

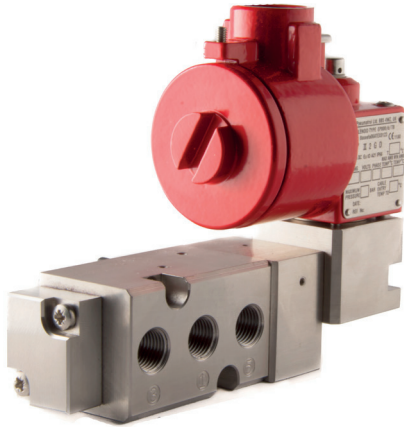
NAMUR  
MOUNTED

ROSS™  
a global family

pneumatrol

powerite  
division of Kinetrol Ltd

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



### DESCRIPTION

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

Hazardous area approved pilot operators (ExnA, Ex e mb, Exd and Exia) are available with various international approvals – ATEX, IECEx, FM, GOST CU TR (Russia) and NEPSI (China).

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
- The valve is fitted with a changeover plate that allows the valve to be converted from 3/2 to 5/2 function quickly and easily for spring return and double acting actuators
- SIL 2 Capable (Deenergise to trip @ HFT=0) SIL 3 Capable (Deenergise to trip @ HFT=1) when used in 3/2 mode

PRODUCT CODE:

T 2 5

OPERATOR

P

COIL

OPTIONS 1

0

VOLTAGE

DESIGNATOR

X

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                            |
| 1 | 4 | 5/3 All ports sealed mid position, internal pilot air feed                |
| 4 | 0 | 5/3 All ports sealed mid position, external pilot air connection          |
| 1 | 5 | 5/3 Inlet sealed open exhaust mid position, internal pilot air feed       |
| 5 | 0 | 5/3 Inlet sealed open exhaust mid position, external pilot air connection |

#### Coil

- |   |                                 |
|---|---------------------------------|
| A | Exia                            |
| B | Terminal Box                    |
| D | Exd                             |
| H | Plug & Socket Exia              |
| K | MC30 Plug & Socket              |
| L | MC30 Plug & Socket with LED     |
| P | Plug & Socket                   |
| S | Exia Stainless Steel Housing    |
| Y | ExnA Plug & Socket              |
| 4 | Stainless Steel Housing         |
| 5 | ExnA Stainless Steel Housing    |
| 8 | Ex e mb Stainless Steel Housing |

#### Options 1

- |   |                             |
|---|-----------------------------|
| C | Lever manual override       |
| D | Push button manual override |
| S | Screw driver override       |
| 0 | No option required          |
- \* Not SIL approved with manual override options**

#### Standard Voltage

- |   |                                 |
|---|---------------------------------|
| B | 24v DC                          |
| H | 24v DC Low Power <sup>(1)</sup> |
| 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 / IECEx <sup>(2)</sup> |
| B | ATEX / IECEx (10mA)         |
| F | FM / CSA                    |
| G | ATEX Exd IIB                |
| J | ATEX Ex e mb                |
| R | GOST CU TR <sup>(3)</sup>   |
| X | NEPSI <sup>(4)</sup>        |

#### 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   |

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

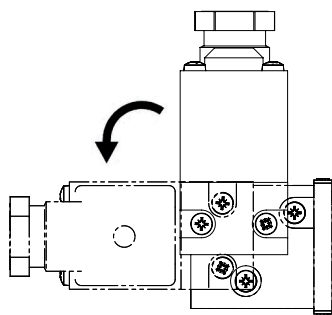
## EXHAUST TO SPRING

In 3/2 function a proportion of clean air exhausting from the actuator is fed back into the spring chamber.

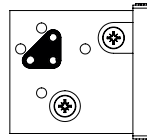
## COIL ORIENTATION

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)

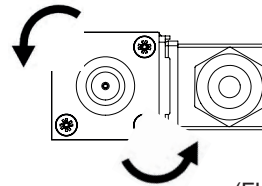
The coil itself can be rotated in 90° steps by releasing the four securing screws. (FIG 3) When rotating the coil care should be taken to ensure the core assembly (core, spring, seal and washer) remains intact and aligned correctly. This is easily achieved by only lifting the coil the small amount required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



(FIG 1)



(FIG 2)



(FIG 3)

## 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	Ex e mb	Exia
Area Class	Safe	Safe	Zone 2	Zones 1 & 2	Zones 1 & 2	Zone 0, 1 & 2
Area Category	N/A	N/A	Ex nA II T4-T6	Exd IIC T3-T6	Ex e mb IIC T4	Exia IIC T6
Ingress Protection	IP65	IP65	IP65	IP66	IP66	IP65
Cable Entry	PG.9	M20 x 1.5	M20 x 1.5 or PG.9	M20 x 1.5	M20 x 1.5	M20 x 1.5
Ambient Temperature	-20 to +80 °C	-20 to +80 °C	-20 to +60 °C	-20 to +80 °C	-20 to +65 °C	-20 to +65 °C
Magnetic Wire Class	H	H	H	H	H	H

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

**NAMUR  
MOUNTED**

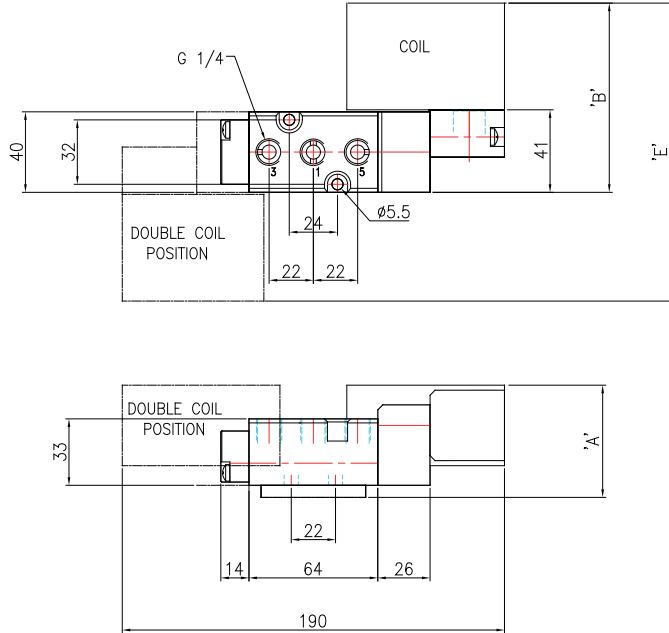
**ROSS™**  
a global family

**pneumatrol**

**powerite**  
division of Kinetrol Ltd

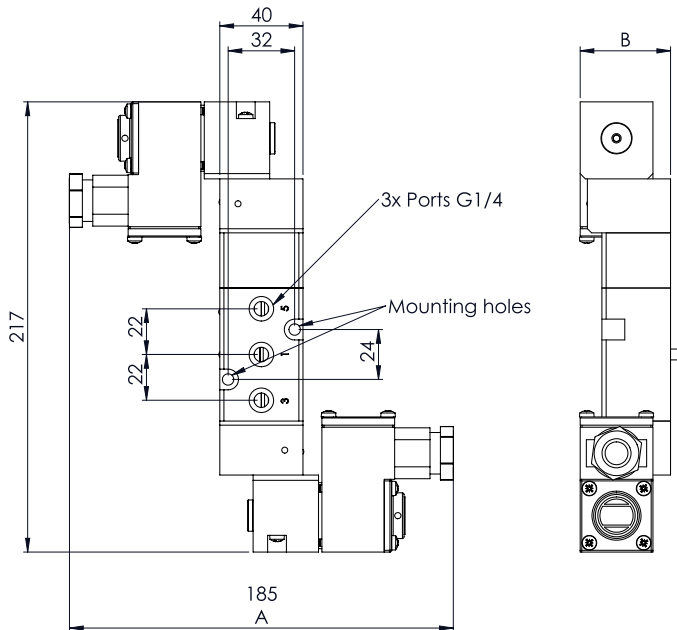
**DIMENSIONS (mm)**

**3/2 or 5/2 Position**



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

**5/3 Position**



COIL TYPE	A	B
Plug & Socket	153	44
MC30 Coil	143	44
Terminal Box	171	44
ExnA	171	44
Exd	195	52
Exia	183	44
Exm	135	44

Official Stockist:

Powerite - Division of Kinetrol Ltd, Steelpark Trading Estate, Steelpark Way, Wolverhampton, WV11 3BF