

Type T45 Series, 1/2" Ported, 3/2, 5/2 or 5/3 Pilot Operated Solenoid Valve



Valve assembly illustrated with an plug & socket coil for reference only

DESCRIPTION

Solenoid valve designed for direct mounting onto pneumatic rotary actuators meeting '1/2" NAMUR' standard fixing dimensions.

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

Body material available in

- Aluminium (standard)
- Stainless Steel
- Brass

Seal kit available – VSKT45P

FEATURES

- Interchangeable CNOMO interface operators including various hazardous area options
- Integrated Exhaust to Spring (ETS) feature in 3/2 position
- 1/2" mains air 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
- (Our manual override options are **NOT** currently covered by SIL Certification)

PRODUCT CODE: **T 4 5**

OPERATOR **COIL** **OPTIONS 1** **DESIGNATOR** **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 ⁽¹⁾ |
| R | 24v AC (50/60 Hz) |
| T | 110v 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

Designator

- | | |
|---|---|
| A | ATEX / IECEx / CCCEX ⁽²⁾ |
| B | ATEX / IECEx / CCCEX ^(10mA) ⁽²⁾ |
| F | FM / CSA |
| J | ATEX Ex e mb |
| R | GOST CU TR ⁽³⁾ |

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.

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	1/2" 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	3.5
Flow Rate (6 bar inlet pressure, 1 bar pressure drop)	3534 l/min
Maximum Ambient Temperature	+80 °C
Minimum Working Temperature	-20 °C

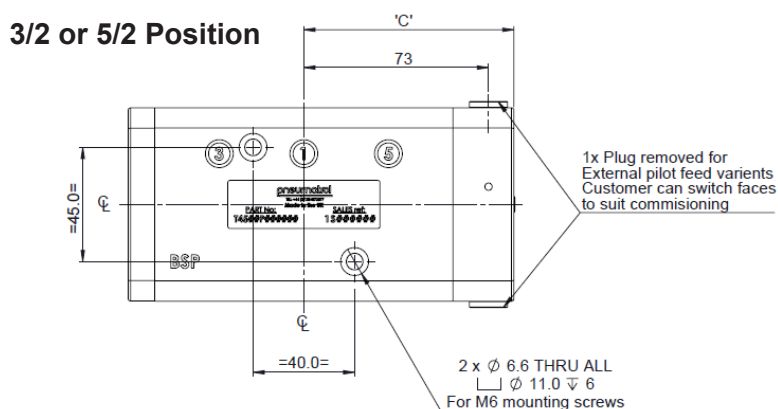
COIL DETAILS

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

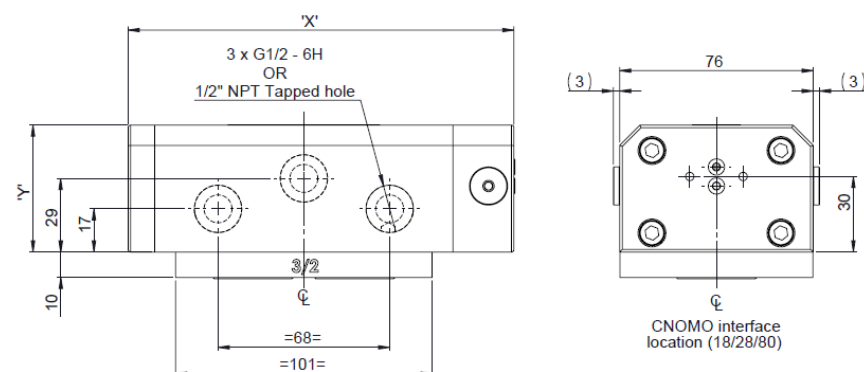
*** FURTHER SOLENOID OPTIONS AVAILABLE ON REQUEST**

DIMENSIONS (mm)

3/2 or 5/2 Position

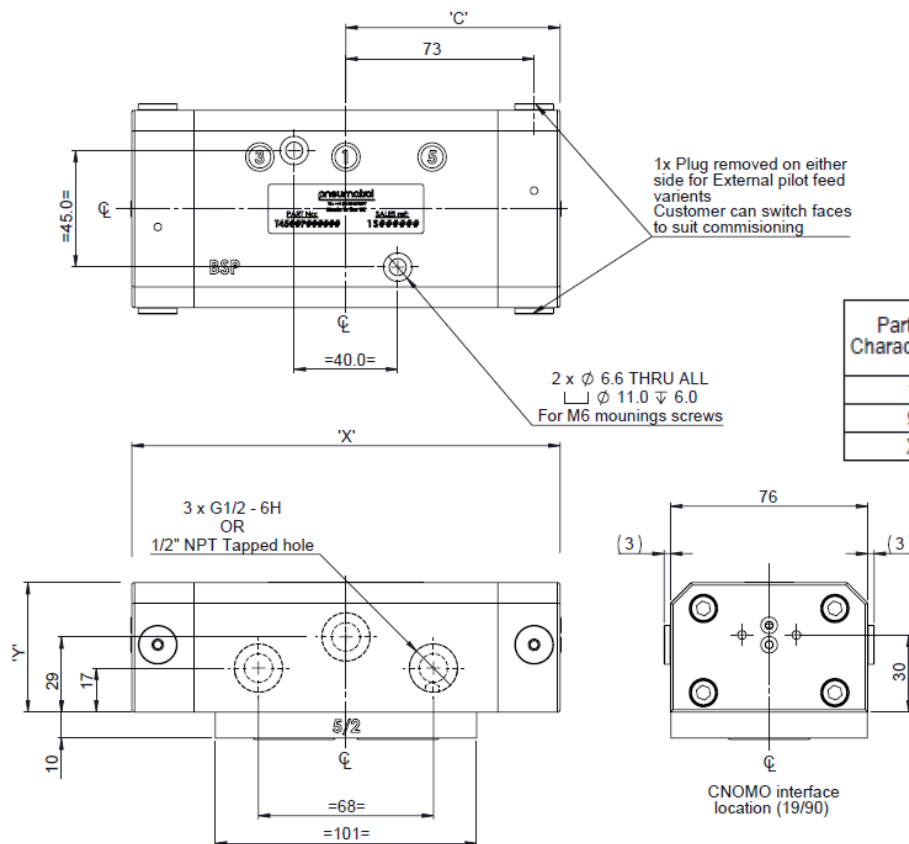


Part code Character 4 & 5	External pilot ports	Air pilot ports	Xmm	Ymm	Cmm(Max Offset)
18	N	N	152	50	83
28	N	N	152	50	83
80	Y	N	152	50	83
X8	N	Y	152	50	83



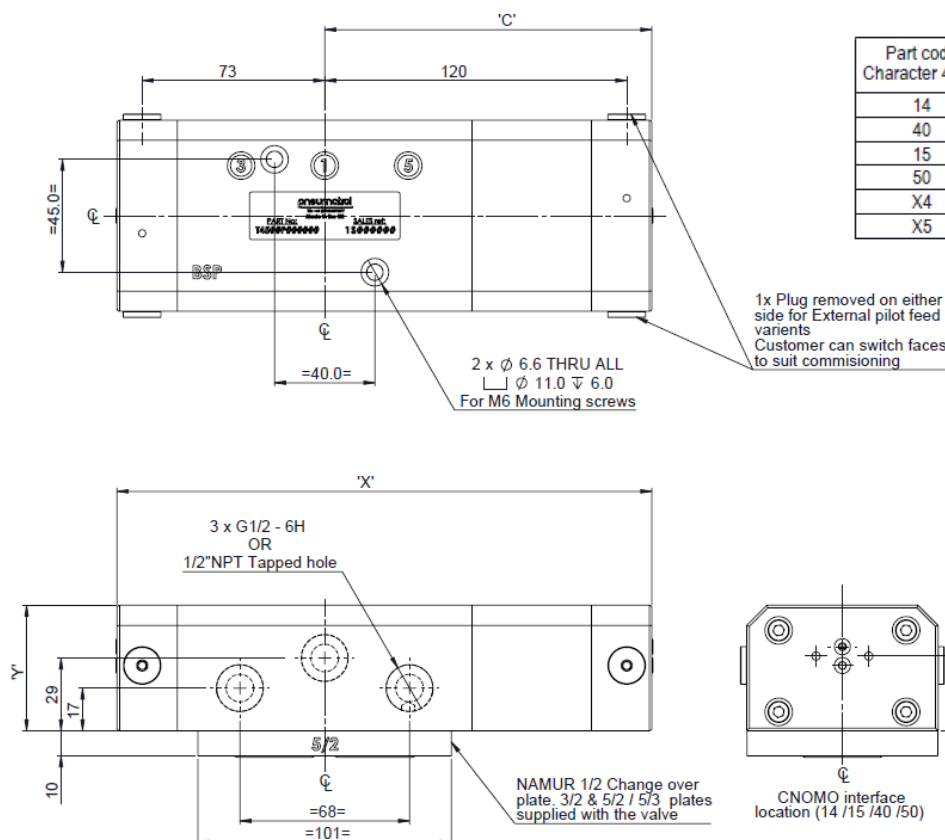
DIMENSIONS (mm)

5/2 Position



Part code Character 4 & 5	External pilot ports	Air pilot ports	Xmm	Ymm	Cmm (Max Offset)
19	N	N	165	50	83
90	Y	N	165	50	83
X9	N	Y	165	50	83

5/3 Position



Part code Character 4 & 5	External pilot ports	Air pilot ports	Xmm	Ymm	Cmm (Max Offset)
14	N	N	213	50	130
40	Y	N	213	50	130
15	N	N	213	50	130
50	Y	N	213	50	130
X4	N	Y	213	50	130
X5	N	Y	213	50	130