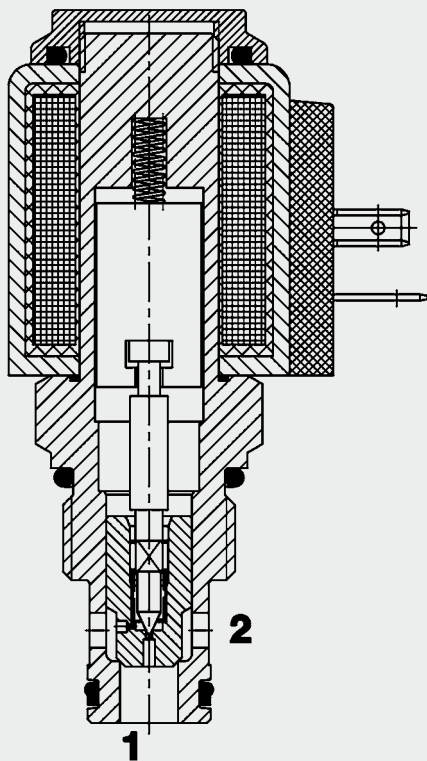


## 2/2 Solenoid Directional Valve **UNF** Poppet Type - Pilot Operated, Normally Closed **SAE-10 Cartridge – 350 bar**

WS10Z-01

### FUNCTION



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, there is free flow through the valve from port 2 to port 1. Flow in the reverse direction is not possible.

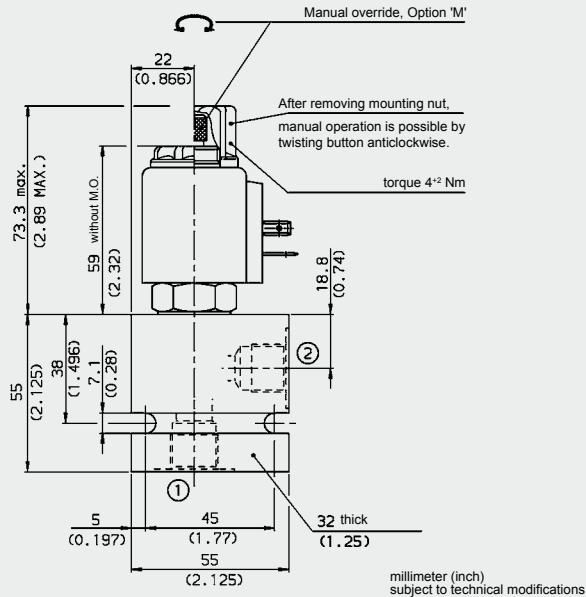
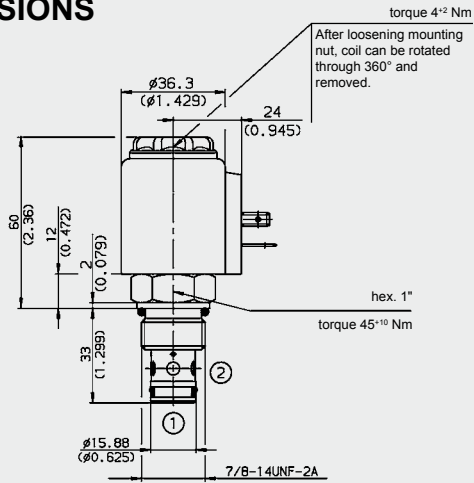
### FEATURES

- 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

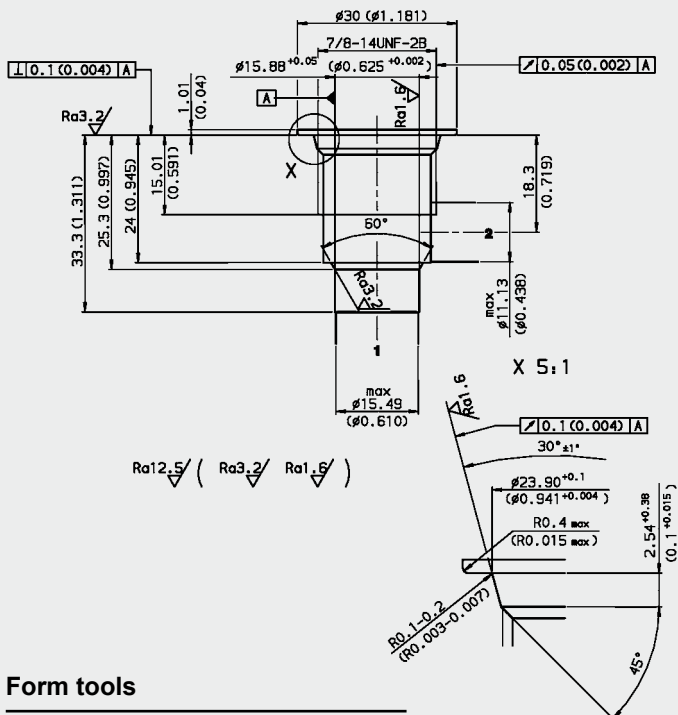
|                                    |   |
|------------------------------------|---|
| Operating pressure:                | max. 350 bar  |
| Nominal flow:                      | max. 75 l/min   |
| Leakage:                           | Leakage-free<br>(max. 5 drops = 0,25 cm <sup>3</sup> /min at 350 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<br>Piston: hardened and ground steel<br>Seals: NBR (standard)<br>FKM (optional, media temperature range -20 °C to +120 °C)<br>Back-up rings: PTFE<br>Coil: steel / polyamide |
| Cavity:                            | FC10-2  |
| Weight:                            | Valve complete: 0.37 kg<br>Coil only: 0.19 kg   |
| <b>Electrical data:</b>            |   |
| Switching time:                    | energized: approx. 30 ms<br>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<br>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   |

## DIMENSIONS



## CAVITY

FC10-2



## Form tools

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

millimeter (inch) subject to technical modifications

## MODEL CODE

**WS10Z-01 M - C - N - 24 DG**

### Basic Model

Directional poppet valve UNF

### 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  
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. |
|--------------------|----------|
| WS10Z-01-C-N-24DG  | 3030560  |
| WS10Z-01-C-N-230AG | 3043793  |

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  |

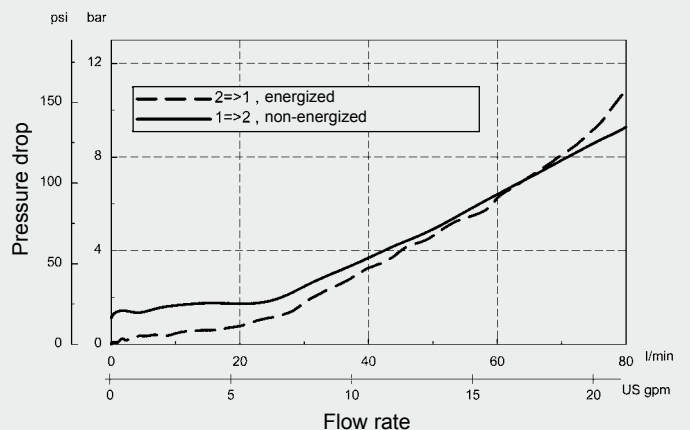
Other housings on request

## Seal kits

| Code             | Material | Part No. |
|------------------|----------|----------|
| FH102-N Seal kit | NBR      | 3033872  |
| FH102-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