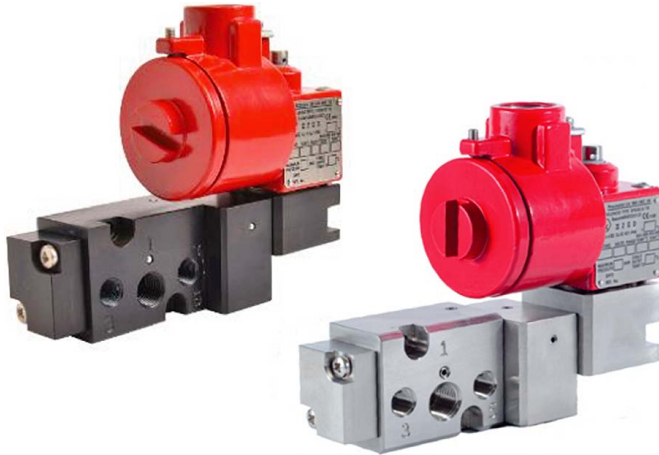# pneumatrol

# Type T25 Series, 1/4" Ported, 3/2 or 5/2 Pilot Operated Solenoid Valve

**CALL:** +44 (0)1254 872277
**E-MAIL:** sales@pneumatrol.com

## DESCRIPTION

Solenoid valve designed for direct mounting onto 1/4 turn pneumatically operated valve actuators meeting 'NAMUR' standard fixing dimensions.

Valve is illustrated with dual safe area terminal box coils.

Body material available in
- Aluminium (standard)
- Stainless Steel
- Brass

Seal kit available – VSKT25P

## FEATURES

- Interchangeable CNOMO interface operators including various hazardous area options
- Integrated Exhaust to Spring (ETS) feature in 3/2 position
- Top face air connection
- 1/4" mains air and exhaust ports
- Solenoid/spring or solenoid/solenoid functions
- Built in 3/2 to 5/2 function conversion facility for spring return and double acting actuators respectively
- SIL2 on energising, SIL3 on de-energising when used in 3/2 mode

## PRODUCT CODE: T 2 5 [ ][ ] P [ ][ ] 0 [ ][ ][ ]

OPTIONS 1 · DESIGNATOR
OPERATOR · COIL · VOLTAGE · OPTIONS 2

**SEE BELOW FOR PRODUCT CODE DETAILS**
Any of the below options that are not required enter '0' in relevant box.

### Operator

| | | |
|---|---|---|
| 1 | 8 | Spring return, internal pilot air feed |
| 8 | 0 | Spring return, external pilot air connection |
| 1 | 9 | Double solenoid, internal pilot air feed |
| 9 | 0 | Double solenoid, external pilot air connection |

### Coil

| | |
|---|---|
| A | Exia (BASEEFA) |
| B | Terminal Box |
| U | Exia (FM) |
| D | Exd |
| K | MC30 Plug & Socket |
| N | ExnA |
| P | Plug & Socket |
| S | Exia (BASEEFA) Stainless Steel Housing |
| 0 | No Coil Unit |
| 8 | Ex e mb |
| 4 | IP66 Terminal Box |

### Options 1

| | |
|---|---|
| C | Lever manual override |
| D | Push button manual override |
| S | Screw driver override (standard) |
| 0 | No option required |

### Standard Voltage

| | |
|---|---|
| B | 24v DC |
| H | 24v DC Low Power [1] |
| R | 24v AC (50/60 Hz) |
| T | 110v AC (50/60 Hz) |
| N | 220v AC (50/60 Hz) |
| U | 240v AC (50/60 Hz) |

**\* A comprehensive range of non-standard voltages available on request**

**Note:**
(1) "H" option not available with Exia solenoids
(2) IECEx only available with Exia and Exd Solenoids
(3) GOST CU TR only available with Exd solenoids
(4) NEPSI only available with Exia and Exd solenoids

### Designator

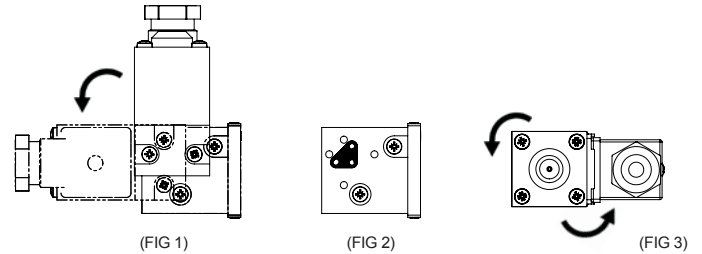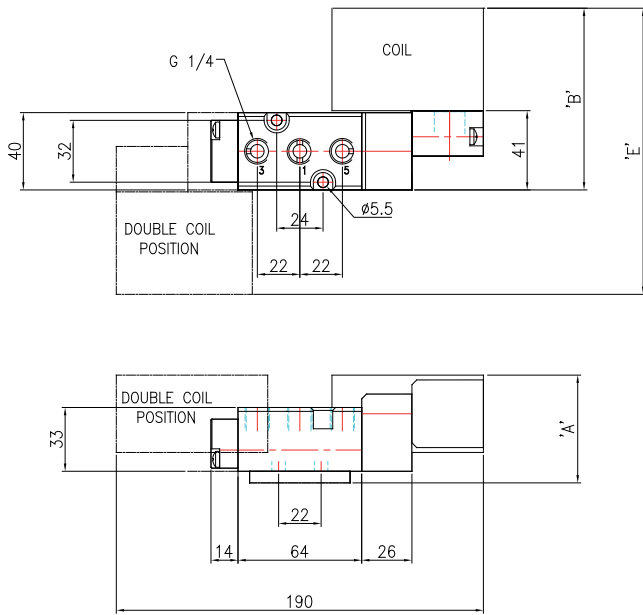| | |
|---|---|
| A | ATEX |
| C | IECEx [2] |
| E | Exme 0.5W |
| G | ATEX Exd IIB |
| H | Exm |
| J | Exme 2.4W |
| R | GOST CU TR [3] |
| X | NEPSI [4] |

### Options 2

| | |
|---|---|
| B | Valve body brass |
| C | Valve body brass and NPT ports |
| D | Valve body brass, NPT ports and 1/2" NPT electrical connection |
| E | 1/2" NPT electrical connection |
| L | Low temperature duty -40°C |
| M | NPT ports and 1/2" NPT electrical connection |
| N | NPT ports |
| P | Valve body stainless steel, NPT ports and 1/2" NPT electrical connection |
| R | Valve body stainless steel and NPT ports |
| S | Valve body stainless steel |
| X | Valve suitable for use with Oxygen |

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## COIL ORIENTATION

The solenoid pilot can be mounted in two possible positions by rotating the solenoid base through 90° (FIG 1). This is achieved by releasing the two M4 pozi-drive screws which secure the solenoid pilot to the valve body. When changing the solenoid pilot position care should be taken to ensure the triangular gasket seal is in place. (FIG 2)

The coil itself can be rotated in 90° steps by releasing the four securing screws. (FIG 3) When rotating the coil care should be taken to ensure the core assembly (core, spring, seal and washer) remains intact and alined correctly. This is easily achieved by only lifting the coil the small amount required to clear the screws enabling the coil to be rotated.

(FIG 1)  (FIG 2)  (FIG 3)

## DIMENSIONS (mm)

| COIL TYPE | A | B | E |
|---|---|---|---|
| MC30 Plug & Socket | 54 | 85 | 130 |
| Heavy Duty Mazak Plug & Socket | 54 | 85 | 130 |
| Standard Terminal Box | 54 | 93 | 146 |
| SS Terminal Box | 62 | 110 | 180 |
| ExnA Terminal Box | 54 | 93 | 146 |
| Exd SS Terminal Box | 62 | 110 | 180 |
| Exm Flying Lead | 54 | 81 | 122 |
| Exme Terminal Box | 54 | 93 | 146 |
| Piezo Operator | 52 | 94 | 148 |
| Exia SS Terminal Box | 62 | 117 | 194 |
| Exia Std. Terminal Box | 54 | 100 | 160 |
| Exia Plug & Socket | 54 | 88 | 136 |

## MATERIAL SPECIFICATIONS

| | STANDARD |
|---|---|
| Body and End Caps | Black Anodised Aluminium (Dural) |
| Spool | Hard Anodised Aluminium PTFE Impregnated |
| Spacers | Glass Filled Acetal |
| Seals | Nitrile |
| Spring | Music Wire |
| Mounting Screws | Stainless Steel |
| NAMUR Interfaced Plates | Nylon 66 30% Glass Filled |

## VALVE SPECIFICATIONS

| | STANDARD |
|---|---|
| Port Connection Size | 1/4" BSP |
| Working Pressure Internal Pilot Version | 3 to 10 bar |
| Working Pressure External Pilot Version | 3 to 10 bar |
| Minimum External Pilot Pressure | 3 bar |
| Cv Factor | 1.1 |
| Flow Rate (6 bar inlet pressure, 1 bar pressure drop) | 1050 l/min |
| Maximum Ambient Temperature | +80 °C |
| Minimum Working Temperature | -20 °C |

## COIL DETAILS

| Coil Type | Plug & Socket | Terminal Box | ExnA | Exd | Exm | Exia |
|---|---|---|---|---|---|---|
| Area Class | Safe | Safe | Zone 2 | Zones 1 & 2 | Zones 1 & 2 | Zone 0, 1 & 2 |
| Area Category | N/A | N/A | ExN II T4-T6 | Exd IIC T3-T6 | Exm IIC T5 | Exia IIC T6 |
| Ingress Protection | IP65 | IP65 | IP65 | IP66 | IP65 | IP65 |
| Cable Entry | PG.9 | M20 x 1.5 | M20 x 1.5 | M20 x 1.5 | Flying leads | M20 x 1.5 |
| Ambient Temperature | -20 to +80 °C | -20 to +80 °C | -40 to +60 °C | -60 to +80 °C | -20 to +65 °C | -40 to +65 °C |
| Magnetic Wire Class | H | H | H | H | H | H |

**\* FURTHER SOLENOID OPTIONS AVAILABLE ON REQUEST**

Specifications subject to change without prior notice.