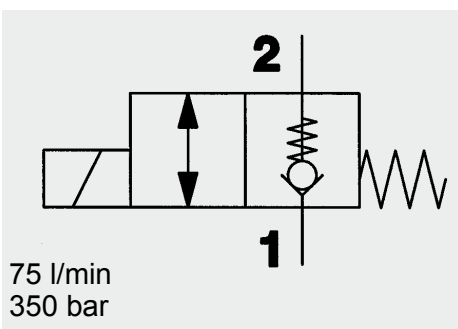
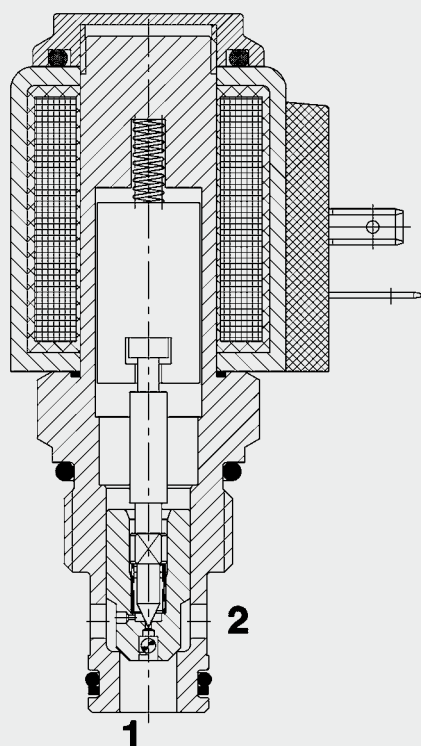


## 2/2 Solenoid Directional Valve **UNF** **Poppet Type** **Normally Closed (Reverse Flow)** **SAE-10 Cartridge – 350 bar**

WS10ZR-01



### FUNCTION



### FEATURES

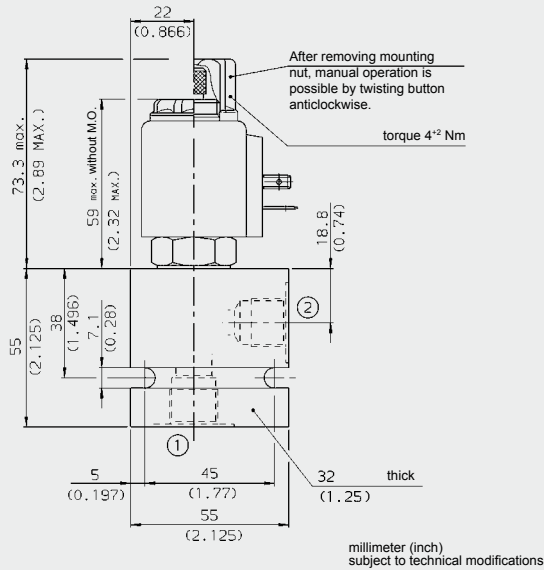
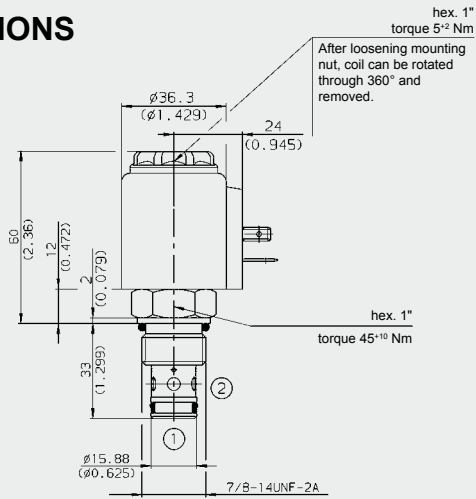
- External surfaces zinc-plated and corrosion proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid
- Low pressure drop by CFD optimized flow path

### SPECIFICATIONS

Operating pressure:	max. 350 bar
Nominal flow:	max. 75 l/min
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. 7.4 mm <sup>2</sup> /s to max. 420 mm <sup>2</sup> /s
Filtration:	Class 21/19/16 according 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:	FC10-2
Weight:	Valve complete 0.37 kg Coil only 0.19 kg
<b>Electrical data:</b>	
Switching time:	energized: approx. 30 ms non-energized: approx. 60 ms
Type of voltage:	DC solenoid, AC voltage is rectified using a bridge rectifier built into the coil
Nominal voltage at 20 °C:	1.5 A at 12 V DC 0.8 A at 24 V DC
Voltage tolerance:	$\pm$ 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

When the solenoid coil is not energized, the valve is closed from port 2 to port 1. There is free flow from port 1 to port 2. When energized, the valve allows flow in both directions.

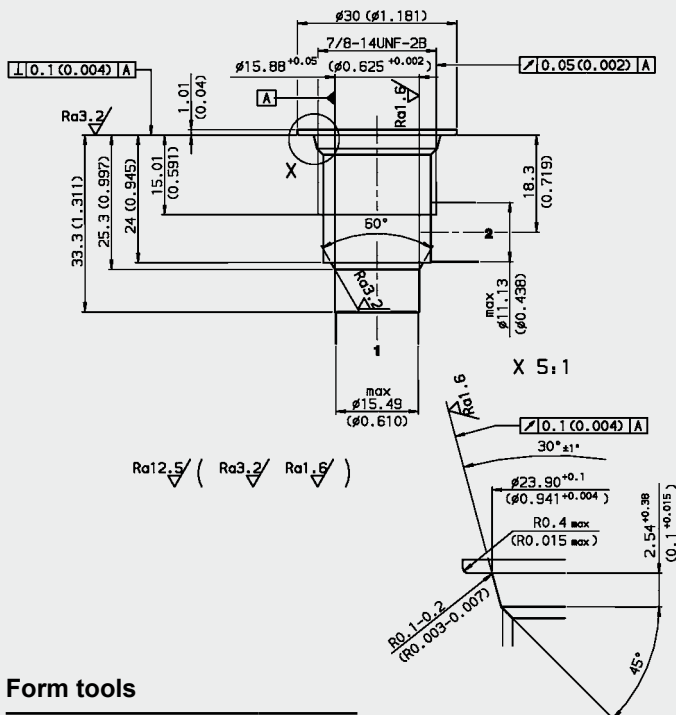
## DIMENSIONS



millimeter (inch)  
subject to technical modifications

## CAVITY

FC10-2



## Form tools

Tool	Part No.
Countersink FC10-2	176379
Reamer FC10-2	165706

millimeter (inch)  
subject to technical modifications

## MODEL CODE

WS10ZR - 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  
SB4 = G1/2 ports, steel body  
AB4 = G1/2 ports, aluminium body

**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 to EN 175301-803  
DK = KOSTAL threaded connection M27x1  
DL = 2 flying leads, 457 mm long, 0.75 mm<sup>2</sup>  
DN = Deutsch connector, 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.
WS10ZR-01-C-N-24DG	3030604
WS10ZR-01-C-N-230AG	3043820

Other models on request

## \*Standard in-line bodies

Code	Part No.	Material	Ports	Pressure
FH102-SB4	3037594	Steel, zinc-plated	G1/2	420 bar
FH102-AB4	3037777	Aluminium, clear anodized	G1/2	210 bar

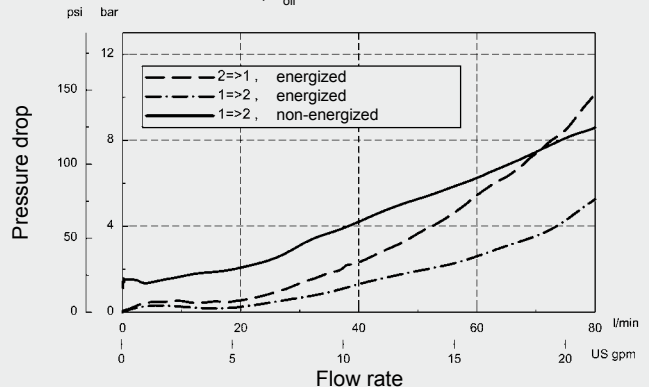
Other housings on request

## Seal kits

Code	Material	Part No.
FS102-N SEAL KIT	NBR	3033872
FS102-V SEAL KIT	FKM	3051757

## 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.

**HYDAC Fluidtechnik GmbH**  
Justus-von-Liebig-Str.  
**D-66280 Sulzbach/Saar**  
Tel: 0 68 97 /509-01  
Fax: 0 68 97 /509-598  
E-Mail: flutec@hydac.com