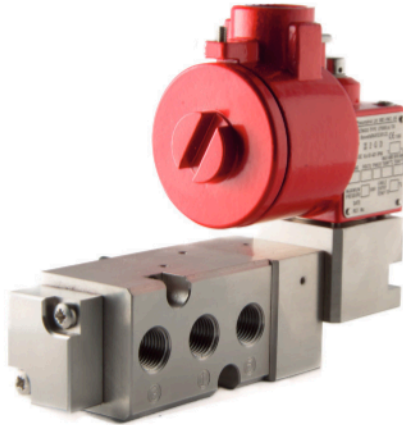


# Type T25 Series, 1/4" Ported, 3/2, 5/2 or 5/3 Pilot Operated Solenoid Valve



Valve Assembly illustrated with an Ex d coil for reference only.

## DESCRIPTION

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

- Hazardous area approved pilot operators
  - Ex nA, Ex e mb, Ex d & Ex ia
- Various international approvals
  - ATEX, IECEx, FM/CSA, CCCEX & UKCA
- Body material available in
  - Aluminium (standard)
  - Stainless Steel
  - Brass
- Seal kit available - VSKT25P

## FEATURES

- Integrated CNOMO interface coil units, including various hazardous area options
- Integrated Exhaust To Spring (ETS) feature in 3/2 position
- 1/4" mains air connection and exhaust ports
- The valve is fitted with a change-over 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 (De-energise to trip @ HFT=0), SIL 3 Capable (De-energise to trip @ HFT=1) (3/2 Solenoid Function only)
- Our manual override options are **NOT** currently covered by SIL Certification

PRODUCT CODE: T25

OPERATOR

P

COIL

OPTION 1

0

VOLTAGE

DESIGNATOR

OPTION 2

SEE BELOW  
PRODUCT CODE  
DETAILS

Any of the below options that are not required enter "0" in relevant box.

Operator	Coil	Option 1	Standard Voltage	Designator	Option 2
<b>1 8</b> Spring return, internal pilot air feed	<b>A</b> Exia	<b>C</b> Lever manual override	<b>B</b> 24v DC	<b>A</b> ATEX / IECEx / CCCEX <sup>(2)</sup>	<b>B</b> Valve body brass
<b>8 0</b> Spring return, external pilot air connection	<b>B</b> Terminal Box	<b>D</b> Push button manual override	<b>H</b> 24v DC Low Power <sup>(1)</sup>	<b>B</b> ATEX / IECEx / CCCEX (10mA) <sup>(2)</sup>	<b>C</b> Valve body brass and NPT ports
<b>1 9</b> Double solenoid, internal pilot air feed	<b>D</b> Exd	<b>S</b> Screw driver override	<b>R</b> 24v AC (50/60 Hz)	<b>F</b> FM / CSA <sup>(3)</sup>	<b>D</b> Valve body brass, NPT ports and 1/2" NPT electrical connection
<b>9 0</b> Double solenoid, external pilot air connection	<b>H</b> Plug & Socket Exia	<b>0</b> No option required	<b>T</b> 110v AC (50/60 Hz)	<b>J</b> ATEX Ex e mb	<b>E</b> 1/2" NPT electrical connection
<b>1 4</b> 5/3 All ports sealed mid position, internal pilot air feed	<b>K</b> MC30 Plug & Socket	*Not SIL approved with manual override options	<b>U</b> 240v AC (50/60 Hz)		<b>L</b> Low temperature duty -40°C
<b>4 0</b> 5/3 All ports sealed mid position, external pilot air connection	<b>L</b> MC30 Plug & Socket with LED				
<b>1 5</b> 5/3 Inlet sealed open exhaust mid position, internal pilot air feed	<b>P</b> Plug & Socket				<b>N</b> NPT ports
<b>5 0</b> 5/3 Inlet sealed open exhaust mid position, external pilot air connection	<b>S</b> Exia Stainless Steel Housing				<b>P</b> Valve body stainless steel, NPT ports and 1/2" NPT electrical connection
	<b>Y</b> ExnA Plug & Socket				<b>R</b> Valve body stainless steel and NPT ports
	<b>4</b> Stainless Steel Housing				<b>S</b> Valve body stainless steel
	<b>5</b> ExnA Stainless Steel Housing				
	<b>8</b> Ex e mb Stainless Steel Housing				

Note:

- (1) "H" option not available with Exia solenoids
- (2) IECEx & CCCEX only available with Exia and Ex db solenoids
- (3) FM only available in Exia

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

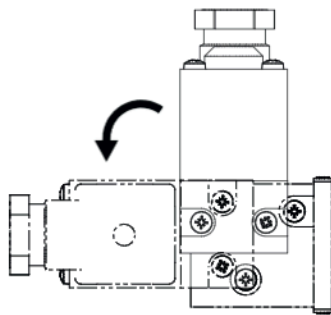
## EXHAUST TO SPRING

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

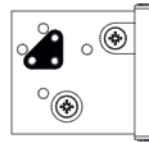
## COIL ORIENTATION

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)

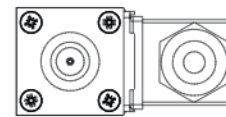
The coil itself can be rotated in 90° steps by releasing the four securing screws. (FIG 3) When rotating the coil care should be taken to ensure the core assembly (core, spring, seal and washer) remains intact and aligned correctly. This is easily achieved by only lifting the coil the small amount required 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 (Alternative Seals Available)
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 Version	3 bar
Cv Factor	1.1
Flow Rate (at 6 bar with 1 bar pressure drop)	1050 l/min
Maximum Ambient Temperature	+80°C
Minimum Working Temperature	-20°C

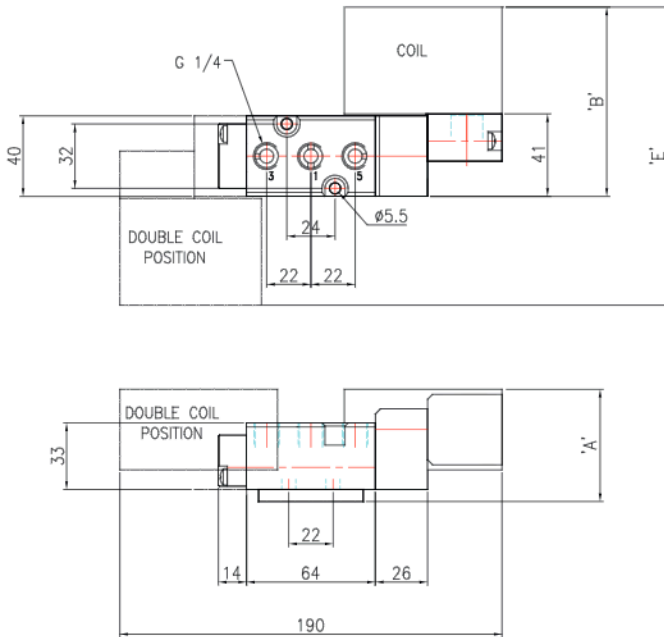
## COIL DETAILS

Coil Type	Plug & Socket	Terminal Box	ExnA	Exd	Ex e mb	Exia
Area Class	Safe	Safe	Zone 2	Zone 1 & 2	Zone 1 & 2	Zone 0, 1 & 2
Area Category	N/A	N/A	ExnA 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	PG.9	M20 x 1.5	M20 x 1.5	M20 x 1.5
Ambient Temperature	-20°C to +80°C	-20°C to + 80°C	-20°C to + 80°C	-20°C to +80°C	-20°C to +80°C	-20°C to +80°C
Magnetic Wire Class	H	H	H	H	H	H

**Further solenoid options available on request**

**DIMENSIONS (mm)**

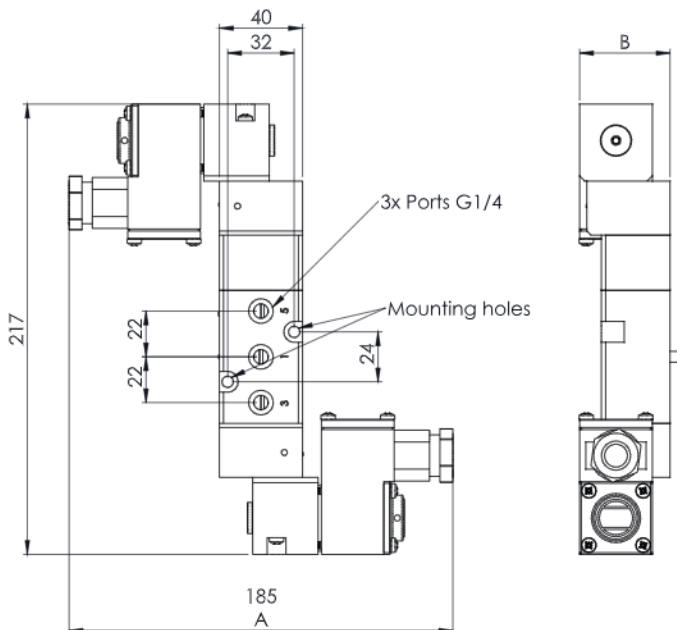
**3/2 or 5/2 Position**



**COIL TYPE**

COIL TYPE	A	B	E
MC30 Plug & Socket	54	85	130
Heavy Duty Mazek 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**

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

