

NAMUR  
MOUNTED

**pneumatrol**  
A ROSS CONTROLS Company

**powerite**  
division of Kinetrol Ltd

# Type C15 Series 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 – VSKC15P

## FEATURES

- Interchangeable CNOMO interface coil units, including various hazardous area options
- Integrated Exhaust to Spring (ETS) feature in 3/2 position
- Top face air connection
- 1/4" BSP mains air connection and 1/8" BSP exhaust ports, also available in NPT ports
- Single coil spring return function or double coil stay put function
- Pilot exhaust dust caps fitted as standard
- 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: **C 1 5**

**P**  
OPERATOR

OPTIONS 1

**0**  
COIL

DESIGNATOR

**0**  
VOLTAGE      OPTIONS 2

SEE BELOW FOR  
PRODUCT CODE  
DETAILS

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

### Operator

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

### Coil

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

### Options 1

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

### Standard Voltage

- |          |                                 |
|----------|---------------------------------|
| <b>B</b> | 24v DC                          |
| <b>H</b> | 24v DC Low Power <sup>(1)</sup> |
| <b>R</b> | 24v AC (50/60 Hz)               |
| <b>T</b> | 110v AC (50/60 Hz)              |
| <b>N</b> | 220v AC (50/60 Hz)              |
| <b>U</b> | 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

- |          |                             |
|----------|-----------------------------|
| <b>A</b> | ATEX / IECEx <sup>(2)</sup> |
| <b>B</b> | ATEX / IECEx (10mA)         |
| <b>F</b> | FM / CSA                    |
| <b>G</b> | ATEX Exd IIB                |
| <b>J</b> | ATEX Ex e mb                |
| <b>R</b> | GOST CU TR <sup>(3)</sup>   |
| <b>X</b> | NEPSI <sup>(4)</sup>        |

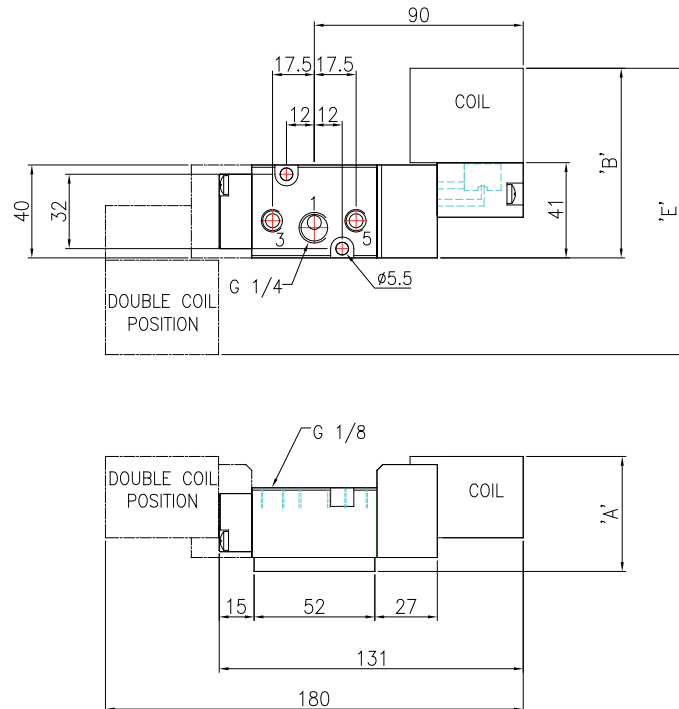
### Options 2

- |          |  |
|----------|--|
| <b>B</b> | Valve body brass   |
| <b>C</b> | Valve body brass and NPT ports   |
| <b>D</b> | Valve body brass, NPT ports and 1/2" NPT electrical connection           |
| <b>E</b> | 1/2" NPT electrical connection   |
| <b>L</b> | Low temperature duty -40°C   |
| <b>M</b> | NPT ports and 1/2" NPT electrical connection                             |
| <b>N</b> | NPT ports  |
| <b>P</b> | Valve body stainless steel, NPT ports and 1/2" NPT electrical connection |
| <b>R</b> | Valve body stainless steel and NPT ports                                 |
| <b>S</b> | Valve body stainless steel   |

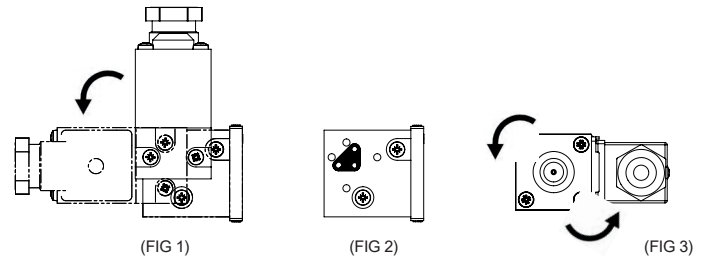
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## COIL ORIENTATION

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 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.



## DIMENSIONS (mm)

COIL TYPE	A	B	E
Moulded Plug & Socket	50	85	130
Heavy Duty Mazak Plug & Socket	50	85	130
Standard Terminal Box	50	93	146
SS Terminal Box	58	110	180
ExnA SS Terminal Box	58	110	180
Exd SS Terminal Box	58	110	180
Piezo Operator	48	94	148
Exia SS Terminal Box	58	117	194
Exia Std. Terminal Box	50	100	160
Exia Plug & Socket	50	88	136

## MATERIAL SPECIFICATIONS

### STANDARD

Body and End Caps	Black Anodised Aluminium (Dural)
Spool	Hard Anodised Aluminium PTFE Impregnated
Jet	Brass
Spacers	Glass Filled Acetal
Seals	Nitrile (Alternative Seals Available)
Spring	Music Wire
Mounting Screws	Stainless Steel
Change Over Plate	Nylon 66 30% Glass Filled
Gasket	Nitrile

## VALVE SPECIFICATIONS

### STANDARD

Inlet Port Connection Size	1/4" BSP
Exhaust Port Connection Size	1/8" BSP
Working Pressure	3 to 10 bar
Cv Factor	0.7
Flow Rate (at 6 bar with 1 bar pressure drop)	675 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**

Official Stockist:

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