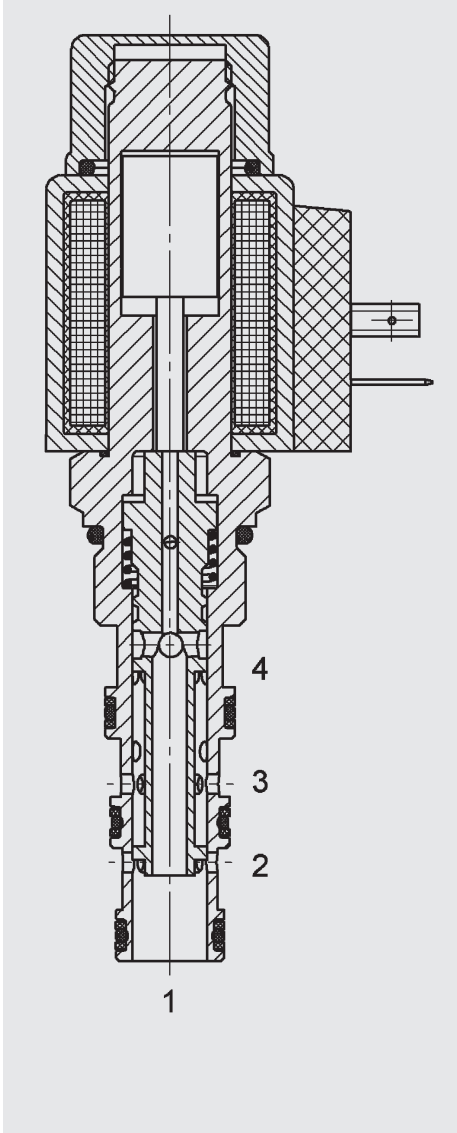


FUNCTION



The 4/2 directional valve is a direct-acting valve with negative overlap, i.e. all ports are connected to each other during the switching process.

When de-energised, there is free flow through the valve from port 3 to port 4 and from port 1 to port 2.

When energised, there is free flow through the valve from port 3 to port 2 and from port 4 to port 1.

4/2 Solenoid Directional Valve Spool Type, Direct-Acting Cartridge UNF – 250 bar WK10Y-40

FEATURES

- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid
- External surfaces with advanced corrosion protection due to Zn-Ni coating (1,000 h salt spray test)

SPECIFICATIONS*

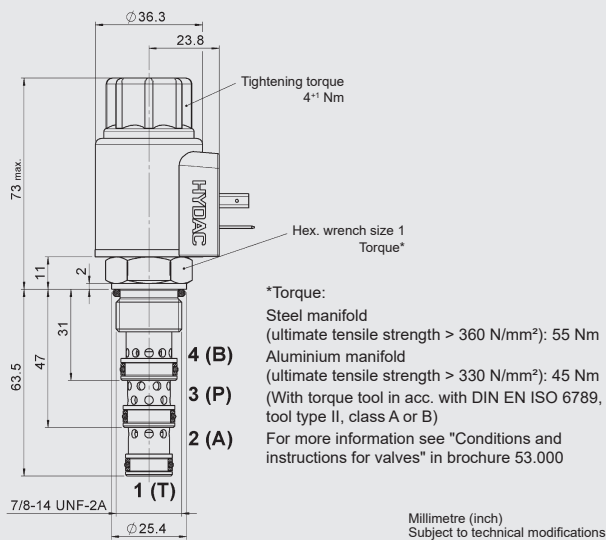
Operating pressure:	Max. 250 bar
Flow rate:	Max. 52 l/min
Internal leakage:	Max. 395 ml/min at 210 bar (3 to 2) Max. 570 ml/min at 210 bar (3 to 4)
Media operating temperature range:	Min. -20°C to max. +100°C
Ambient temperature range:	Min. -20°C to max. + 60°C
Operating fluid:	Hydraulic oil to DIN 51524 Part 1, 2 and 3
Viscosity range:	Min. 7.4 mm ² /s to max. 420 mm ² /s
Filtration: (to ISO 4406)	≤ 210 bar: min. Class 20/18/15 > 210 bar: min. Class 19/17/14
MTTF _d :	150 – 1200 years, according to DIN EN ISO 13849-1
Installation position:	No orientation restrictions
Materials:	Valve body: Steel Piston: Hardened and ground steel Seals: NBR (standard) FKM (optional, media temperature range -20°C to +120°C) Back-up rings: PTFE Solenoid coil: Steel / polyamide
Cavity:	FC10-4
Weight:	Complete valve: 0.40 kg Coil only: 0.19 kg

Electrical data

Type of voltage:	DC: DC solenoid AC: AC solenoid with a bridge rectifier built into the coil
Nominal current 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

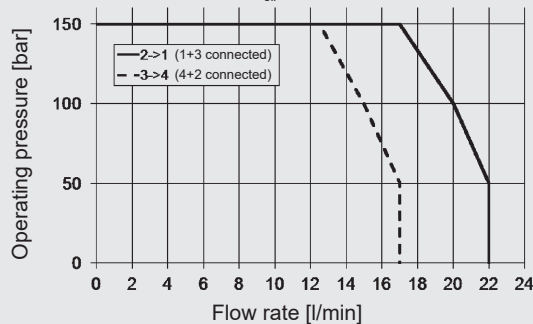
*see "Conditions and Instructions for Valves" in brochure 53.000

DIMENSIONS



PERFORMANCE LIMITS

Measured at $v = 44 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 46^\circ\text{C}$

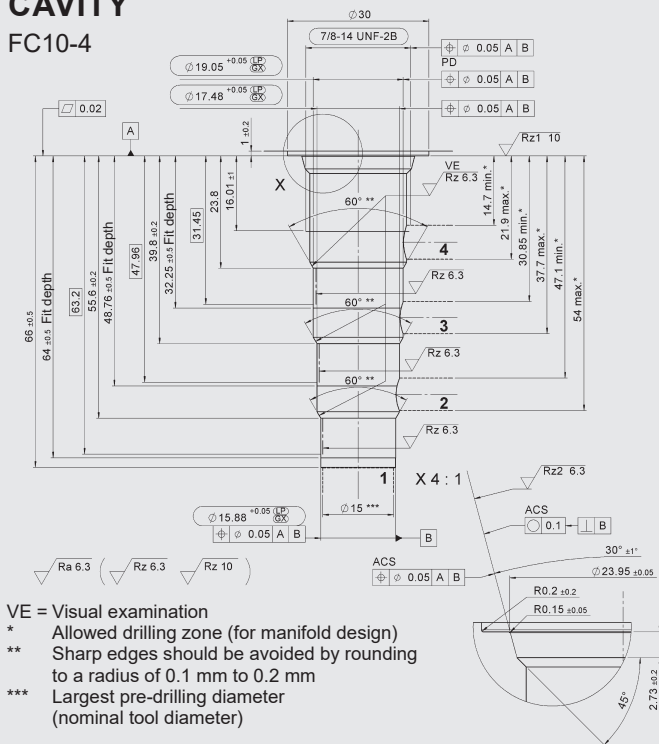


NOTICE:

Variations in the performance limits may be caused by other load conditions and port connections.

CAVITY

FC10-4



Form tools

Tool	Part no.
Countersink	176174
Reamer	176175

Millimetre (inch)
Subject to technical modifications

MODEL CODE

WK10Y - 40 - C - N - 24 DG

Basic model

4/2 directional spool valve, UNF

Type

40 = Δp optimised

Body and ports*

C = cartridge only

Seals

N = NBR (standard)

F = FKM

Coil voltage

DC voltages

12 = 12 VDC

24 = 24 VDC

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, form A, to EN 175301-803

DK = KOSTAL threaded connection M27x1

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

DN = Deutsch connector DT04-2P, 2-pole, axial

DT = AMP Junior Timer, 2-pole, radial

AC: AG = DIN connector to EN 175301-803

Other connectors on request

Standard models

Model code	Part no.
WK10Y-40-C-N-12DG	3839983
WK10Y-40-C-N-24DG	3839976

Other models on request

*Standard in-line bodies

Code	Material	Ports	Pressure	Part no.
FH104-SB4	Steel, zinc-plated	G1/2"	250 bar	3037784
FH104-AB4	Aluminium, anodised	G1/2"	210 bar	3038097

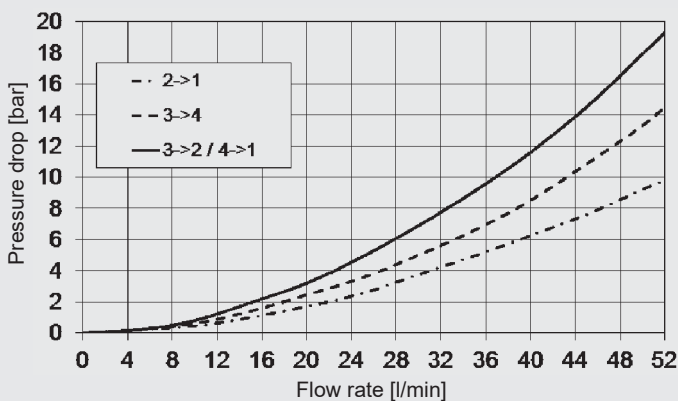
Other housings on request

Seal kits

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

TYPICAL PERFORMANCE

Measured at $v = 36 \text{ mm}^2/\text{s}$, $T_{\text{oil}} = 44^\circ\text{C}$



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. Technical modifications are reserved.

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