

5 Port Mechanical Valves

Series **EVZM/EVFM** (VZM/VFM)*

Features

- ➔ 4 Series of valves.
- ➔ Metal and rubber seal types.
- ➔ 1/8 and 1/4 ported sizes.
- ➔ Wide choice of replaceable operating heads.

*The variant used in Europe is the EVZM/EVFM type which has parallel port threads. The VZM/VFM type used elsewhere in the world may also be found. These are identical except for the Rc (taper) port threads.



How to Order

E VZM45 0 - F01 - 01 S

Port type

E	G Threads
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(Not shown on detail pages)

Valve type

VZM45	EVZM400 Series (1/8)
VZM55	EVZM500 Series (1/8)
VFM25	EVFM300 Series (1/4)
VFM35	EVFM200 Series (1/4)

Port size

F01	G 1/8
F02	G 1/4

(See detail pages for applicability)

Actuator type

00	Basic
01	Roller lever
02	One Way Roller Lever
05	Straight plunger
06	Roller plunger
08	Toggle lever
30	Push button (Mushroom)
32	Push button (Extended)
33	Push button (Flush)
34	Twist selector (2 position)
36	Key selector (2 position)
37	Push pull (VZM550 only)

Suffix for actuator

S	Hard steel roller	Color of push button selector
R	Red	
B	Black	
G	Green	
Y	Yellow	

Specifications

	Series EVZM400	Series EVZM500
Fluid	Air/Inert gas	Air/Inert gas
Operating pressure	0.15 to 1.0 MPa ⁽¹⁾	0.15 to 0.7 MPa ⁽¹⁾
Ambient and fluid temperature	-5 to 60°C (No freezing)	-5 to 60°C (No freezing)
Effective area	9.9 mm ²	10.8 mm ²
Maximum frequency (Mechanical operation type)	300 c.p.m. or less	300 c.p.m. or less
Lubrication	Not required (Use turbine oil class 1 ISO VG32, if lubricated.)	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Port size	Main valve 1/8 Pilot valve (EXH)/M5	Main valve 1/8 Pilot valve (EXH)/M5
Weight (Basic)	150 g	130 g
Spool sealing	Metal	Rubber

	Series EVZM200	Series EVZM300
Fluid	Air/Inert gas	Air/Inert gas
Operating pressure	0.1 to 1.0 MPa ⁽¹⁾	0.15 to 0.9 MPa ⁽¹⁾
Ambient and fluid temperature	-5 to 60°C (No freezing)	-5 to 60°C (No freezing)
Effective area	18 mm ²	18 mm ²
Maximum frequency (Mechanical operation type)	300 c.p.m. or less	300 c.p.m. or less
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Port size	Main valve 1/4 Pilot valve (EXH)/M5	Main valve/SUP, CYL port 1/4, EXH port 1/8 Pilot valve (EXH)/M5
Weight (Basic)	300 g	260 g
Spool sealing	Metal	Rubber

Note 1) External pilot type Main valve: 0 to 1.0 MPa, Pilot valve: 0.15 to 1.0 MPa

Note 2) The standard body can not be retrofitted with a foot bracket.

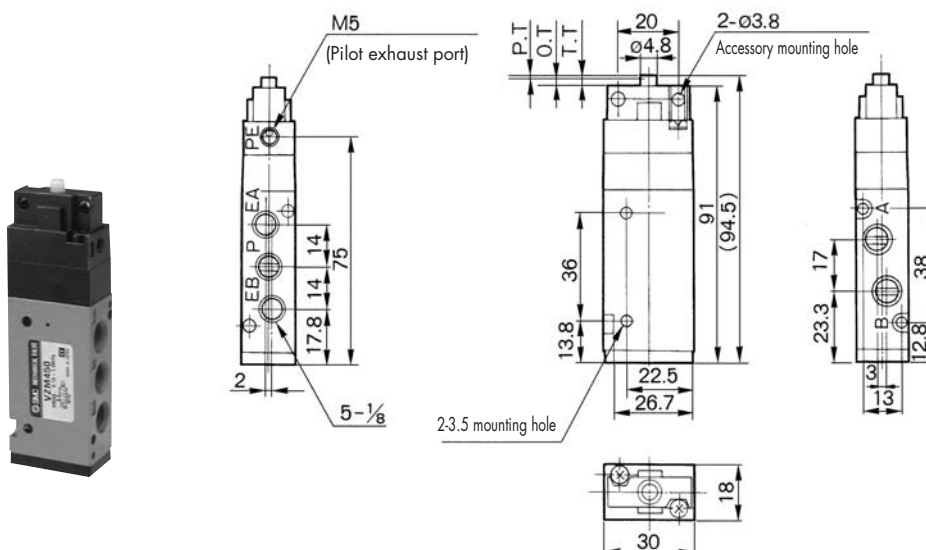
How to order EVZM and EVFM Mechanical valves

For best delivery times, please order the parts highlighted bold in the following pages. The operating heads are supplied with screws for easy fixing to the base valves. Pre-assembled valves and operating heads are also available where shown but may be subject to extended delivery times. Some variants, for example roller lever, are only available as pre-assembled units

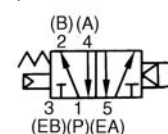
Dimensions: EVZM400

Basic

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	N/A	N/A	5 port



Symbol

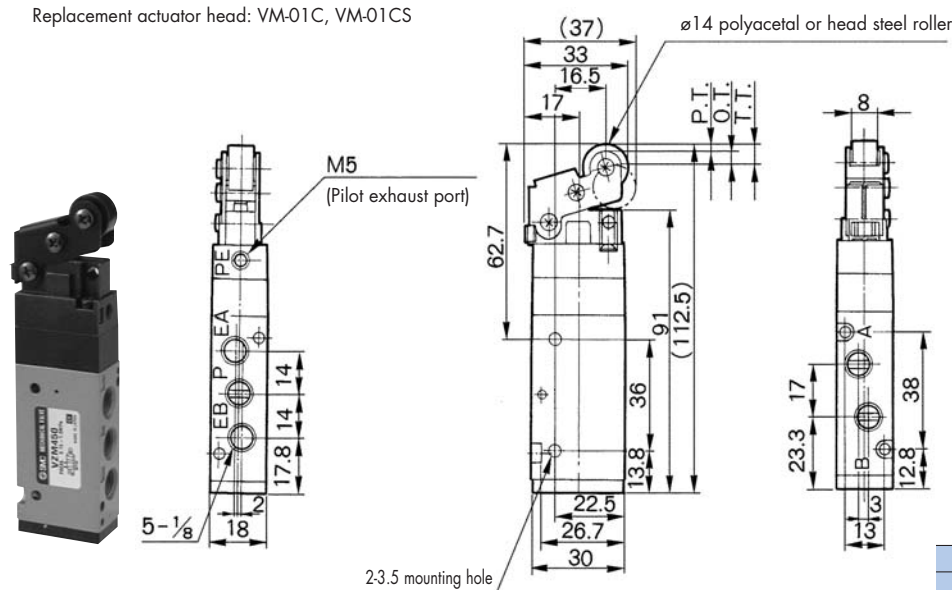


P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

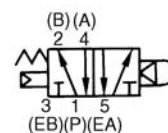
Roller lever

Base valve	Operating head	Pre-Assembled unit	Note
N/A	N/A	EVZM450-F01-01	5 port
N/A	N/A	EVZM450-F01-01S	5 port steel roller

Replacement actuator head: VM-01C, VM-01CS



Symbol



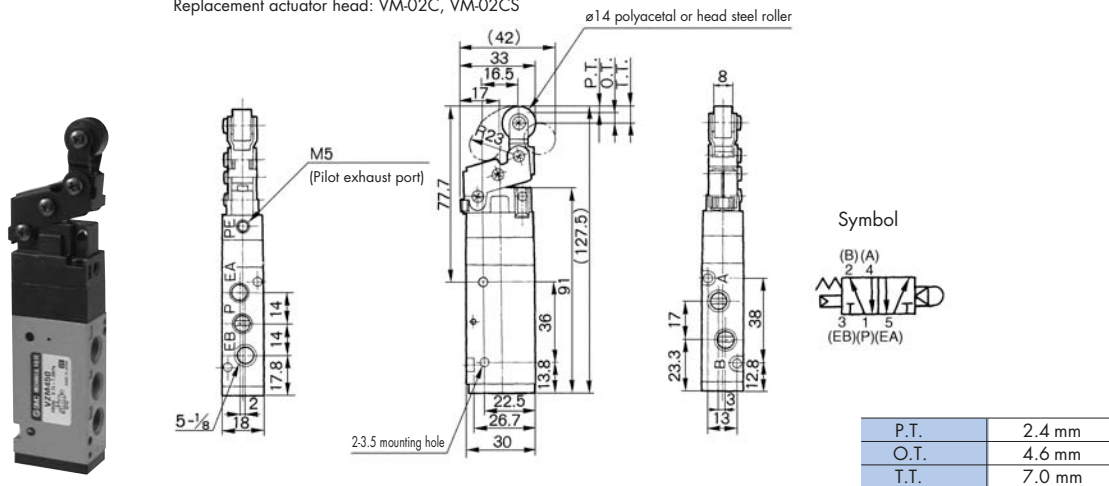
P.T.	2.2 mm
O.T.	4.0 mm
T.T.	6.2 mm

Dimensions: EVZM400

One way roller lever

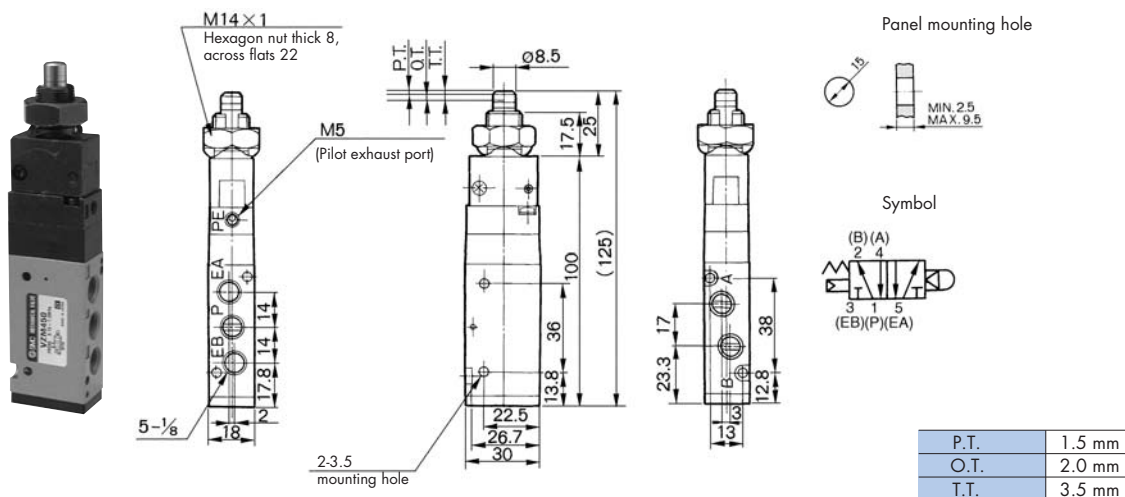
Base valve	Operating head	Pre-Assembled unit	Note
N/A	N/A	EVZM450-F01-02	5 port
N/A	N/A	EVZM450-F01-02S	5 port steel roller

Replacement actuator head: VM-02C, VM-02CS



Straight Plunger

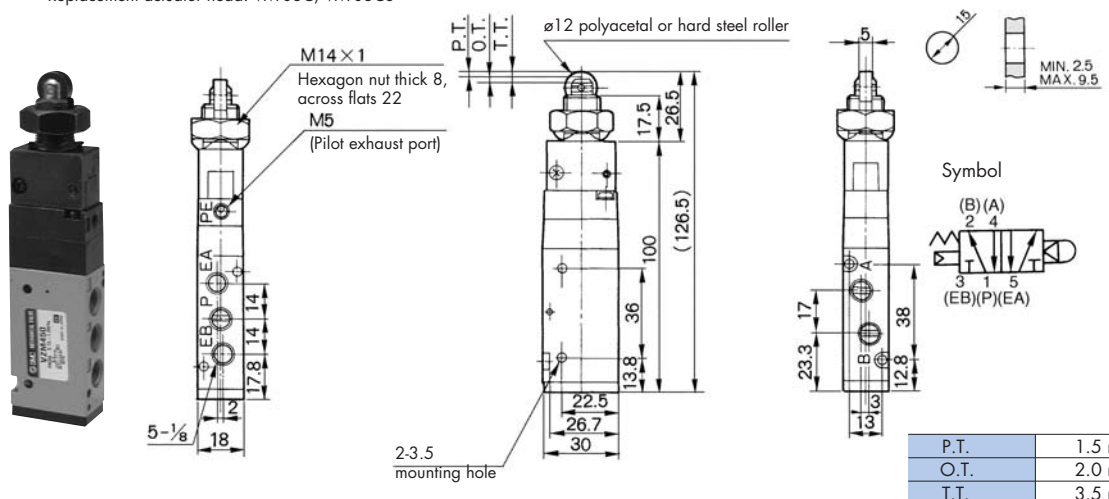
Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-05C	EVZM450-F01-05	5 port



Roller Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-06C	EVZM450-F01-06	5 port
EVZM450-F01-00	VM-06CS	EVZM450-F01-06S	5 port steel roller

Replacement actuator head: VM-06C, VM-06CS

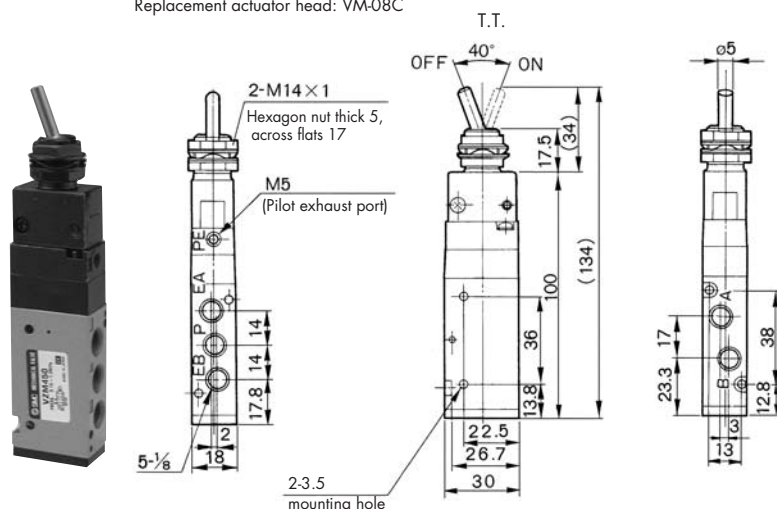


Dimensions: EVZM400

Toggle Lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-08C	EVZM450-F01-08	5 port

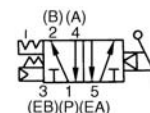
Replacement actuator head: VM-08C



Panel mounting hole



Symbol



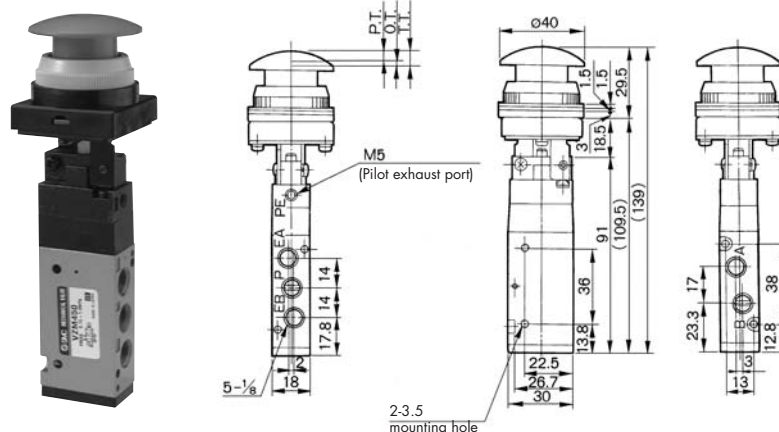
T.T. 40°

Push button (mushroom)

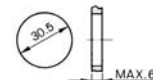
Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-30C □	EVZM450-F01-30 □	5 port

□ = Specify colour (R/B/G/Y)

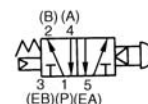
Replacement actuator head: VM-30C*



Panel mounting hole



Symbol



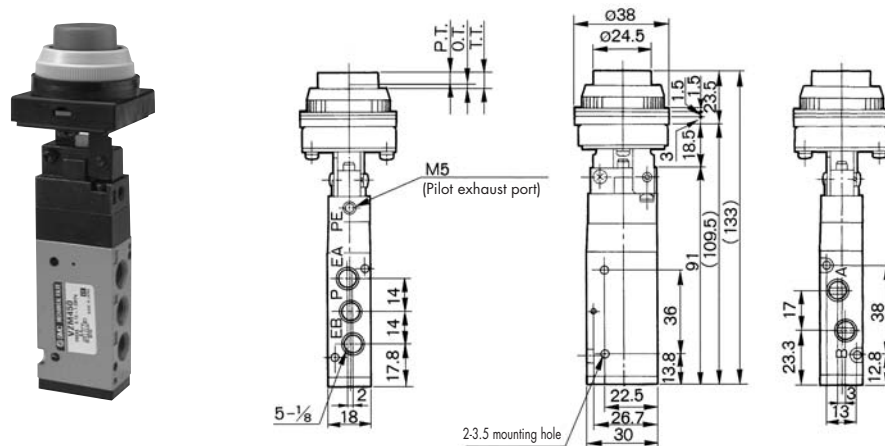
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Push button (extended)

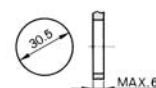
Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-32C □	EVZM450-F01-32 □	5 port

□ = Specify colour (R/B/G/Y)

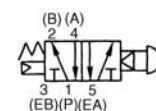
Replacement actuator head: VM-32C*



Panel mounting hole



Symbol



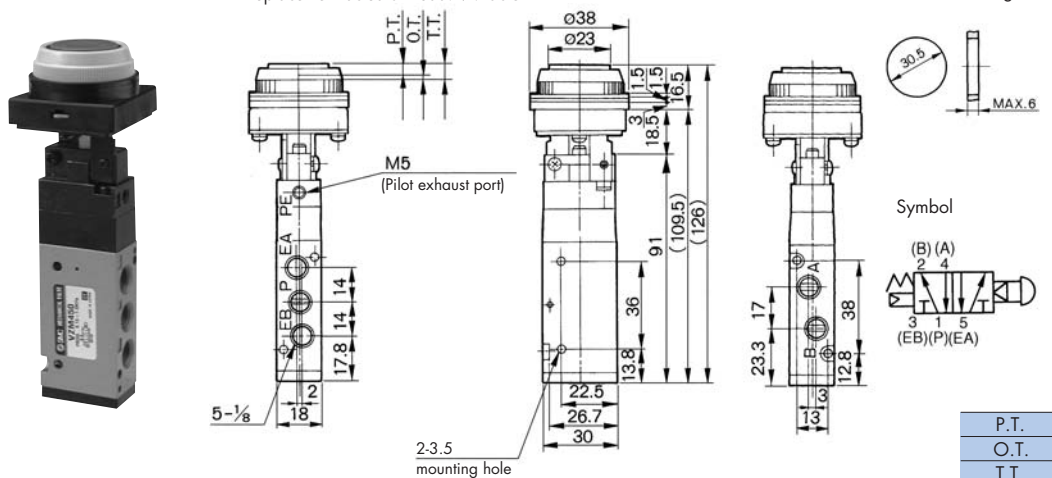
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Dimensions: EVZM400

Push Button (flush)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-33C	EVZM450-F01-33	5 port

Replacement actuator head: VM-33C



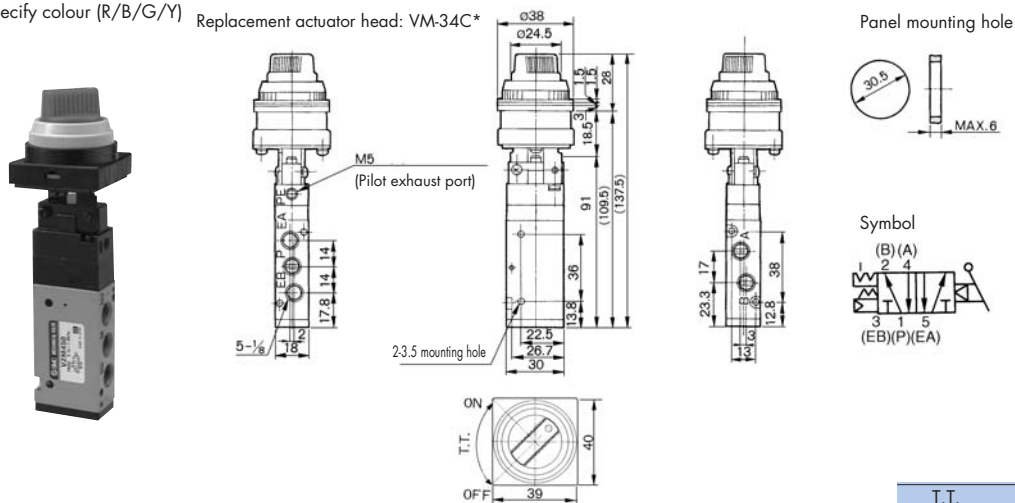
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Twist selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-34C □	EVZM450-F01-34 □	5 port

□ = Specify colour (R/B/G/Y)

Replacement actuator head: VM-34C*

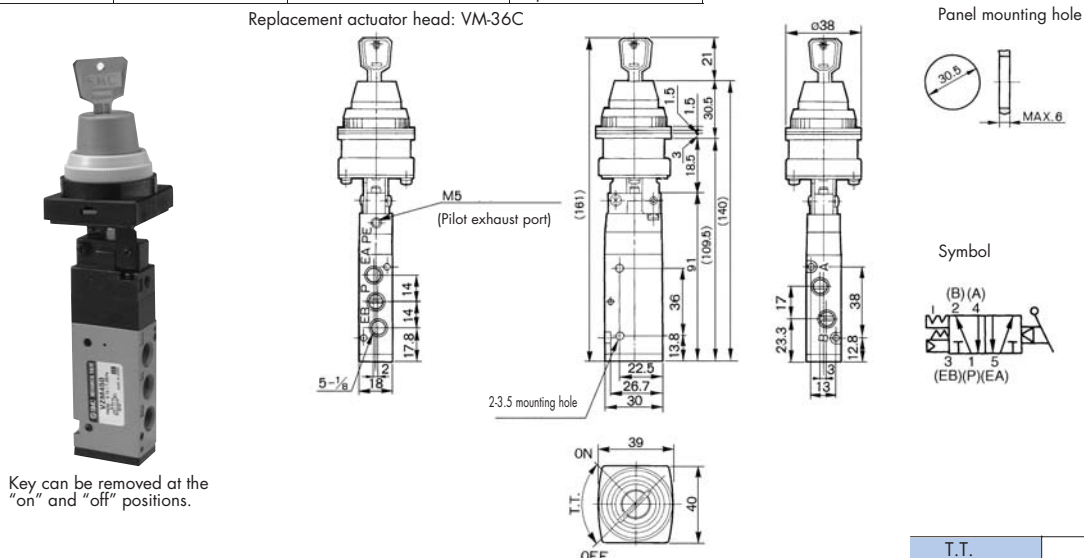


T.T.	90°
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Key Selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM450-F01-00	VM-36C	EVZM450-F01-36	5 port

Replacement actuator head: VM-36C



Key can be removed at the "on" and "off" positions.

T.T.	90°
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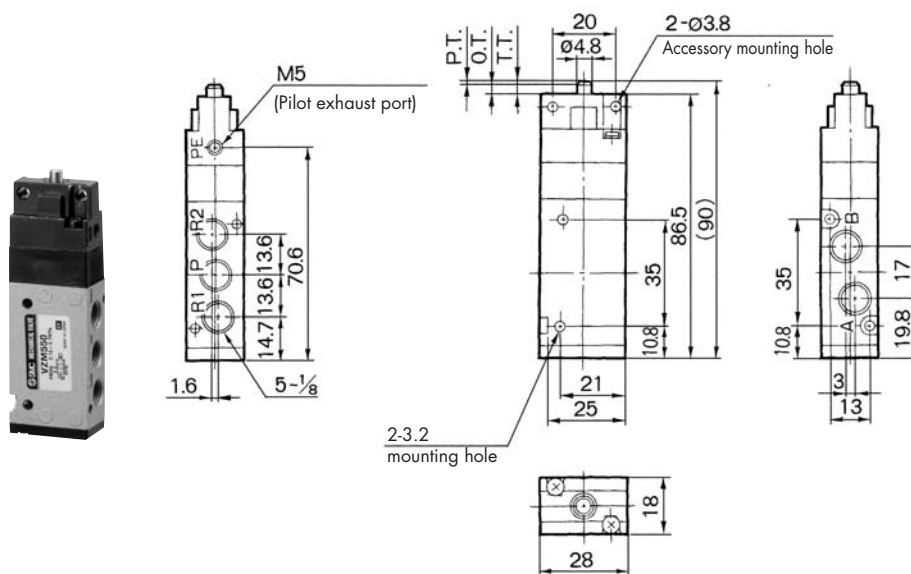
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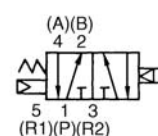
Dimensions: EVZM500

Basic

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	N/A	N/A	5 port



Symbol

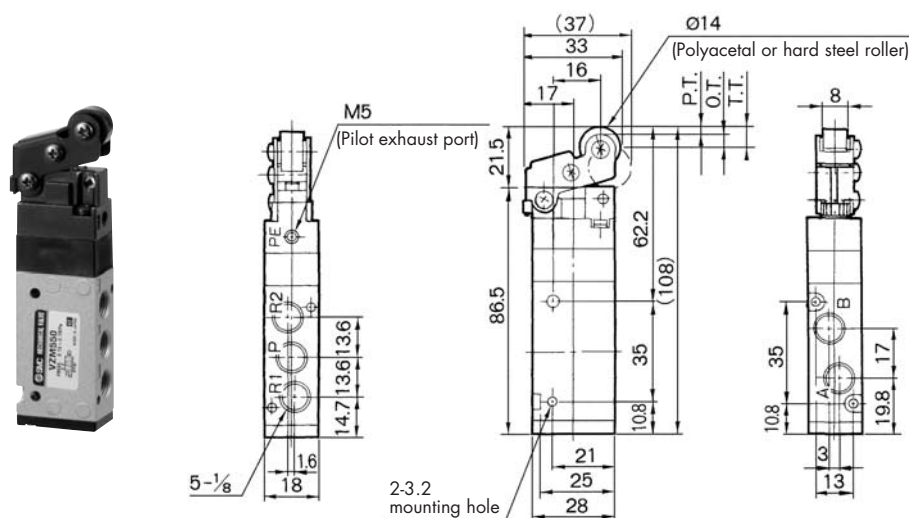


P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

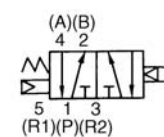
Roller lever

Base valve	Operating head	Pre-Assembled unit	Note
N/A	N/A	EVZM550-F01-01	5 port
N/A	N/A	EVZM550-F01-01S	5 port steel roller

Replacement actuator head: VM-01C, VM-01CS



Symbol



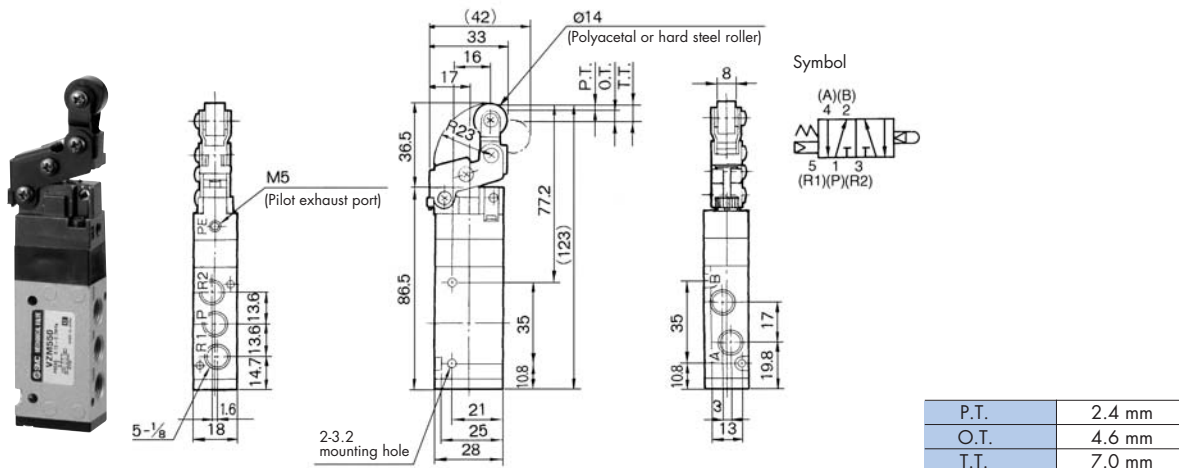
P.T.	2.2 mm
O.T.	4.0 mm
T.T.	6.2 mm

Dimensions: EVZM500

One way roller lever

Base valve	Operating head	Pre-Assembled unit	Note
N/A	N/A	EVZM550-F01-02	5 port
N/A	N/A	EVZM550-F01-02S	5 port steel roller

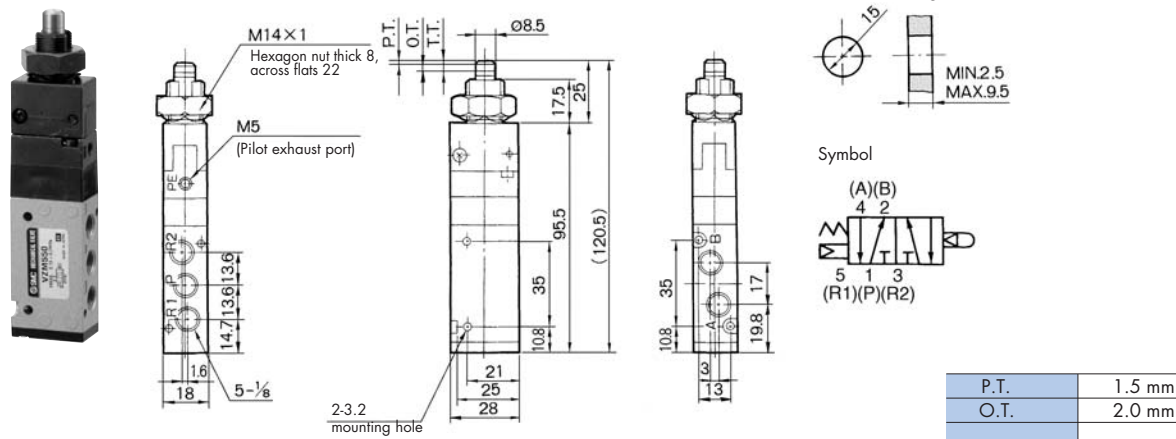
Replacement actuator head: VM-02C, VM-02CS



Straight Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	VM-05C	EVZM550-F01-05	5 port

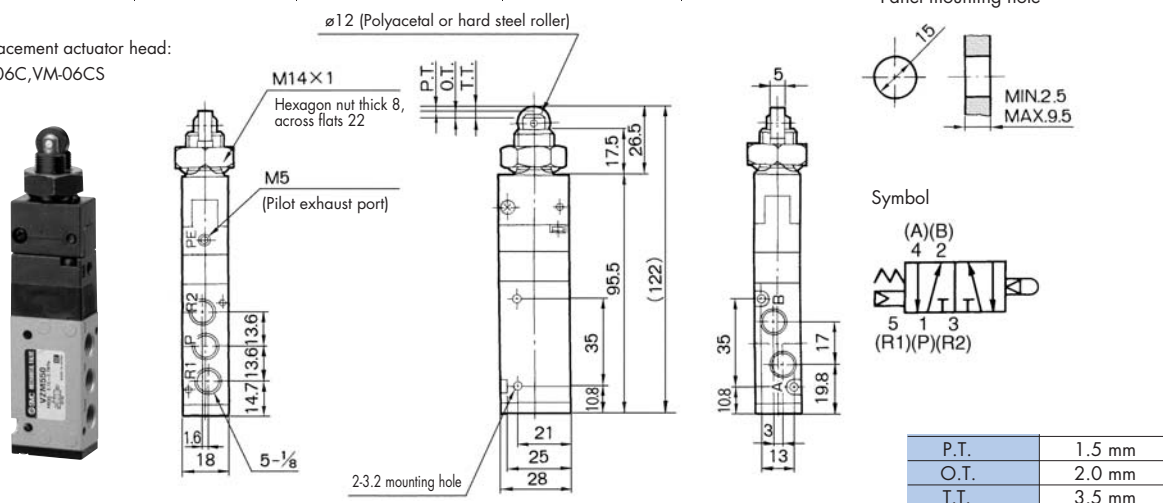
Replacement actuator head: VM-05C



Roller Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	VM-06C	EVZM550-F01-06	5 port
EVZM550-F01-00	VM-06CS	EVZM550-F01-06S	5 port steel roller

Replacement actuator head:
VM-06C, VM-06CS



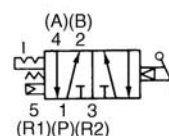
Toggle Lever

Replacement actuator head: VM-08C

T.T. (Total Travel) 40°



Symbol



I.I.

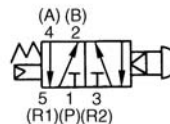
40°

□ = Specify colour (R/B/G/Y)

Replacement actuator head: VM-30C*



Symbol



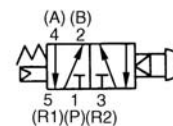
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

□ = Specify colour (R/B/G/Y)

Replacement actuator head: VM-32C*



Symbol



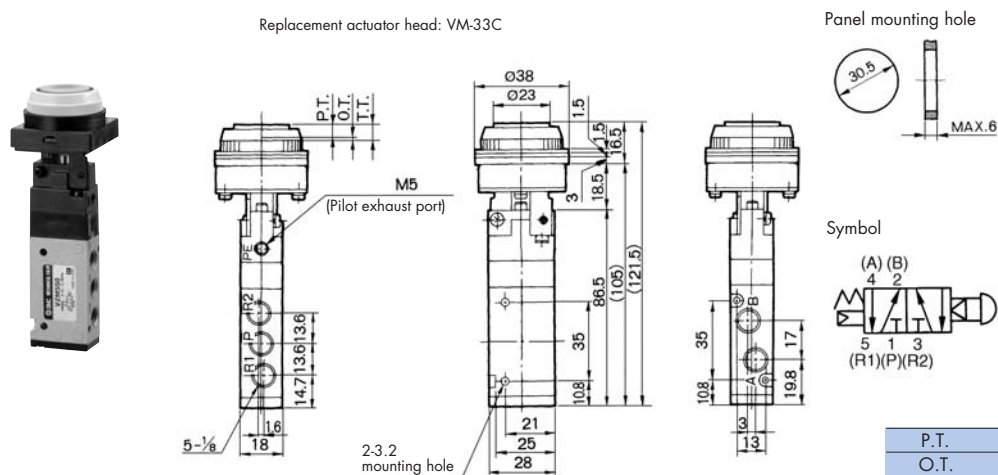
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Dimensions: EVZM500

Push Button (flush)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	VM-33C	EVZM550-F01-33	5 port

Replacement actuator head: VM-33C



Note: Supplied with 4 colour caps.

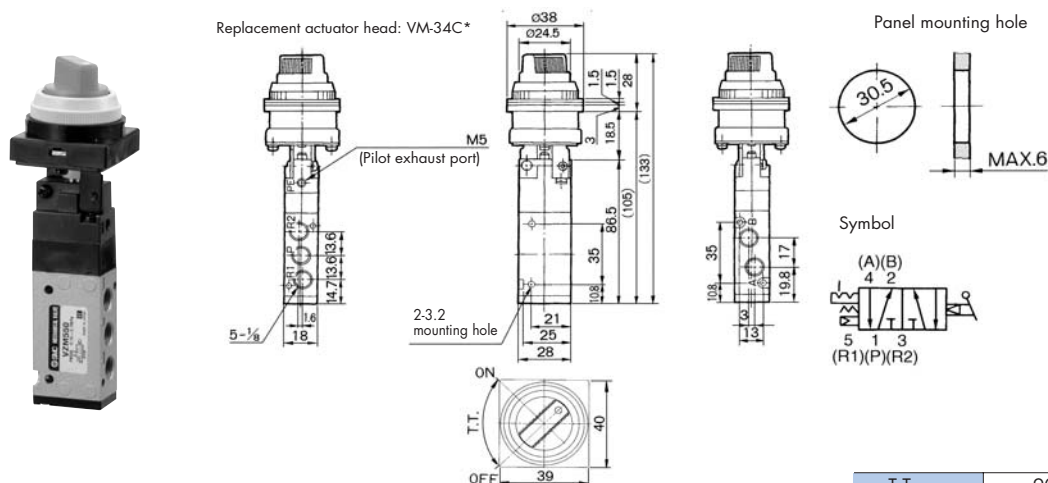
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Twist selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	VM-34C □	EVZM550-F01-34 □	5 port

□ = Specify colour (R/B/G/Y)

Replacement actuator head: VM-34C*

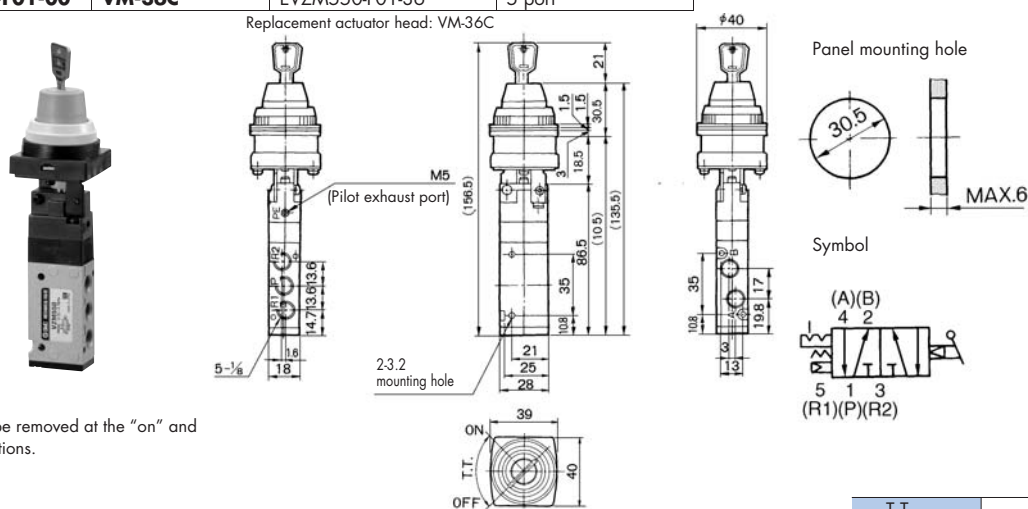


T.T.	90°
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Key Selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVZM550-F01-00	VM-36C	EVZM550-F01-36	5 port

Replacement actuator head: VM-36C

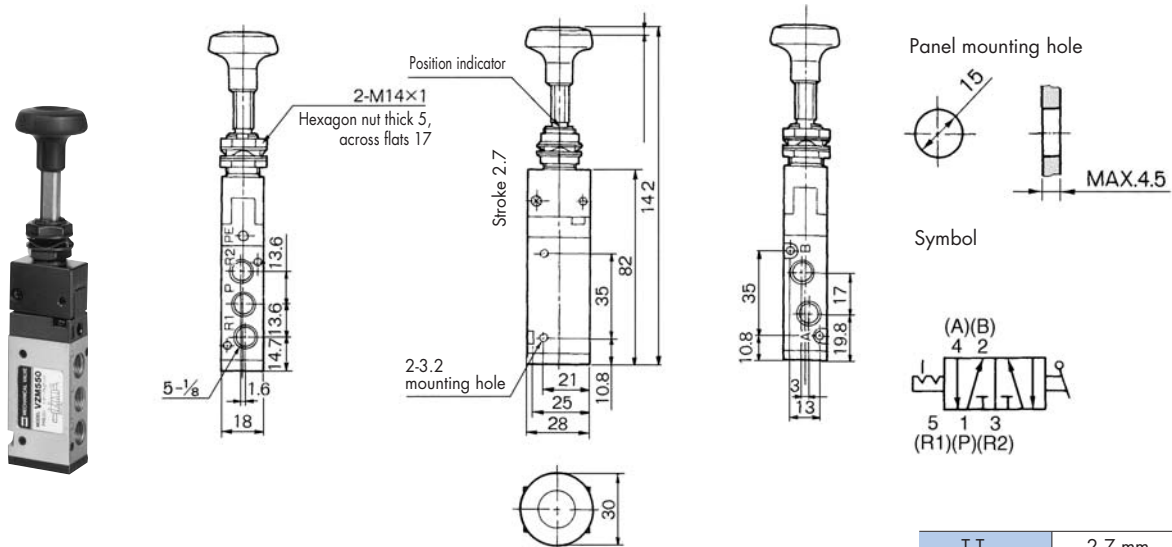


Key can be removed at the "on" and "off" positions.

T.T.	90°
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Push-pull

Base valve	Operating head	Pre-Assembled unit	Note
N/A	N/A	EVZM550-F01-37	5 port



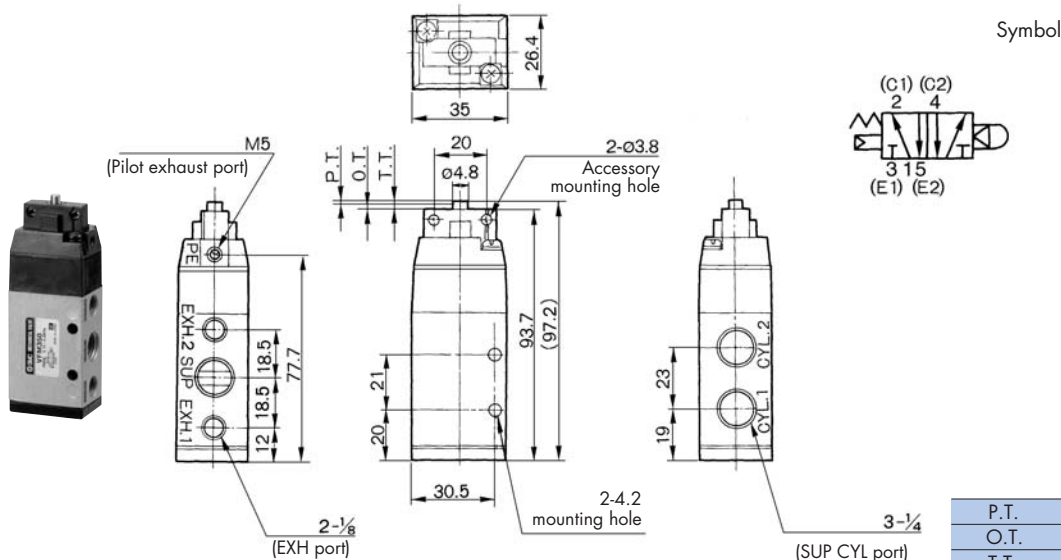
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Dimensions: EVFM300

Basic

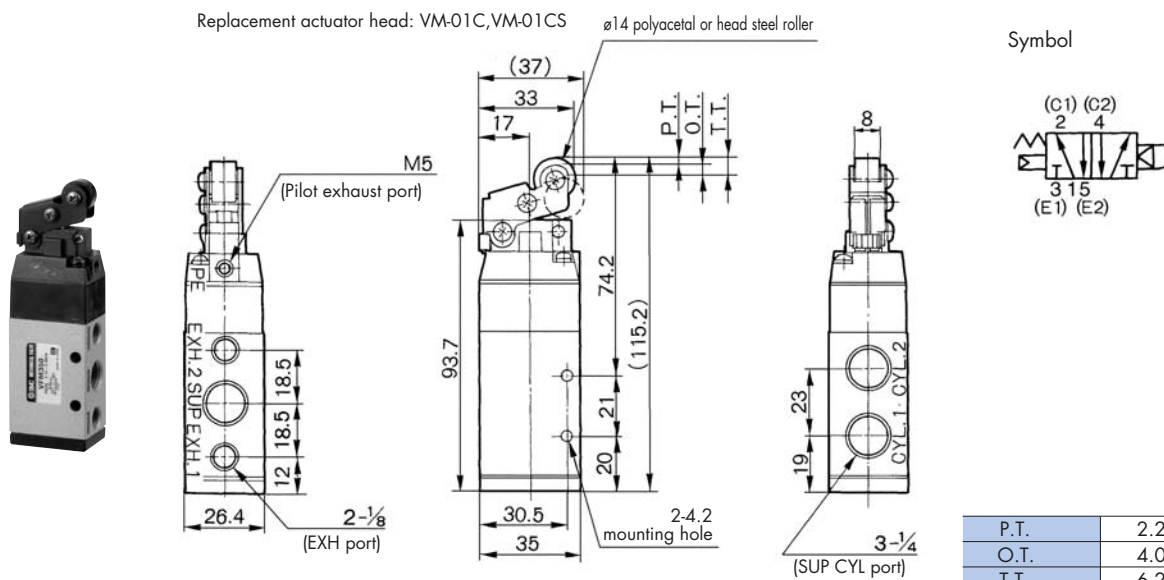
Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	N/A	N/A	5 port



P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

Roller lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-01C	EVFM350-F02-01	5 port
EVFM350-F02-00	VM-01CS	EVFM350-F02-01S	5 port steel roller



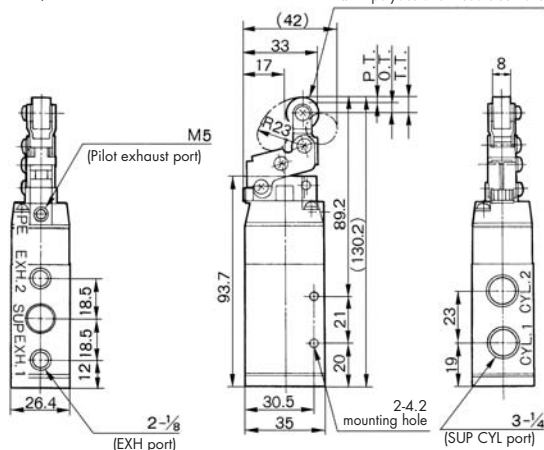
P.T.	2.2 mm
O.T.	4.0 mm
T.T.	6.2 mm

Dimensions: EVFM300

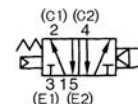
One way roller lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-02C	EVFM350-F02-02	5 port
EVFM350-F02-00	VM-02CS	EVFM350-F02-02S	5 port steel roller

Replacement actuator head: VM-02C, VM-02CS $\phi 14$ polyacetal or head steel roller



Symbol

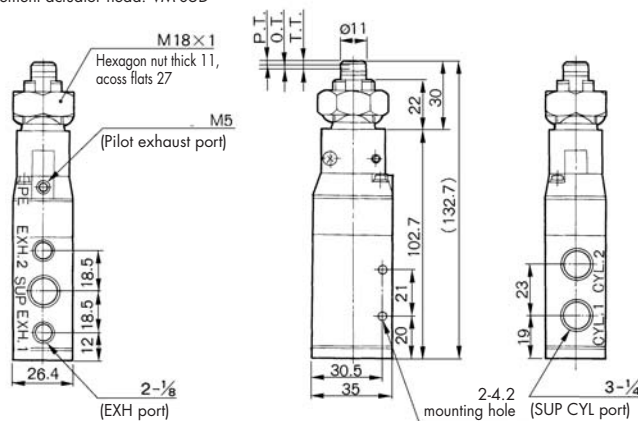


P.T.	2.4 mm
O.T.	4.6 mm
T.T.	7.0 mm

Straight Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-05D	EVFM350-F02-05	5 port

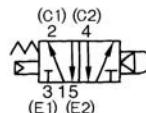
Replacement actuator head: VM-05D



Panel mounting hole



Symbol

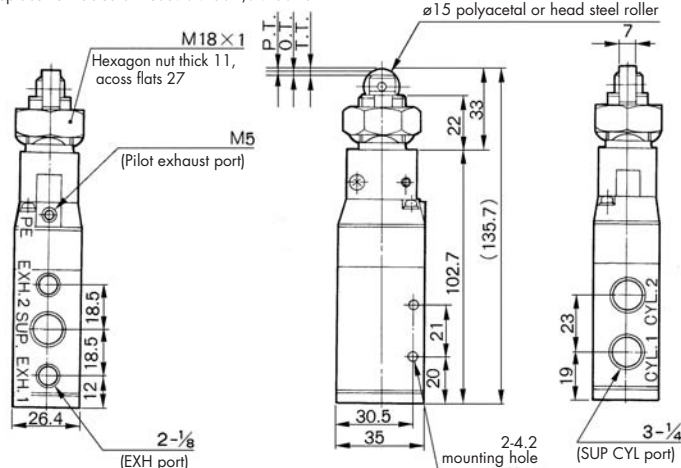


P.T.	1.5 mm
O.T.	2.0 mm
T.T.	3.5 mm

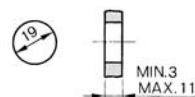
Roller Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-06D	EVFM350-F02-06	5 port
EVFM350-F02-00	VM-06DS	EVFM350-F02-06S	5 port steel roller

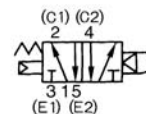
Replacement actuator head: VM-06D, VM-06DS $\phi 15$ polyacetal or head steel roller



Panel mounting hole



Symbol

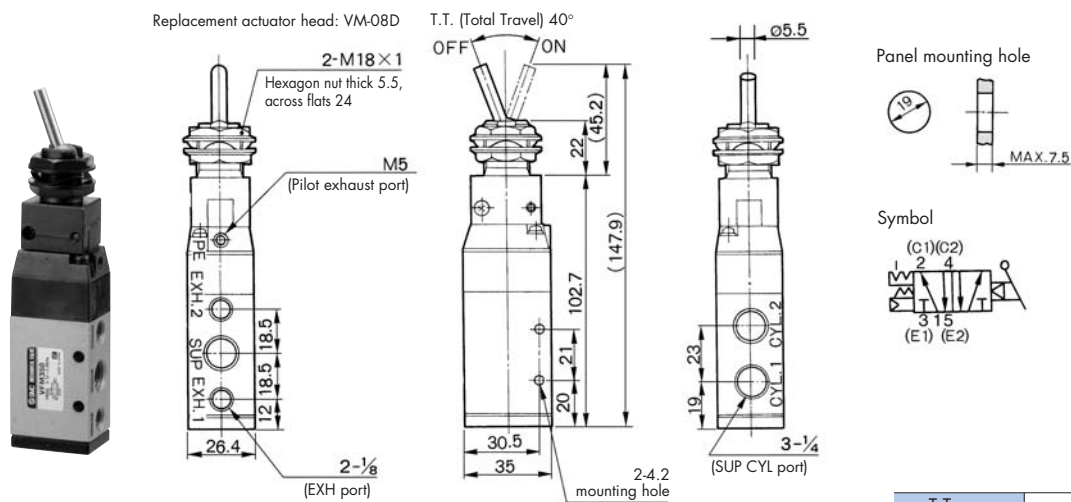


P.T.	1.5 mm
O.T.	2.0 mm
T.T.	3.5 mm

Dimensions: EVFM300

Toggle Lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-08D	EVFM350-F02-08	5 port



T.T. 40°

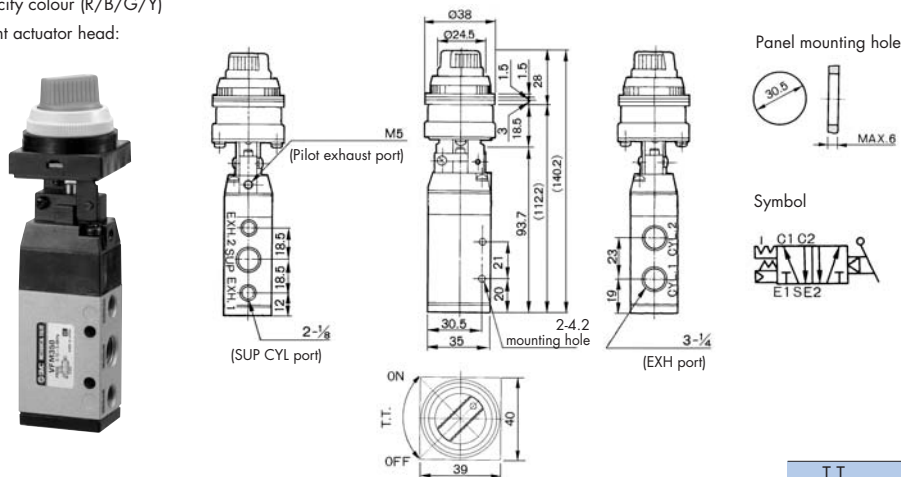
Twist selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-34C □	EVFM350-F02-34 □	5 port

□ = Specify colour (R/B/G/Y)

Replacement actuator head:

VM-34C*



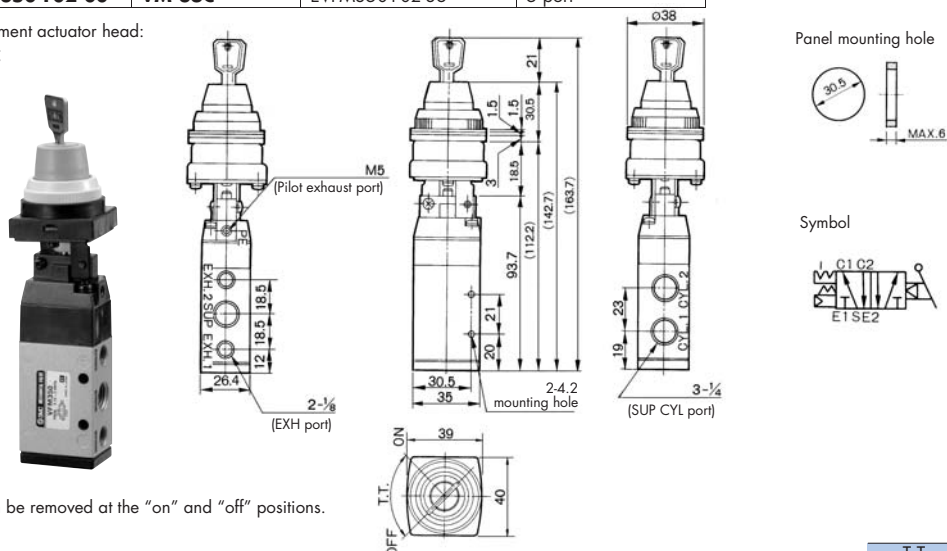
T.T. 90°

Key Selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM350-F02-00	VM-36C	EVFM350-F02-36	5 port

Replacement actuator head:

VM-36C

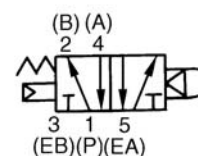
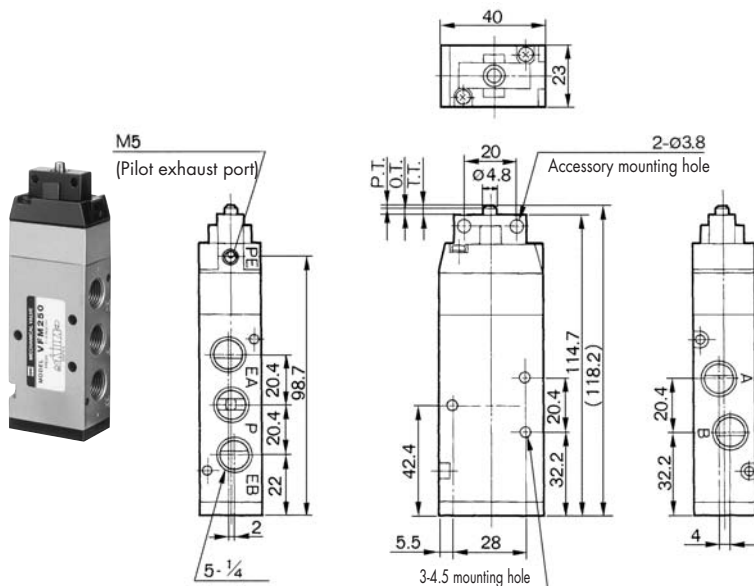


Key can be removed at the "on" and "off" positions.

T.T. 90°

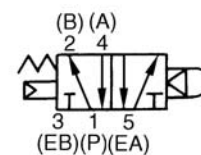
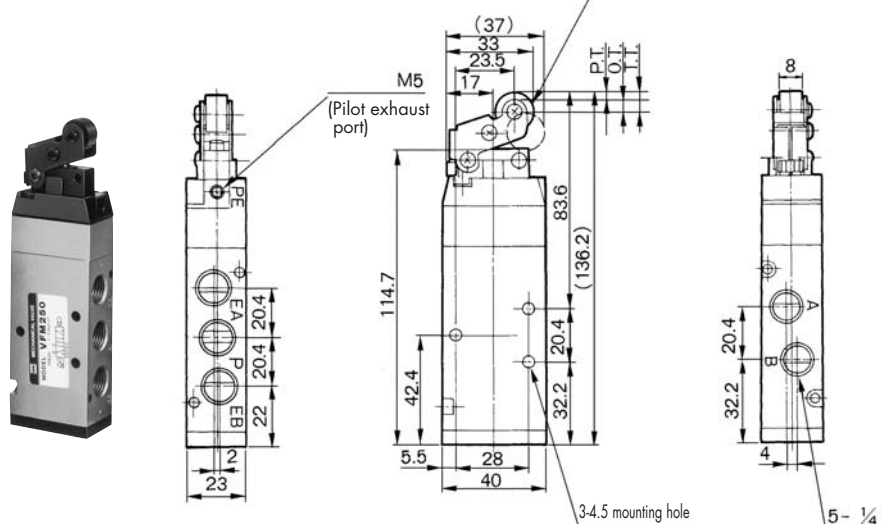
For best delivery times, please order the parts highlighted **bold** in the following pages. The operating heads are supplied with screws for easy fixing to the base valves. Pre-assembled valves and operating heads are also available where shown but may be subject to extended delivery times. Some variants, for example roller lever, are only available as pre-assembled units

Basic



P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-01C	EVFM250-F02-01	5 port
EVFM250-F02-00	VM-01CS	EVFM250-F02-01S	5 port steel roller



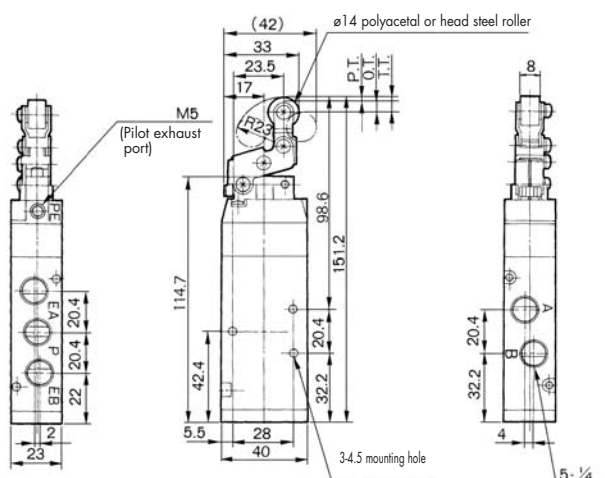
P.T.	2.2 mm
O.T.	4.0 mm
T.T.	6.2 mm

Dimensions: EVFM200

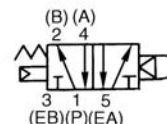
One way roller lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-02C	EVFM250-F02-02	5 port
EVFM250-F02-00	VM-02CS	EVFM250-F02-02S	5 port steel roller

Replacement actuator head:
VM-02C, VM-02CS



Symbol

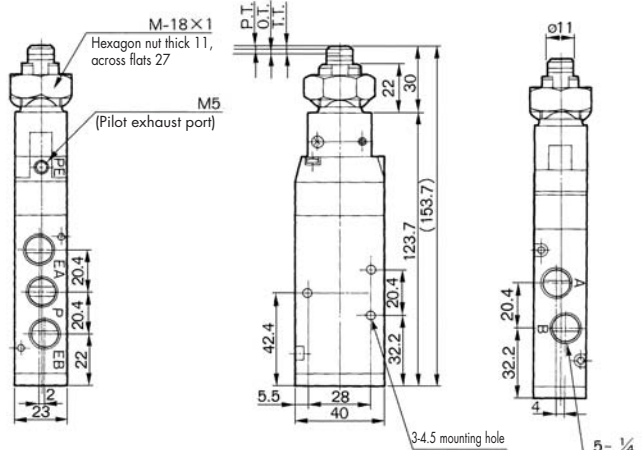


P.T.	2.4 mm
O.T.	4.6 mm
T.T.	7.0 mm

Straight Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-05D	EVFM250-F02-05	5 port

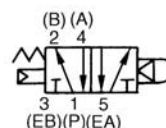
Replacement actuator head:
VM-05D



Panel mounting hole



Symbol

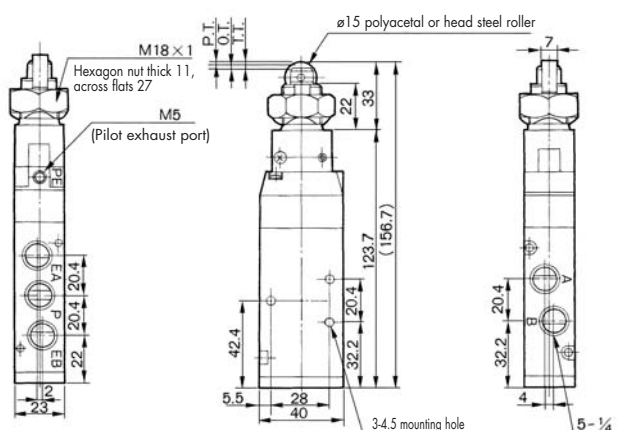


P.T.	1.5 mm
O.T.	2.0 mm
T.T.	3.5 mm

Roller Plunger

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-06D	EVFM250-F02-06	5 port
EVFM250-F02-00	VM-06DS	EVFM250-F02-06S	5 port steel roller

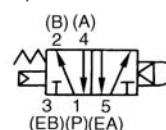
Replacement actuator head: VM-06D, VM-06DS



Panel mounting hole



Symbol



P.T.	1.5 mm
O.T.	2.0 mm
T.T.	3.5 mm

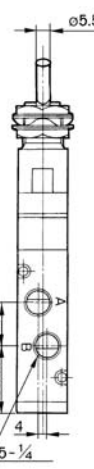
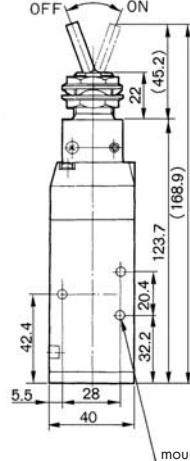
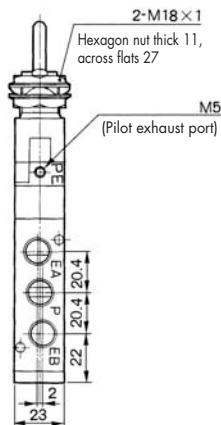
Dimensions: EVFM200

Toggle Lever

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-08D	EVFM250-F02-08	5 port

Replacement actuator head: VM-08D, VM-08DS

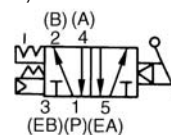
T.T. (Total Travel) 40°



Panel mounting hole



Symbol



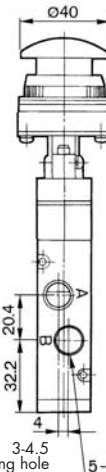
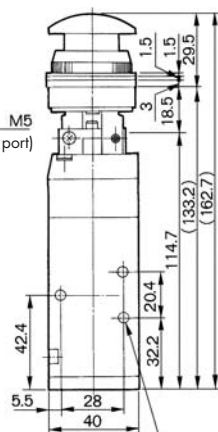
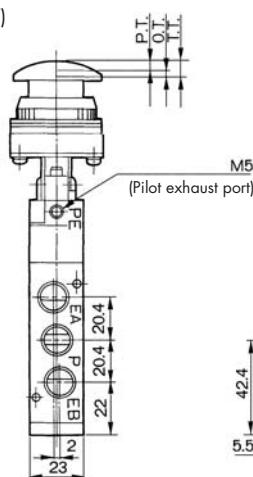
T.T. 40°

Push button (mushroom)

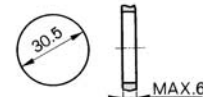
Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-30C □	EVFM250-F02-30 □	5 port

□ = Specify colour (R/B/G/Y)

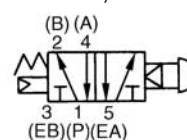
Replacement actuator head:
VM-30C*



Panel mounting hole



Symbol



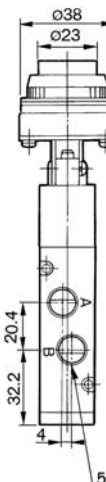
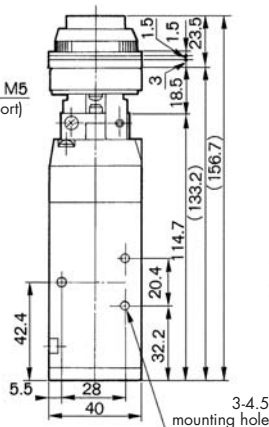
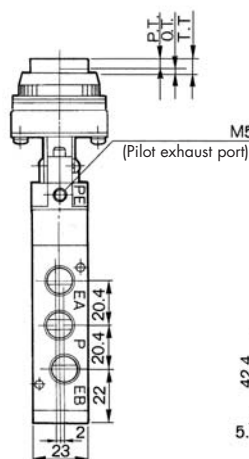
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Push button (extended)

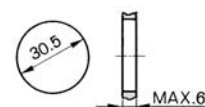
Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-32C □	EVFM250-F02-32 □	5 port

□ = Specify colour (R/B/G/Y)

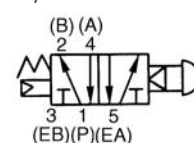
Replacement actuator head:
VM-32C*



Panel mounting hole



Symbol



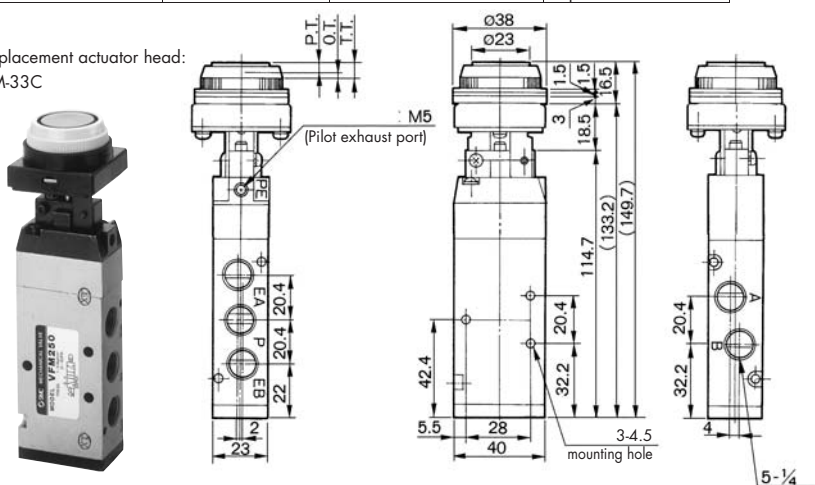
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Dimensions: EVFM200

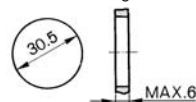
Push Button (flush)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-33C	EVFM250-F02-33	5 port

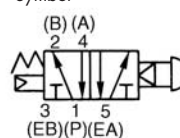
Replacement actuator head:
VM-33C



Panel mounting hole



Symbol



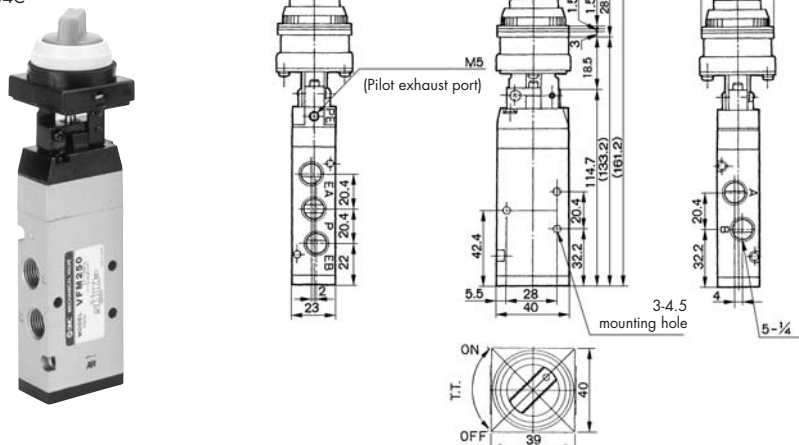
P.T.	4.8 mm
O.T.	1.7 mm
T.T.	6.5 mm

Twist selector (2 position)

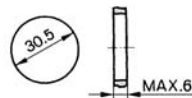
Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-34C □	EVFM250-F02-34 □	5 port

□ = Specify colour (R/B/G/Y)

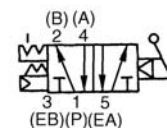
Replacement actuator head:
VM-34C*



Panel mounting hole



Symbol

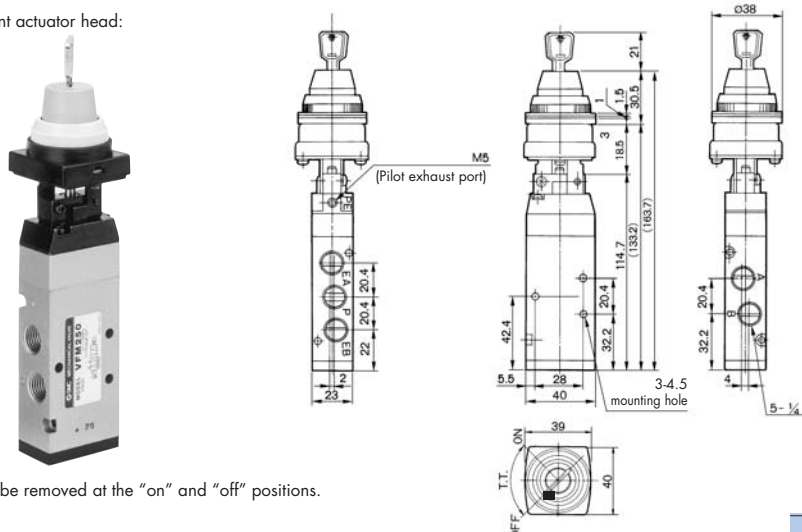


T.T.	90°
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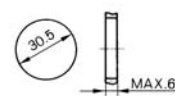
Key Selector (2 position)

Base valve	Operating head	(Pre-Assembled unit)	Note
EVFM250-F02-00	VM-36C	EVFM250-F02-36	5 port

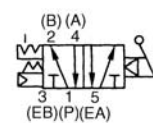
Replacement actuator head:
VM-36C



Panel mounting hole



Symbol



T.T.	90°
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Key can be removed at the "on" and "off" positions.