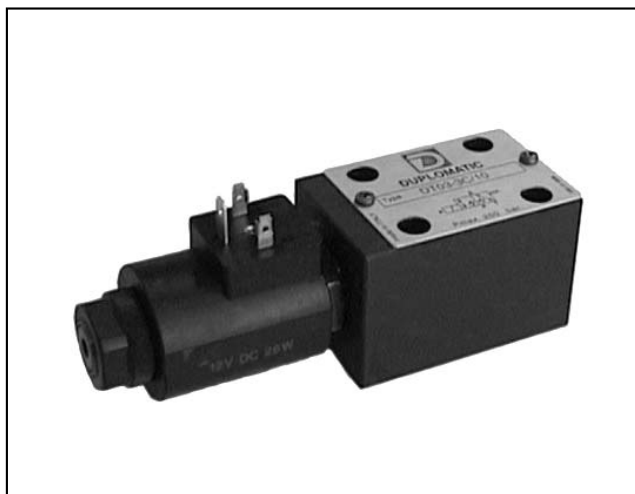




DIPLOMATIC
HYDRAULICS



DT03

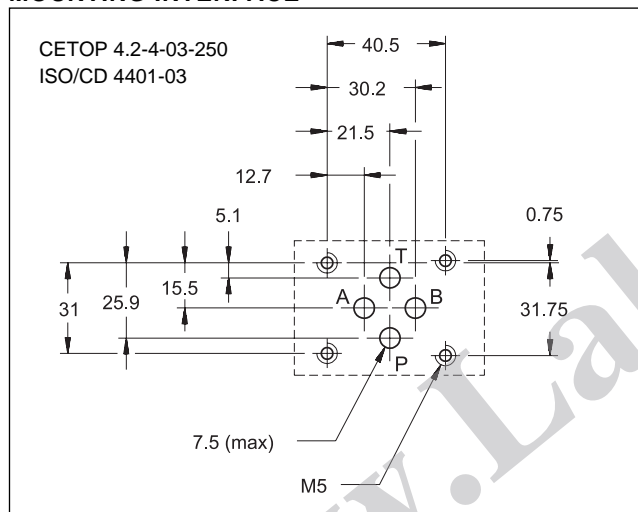
**POPPET TYPE
SOLENOID OPERATED
DIRECTIONAL CONTROL VALVE
SERIES 10**

CETOP 03

p max 250 bar

Q max 25 l/min

MOUNTING INTERFACE



SUBPLATE MOUNTING

- Direct-acting control valve with conical seat seal.
- Two- or three-way versions with possibility of seal in both directions for two-way valves.
- Leakproof solenoids in oil bath, available in AC and DC supply voltages.

CONFIGURATIONS (see Hydraulic symbols table)

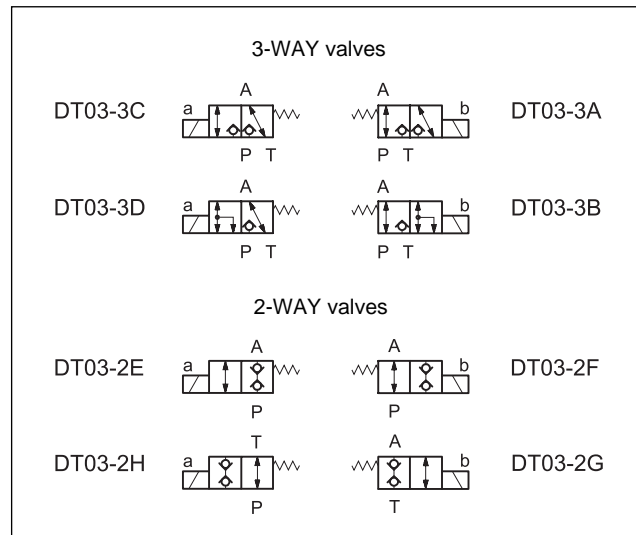
- Configurations "A", "B", "C", "D": 3-way, 2-position solenoid valves.
- Configurations "E", "F", "G", "H": 2-way, 2-position solenoid valves.

PERFORMANCE RATINGS

(working with mineral oil of viscosity of 36 cSt at 50°C)

| | | |
|----------------------------|-------------|-----------|
| Maximum operating pressure | bar | 250 |
| Maximum flow rate | l/min | 25 |
| Ambient temperature range | °C | -20 ÷ +50 |
| Fluid temperature range | °C | -20 ÷ +70 |
| Fluid viscosity range | cSt | 2,8 ÷ 380 |
| Recommended filtration | µm absolute | ≤ 25 |
| Recommended viscosity | cSt | 25 |
| Mass | kg | 1,3 |

HYDRAULIC SYMBOLS





1 - IDENTIFICATION CODE

| | | | | | | | | | | | | | |
|--|----------|----------|-----------|---|--|---|--|---|-----------|---|--|---|--|
| | D | T | 03 | - | | / | | / | 10 | / | | / | |
|--|----------|----------|-----------|---|--|---|--|---|-----------|---|--|---|--|

Poppet type solenoid operated directional control valve

CETOP 03 size

Number of ways:
2 = 2-way
3 = 3-way

Type of configuration:
A - B - C - D: 3-way, 2-position solenoid valve
E - F - G - H: 2-way, 2-position solenoid valve

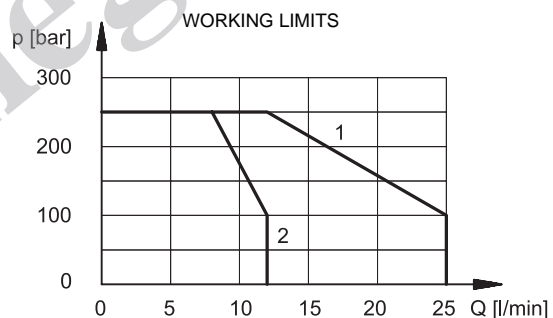
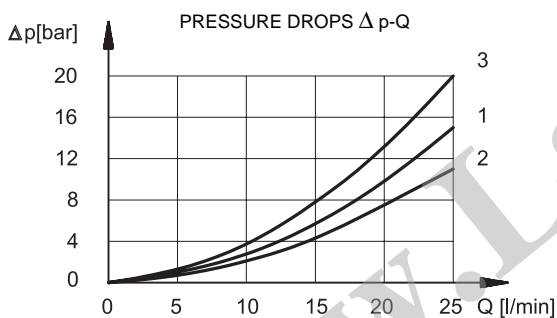
Variant on line P:
D08 = orifice \varnothing 0.8
D10 = orifice \varnothing 1.0
(omit if not required)

Seals: omit for mineral oils
V = viton for special fluids

Supply voltage: see par. 4.2

Series No. (The overall and mounting dimensions remain unchanged from 10 to 19)

2 - CHARACTERISTIC CURVES (values obtained with viscosity 36 cSt at 50 °C)



| Valve code | De-energized solenoid | Energized solenoid |
|------------|-----------------------|--------------------|
| | Curve on the graph | |
| DT03-3A | 1 | 3 |
| DT03-3B | 2 | 3 |
| DT03-3C | 1 | 3 |
| DT03-3D | 2 | 3 |
| DT03-2E | - | 3 |
| DT03-2F | 1 | - |
| DT03-2G | - | 3 |
| DT03-2H | 1 | - |

| Valve code | Curve on the graph |
|------------|--------------------|
| DT03-3A | 2 |
| DT03-3B | 1 |
| DT03-3C | 1 |
| DT03-3D | 1 |
| DT03-2E | 1 |
| DT03-2F | 2 |
| DT03-2G | 1 |
| DT03-2H | 1 |

3 - HYDRAULIC FLUIDS

Use mineral oil-based hydraulic fluids, with the addition of suitable anti-frothing and anti-oxidising agents.
For the use of other fluid types (water glycol, phosphate esters and others), please consult our technical department.



4 - ELECTRICAL FEATURES

4.1 Solenoids

These are essentially made up of two parts: tube and coil. The tube is threaded onto the valve body and includes the armature that moves immersed in oil, without wear. The inner part, in contact with the oil in the return line, ensures heat dissipation. The coil is fastened to the tube by a threaded nut, and can be turned 360° on its axis, compatible with space available. The interchangeability of coils of different voltages is allowed within the same type of supply current: alternating or direct (DC / RAC).

4.2 Available voltages

It is necessary to always use "D" type connectors (with rectifier incorporated) and RAC coils for alternating current supply. Rectified current supply takes place by using a bridge rectifier bridge, externally or fitted within the "D" type connectors, between the alternating current source (24 V or 110 V, /50 or /60 Hz) and the coil.

4.3 Current and power consumption

| V | Hz | Current consumption A (± 5%) | Power W (± 5%) |
|-----|-----|------------------------------|----------------|
| 12 | DC | 2.38 | 28.8 |
| 24 | DC | 1.19 | |
| 24 | RAC | 1.4 | 28.8 |
| 110 | RAC | 0.3 | |
| 220 | RAC | 0.15 | |

4.4 Switching times

The values indicated refer to a flow rate of Q=10 l/min, p=210 bar working with mineral oil at a temperature of 50°C, a viscosity of 36 cSt and supply voltage equal to 90% of the nominal voltage.

| | |
|---|-----------------------------|
| SUPPLY VOLTAGE FLUCTUATION | ±10% Vnom |
| DUTY CYCLE | 100% |
| Class of protection according to IEC144 standards: Atmospheric agents Coil insulation Impregnation | IP 65 class H class F |

| DIRECT CURRENT COILS | | |
|----------------------|----------|----------|
| 12V DC | 24V DC | |
| RAC COILS | | |
| 24V RAC | 110V RAC | 220V RAC |

4.5 Electric connectors

The solenoid valves are never supplied with connector.

Connectors must be ordered separately.

For the identification of the connector type to be ordered, please see catalogue 49 000.

| TIMES (±10%) | ENERGIZING | DE-ENERGIZING |
|--------------|------------|---------------|
| | | 30 ms |

5 - OVERALL AND MOUNTING DIMENSIONS

NOTE: The solenoid position here shown is for A-B-F-G versions. For the other versions the solenoid is on the opposite side.

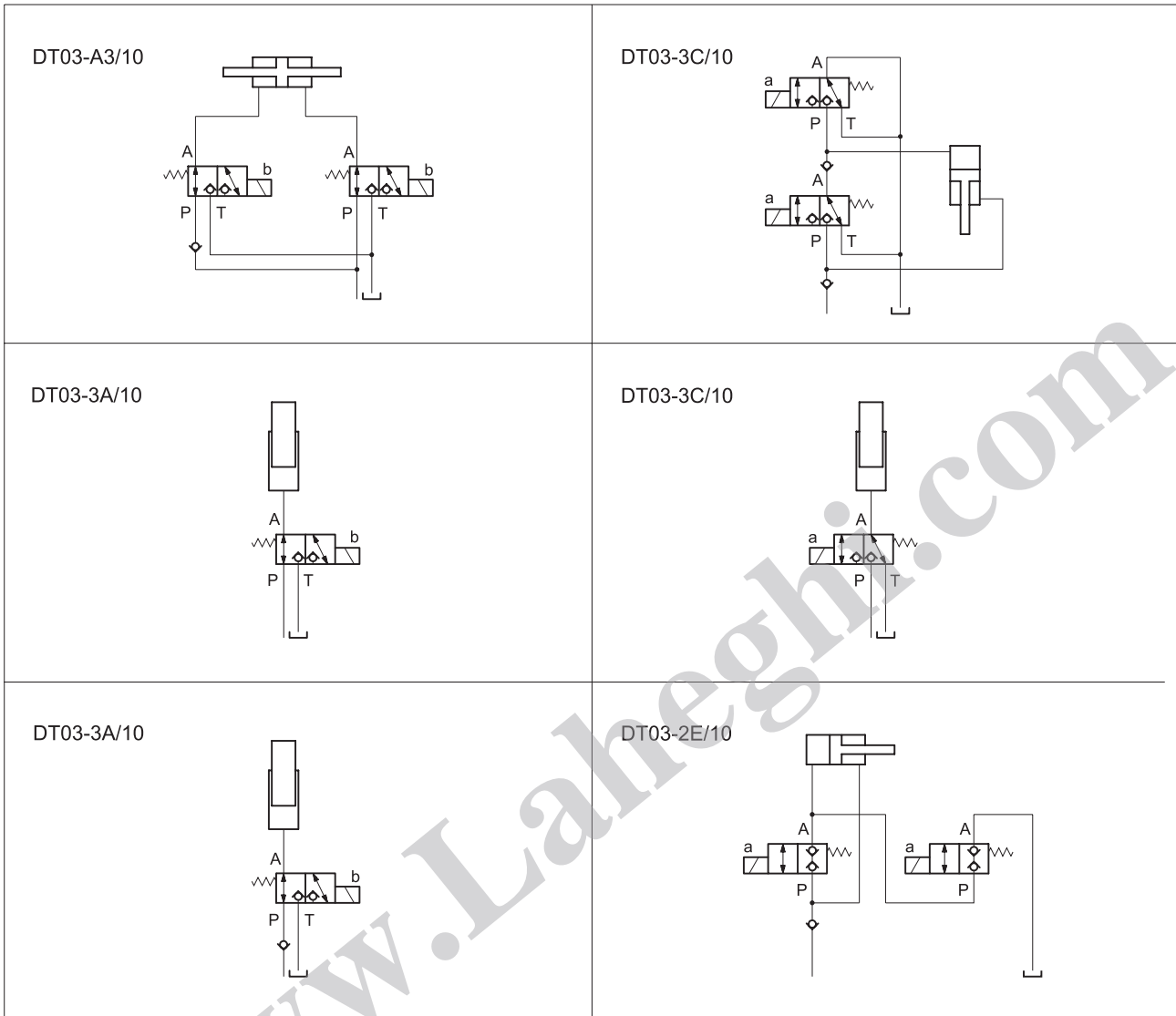
Fastening bolts:
4 bolts M5 x 50
Torque: 5 Nm

| | |
|---|---|
| 1 | Manual override |
| 2 | Coil removal space |
| 3 | Mounting surface with sealing rings: 4 OR type 2037 |
| 4 | Electric connector to be ordered separately (see cat. 49 000) |
| 5 | Connector removal space |

dimensions in mm



6 - APPLICATION EXAMPLES



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