

5 Port Mechanical Valve Metal Seal

VZM400 Series



**Compact design,
large flow capacity
High cycle rate,
long life/300 c.p.m. or less
Piping possible to any EXH
port.**

Proper countermeasures can be taken for applications in which the noise of the exhaust could cause problems to the surroundings.

**Pilot type is selectable.
(Internal pilot and external pilot)**



Specifications

Fluid	Air			
Operating pressure	0.15 to 1.0 MPa ⁽¹⁾			
Ambient and fluid temperature	-5 to 60°C (No freezing)			
Flow rate characteristics	C[dm ³ /(s·bar)]	b	Cv	
	1(P)→2(B)/4(A)	2.0	0.14	0.49
	2(B)/4(A)→4(EB)/5(EA)	1.7	0.25	0.44
Maximum frequency (Mechanical operation type)	300 c.p.m. or less			
Lubrication	Not required (Use turbine oil class 1 ISO VG32, if lubricated.)			
Port size	Main valve 1/8			
	Pilot valve (EXH) M5 x 0.8			
Option	Foot bracket ⁽²⁾			

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.

Model

	Actuator	Model	Actuator part no.	Application	Weight (g)
Mechanical operation	Basic	VZM450-01-00	—	—	120
	Roller lever	VZM450-01-01	VM-01C	Polyacetal roller	160
		VZM450-01-01S	VM-01CS	Hard steel roller	170
	One way roller lever	VZM450-01-02	VM-02C	Polyacetal roller	170
		VZM450-01-02S	VM-02CS	Hard steel roller	180
	Straight plunger	VZM450-01-05	VM-05C	—	200
Roller plunger	VZM450-01-06	VM-06C	Polyacetal roller	200	
	VZM450-01-06S	VM-06CS	Hard steel roller	200	
Manual operation	Toggle lever	VZM450-01-08	VM-08C	—	190
	Push button (Mushroom)	VZM450-01-30R	VM-30CR	Red	199
		VZM450-01-30B	VM-30CB	Black	
		VZM450-01-30G	VM-30CG	Green	
		VZM450-01-30Y	VM-30CY	Yellow	
	Push button (Extended)	VZM450-01-32R	VM-32CR	Red	192
		VZM450-01-32B	VM-32CB	Black	
		VZM450-01-32G	VM-32CG	Green	
		VZM450-01-32Y	VM-32CY	Yellow	
	Push button (Flush)	VZM450-01-33	VM-33C	With a set of red, black, green, yellow	197
		VZM450-01-34R	VM-34CR	Red	
	Twist selector (2 position)	VZM450-01-34B	VM-34CB	Black	198
		VZM450-01-34G	VM-34CG	Green	
		VZM450-01-34Y	VM-34CY	Yellow	
Key selector (2 position)	VZM450-01-36	VM-36C	—	217	

Note 1) Actuator replacement is available for all types.

Note 2) For push button (mushroom), push button (extended), push button (flush) and a single unit of fastening ring, refer to pages 1481 and 1482. The other parts are not replaceable.

Note 3) The handle of the selector (2 position) cannot be removed or replaced alone.

VZM400 Series

How to Order

VZM45 **0** - **01** - **01** **S** - [] - []

● **Made to Order**
(Refer to pages 1474 to 1477 for details.)

X207A	Alternate type, Mushroom push button
X219A	Push-lock turn-reset type, Mushroom push button

● **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) <small>Note 1)</small>
34	Twist selector (2 position)
36	Key selector (2 position)

● **Port size**

01	Rc 1/8
N01	NPT 1/8
F01	G 1/8

● **Body option**

0	Internal pilot type
1	External pilot type

● **Suffix for actuator***

S	Hard steel roller
R	Red
B	Black
G	Green
Y	Yellow

Color of push button selector

● **Option**

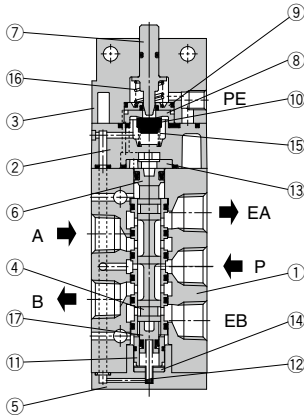
F	Foot bracket (Only internal pilot)
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* Refer to the table on page 1449 for combinations of actuator type and suffix.

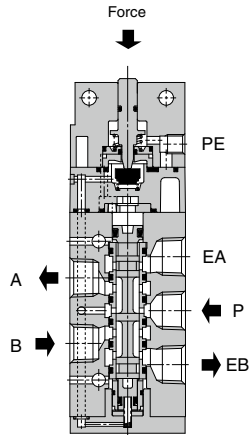
Note 1) When selecting the flush type, it is not necessary to select the suffix for the actuator.

Construction

Non-actuated



Actuated



Component Parts

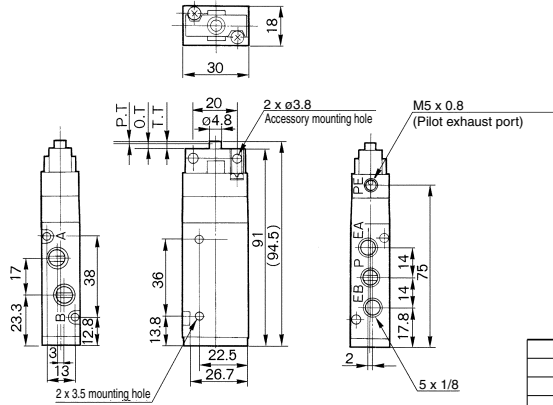
No.	Description	Material	Note
1	Body	ADC	Platinum silver
2	Pilot body	PBT	ZDC only for external pilot type
3	Head cover	ZDC	Black zinc chromated
4	Spool/sleeve	Stainless steel	
5	End cover	POM	
6	Piston A	POM	
7	Plunger	POM	
8	Valve seat (A)	POM	
9	Valve seat (B)	POM	

No.	Description	Material	Note
10	Valve	NBR	
11	Piston guide B	Aluminum alloy	
12	Return spring	Stainless steel	
13	Cushion	Rubber	
14	Cushion	Rubber	
15	Valve spring	Stainless steel	
16	Return spring	Stainless steel	
17	Piston B	POM	

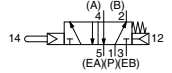
5 Port Mechanical Valve Metal Seal **VZM400 Series**

VZM400 Series

Basic / VZM450-01-00



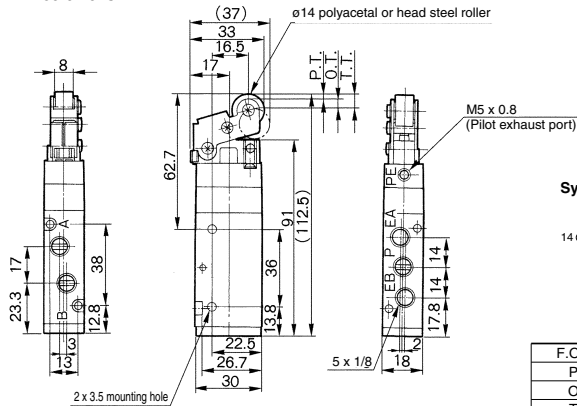
Symbol



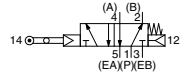
+ 0.5 MPa supply

F.O.F.*	16 N
P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

Roller lever / VZM450-01-01 · VZM450-01-01S



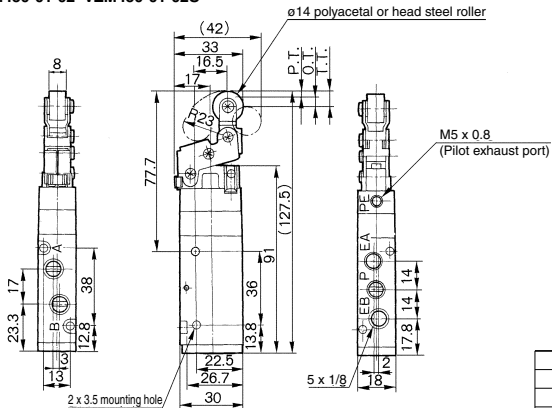
Symbol



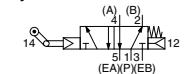
+ 0.5 MPa supply

F.O.F.*	8 N
P.T.	2.2 mm
O.T.	4.0 mm
T.T.	6.2 mm

One way roller lever / VZM450-01-02 · VZM450-01-02S



Symbol



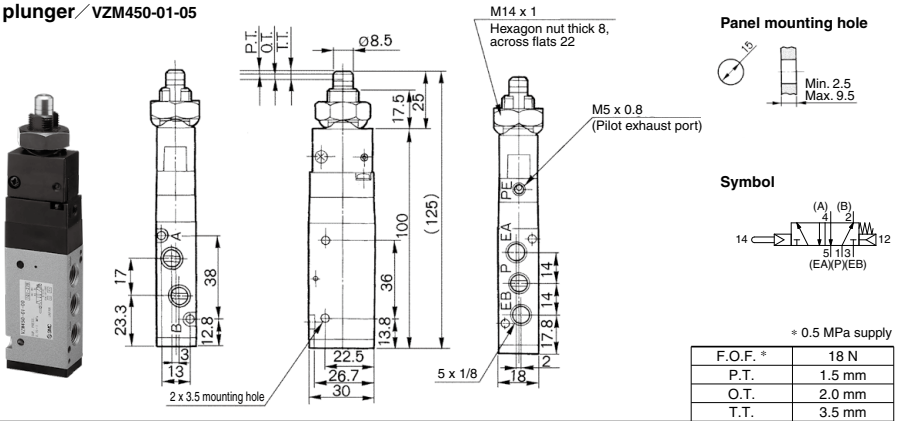
+ 0.5 MPa supply

F.O.F.*	7 N
P.T.	2.4 mm
O.T.	4.6 mm
T.T.	7.0 mm

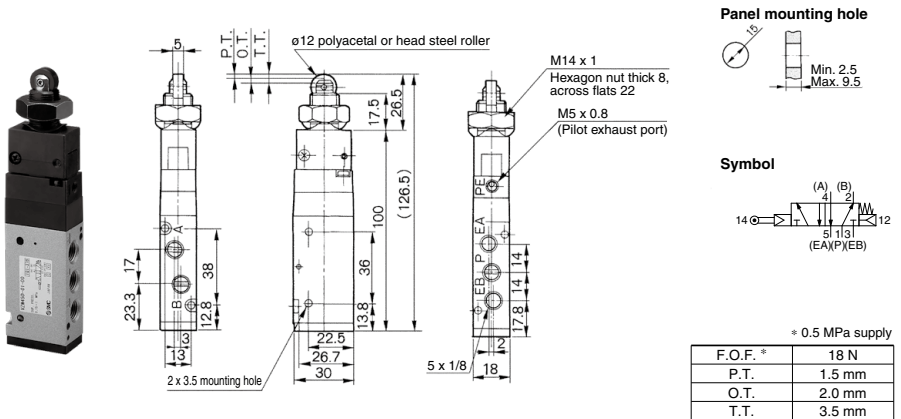
VZM400 Series

VZM400 Series

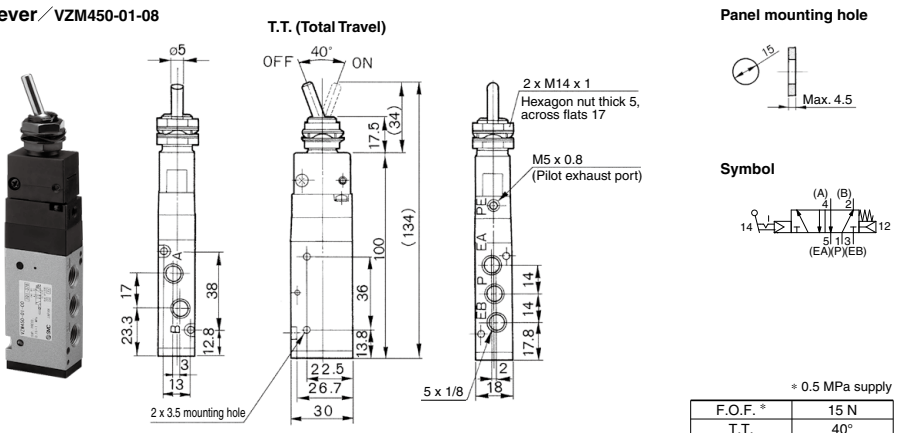
Straight plunger / VZM450-01-05



Roller plunger / VZM450-01-06 · VZM450-01-06S

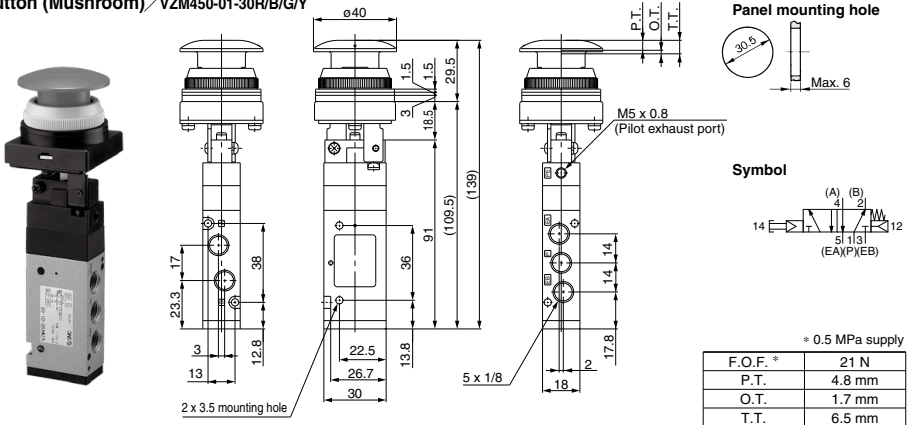


Toggle lever / VZM450-01-08

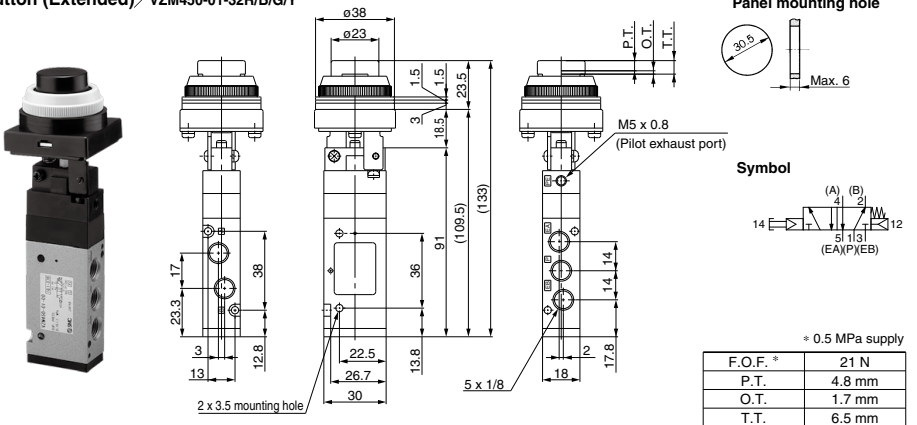


VZM400 Series

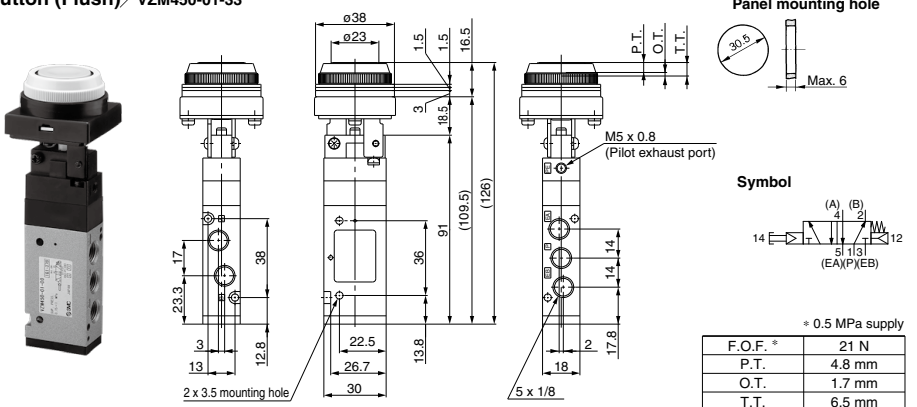
Push button (Mushroom) / VZM450-01-30R/B/G/Y



Push button (Extended) / VZM450-01-32R/B/G/Y



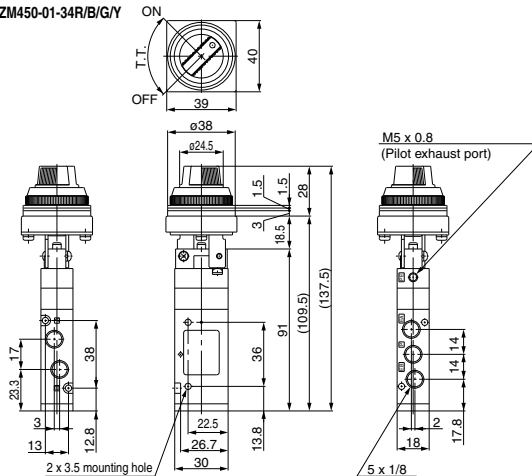
Push button (Flush) / VZM450-01-33



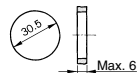
VZM400 Series

VZM400 Series

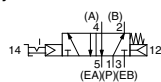
Twist selector (2 position) / VZM450-01-34R/B/G/Y



Panel mounting hole



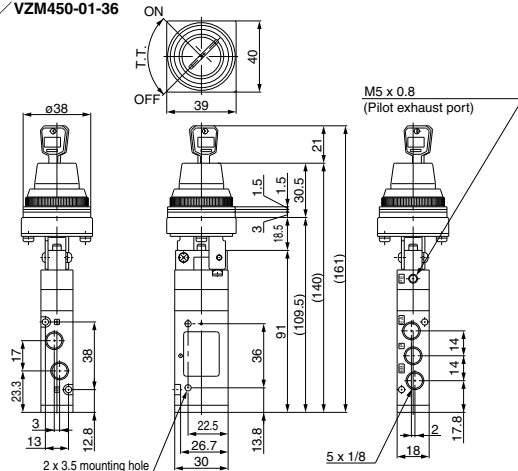
Symbol



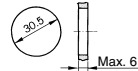
= 0.5 MPa supply

F.O.F. *	23 N
T.T.	90°

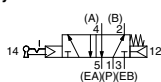
Key selector (2 position) / VZM450-01-36



Panel mounting hole



Symbol

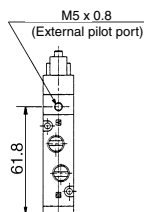


= 0.5 MPa supply

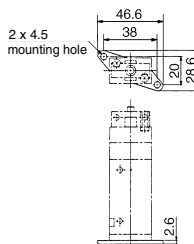
F.O.F. *	26 N
T.T.	90°

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

External pilot type
VZM451 type



With foot bracket
VZM450-01-□□-F



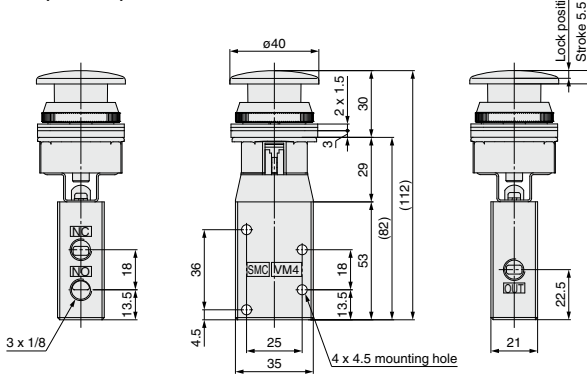


Alternate Type, Mushroom Push Button

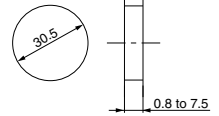
X207A

Alternate type: When pushing the push button, the valve actuates and will hold its position even after the button is released. Pushing the button again will return the button and valve to their previous position.

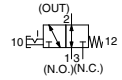
VM430-01-30(R/B/G/Y)-X207A



Panel mounting hole



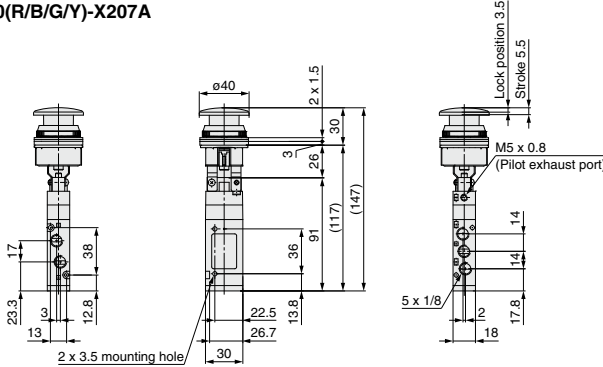
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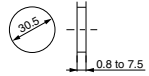
* 0.5 MPa supply

F.O.F.*	26 N
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VZM450-01-30(R/B/G/Y)-X207A



Panel mounting hole



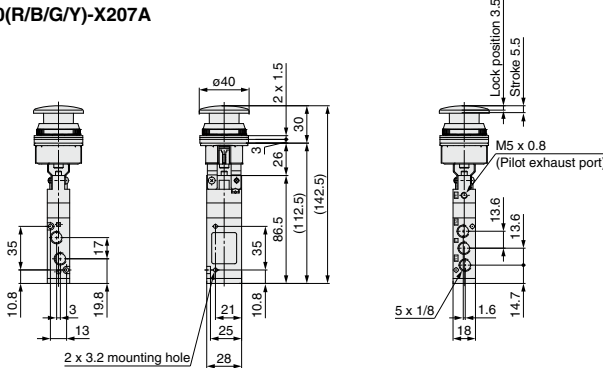
Symbol



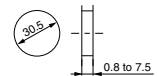
* 0.5 MPa supply

F.O.F.*	16 N
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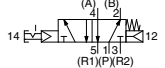
VZM550-01-30(R/B/G/Y)-X207A



Panel mounting hole



Symbol



* 0.5 MPa supply

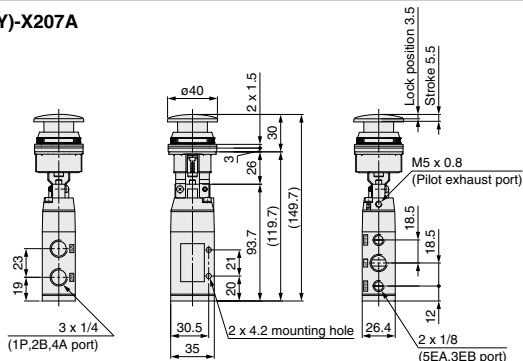
F.O.F.*	21 N
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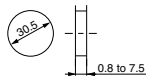
Alternate Type, Mushroom Push Button

X207A

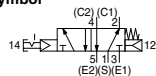
VFM350-02-30(R/B/G/Y)-X207A



Panel mounting hole



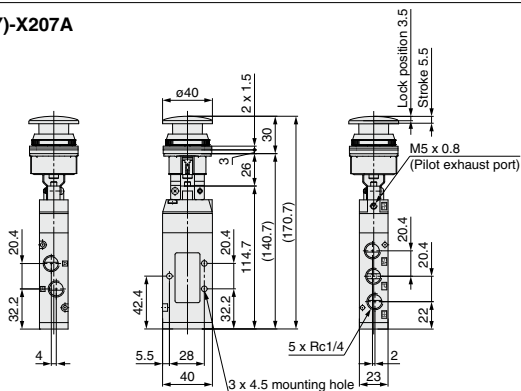
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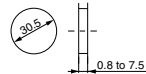
* 0.5 MPa supply

F.O.F. *	21 N
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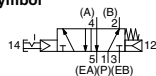
VFM250-02-30(R/B/G/Y)-X207A



Panel mounting hole



Symbol



* 0.5 MPa supply

F.O.F. *	21 N
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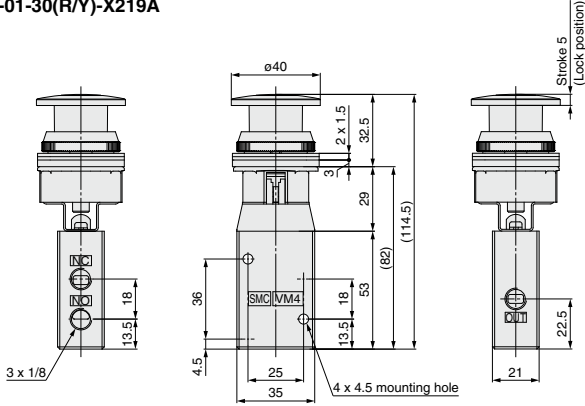


Push-lock Turn-reset Type, Mushroom Push Button

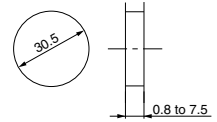
X219A

Push-lock turn-reset type: When pressing the push button, it is locked in this status. Turning the button clockwise will reset it.

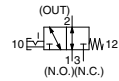
VM430-01-30(R/Y)-X219A



Panel mounting hole



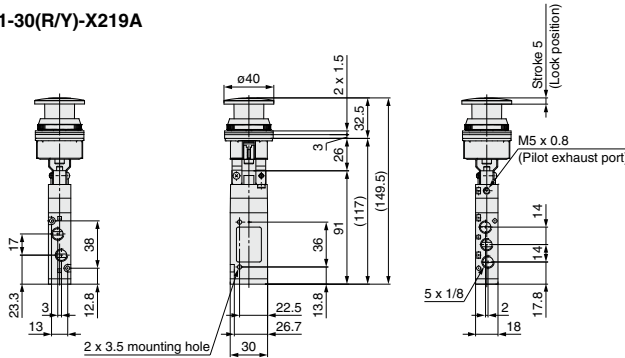
Symbol



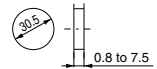
* 0.5 MPa supply

F.O.F. * 26 N

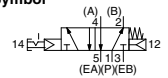
VZM450-01-30(R/Y)-X219A



Panel mounting hole



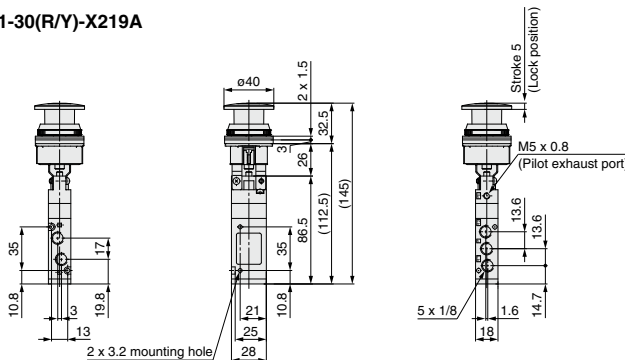
Symbol



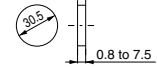
* 0.5 MPa supply

F.O.F. * 21 N

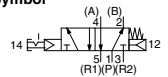
VZM550-01-30(R/Y)-X219A



Panel mounting hole



Symbol



* 0.5 MPa supply

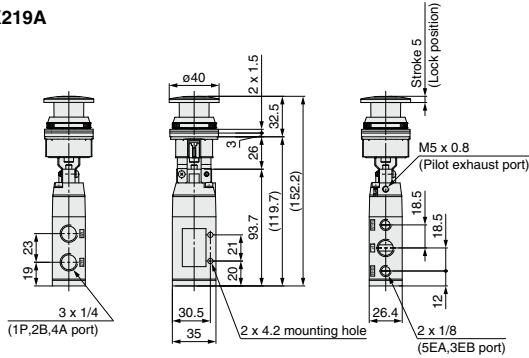
F.O.F. * 21 N



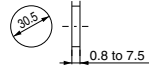
Push-lock Turn-reset Type, Mushroom Push Button

X219A

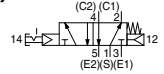
VFM350-02-30(R/Y)-X219A



Panel mounting hole



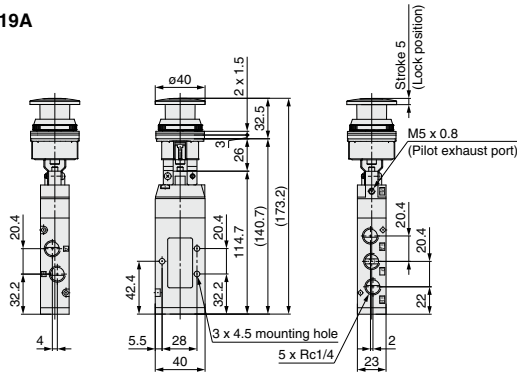
Symbol



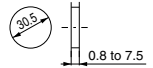
* 0.5 MPa supply

F.O.F. *	21 N
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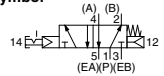
VFM250-02-30(R/Y)-X219A



Panel mounting hole



Symbol



* 0.5 MPa supply

F.O.F. *	21 N
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VM Series Made to Order 5

Please contact SMC for detailed dimensions, specifications and lead times.



RoHS

Foot Pedal Type 5 Port Mechanical Valve

XT34-60/67

- 5 port is added to the foot pedal type mechanical valve.
- Models with lock and without lock are available.

Model

Model	XT34-60	XT34-67
Lock	With lock	Without lock
Weight	0.8 kg	0.5 kg

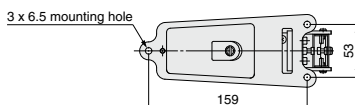
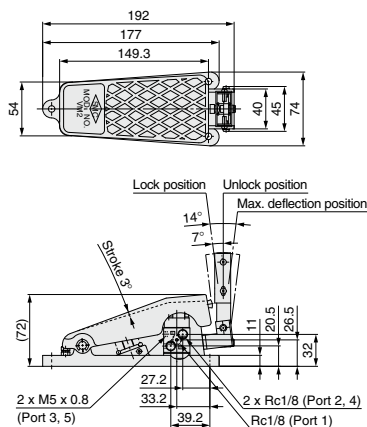
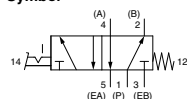
Specifications

Fluid	Air/Inert gas			
Operating pressure	0.15 to 0.9 MPa			
Ambient and fluid temperature	-5 to 60°C (No freezing)			
Flow rate characteristics	C [dm ³ /(s·bar)]	b	Cv	
	1(P) → 2(B)/4(A)	0.76	0.22	0.17
	2(B)/4(A) → 4(EB)/5(EA)	0.53	0.28	0.13
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated)			
Port size	Port 1(P), Port 2(B), Port 4(A): Rc1/8			
	Port 3(EB), Port 5(EA): M5 x 0.8			

XT34-60 (With lock)



Symbol



Travel required for operation	3°
Full Operating Force (F.O.F.)	55 N (at 0.5 MPa)
Travel required to release the lock	7°
Force required to release the lock (F.O.F.)	3.5 N

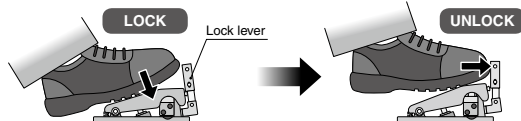
Operation

Locked

When stepping on the pedal, it is locked by the lock lever, and held in a locked state.

Unlocked

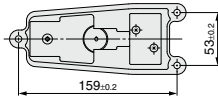
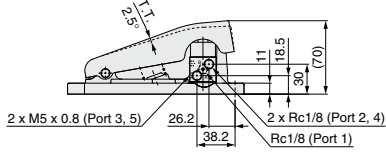
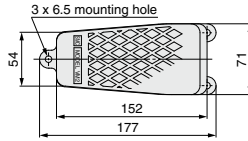
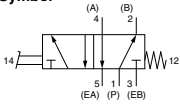
When pushing the lock lever with the toe, the lock is released, and the pedal returns to its original position.



XT34-67 (Without lock)



Symbol



Total Travel (T.T.)	2.5°
Full Operating Force (Reference value)(F.O.F.)	55 N (at 0.5 MPa)