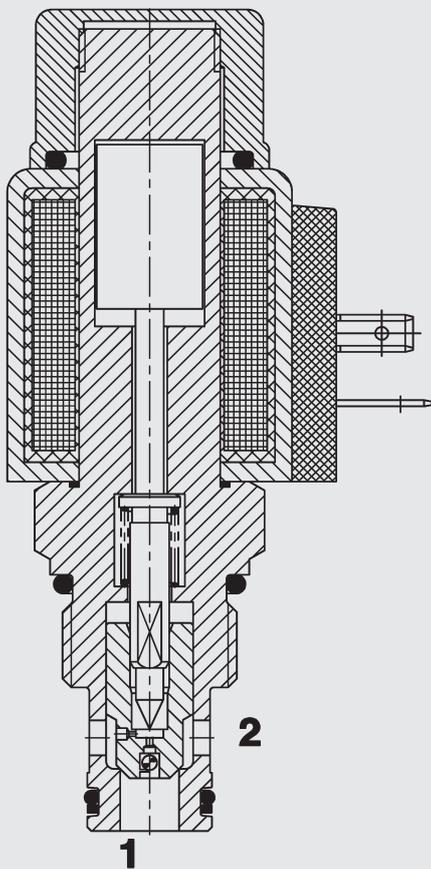


FUNCTION



The directional valve is a pilot operated valve in poppet style. When the solenoid coil is de-energized, the valve is open in both directions. When the solenoid coil is energized, the valve is closed from port 2 to port 1. In the reverse direction the valve will allow flow from port 1 to 2 when the hydraulic force on the piston overcomes the solenoid force (approx. 9 to 20 bar). 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 Open (Reverse Flow) UNF Cartridge – 350 bar

WS10YR-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*

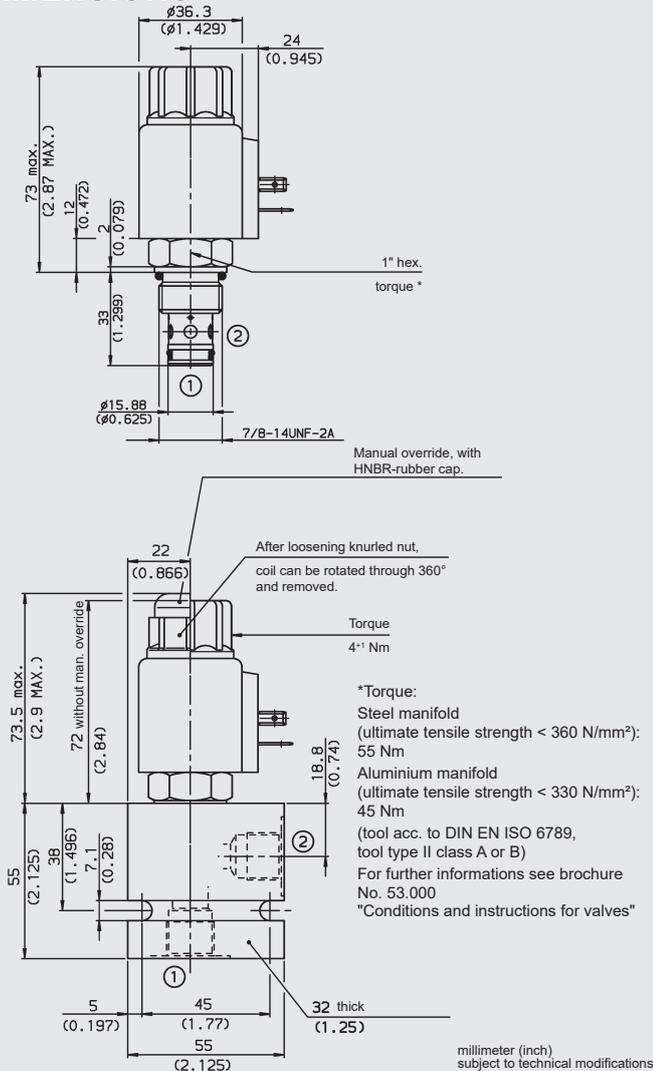
Operating pressure:	max. 350 bar
Nominal flow:	max. 75 l/min
Leakage:	Leakage-free max. 5 drops (0.25 cm ³ /min) at 350 bar
Media operating temperature range:	min. -20 °C to max. +100 °C
Ambient temperature range:	min. -20 °C to max. + 60 °C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3
Viscosity range:	min. 7.4 mm ² /s to max. 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
Materials:	Valve body: free-cutting steel Poppet: 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:	FC10-2
Weight:	Valve complete: 0.37 kg Coil only: 0.19 kg

Electrical data

Response time: (at p _{max} , Q _{max} , v = 34 mm ² /s)	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 the nominal voltage
Coil duty rating:	Continuous up to max. 115 % of the nominal voltage at 60 °C ambient temperature
Coil type:	Coil...-40-1836

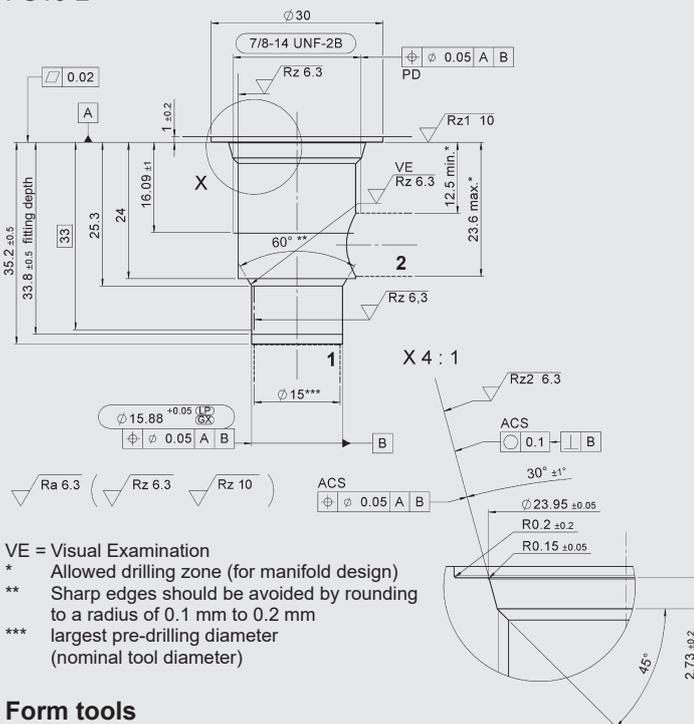
* see "Conditions and instructions for valves" in brochure 53.000

DIMENSIONS



CAVITY

FC10-2



Form tools

Tool	Part No.
Countersink	176379
Reamer	165706

MODEL CODE

WS10YR-01 M - C - N - 24 DG

Basic model

Directional spool valve, UNF

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.
WS10YR-01-C-N-24DG	3030758
WS10YR-01-C-N-230AG	3043833

Other models on request

*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH102-SB4	3037594	Steel, zinc-plated	G1/2"	350 bar
FH102-AB4	3037777	Aluminium, clear anodized	G1/2"	210 bar

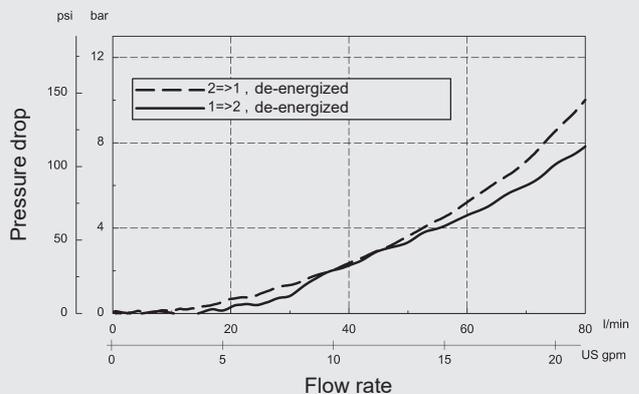
Other housings on request

Seal kits

Code	Material	Part No.
FS UNF 10/N	NBR	3651557
FS UNF 10/V	FKM	3651559

TYPICAL PERFORMANCE

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



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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