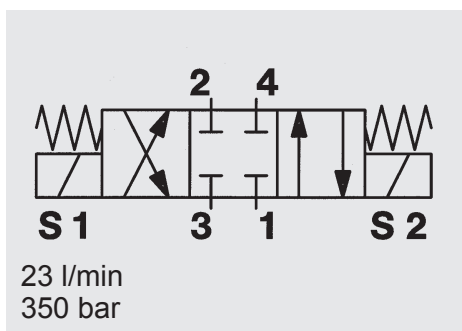
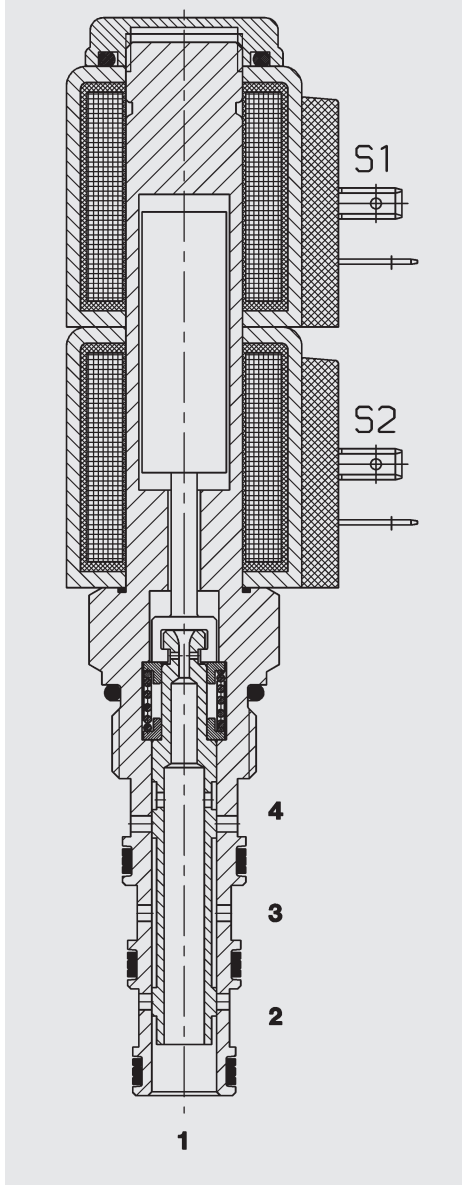




## FUNCTION



When the solenoid coil is de-energized, all ports are closed. When the solenoid coil S1 is energized, there is free flow through the valve from port 3 to port 4 and from port 2 to port 1. When solenoid coil S2 is energized, there is free flow through the valve from port 3 to 2 and from port 4 to 1.

## 4/3 Solenoid Directional Valve **UNF** Spool Type, Direct-Acting Closed Center, SAE-10 Cartridge – 350 bar WK10E-01

### FEATURES

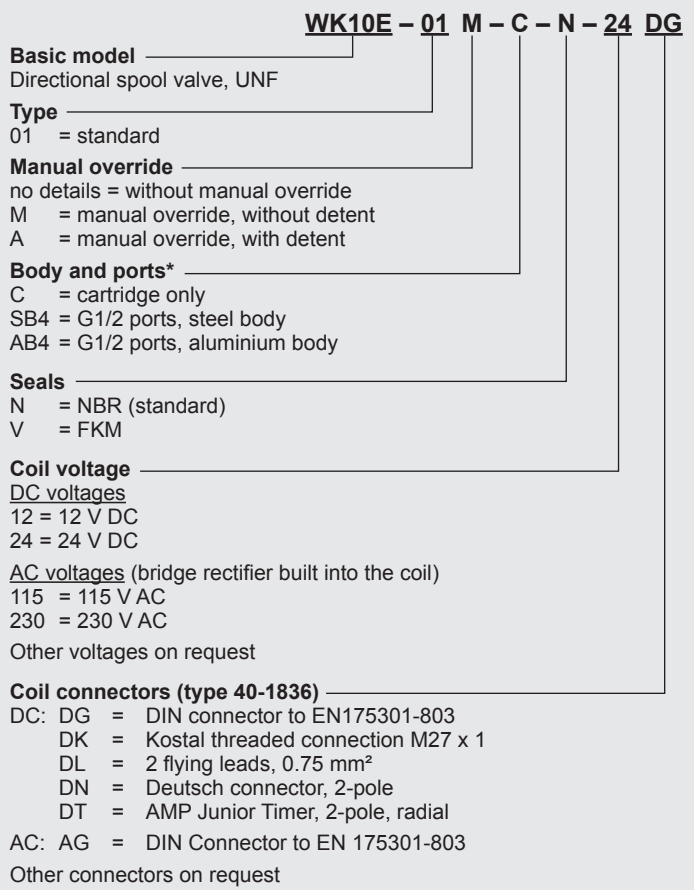
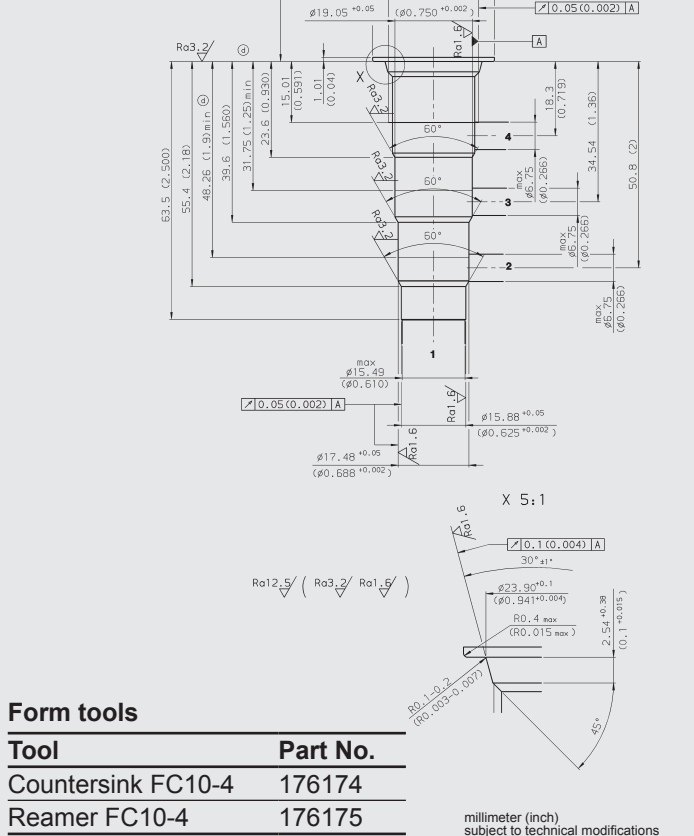
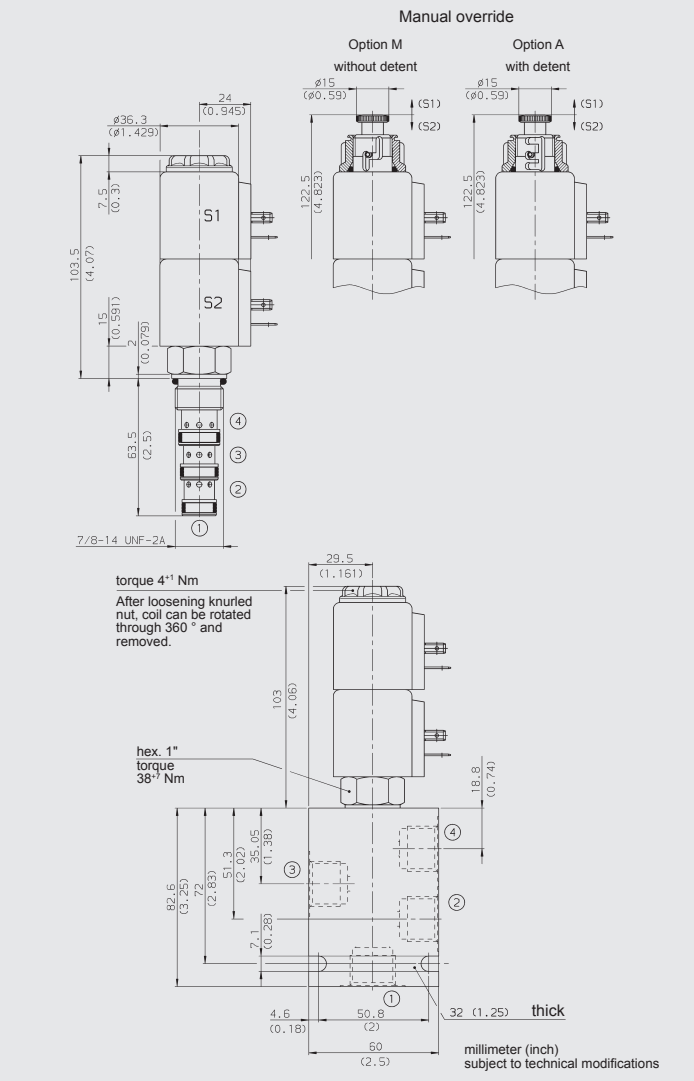
- External surfaces zinc-plated and corrosion-proof
- Hardened and ground internal valve components to ensure minimal wear and extended service life
- Coil seals protect the solenoid system
- Wide variety of connectors available
- Excellent switching performance by high power HYDAC solenoid
- Low pressure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

### SPECIFICATIONS

|                                    |                                                                                                                                                                                                      |
|------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Operating pressure:                | 350 bar                                                                                                                                                                                              |
| Nominal flow:                      | 23 l/min<br>(Consult HYDAC for flow ratings above 207 bar)                                                                                                                                           |
| Internal leakage:                  | max. 120 cm <sup>3</sup> /min<br>at 207 bar and 34 mm <sup>2</sup> /s                                                                                                                                |
| 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:                   | 7.4 to 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                                                                                                                                                                          |
| Material:                          | Valve body: steel<br>Spool: hardened and ground steel<br>Seals: N = NBR (standard)<br>V = FKM (optional, media temperature range -20 °C to 120 °C)<br>Coil: Steel / Polyamide<br>Back-up rings: PTFE |
| Cavity:                            | FC10-4                                                                                                                                                                                               |
| Weight:                            | Valve complete: 0.67 kg<br>Coil only: 0.19 kg<br>(2 pieces are required)                                                                                                                             |

### Electrical data:

|                        |                                                                                   |
|------------------------|-----------------------------------------------------------------------------------|
| Type of voltage:       | DC solenoid, AC voltage is rectified using a bridge rectifier built into the coil |
| Current draw at 20 °C: | 1.5 A at 12 V DC<br>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 (2 pieces)                                                        |

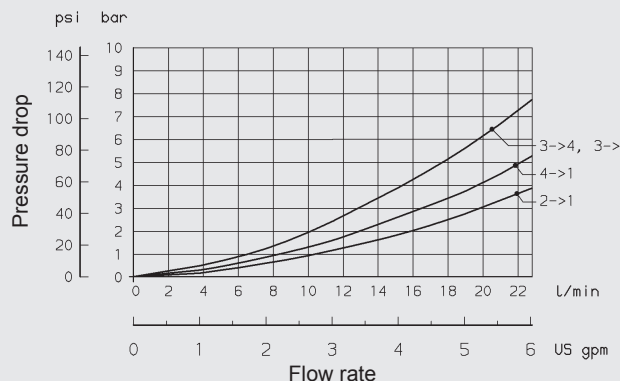


| Code                    | Part No. |
|-------------------------|----------|
| WK10E-01-C-N-12DG       | 3044407  |
| WK10E-01-C-N-24DG       | 3044428  |
| WK10E-01-C-N-230AG      | 3044426  |
| Other models on request |          |

| Code                    | Part No. | Material            | Ports | Pressure |
|-------------------------|----------|---------------------|-------|----------|
| FH104-SB4               | 3037784  | Steel, zinc-plated  | G1/2  | 420 bar  |
| FH104-AB4               | 3038097  | Aluminium, anodized | G1/2  | 210 bar  |
| Other models on request |          |                     |       |          |

| Code             | Part No. | Material |
|------------------|----------|----------|
| Seal kit FS104-N | 3051912  | NBR      |
| Seal kit FS104-N | 3071275  | FKM      |

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



**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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