



Mechanical Valves

Series VM

Model	VM1000	VM100	VM200
Dimensions (mm)	Side ported 11 x 36 x 16 Bottom ported 11 x 28 x 25	Side ported 17 x 44 x 25 Bottom ported 17 x 44 x 30	25 x 40 x 52

	VM1000	VM100	VM200
Basic			
Roller lever		●	●
One way roller lever		●	●
Straight plunger		●	●
Roller plunger		●	●
Cross roller plunger		●	●
Toggle lever		●	●
Push button (Mushroom)		●	●
Push button (Extended)		●	●
Push button (Flush)		●	●
Twist selector (2 position)		●	●
Key selector (2 position)		●	●
Twist selector (3 position)		●	●
Foot pedal		●	●
Push-pull		●	●

	P. 5-6-8	P. 5-6-12	P. 5-6-20
Effective area (mm ²)	1	2.5	19
Number of ports	2, 3	2, 3	2, 3
Function	Poppet 	Poppet 	Poppet

Mechanical Valves

VM400
21 x 35 x 53

VZM500
18 x 28 x 87

VZM400
18 x 30 x 91

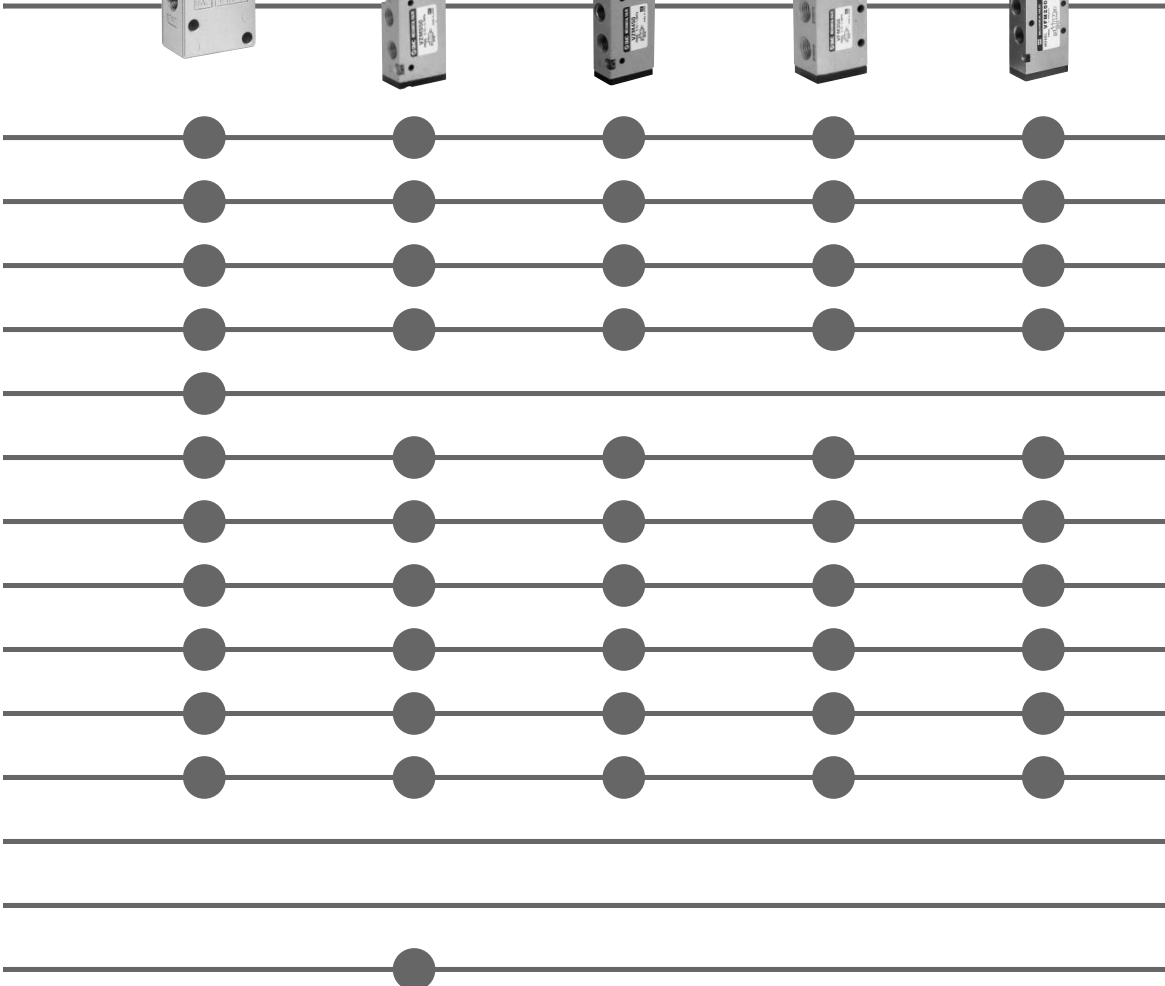
VFM300
26 x 35 x 94

VFM200
23 x 40 x 115

VM800
30 x 40 x 57



- A
- A
- A
- A
- VM**
- VR
- VH
- VHS



P. 5-6-26
7
3
Balanced poppet
OUT
NO NC

P. 5-6-41
10.8
5
Rubber spool
4(A) 2(B)
5(F) 1(P) 3(R2)

P. 5-6-35
9.9
5
Metal spool
* 2(B) 4(A)
3(EB) 1(P) 5(EA)

P. 5-6-48
18
5
Rubber spool
2(B) 4(A)
3(EB) 1(P) 5(EA)

P. 5-6-54
18
5
Metal spool
* 2(B) 4(A)
3(EB) 1(P) 5(EA)

P. 5-6-32
6
3
Balanced poppet
OUT
NO NC



* Dual pressure is available only on external pilot.

⚠ Precautions

Be sure to read before handling. Refer to pages 5-12-2 to 6 for Safety Instructions and Solenoid Valve Precautions.

Mounting

⚠ Warning

1. Conditions for mechanical operation

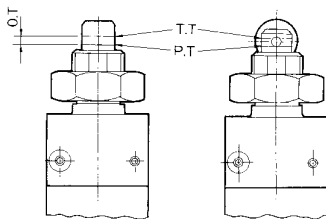
Do not move the mechanical operation beyond the operating limit position, as this could damage the mechanical valve itself and lead to equipment malfunction.

• Actuator stroke

Operate the mechanism within the stroke range that has been obtained through the formula given below. (Do not move beyond the operating limit position.)
 Operating stroke: (P.T. + 0.5 x O.T.) to (P.T. + O.T. - 0.1)

Series	Actuator	Actuator stroke (mm)
VM1000	Basic	T.T. = 4.8 mm (T.T. = 2.5 mm)
	Roller lever	3.5 to 4.4
	One way roller lever	3.5 to 4.4
VM100	Basic	2.2 to 2.9
	Roller lever	4.3 to 5.3
	One way roller lever	4.3 to 5.3
	Straight plunger	2.7 to 3.4
	Roller plunger	2.7 to 3.4
	Cross roller plunger	2.7 to 3.4
VM200	Basic	4.0 to 4.9
	Roller lever	8.7 to 10.7
	One way roller lever	9.5 to 11.7
	Straight plunger	4.5 to 5.4
	Roller plunger	4.5 to 5.4
VM400	Basic	2.5 to 3.4
	Roller lever	6.2 to 8.2
	One way roller lever	6.5 to 8.7
	Straight plunger	4.5 to 5.4
	Roller plunger	4.5 to 5.4
VZM500 VZM400 VFM300 VFM200	Basic	2.0 to 2.9
	Roller lever	4.2 to 6.0
	One way roller lever	4.7 to 6.7
	Straight plunger	2.5 to 3.4
	Roller plunger	2.5 to 3.4

For straight and roller plunger types, there is a groove indicating P.T. and T.T. for stroke adjustment.



Pressure Source

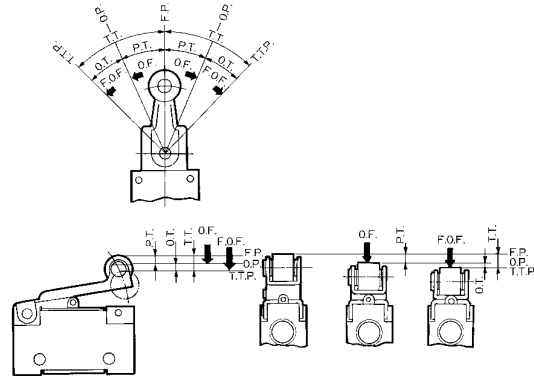
⚠ Warning

Operable fluid is either air or inert gas only. It cannot be used for corrosive gas and fluid.

⚠ Caution

When using vacuum pressure for VM100, supply vacuum pressure to P port.

Definition of Symbol



- F.P. (Free Position) No external force applied.
- O.P. (Operating Position) Internal valve opening position.
- T.T.P. (Total Travel Position)..... Includes over travel.
- O.F. (Operating Force)..... Operating force required to initial valve opening position.
- F.O.F. (Full Operating Force) .. Required force to total travel position.
- P.T. (Pre-travel) From free position to initial valve operating position.
- O.T. (Over Travel)..... From initial valve operating position to total travel position.
- T.T. (Total Travel)..... From free position to total travel position.

Caution

This product cannot be used for applications in which the pressure must be sealed because there will be a slight leakage. Please consult with SMC for this type of application.

S□A

V□A

S□A

V□A

VM

VR

VH

VHS

⚠️ Precautions

Be sure to read before handling. Refer to pages 5-12-2 to 6 for Safety Instructions and Solenoid Valve Precautions.

Mounting

⚠️ Warning

2. Conditions for mechanical operation

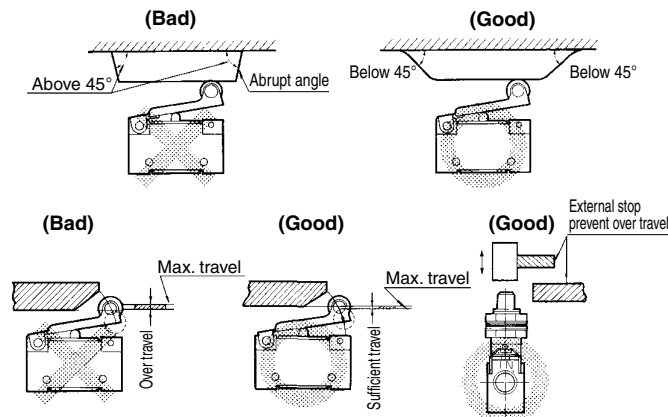
- Cam and dog angle and maximum speed

Select the angle and the maximum speed of the operating cam and the dog of the mechanism from within the selection range given in the table below.

If they are operated beyond the selection range, the cam and the dog could apply impact shocks to the actuator, leading to damage.

Series	Actuator	Angle limit switch actuator	Max. speed limit switch actuator (m/s)
VM1000	Roller lever	30°	0.7
		45°	0.3
	One way roller lever	30°	0.7
		45°	0.3
VM100 VM200 VM400	Roller lever	30°	0.7
		45°	0.3
	One way roller lever	30°	0.7
		45°	0.3
	Straight plunger	—	0.2
	Roller plunger	30°	0.3
Cross roller plunger	30°	0.3	
VZM500 VZM400 VFM300 VFM200	Roller lever	30°	1.5
		45°	0.7
	One way roller lever	30°	0.7
		45°	0.3
	Straight plunger	—	0.4
Roller plunger	30°	0.7	
VM800	Roller lever	30°	0.5
		45°	0.2
	Adjustable roller lever	30°	0.2
		45°	0.1
	Adjustable rod lever	—	0.2

Avoid abrupt angles on limit switch actuator.



Cam and Dog Material

Roller material	Plunger material	Plunger surface finish
Polyacetal	Steel	▽▽▽
Steel	Steel, Resin	▽▽

3. Never perform additional machining such as enlarging the body mounting holes.

As doing so could lead to abnormal conditions such as air leakage.

4. Operate all manual valves such as the push pin types, the selector types, and the flip toggle types with your finger.

If a hammer or other tools are used, or it is operated mechanically through the use of a cylinder or the like, damage could result.

Environments

⚠️ Caution

1. Do not operate it in an area in which fluids such as oil, coolant, or water splash on it or dust comes in contact with it. Because it does not have a waterproof or dustproof construction, fluids or dust could enter the valve, leading to malfunction. Therefore, take measures such as providing a protective cover to prevent direct exposure.

Maintenance

⚠️ Warning

1. Perform inspections on a regular basis as necessary, such as at the beginning of an operation, to make sure that the mechanical valve operates properly.

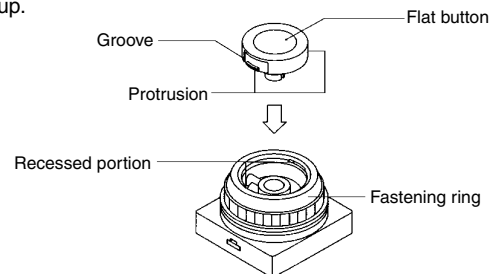
Failure to observe this precaution could lead to unsafe operation, such as unintended operation or malfunction.

How to Change the Buttons

Replace the button in the following manner to change color of the button.

1. Push button (Flush type)

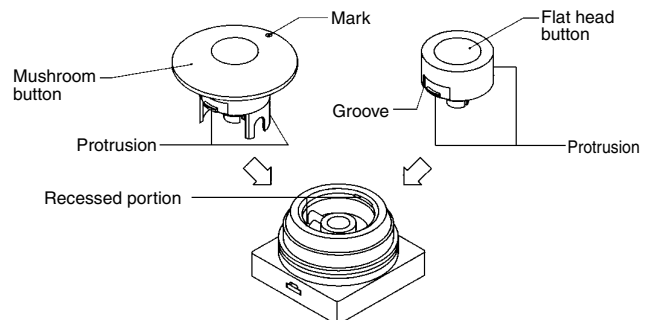
- Installation Of the four colors, red, green, black, and yellow, select and align the protruding portion of the button with the recessed portion of the body and push in.
- Removal Remove the fastening ring and insert the tip of a small flat screwdriver into the groove of the button to pry it up.



2. Push button (Mushroom and extended types)

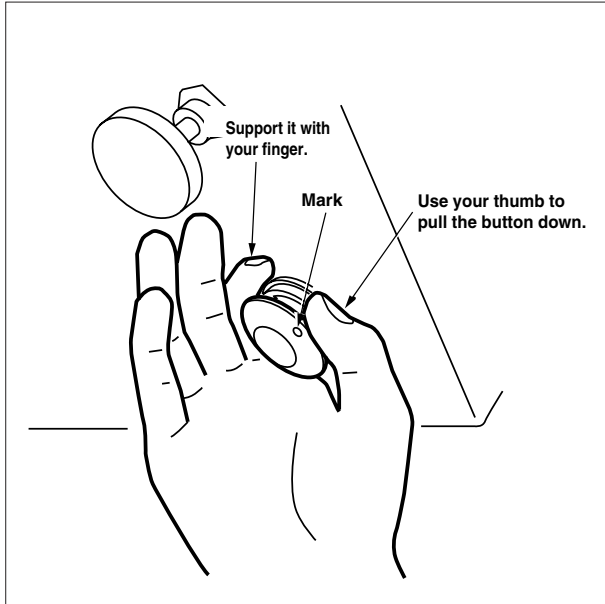
At the time of shipment, only 1 button of the color that you specified is attached to the body.

	Mushroom type	Extended type
Mounting	Align the protruding portion of the button with the recessed portion of the body and push in. (Use the mark on the button as a reference to align the protruding part.)	Align the protruding portion of the button with the recessed portion of the body and push in.
Removal	Placing your finger under the collar of the button on the side of the mark, tilt it upward.	Remove the fastening ring and insert the tip of a small flat screwdriver into the groove of the button to pry it up.

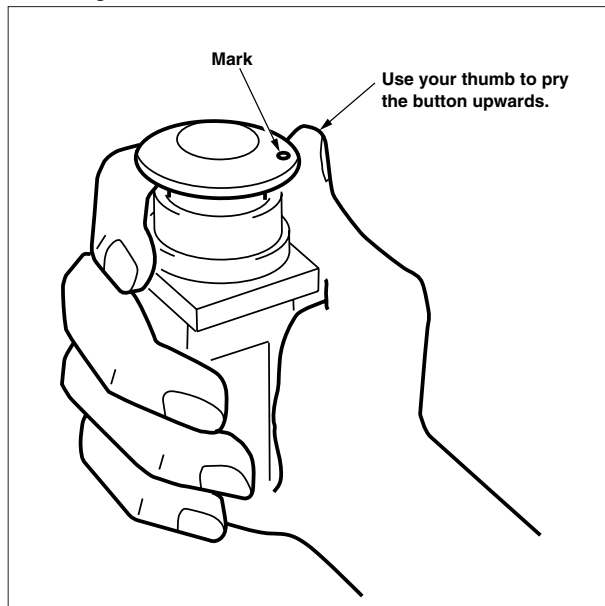


How to remove a mushroom button

How to remove at panel mount



Removing the valve as a unit



Replacement parts

1. Use the part numbers listed below to order individual mushroom head or flat head buttons.

Color	Mushroom button	Extended button
Red	3402186R	3402187R
Black	3402186B	3402187B
Green	3402186G	3402187G
Yellow	3402186Y	3402187Y

Color	Push button (Flush)
Red	3402188R
Black	3402188B
Green	3402188G
Yellow	3402188Y

2. To order single fastening ring, use the part number below.
Fastening ring: 3402184

3. To order a single push button for series VM1000 and a single cover use the part number below.

Color	Push button	Cover for push button
Red	3410701-R	3410703 (White only)
Black	3410701-B	
Green	3410701-G	

S□A

V□A

S□A

V□A

VM

VR

VH

VHS

Micro Mechanical Valve

Series VM1000

Miniature structure requires little mounting space.

Built-in hose nipple connection.

Piping options:
Side piping, Bottom piping
Over Travel after actuation (mechanical operated types)



Specifications

Valve type	N.C. poppet
Number of ports	2 or 3
Piping	Side or bottom ported
Fluid	Air/Inert gas
Operating pressure	0 to 0.8 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area	1 mm ²
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Fitting	With hose nipple
Weight (Basic)	6 g

Option

Total travel (T.T.)	2.5 mm (Basic)
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- A commercially available actuator for the V microswitch can be installed.
- However, be aware that there are different microswitches, such as the P.T./O.T. or F.O.F. types.
- T.T. 2.5 mm is available for basic style only.

Model

	Actuator	Piping	Number of ports	Applicable tubing		Note
				T0425	TU0425/ET0403	
Mechanical operation	Basic	Side ported	3 port	VM1000-4N-00	VM1000-4NU-00	
			2 port	VM1100-4N-00	VM1100-4NU-00	
		Bottom ported	3 port	VM1010-4N-00	VM1010-4NU-00	
	2 port		VM1110-4N-00	VM1110-4NU-00		
	Roller lever	Side ported	3 port	VM1000-4N-01	VM1000-4NU-01	
			2 port	VM1100-4N-01	VM1100-4NU-01	
		Bottom ported	3 port	VM1010-4N-01	VM1010-4NU-01	
	2 port		VM1110-4N-01	VM1110-4NU-01		
	One way roller lever	Side ported	3 port	VM1000-4N-02	VM1000-4NU-02	
2 port			VM1100-4N-02	VM1100-4NU-02		
Bottom ported		3 port	VM1010-4N-02	VM1010-4NU-02		
	2 port	VM1110-4N-02	VM1110-4NU-02			
Manual operation	Toggle lever	Side ported	3 port	VM1000-4N-08	VM1000-4NU-08	
			2 port	VM1100-4N-08	VM1100-4NU-08	
	Bottom ported	3 port	VM1010-4N-08	VM1010-4NU-08		
		2 port	VM1110-4N-08	VM1110-4NU-08		
	Push button	Side ported	3 port	VM1000-4N-32R	VM1000-4NU-32R	Red
			2 port	VM1100-4N-32R	VM1100-4NU-32R	Red
		Bottom ported	3 port	VM1010-4N-32R	VM1010-4NU-32R	Red
			2 port	VM1110-4N-32R	VM1110-4NU-32R	Red
		Side ported	3 port	VM1000-4N-32B	VM1000-4NU-32B	Black
			2 port	VM1100-4N-32B	VM1100-4NU-32B	Black
		Bottom ported	3 port	VM1010-4N-32B	VM1010-4NU-32B	Black
			2 port	VM1110-4N-32B	VM1110-4NU-32B	Black
Side ported		3 port	VM1000-4N-32G	VM1000-4NU-32G	Green	
		2 port	VM1100-4N-32G	VM1100-4NU-32G	Green	
Bottom ported	3 port	VM1010-4N-32G	VM1010-4NU-32G	Green		
	2 port	VM1110-4N-32G	VM1110-4NU-32G	Green		

Note) To replace the push button and push button cover alone, refer to page 5-6-7.
Other parts and actuator cannot be replaced.

How to Order

VM1 0 0 0 4N 00 R

• **Number of ports**

0	3 port
1	2 port

• **Piping**

0	Side ported
1	Bottom ported

• **Total travel/Basic (T.T.)**

0	4.8 mm
1	2.5 mm (Option)*

• **Applicable tubing (Material/Size)**

4N	Nylon ø4/2.5 (T0425)
	Nylon ø4/3 (T0403)
4NU	Soft Nylon ø4/2.5 (TS0425)
	Polyurethane ø4/2.5 (TU0425)

• **Actuator type**

00	Basic
01	Roller lever
02	One way roller lever
08	Toggle lever
32	Push button

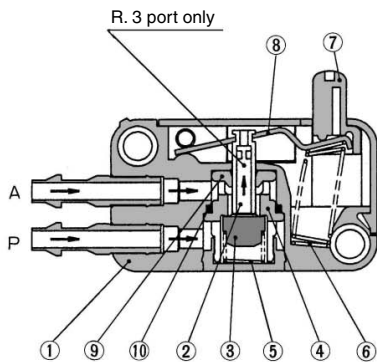
• **Color of push button**

R	Red
G	Green
B	Black

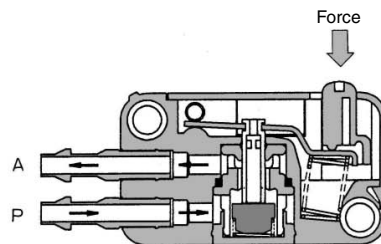
- A
- A
- A
- A
- VM**
- VR
- VH
- VHS

Construction

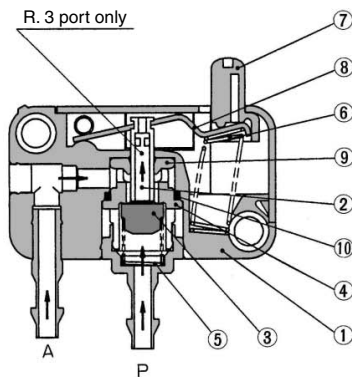
Side ported/Non-actuated



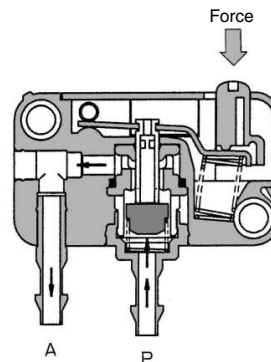
Side ported/Actuated



Bottom ported/Non-actuated



Bottom ported/Actuated



Component Parts

No.	Description	Material	Note
①	Body	PBT	
②	Valve	POM	
③	Valve	NBR	
④	Retainer	POM	
⑤	Spring	Stainless steel	

No.	Description	Material	Note
⑥	Spring	Stainless steel	
⑦	Plunger	POM	T.T. = 2.5 mm only, w/threads
⑧	Lever	Stainless steel	
⑨	Packing	NBR	
⑩	O-ring	NBR	

Micro Mechanical Valve Series VM1000

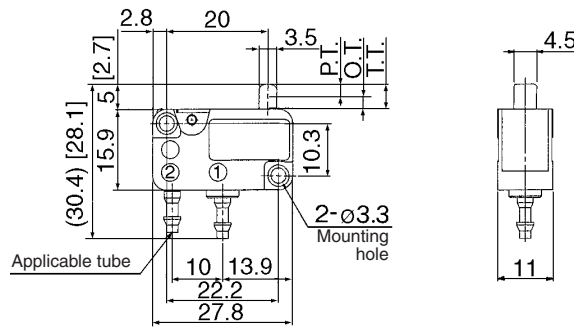
Series VM1000/Bottom Ported

Basic

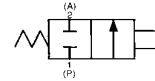
VM1010-4N-00
VM1010-4NU-00
VM1110-4N-00
VM1110-4NU-00



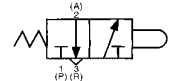
[]: T.T. = 2.5 mm



JIS Symbol/2 port



3 port



* 0.5 MPa supply

		Applicable tubing	
		T0425	TU0425, T0403, TS0425
Bottom ported	3 port	VM1010-4N-00	VM1010-4NU-00
	2 port	VM1110-4N-00	VM1110-4NU-00
F.O.F.*		6 N	
P.T.		2.5 mm	
O.T.		2.3 mm [0.5 mm]	
T.T.		4.8 mm [2.5 mm]	

□A

□A

□A

□A

VM

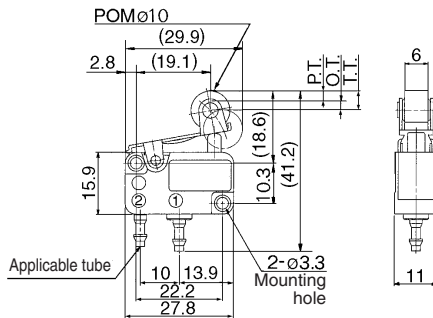
VR

VH

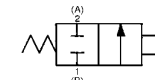
VHS

Roller lever

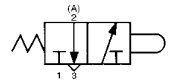
VM1010-4N-01
VM1010-4NU-01
VM1110-4N-01
VM1110-4NU-01



JIS Symbol/2 port



3 port

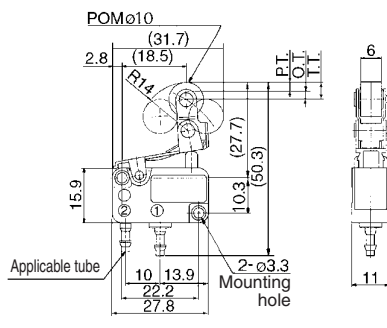


* 0.5 MPa supply

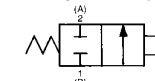
		Applicable tubing	
		T0425	TU0425, T0403, TS0425
Bottom ported	3 port	VM1010-4N-01	VM1010-4NU-01
	2 port	VM1110-4N-01	VM1110-4NU-01
F.O.F.*		6 N	
P.T.		2.5 mm	
O.T.		2.0 mm	
T.T.		4.5 mm	

One way roller lever

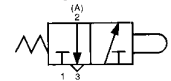
VM1010-4N-02
VM1010-4NU-02
VM1110-4N-02
VM1110-4NU-02



JIS Symbol/2 port



3 port

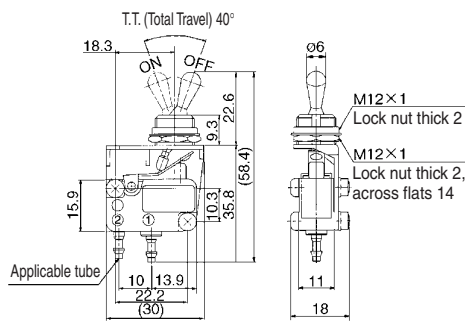


* 0.5 MPa supply

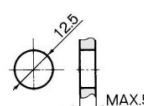
		Applicable tubing	
		T0425	TU0425, T0403, TS0425
Bottom ported	3 port	VM1010-4N-02	VM1010-4NU-02
	2 port	VM1110-4N-02	VM1110-4NU-02
F.O.F.*		6 N	
P.T.		2.5 mm	
O.T.		2.0 mm	
T.T.		4.5 mm	

Toggle lever

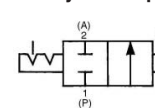
VM1010-4N-08
VM1010-4NU-08
VM1110-4N-08
VM1110-4NU-08



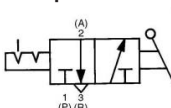
Panel mounting hole



JIS Symbol/2 port



3 port

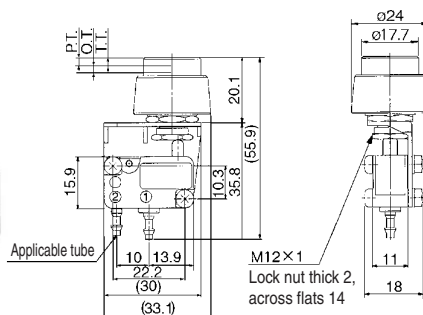


* 0.5 MPa supply

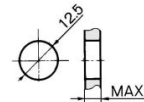
		Applicable tubing	
		T0425	TU0425, T0403, TS0425
Bottom ported	3 port	VM1010-4N-08	VM1010-4NU-08
	2 port	VM1110-4N-08	VM1110-4NU-08
F.O.F.*		4 N	
T.T.		40°	

Push button

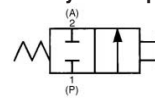
VM1010-4N-32
VM1010-4NU-32
VM1110-4N-32
VM1110-4NU-32



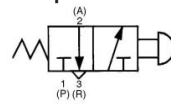
Panel mounting hole



JIS Symbol/2 port



3 port



* 0.5 MPa supply

		Applicable tubing	
		T0425	TU0425, T0403, TS0425
Bottom ported	3 port	VM1010-4N-32	VM1010-4NU-32
	2 port	VM1110-4N-32	VM1110-4NU-32
F.O.F.*		6 N	
P.T.		2.5 mm	
O.T.		2.0 mm	
T.T.		4.5 mm	

2/3 Port Mechanical Valve

Series VM100

Compact size.
Piping options:
Side piping, Bottom piping
A variety of actuator types.



Specifications

Piping	Side ported	Bottom ported
Fluid	Air/Inert gas	
Operating pressure	-100 kPa to 1.0 MPa	
Ambient and fluid temperature	-5 to 60°C (No freezing)	
Effective area	2.5 mm ²	
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)	
Port size	1/8	M5 x 0.8
Weight (Basic)	95 g	110 g

Model

	Side ported		Bottom ported		Actuator part no.	Application	
	2 port	3 port	2 port	3 port			
Mechanical operation	Basic	VM120-01-00	VM130-01-00	VM122-M5-00	VM132-M5-00	—	
		VM121-01-00	VM131-01-00	VM123-M5-00	VM133-M5-00	—	
	Roller lever	VM121-01-01	VM131-01-01	VM123-M5-01	VM133-M5-01	—	Polyacetal roller
		VM121-01-01S	VM131-01-01S	VM123-M5-01S	VM133-M5-01S	—	Hard steel roller
	One way roller lever	VM121-01-02	VM131-01-02	VM123-M5-02	VM133-M5-02	—	Polyacetal roller
		VM121-01-02S	VM131-01-02S	VM123-M5-02S	VM133-M5-02S	—	Hard steel roller
	Straight plunger	VM120-01-05	VM130-01-05	VM122-M5-05	VM132-M5-05	VM-05B	—
	Roller plunger	VM120-01-06	VM130-01-06	VM122-M5-06	VM132-M5-06	VM-06B	Polyacetal roller
		VM120-01-06S	VM130-01-06S	VM122-M5-06S	VM132-M5-06S	VM-06BS	Hard steel roller
	Cross roller plunger	VM120-01-07	VM130-01-07	VM122-M5-07	VM132-M5-07	VM-07B	Polyacetal roller
VM120-01-07S		VM130-01-07S	VM122-M5-07S	VM132-M5-07S	VM-07BS	Hard steel roller	
Manual operation	Toggle lever	VM120-01-08	VM130-01-08	VM122-M5-08	VM132-M5-08	VM-08B	—
	Push button (Mushroom)	VM120-01-30R	VM130-01-30R	VM122-M5-30R	VM132-M5-30R	VM-30AR	Red
		VM120-01-30B	VM130-01-30B	VM122-M5-30B	VM132-M5-30B	VM-30AB	Black
		VM120-01-30G	VM130-01-30G	VM122-M5-30G	VM132-M5-30G	VM-30AG	Green
		VM120-01-30Y	VM130-01-30Y	VM122-M5-30Y	VM132-M5-30Y	VM-30AY	Yellow
	Push button (Extended)	VM120-01-32R	VM130-01-32R	VM122-M5-32R	VM132-M5-32R	VM-32AR	Red
		VM120-01-32B	VM130-01-32B	VM122-M5-32B	VM132-M5-32B	VM-32AB	Black
		VM120-01-32G	VM130-01-32G	VM122-M5-32G	VM132-M5-32G	VM-32AG	Green
	Push button (Flush)	VM120-01-32Y	VM130-01-32Y	VM122-M5-32Y	VM132-M5-32Y	VM-32AY	Yellow
		VM120-01-33	VM130-01-33	VM122-M5-33	VM132-M5-33	VM-33A	With a set of red, black, green, yellow
	Twist selector (2 position)	VM120-01-34R	VM130-01-34R	VM122-M5-34R	VM132-M5-34R	VM-34AR	Red
		VM120-01-34B	VM130-01-34B	VM122-M5-34B	VM132-M5-34B	VM-34AB	Black
		VM120-01-34G	VM130-01-34G	VM122-M5-34G	VM132-M5-34G	VM-34AG	Green
		VM120-01-34Y	VM130-01-34Y	VM122-M5-34Y	VM132-M5-34Y	VM-34AY	Yellow
	Key selector (2 position)	VM120-01-36	VM130-01-36	VM122-M5-36	VM132-M5-36	VM-36A	—
	Twist selector (3 position)	VM131-01-35R	VM151-01-35R	VM133-M5-35R	VM153-M5-35R	—	Red
		VM131-01-35B	VM151-01-35B	VM133-M5-35B	VM153-M5-35B	—	Black
		VM131-01-35G	VM151-01-35G	VM133-M5-35G	VM153-M5-35G	—	Green
		VM131-01-35Y	VM151-01-35Y	VM133-M5-35Y	VM153-M5-35Y	—	Yellow
	(3 port)	(5 port)	(3 port)	(5 port)	—	—	



Note 1) Actuator replacement is available for all types except for roller lever, one way roller lever, and 3 position selector.

Note 2) For push button (mushroom), push button (extended), push button (flush) and a single unit of fastening ring, refer to pages 5-6-6 to 5-6-7. The other parts are not replaceable.

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

How to Order

VM1 **3** **1** **01** **01** **S**

Port size

01	Rc 1/8
M5	M5 x 0.8 (Female thread)
N01	NPT 1/8
F01	G 1/8

Piping direction and the length of push rod

0	Long	Side ported
1	Short	Side ported
2	Long	Bottom ported
3	Short	Bottom ported

Number of ports

2	2 port
3	3 port

Actuator type

00	Basic
01	Roller lever
02	One way roller lever
05	Straight plunger
06	Roller plunger
07	Cross 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)
35	Twist selector (3 position)

Suffix for actuator

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

Color of push button selector

Suffix for indicator light

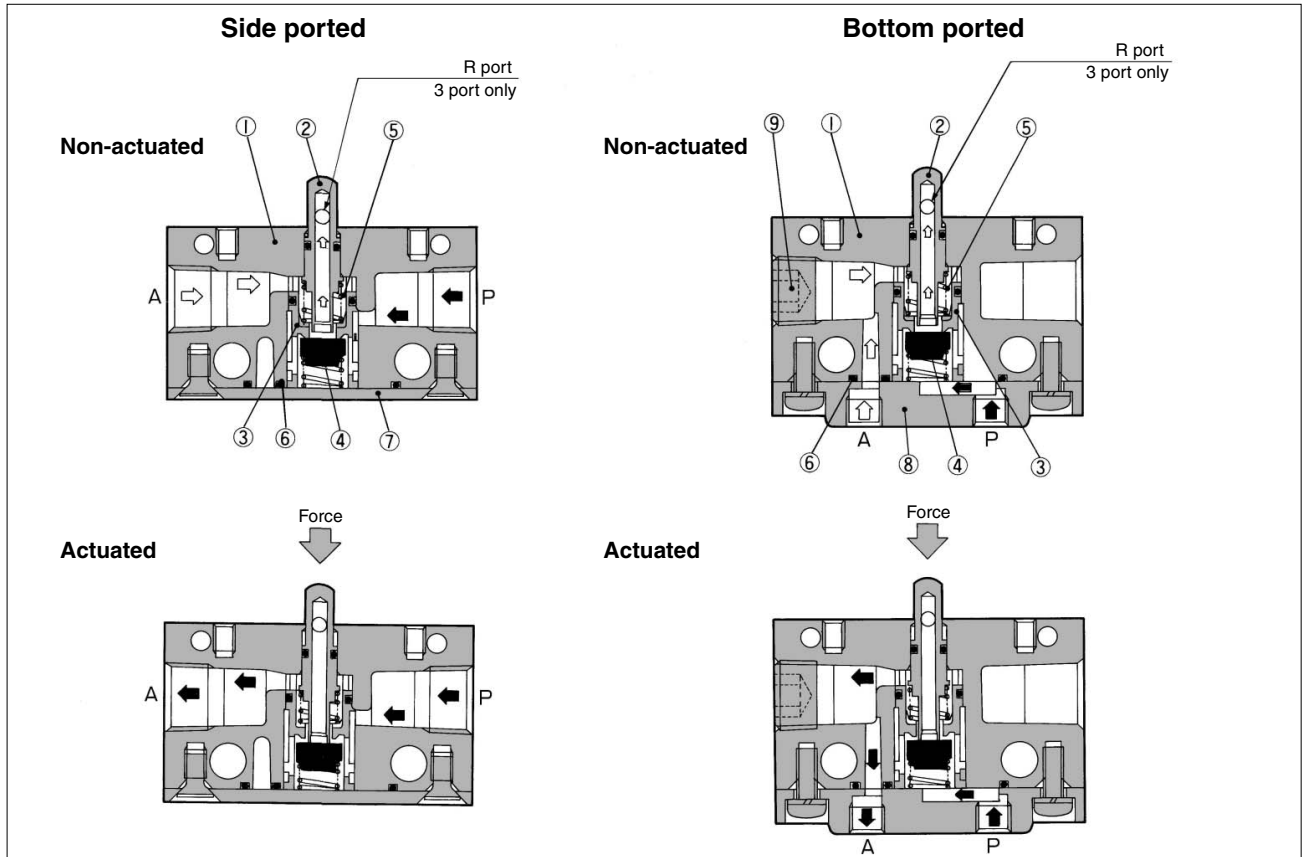
Z	With miniature indicator light (Bottom piping type only)
---	--

Actuator	Height of rod push	Side ported		Bottom ported	
		Long	Short	Long	Short
		0	1	2	3
Basic	00	○	○	○	○
Roller lever	01	x	○	x	○
One way roller lever	02	x	○	x	○
Straight plunger	05	○	x	○	x
Roller plunger	06	○	x	○	x
Cross roller plunger	07	○	x	○	x
Toggle lever	08	○	x	○	x
Push button (Mushroom)	30	○	x	○	x
Push button (Extended)	32	○	x	○	x
Push button (Flush)	33	○	x	○	x
Twist selector (2 position)	34	○	x	○	x
Key selector (2 position)	36	○	x	○	x
Twist selector (3 position)	35	x	○	x	○

- A
- A
- A
- VM
- VR
- VH
- VHS

Combination possible: ○, Combination impossible: x

Construction



Component Parts

No.	Description	Material	Note
①	Valve	ZDC	Metallic plated
②	Plunger	POM	
③	Valve sheet	POM	
④	Valve	NBR	
⑤	Spring	Stainless steel	

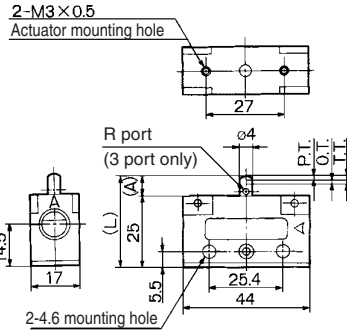
No.	Description	Material	Note
⑥	Gasket	NBR	
⑦	Cover	Rolled steel	
⑧	Sub-plate	ZDC	Metallic plated
⑨	Hexagon socket head plug	Rolled steel	

Series VM100

Series VM100/Side Ported

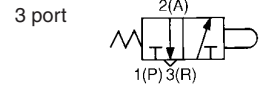
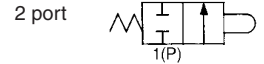
Basic

VM120-01-00
VM130-01-00
VM121-01-00
VM131-01-00



Model	L	A
VM120-01-00 VM130-01-00	32.5	7.5
VM121-01-00 VM131-01-00	28.5	3.5

JIS Symbol

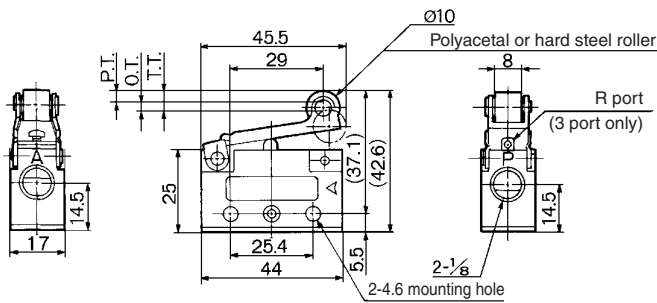


* 0.5 MPa supply

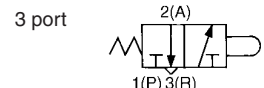
F.O.F. *	20 N
P.T.	1.5 mm
O.T.	1.5 mm
T.T.	3.0 mm

Roller lever

VM121-01-01
VM131-01-01
VM121-01-01S
VM131-01-01S



JIS Symbol

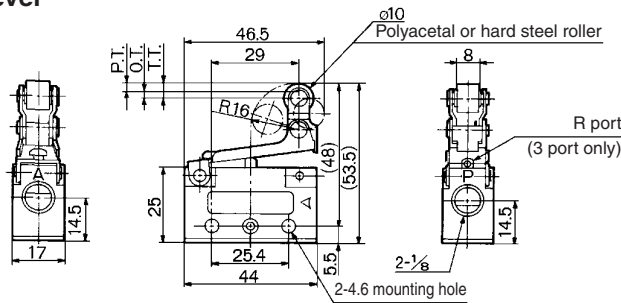


* 0.5 MPa supply

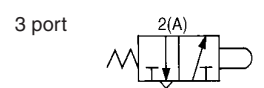
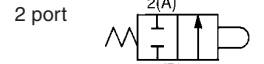
F.O.F. *	10 N
P.T.	3.2 mm
O.T.	2.3 mm
T.T.	5.5 mm

One way roller lever

VM121-01-02
VM131-01-02
VM121-01-02S
VM131-01-02S



JIS Symbol

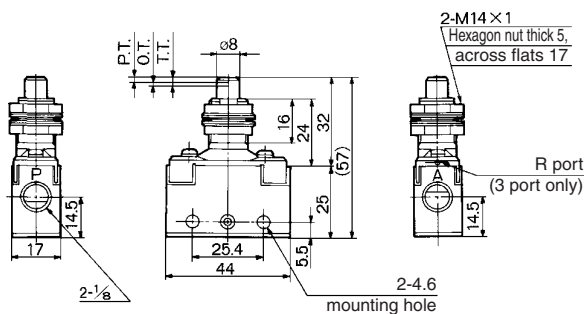


* 0.5 MPa supply

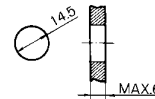
F.O.F. *	10 N
P.T.	3.2 mm
O.T.	2.3 mm
T.T.	5.5 mm

Straight plunger

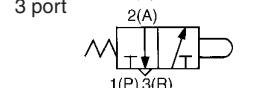
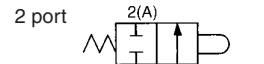
VM120-01-05
VM130-01-05



Panel mounting hole



JIS Symbol

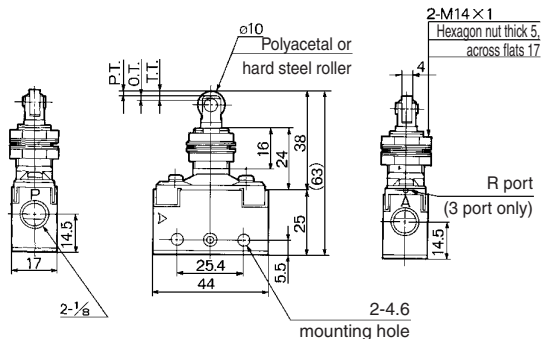


* 0.5 MPa supply

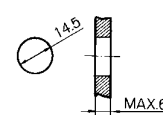
F.O.F. *	23 N
P.T.	2.0 mm
O.T.	1.5 mm
T.T.	3.5 mm

Roller plunger

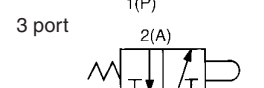
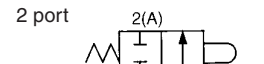
VM120-01-06
VM130-01-06
VM120-01-06S
VM130-01-06S



Panel mounting hole



JIS Symbol



* 0.5 MPa supply

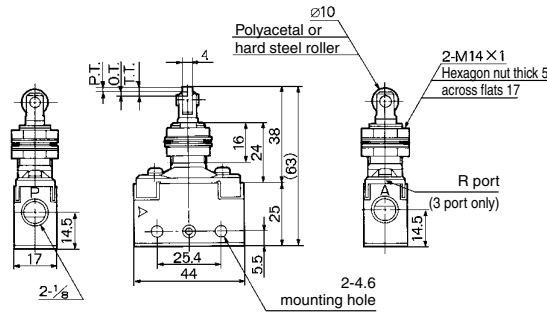
F.O.F. *	23 N
P.T.	2.0 mm
O.T.	1.5 mm
T.T.	3.5 mm

2/3 Port Mechanical Valve Series VM100

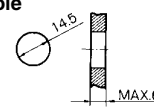
Series VM100/Side Ported

Cross roller plunger

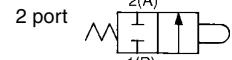
VM120-01-07
VM130-01-07
VM120-01-07S
VM130-01-07S



Panel mounting hole



JIS Symbol



* 0.5 MPa supply

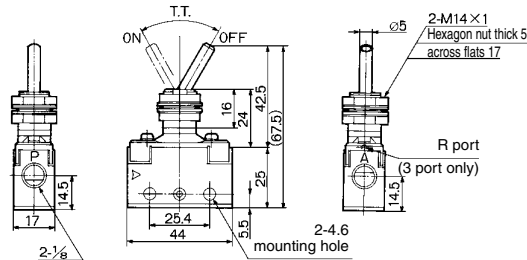
F.O.F.*	23 N
P.T.	2 mm
O.T.	1.5 mm
T.T.	3.5 mm

□A

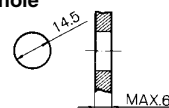
□A

Toggle lever

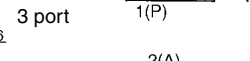
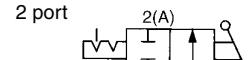
VM120-01-08
VM130-01-08



Panel mounting hole



JIS Symbol



* 0.5 MPa supply

F.O.F.*	10 N
T.T.	60°

□A

□A

VM

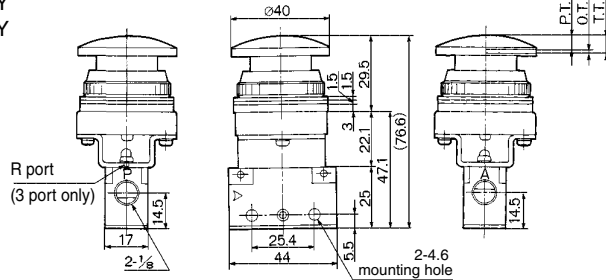
VR

VH

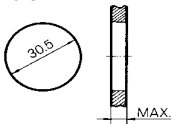
VHS

Push button (Mushroom)

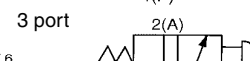
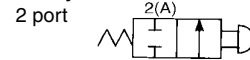
VM120-01-30R/B/G/Y
VM130-01-30R/B/G/Y



Panel mounting hole



JIS Symbol

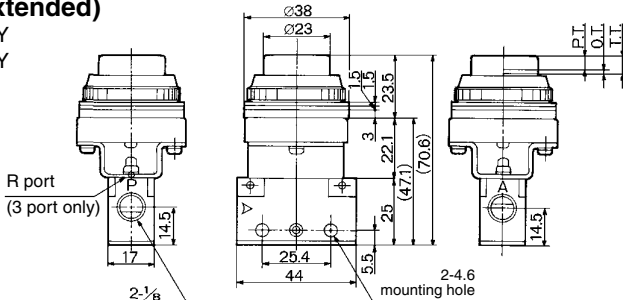


* 0.5 MPa supply

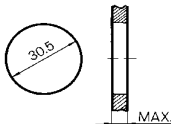
F.O.F.*	21 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Push button (Extended)

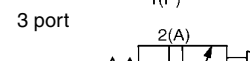
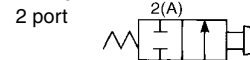
VM120-01-32R/B/G/Y
VM130-01-32R/B/G/Y



Panel mounting hole



JIS Symbol

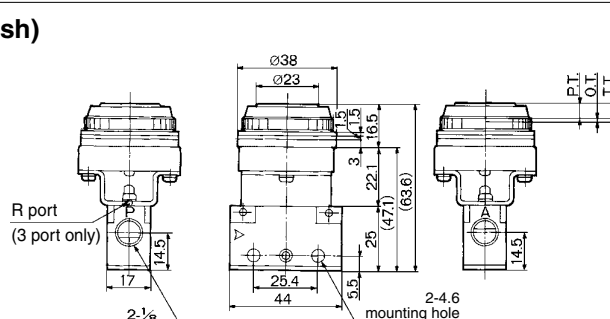


* 0.5 MPa supply

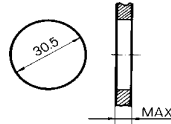
F.O.F.*	21 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Push button (Flush)

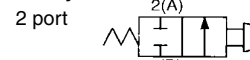
VM120-01-33
VM130-01-33



Panel mounting hole



JIS Symbol



* 0.5 MPa supply

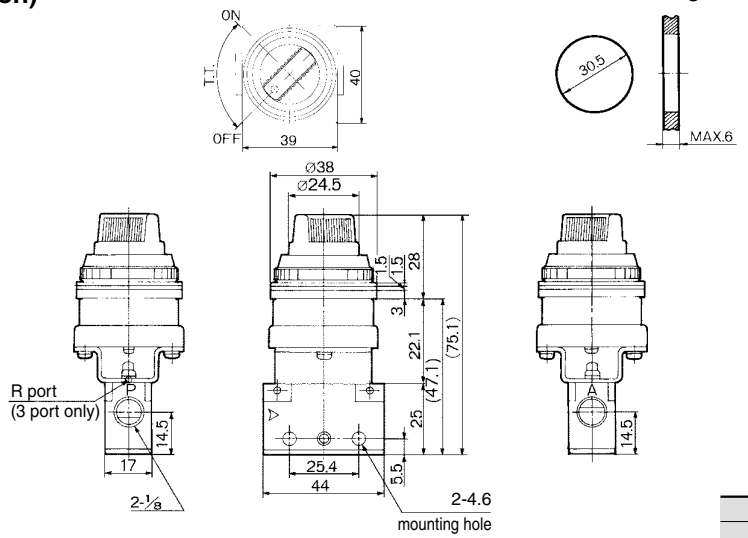
F.O.F.*	21 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Series VM100

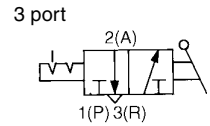
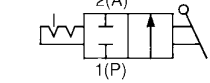
Series VM100/Side Ported

Twist selector (2 position)

VM120-01-34R/B/G/Y
VM130-01-34R/B/G/Y



JIS Symbol

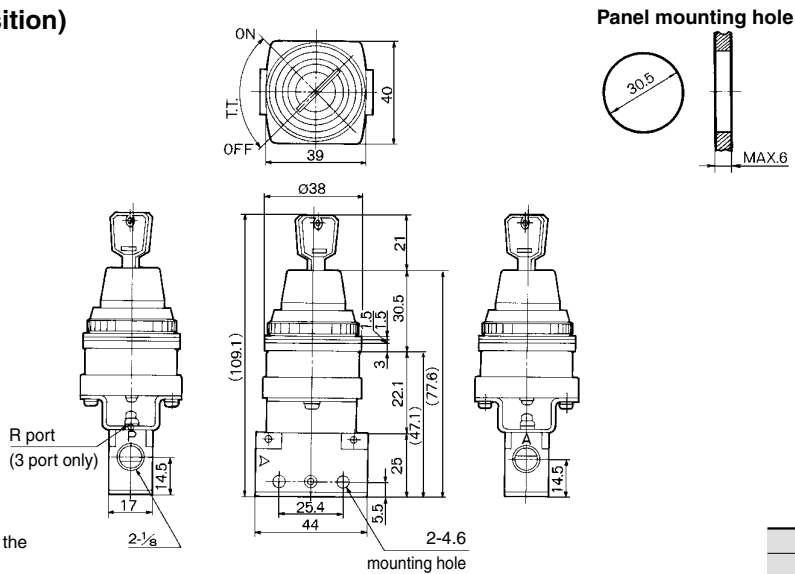


* 0.5 MPa supply

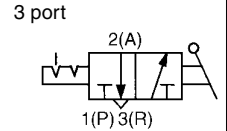
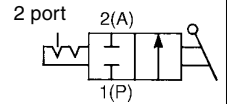
F.O.F. *	15 N
T.T.	90°

Key selector (2 position)

VM120-01-36
VM130-01-36



JIS Symbol

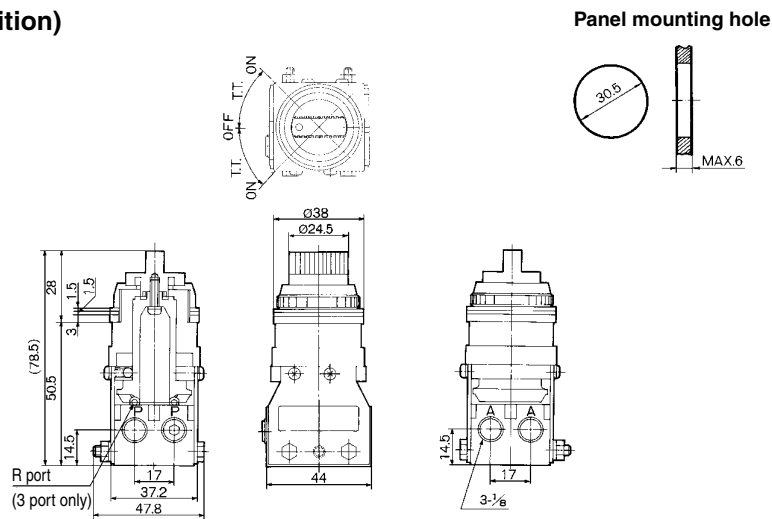


* 0.5 MPa supply

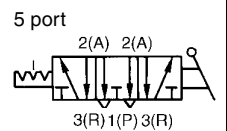
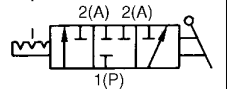
F.O.F. *	15 N
T.T.	90°

Twist selector (3 position)

VM131-01-35R/B/G/Y
VM151-01-35R/B/G/Y



JIS Symbol



* 0.5 MPa supply

F.O.F. *	15 N
T.T.	45°

2/3 Port Mechanical Valve Series VM100

Series VM100/Bottom Ported

Basic
 VM122-M5-00
 VM132-M5-00
 VM123-M5-00
 VM133-M5-00

2-M3×0.5 Actuator mounting hole

R port (3 port only)

2-M5 x 0.8 depth 4

Model	L	A
VM122-M5-00 VM132-M5-00	37.5	7.5
VM123-M5-00 VM133-M5-00	33.5	3.5

JIS Symbol

2 port

3 port

* 0.5 MPa supply

F.O.F. *	20 N
P.T.	1.5 mm
O.T.	1.5 mm
T.T.	3.0 mm

Roller lever
 VM123-M5-01
 VM133-M5-01
 VM123-M5-01S
 VM133-M5-01S

Ø10 Polyacetal or hard steel roller

R port (3 port only)

2-M5 x 0.8 depth 4

JIS Symbol

2 port

3 port

* 0.5 MPa supply

F.O.F. *	10 N
P.T.	3.2 mm
O.T.	2.3 mm
T.T.	5.5 mm

One way roller lever
 VM123-M5-02
 VM133-M5-02
 VM123-M5-02S
 VM133-M5-02S

Ø10 Polyacetal or hard steel roller

R port (3 port only)

2-M5 x 0.8 depth 4

JIS Symbol

2 port

3 port

* 0.5 MPa supply

F.O.F. *	10 N
P.T.	3.2 mm
O.T.	2.3 mm
T.T.	5.5 mm

Straight plunger
 VM122-M5-05
 VM132-M5-05

2-M14×1 Hexagon nut thick 5, across flats 17

Panel mounting hole

R port (3 port only)

2-M5 x 0.8 depth 4

JIS Symbol

2 port

3 port

* 0.5 MPa supply

F.O.F. *	23 N
P.T.	2.0 mm
O.T.	1.5 mm
T.T.	3.5 mm

Roller plunger
 VM122-M5-06
 VM132-M5-06
 VM122-M5-06S
 VM132-M5-06S

Ø10 Polyacetal or hard steel roller

2-M14×1 Hexagon nut thick 5, across flats 17

Panel mounting hole

R port (3 port only)

2-M5 x 0.8 depth 4

JIS Symbol

2 port

3 port

* 0.5 MPa supply

F.O.F. *	23 N
P.T.	2.0 mm
O.T.	1.5 mm
T.T.	3.5 mm

□A

□A

□A

□A

VM


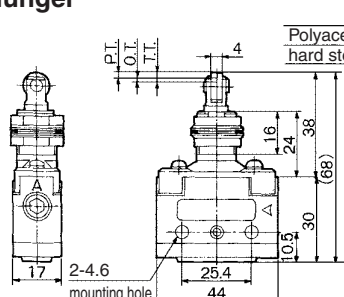
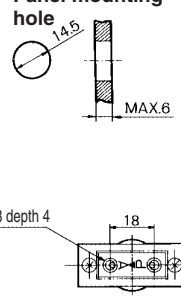
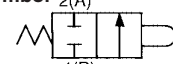
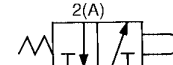

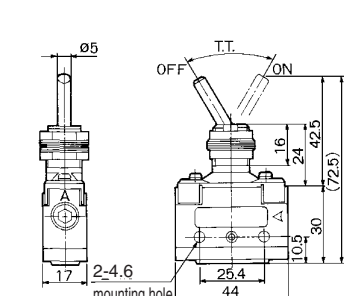
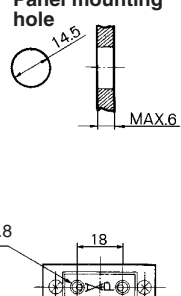
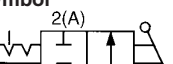
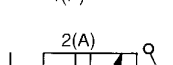

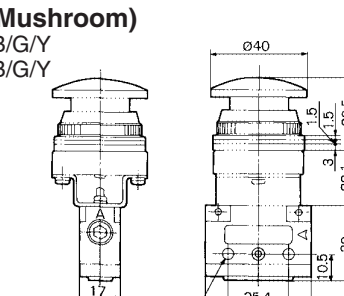
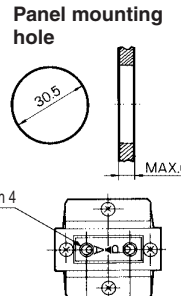
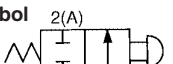
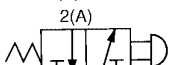

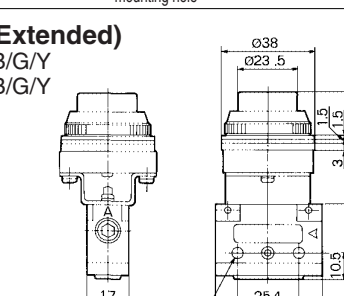
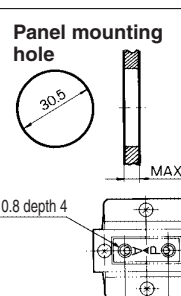
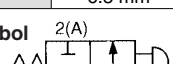
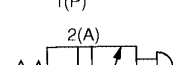

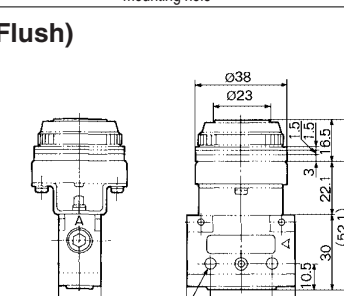
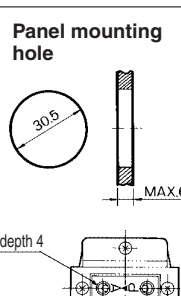
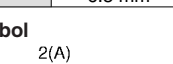
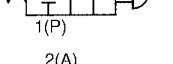
VR

VH

VHS

Series VM100

Series VM100/Bottom Ported

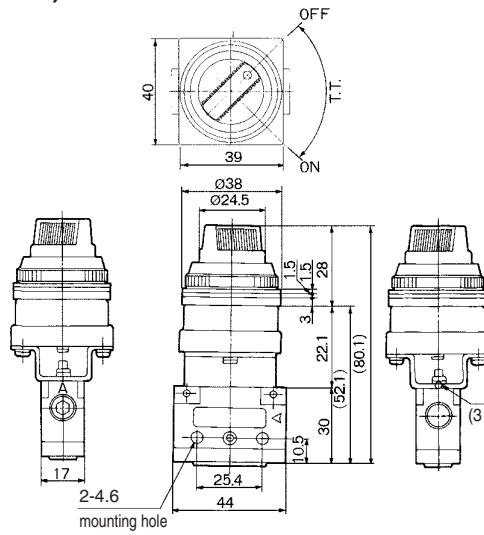
<p>Cross roller plunger VM122-M5-07 VM132-M5-07 VM122-M5-07S VM132-M5-07S</p> 	 <p>Ø10 Polyacetal or hard steel roller 2-M14 x 1 Hexagon nut thick 5, across flats 17 R port (3 port only)</p>	<p>Panel mounting hole</p>  <p>1.4.5 MAX.6 2-M5 x 0.8 depth 4</p>	<p>JIS Symbol</p> <p>2 port  1(P)</p> <p>3 port  2(A) 1(P) 3(R) * 0.5 MPa supply</p> <table border="1"> <tbody> <tr><td>F.O.F. *</td><td>23 N</td></tr> <tr><td>P.T.</td><td>2 mm</td></tr> <tr><td>O.T.</td><td>1.5 mm</td></tr> <tr><td>T.T.</td><td>3.5 mm</td></tr> </tbody> </table>	F.O.F. *	23 N	P.T.	2 mm	O.T.	1.5 mm	T.T.	3.5 mm
F.O.F. *	23 N										
P.T.	2 mm										
O.T.	1.5 mm										
T.T.	3.5 mm										
<p>Toggle lever VM122-M5-08 VM132-M5-08</p> 	 <p>Ø5 OFF ON T.T. 2-M14 x 1 Hexagon nut thick 5, across flats 17 R port (3 port only)</p>	<p>Panel mounting hole</p>  <p>1.4.5 MAX.6 2-M5 x 0.8 depth 4</p>	<p>JIS Symbol</p> <p>2 port  1(P)</p> <p>3 port  2(A) 1(P) 3(R) * 0.5 MPa supply</p> <table border="1"> <tbody> <tr><td>F.O.F. *</td><td>10 N</td></tr> <tr><td>P.T.</td><td>60°</td></tr> </tbody> </table>	F.O.F. *	10 N	P.T.	60°				
F.O.F. *	10 N										
P.T.	60°										
<p>Push button (Mushroom) VM122-M5-30R/B/G/Y VM132-M5-30R/B/G/Y</p> 	 <p>Ø40 P.T. O.T. T.T. 2-M5 x 0.8 depth 4 R port (3 port only)</p>	<p>Panel mounting hole</p>  <p>30.5 MAX.6 2-M5 x 0.8 depth 4</p>	<p>JIS Symbol</p> <p>2 port  1(P)</p> <p>3 port  2(A) 1(P) 3(R) * 0.5 MPa supply</p> <table border="1"> <tbody> <tr><td>F.O.F. *</td><td>21 N</td></tr> <tr><td>P.T.</td><td>4.9 mm</td></tr> <tr><td>O.T.</td><td>1.6 mm</td></tr> <tr><td>T.T.</td><td>6.5 mm</td></tr> </tbody> </table>	F.O.F. *	21 N	P.T.	4.9 mm	O.T.	1.6 mm	T.T.	6.5 mm
F.O.F. *	21 N										
P.T.	4.9 mm										
O.T.	1.6 mm										
T.T.	6.5 mm										
<p>Push button (Extended) VM122-M5-32R/B/G/Y VM132-M5-32R/B/G/Y</p> 	 <p>Ø38 Ø23.5 P.T. O.T. T.T. 2-M5 x 0.8 depth 4 R port (3 port only)</p>	<p>Panel mounting hole</p>  <p>30.5 MAX.6 2-M5 x 0.8 depth 4</p>	<p>JIS Symbol</p> <p>2 port  1(P)</p> <p>3 port  2(A) 1(P) 3(R) * 0.5 MPa supply</p> <table border="1"> <tbody> <tr><td>F.O.F. *</td><td>21 N</td></tr> <tr><td>P.T.</td><td>4.9 mm</td></tr> <tr><td>O.T.</td><td>1.6 mm</td></tr> <tr><td>T.T.</td><td>6.5 mm</td></tr> </tbody> </table>	F.O.F. *	21 N	P.T.	4.9 mm	O.T.	1.6 mm	T.T.	6.5 mm
F.O.F. *	21 N										
P.T.	4.9 mm										
O.T.	1.6 mm										
T.T.	6.5 mm										
<p>Push button (Flush) VM122-M5-33 VM132-M5-33</p> 	 <p>Ø38 Ø23 P.T. O.T. T.T. 2-M5 x 0.8 depth 4 R port (3 port only)</p>	<p>Panel mounting hole</p>  <p>30.5 MAX.6 2-M5 x 0.8 depth 4</p>	<p>JIS Symbol</p> <p>2 port  2(A) 1(P)</p> <p>3 port  2(A) 1(P) 3(R) * 0.5 MPa supply</p> <table border="1"> <tbody> <tr><td>F.O.F. *</td><td>21 N</td></tr> <tr><td>P.T.</td><td>4.9 mm</td></tr> <tr><td>O.T.</td><td>1.6 mm</td></tr> <tr><td>T.T.</td><td>6.5 mm</td></tr> </tbody> </table>	F.O.F. *	21 N	P.T.	4.9 mm	O.T.	1.6 mm	T.T.	6.5 mm
F.O.F. *	21 N										
P.T.	4.9 mm										
O.T.	1.6 mm										
T.T.	6.5 mm										

2/3 Port Mechanical Valve Series VM100

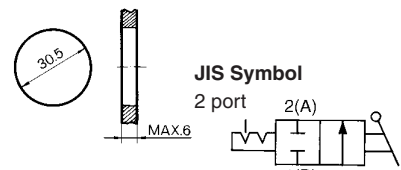
Series VM100/Bottom Ported

Twist selector (2 position)

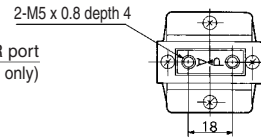
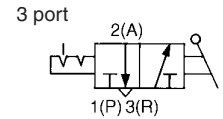
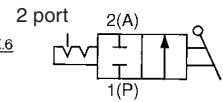
VM122-M5-34R/B/G/Y
VM132-M5-34R/B/G/Y



Panel mounting hole



JIS Symbol

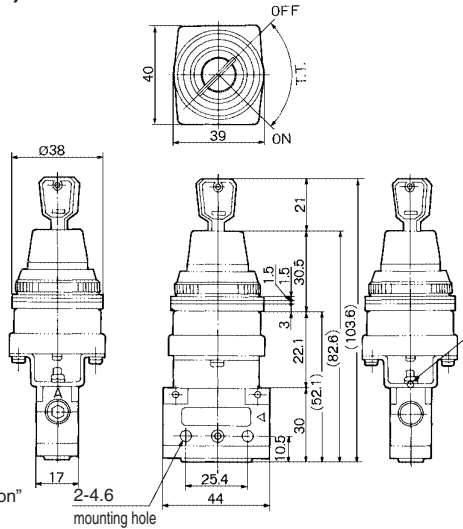


* 0.5 MPa supply

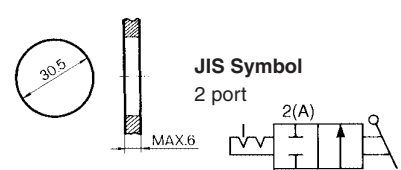
F.O.F. *	15 N
T.T.	90°

Key selector (2 position)

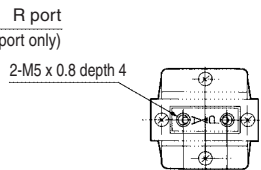
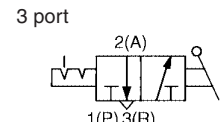
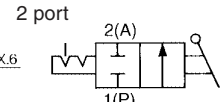
VM122-M5-36
VM132-M5-36



Panel mounting hole



JIS Symbol



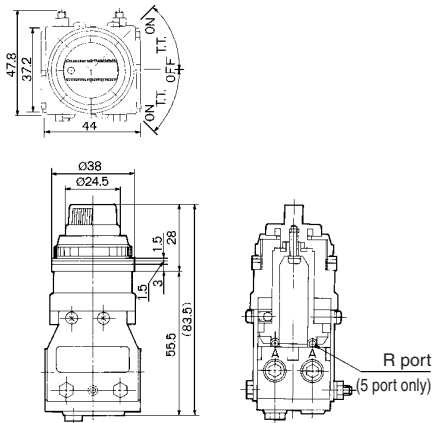
* 0.5 MPa supply

F.O.F. *	15 N
T.T.	90°

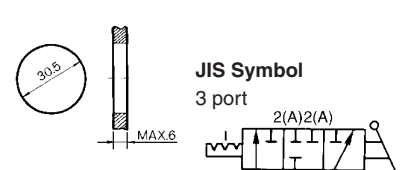
Key can be removed at the "on" and "off" positions.

Twist selector (3 position)

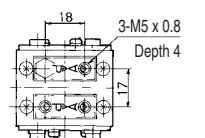
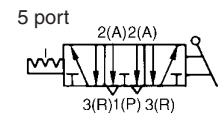
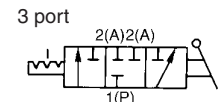
VM133-M5-35R/B/G/Y
VM153-M5-35R/B/G/Y



Panel mounting hole



JIS Symbol



* 0.5 MPa supply

F.O.F. *	20 N
T.T.	45°

- A
- A
- A
- A
- VM
- VR
- VH
- VHS

2/3 Port Mechanical Valve

Series VM200

Large flow capacity.
A variety of actuator types.



Specifications

Fluid	Air/Inert gas
Operating pressure	0 to 1.0 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area	19 mm ²
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Port size	1/4
Weight (Basic)	111 g

Model

Actuator	No. of ports		Actuator part no.	Application	
	2 port	3 port			
Mechanical operation	Basic	VM220-02-00	VM230-02-00	—	—
	Roller lever	VM220-02-01	VM230-02-01	VM-01A	Polyacetal roller
		VM220-02-01S	VM230-02-01S	VM-01AS	Hard steel roller
	One way roller lever	VM220-02-02	VM230-02-02	VM-02A	Polyacetal roller
		VM220-02-02S	VM230-02-02S	VM-02AS	Hard steel roller
	Straight plunger	VM220-02-05	VM230-02-05	VM-05A	—
		VM220-02-06	VM230-02-06	VM-06A	Polyacetal roller
	Roller plunger	VM220-02-06S	VM230-02-06S	VM-06AS	Hard steel roller
		VM220-02-07	VM230-02-07	VM-07A	Polyacetal roller
	Cross roller plunger	VM220-02-07S	VM230-02-07S	VM-07AS	Hard steel roller
VM220-02-08		VM230-02-08	VM-08A	—	
Manual operation	Toggle lever	VM220-02-30R	VM230-02-30R	VM-30AR	Red
	Push button (Mushroom)	VM220-02-30B	VM230-02-30B	VM-30AB	Black
		VM220-02-30G	VM230-02-30G	VM-30AG	Green
		VM220-02-30Y	VM230-02-30Y	VM-30AY	Yellow
		VM220-02-32R	VM230-02-32R	VM-32AR	Red
	Push button (Extended)	VM220-02-32B	VM230-02-32B	VM-32AB	Black
		VM220-02-32G	VM230-02-32G	VM-32AG	Green
		VM220-02-32Y	VM230-02-32Y	VM-32AY	Yellow
	Push button (Flush)	VM220-02-33	VM230-02-33	VM-33A	With a set of red, black, green, yellow
	Twist selector (2 position)	VM220-02-34R	VM230-02-34R	VM-34AR	Red
		VM220-02-34B	VM230-02-34B	VM-34AB	Black
		VM220-02-34G	VM230-02-34G	VM-34AG	Green
		VM220-02-34Y	VM230-02-34Y	VM-34AY	Yellow
	Key selector (2 position)	VM220-02-36	VM230-02-36	VM-36A	—
		VM230-02-35R	VM250-02-35R	—	Red
	Twist selector (3 position)	VM230-02-35B	VM250-02-35B	—	Black
VM230-02-35G		VM250-02-35G	—	Green	
VM230-02-35Y		VM250-02-35Y	—	Yellow	
(3 port)		(5 port)	—	—	
Foot pedal	VM220-02-40	VM230-02-40	—	—	



Note 1) Actuator replacement is available for all types except twist selector (3 position) and foot pedal.

Note 2) For push button (mushroom), push button (extended), push button (flush) and a single unit of fastening ring, refer to pages 5-6-6 to 5-6-7. The other parts are not replaceable.

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

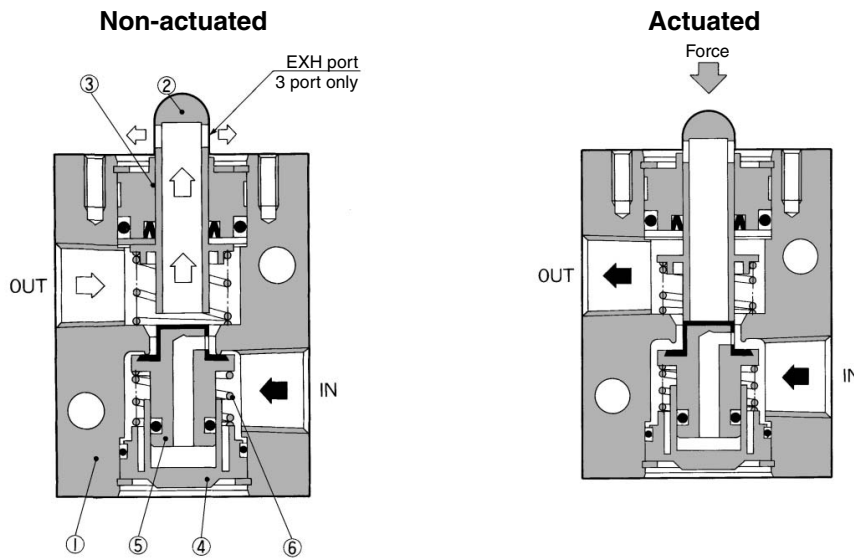
How to Order

VM2 **3** 0 - **02** - **01** **S**

Number of ports		Port size		Actuator type		Suffix for actuator	
2	2 port	02	Rc 1/4	00	Basic	S	Hard steel roller
3	3 port	N02	NPT 1/4	01	Roller lever	R	Red
		F02	G 1/4	02	One way roller lever	B	Black
				05	Straight plunger	G	Green
				06	Roller plunger	Y	Yellow
				07	Cross roller plunger		Color of push button selector
				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)		
				35	Twist selector (3 position)		
				40	Foot pedal		

- S □ A
- V □ A
- S □ A
- V □ A
- VM**
- VR
- VH
- VHS

Construction



Component Parts

No.	Description	Material	Note
①	Valve	ADC	Metallic plated
②	Plunger	POM	
③	Plunger retainer	PBT	

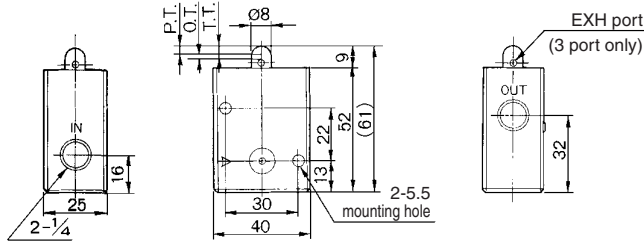
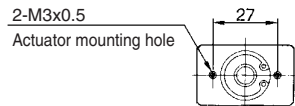
No.	Description	Material	Note
④	Cover	POM	
⑤	Valve	Brass, NBR	
⑥	Spring	Steel	

Series VM200

Series VM200

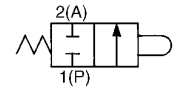
Basic

VM220-02-00
VM230-02-00

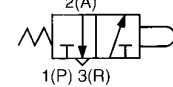


JIS Symbol

2 port



3 port

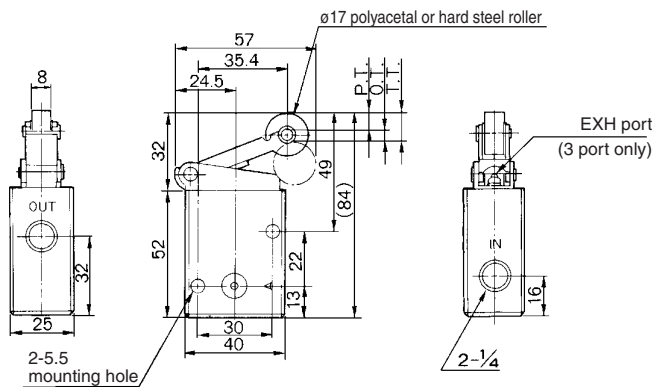


* 0.5 MPa supply

F.O.F. *	52 N
P.T.	3.0 mm
O.T.	2.0 mm
T.T.	5.0 mm

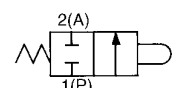
Roller lever

VM220-02-01
VM230-02-01
VM220-02-01S
VM230-02-01S

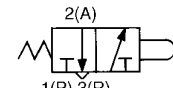


JIS Symbol

2 port



3 port

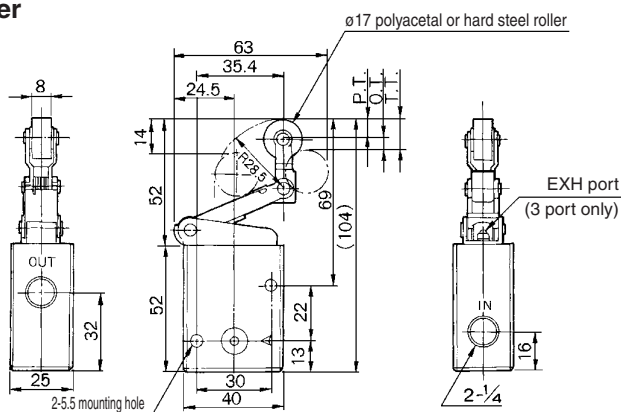


* 0.5 MPa supply

F.O.F. *	24 N
P.T.	6.5 mm
O.T.	4.5 mm
T.T.	11.0 mm

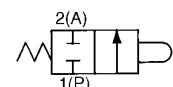
One way roller lever

VM220-02-02
VM230-02-02
VM220-02-02S
VM230-02-02S

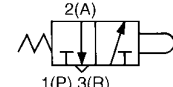


JIS Symbol

2 port



3 port

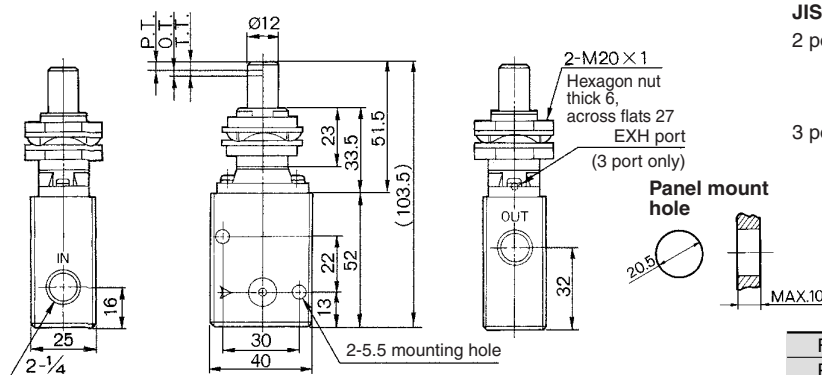


* 0.5 MPa supply

F.O.F. *	22 N
P.T.	7.0 mm
O.T.	5.0 mm
T.T.	12.0 mm

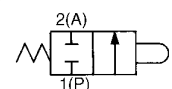
Straight plunger

VM220-02-05
VM230-02-05

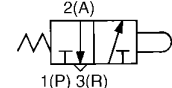


JIS Symbol

2 port



3 port



* 0.5 MPa supply

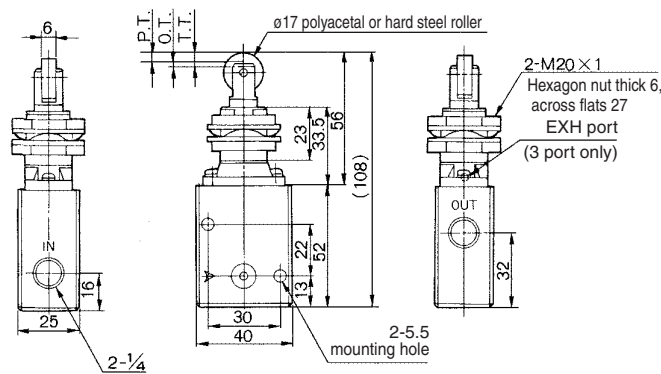
F.O.F. *	56 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

2/3 Port Mechanical Valve Series VM200

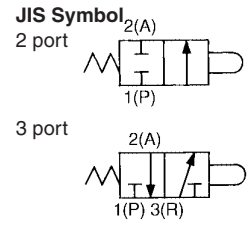
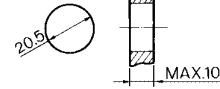
Series VM200

Roller plunger

VM220-02-06
VM230-02-06
VM220-02-06S
VM230-02-06S



Panel mounting hole

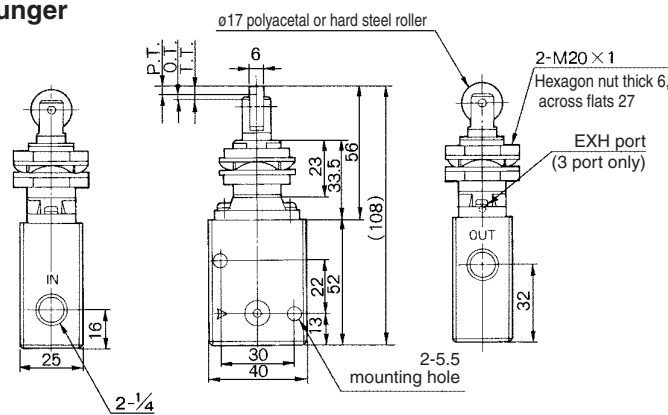


* 0.5 MPa supply

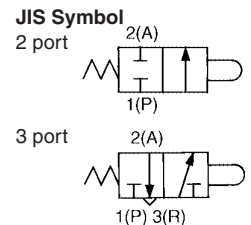
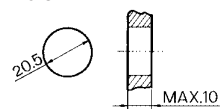
F.O.F. *	56 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

Cross roller plunger

VM220-02-07
VM230-02-07
VM220-02-07S
VM230-02-07S



Panel mounting hole

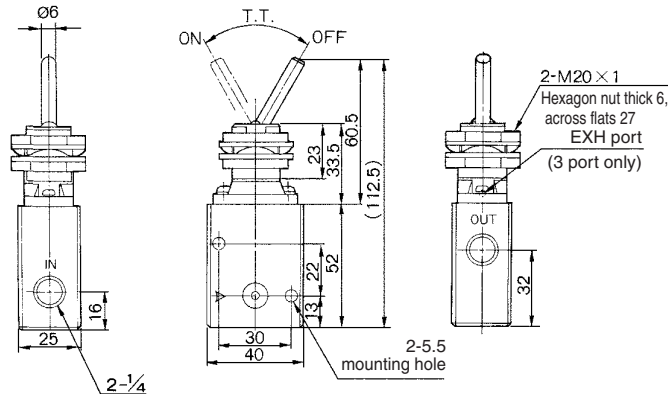


* 0.5 MPa supply

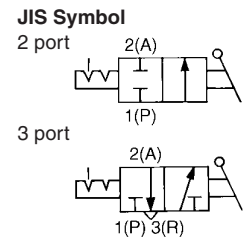
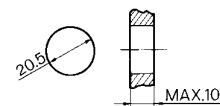
F.O.F. *	56 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

Toggle lever

VM220-02-08
VM230-02-08



Panel mounting hole

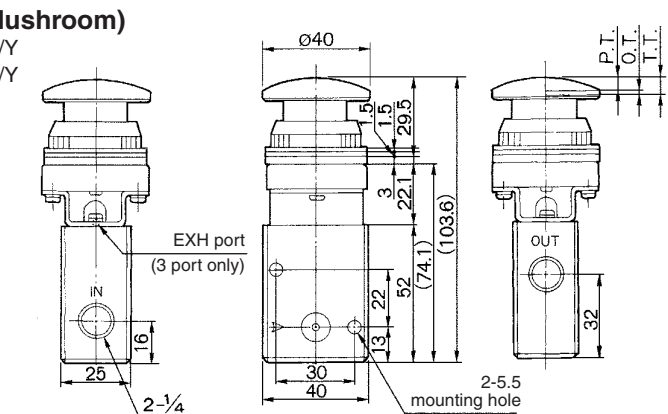


* 0.5 MPa supply

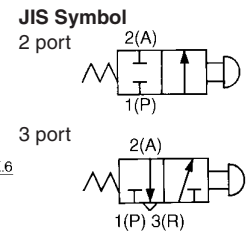
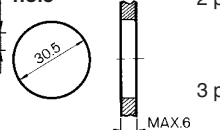
F.O.F. *	12 N
T.T.	60°

Push button (Mushroom)

VM220-02-30R/B/G/Y
VM230-02-30R/B/G/Y



Panel mounting hole



* 0.5 MPa supply

F.O.F. *	52 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

□A

□A

□A

□A

VM

VR

VH

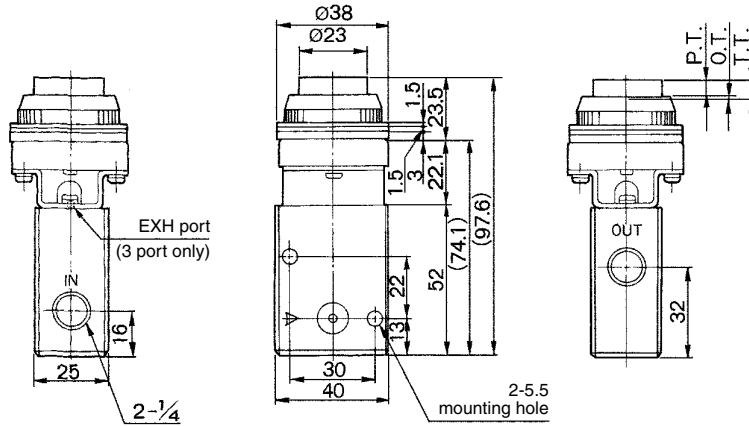
VHS

Series VM200

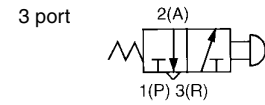
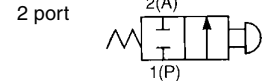
Series VM200

Push button (Extended)

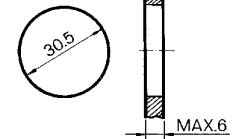
VM220-02-32R/B/G/Y
VM230-02-32R/B/G/Y



JIS Symbol



Panel mounting hole

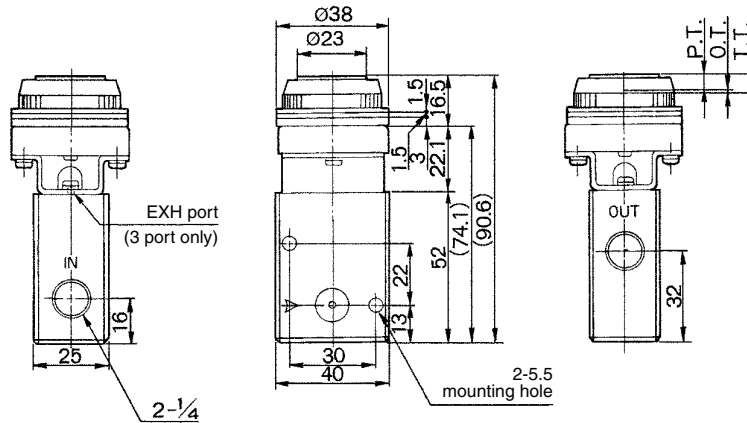


* 0.5 MPa supply

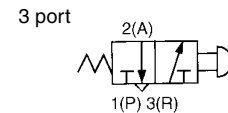
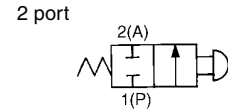
F.O.F. *	52 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Push button (Flush)

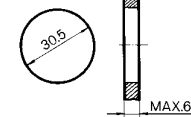
VM220-02-33
VM230-02-33



JIS Symbol



Panel mounting hole

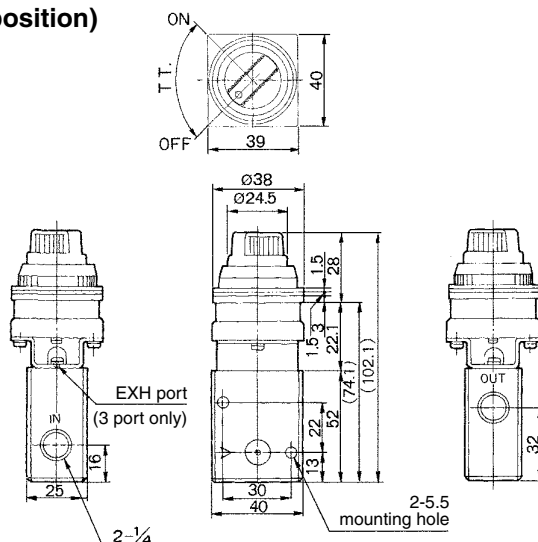


* 0.5 MPa supply

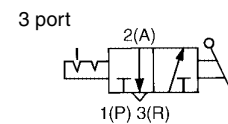
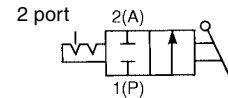
F.O.F. *	52 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Twist selector (2 position)

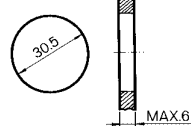
VM220-02-34R/B/G/Y
VM230-02-34R/B/G/Y



JIS Symbol



Panel mounting hole



* 0.5 MPa supply

F.O.F. *	32 N
T.T.	90°

2/3 Port Mechanical Valve Series VM200

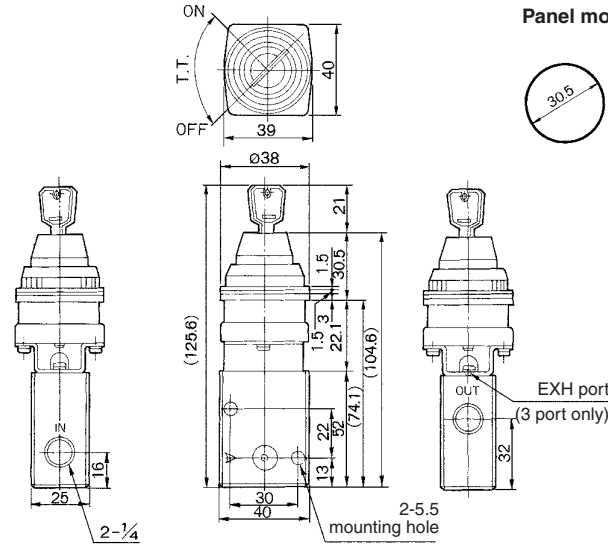
Series VM200

Key selector (2 position)

VM220-02-36
VM230-02-36



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



□A

□A

□A

□A

VM

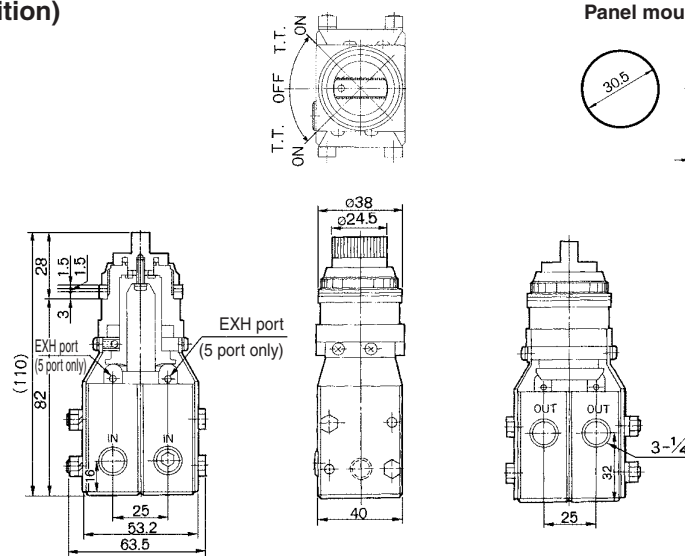
VR

VH

VHS

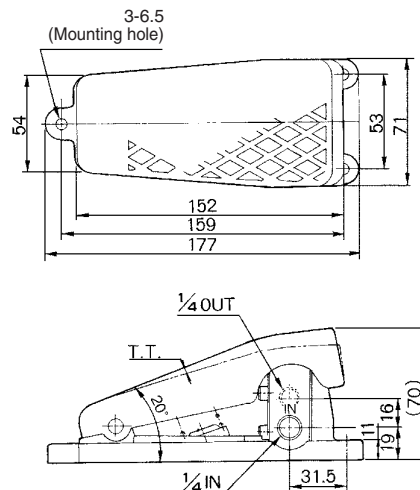
Twist selector (3 position)

VM230-02-35R/B/G/Y
VM250-02-35R/B/G/Y

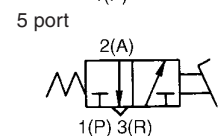
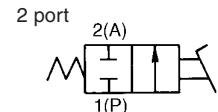


Foot pedal

VM220-02-40
VM230-02-40



JIS Symbol



* 0.5 MPa supply

F.O.F. *	65 N
T.T.	1.2°

3 Port Mechanical Valve

Series VM400

Either N.C. or N.O. is available.

Piping possible to any port.

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

Specifications

Fluid	Air/Inert gas
Operating pressure	-100 kPa to 1.0 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area	7 mm ²
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated)
Port size	1/8
Weight (Basic)	110 g



Model

	Actuator	Model	Actuator part no.	Application
Mechanical operation	Basic	VM430-01-00	—	—
	Roller lever	VM430-01-01	VM-01A	Polyacetal roller
		VM430-01-01S	VM-01AS	Hard steel roller
	One way roller lever	VM430-01-02	VM-02A	Polyacetal roller
		VM430-01-02S	VM-02AS	Hard steel roller
	Straight plunger	VM430-01-05	VM-05A	—
	Roller plunger	VM430-01-06	VM-06A	Polyacetal roller
		VM430-01-06S	VM-06AS	Hard steel roller
	Cross roller plunger	VM430-01-07	VM-07A	Polyacetal roller
		VM430-01-07S	VM-07AS	Hard steel roller
Manual operation	Toggle lever	VM430-01-08	VM-08A	—
	Push button (Mushroom)	VM430-01-30R	VM-30AR	Red
		VM430-01-30B	VM-30AB	Black
		VM430-01-30G	VM-30AG	Green
		VM430-01-30Y	VM-30AY	Yellow
	Push button (Extended)	VM430-01-32R	VM-32AR	Red
		VM430-01-32B	VM-32AB	Black
		VM430-01-32G	VM-32AG	Green
		VM430-01-32Y	VM-32AY	Yellow
	Push button (Flush)	VM430-01-33	VM-33A	With a set of red, black, green, yellow
	Twist selector (2 position)	VM430-01-34R	VM-34AR	Red
		VM430-01-34B	VM-34AB	Black
		VM430-01-34G	VM-34AG	Green
		VM430-01-34Y	VM-34AY	Yellow
	Key selector (2 position)	VM430-01-36	VM-36A	—



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 5-6-6 to 5-6-7. The other parts are not replaceable.

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

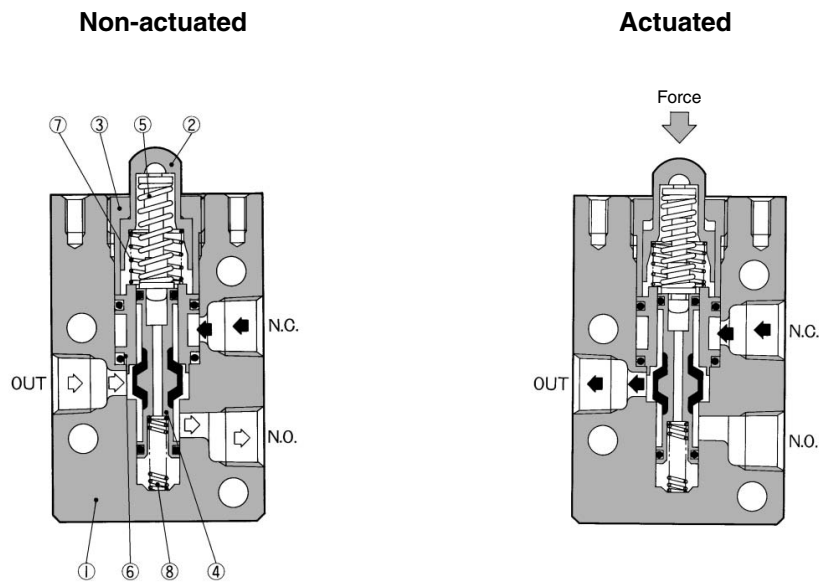
How to Order

VM4 3 0 - 01 - 01 S

• Number of ports		• Port size		• Actuator type		• Suffix for actuator	
3	3 port	01	Rc 1/8	00	Basic	S	Hard steel roller
		N01	NPT 1/8	01	Roller lever	R	Red
		F01	G 1/8	02	One way roller lever	B	Black
				05	Straight plunger	G	Green
				06	Roller plunger	Y	Yellow
				07	Cross roller plunger		Color of push button selector
				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)		

- A
- A
- A
- A
- VM
- VR
- VH
- VHS

Construction



Component Parts

No.	Description	Material	Note
①	Body	ADC	Metallic plated
②	Plunger	POM	
③	Upper lid	Brass	Black zinc chromated
④	Spool valve	Aluminum alloy	Rubber lined

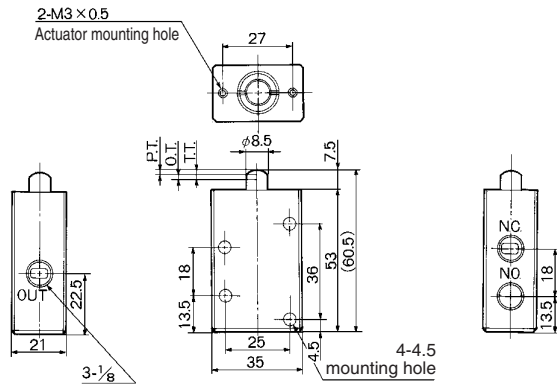
No.	Description	Material	Note
⑤	Over travel spring	Stainless steel	
⑥	Retainer	Brass	
⑦	Spring	Stainless steel	
⑧	Spring	Stainless steel	

Series VM400

Series VM400

Basic

VM430-01-00



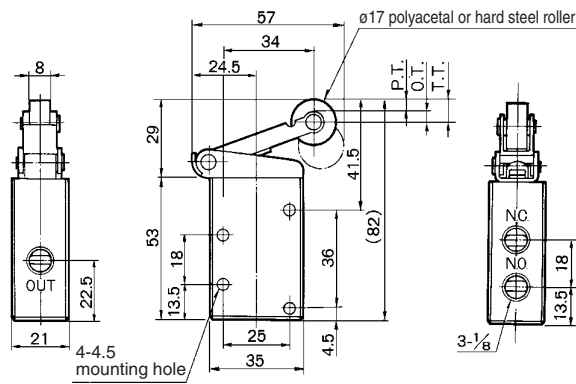
JIS Symbol



F.O.F.	26 N
P.T.	1.5 mm
O.T.	2.0 mm
T.T.	3.5 mm

Roller lever

VM430-01-01
VM430-01-01S



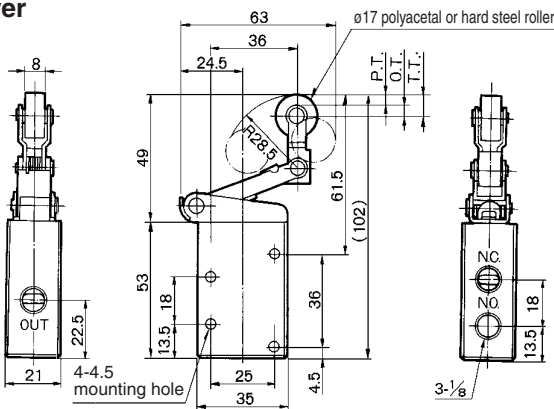
JIS Symbol



F.O.F.	12 N
P.T.	4.0 mm
O.T.	4.5 mm
T.T.	8.5 mm

One way roller lever

VM430-01-02
VM430-01-02S



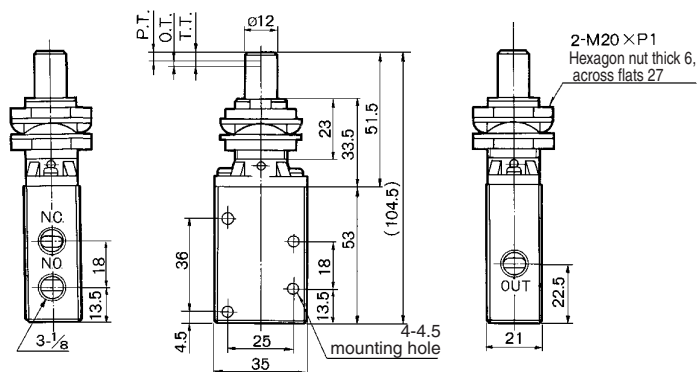
JIS Symbol



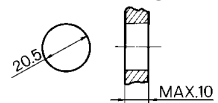
F.O.F.	11 N
P.T.	4.0 mm
O.T.	5.0 mm
T.T.	9.0 mm

Straight plunger

VM430-01-05



Panel mounting hole



JIS Symbol



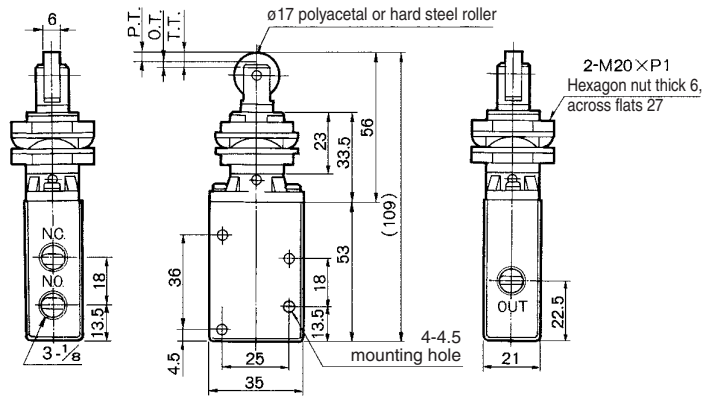
F.O.F.	30 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

3 Port Mechanical Valve Series VM400

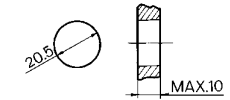
Series VM400

Roller plunger

VM430-01-06
VM430-01-06S



Panel mounting hole



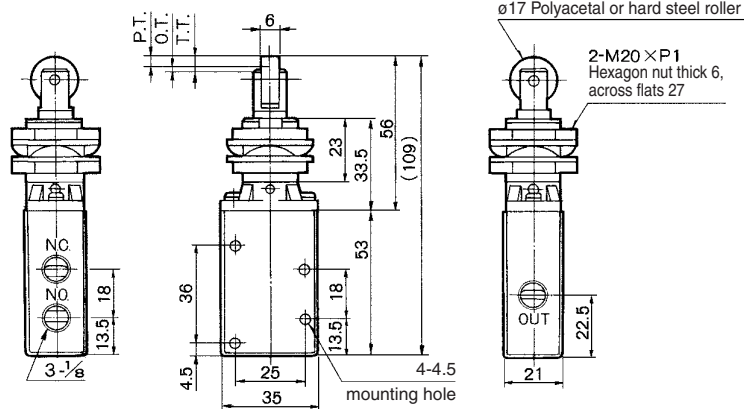
JIS Symbol



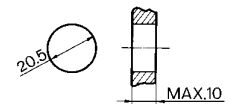
F.O.F.	30 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

Cross roller plunger

VM430-01-07
VM430-01-07S



Panel mounting hole



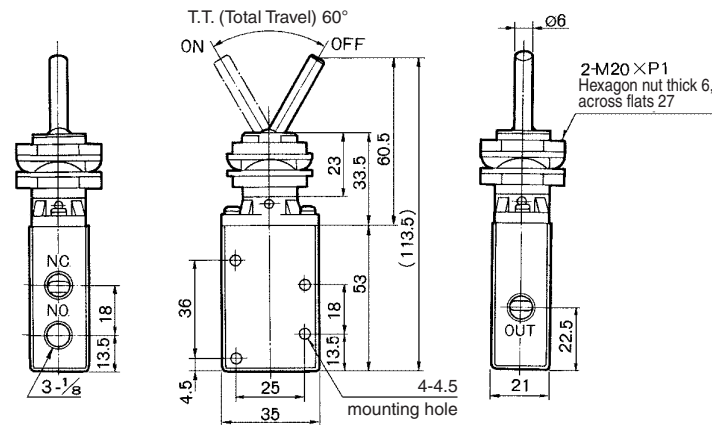
JIS Symbol



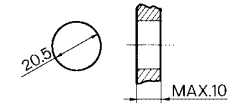
F.O.F.	30 N
P.T.	3.5 mm
O.T.	2.0 mm
T.T.	5.5 mm

Toggle lever

VM430-01-08



Panel mounting hole



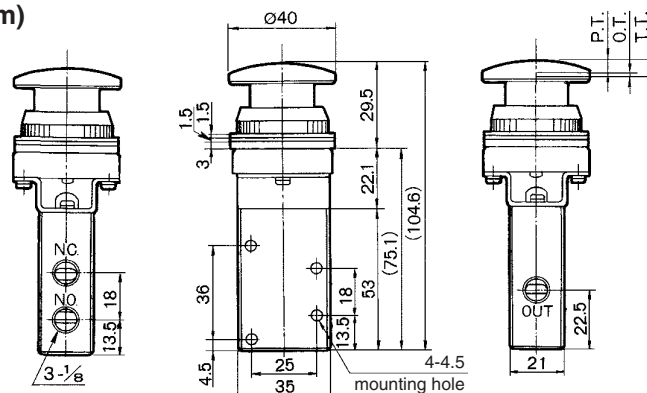
JIS Symbol



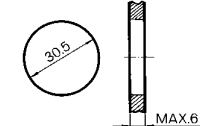
F.O.F.	7 N
T.T.	60°

Push button (Mushroom)

VM430-01-30R/B/G/Y



Panel mounting hole



JIS Symbol



F.O.F.	26 N
P.T.	4.6 mm
O.T.	1.6 mm
T.T.	6.5 mm

□A

□A

□A

□A

VM

VR

VH

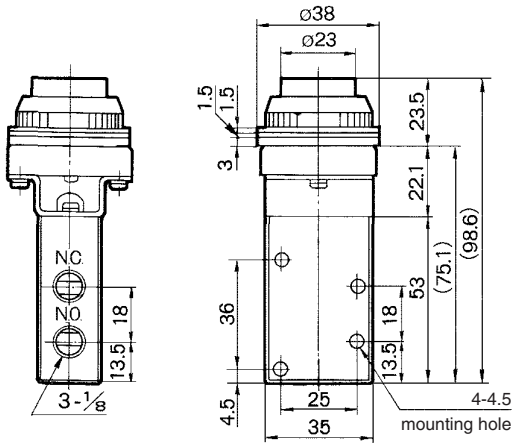
VHS

Series VM400

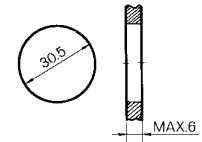
Series VM400

Push button (Extended)

VM430-01-32R/B/G/Y



Panel mounting hole



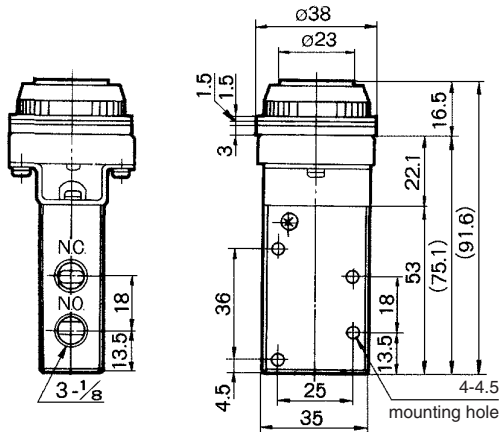
JIS Symbol



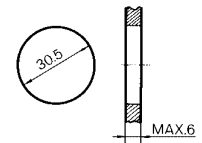
F.O.F.	26 N
P.T.	5.4 mm
O.T.	1.6 mm
T.T.	6.5 mm

Push button (Flush)

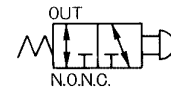
VM430-01-33



Panel mounting hole



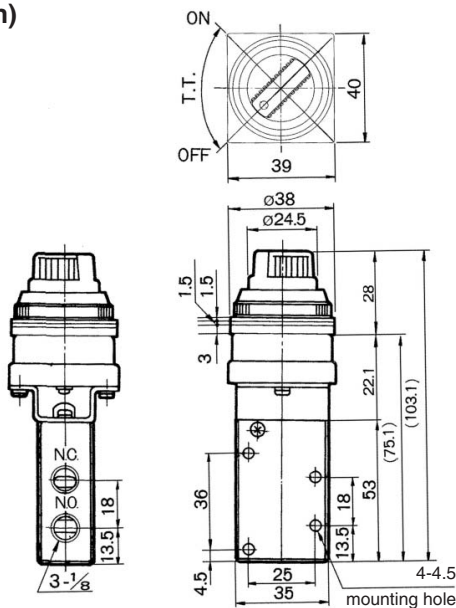
JIS Symbol



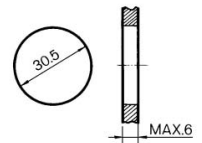
F.O.F.	26 N
P.T.	4.9 mm
O.T.	1.6 mm
T.T.	6.5 mm

Twist selector (2 position)

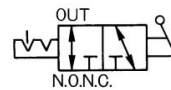
VM430-01-34R/B/G/Y



Panel mounting hole



JIS Symbol



F.O.F.	20 N
T.T.	90°

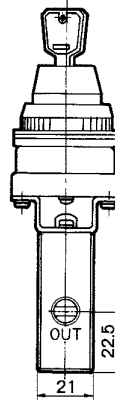
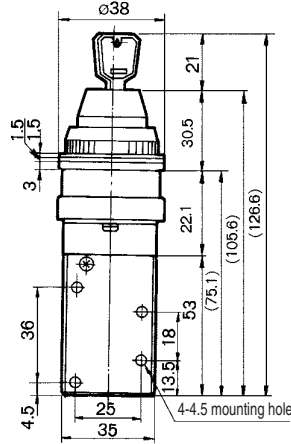
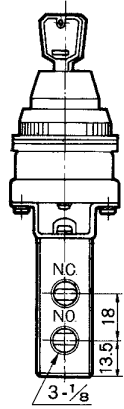
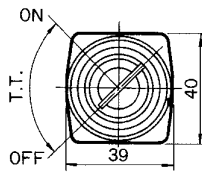
3 Port Mechanical Valve Series VM400

Series VM400

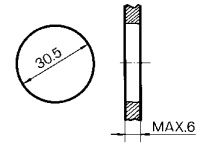
Key selector (2 position) VM430-01-36



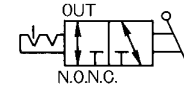
Key can be removed at the "on" and "off" positions.



Panel mounting hole



JIS Symbol



- A
- A
- A
- VM
- VR
- VH
- VHS

F.O.F.	20 N
T.T.	90°

3 Port Mechanical Valve: Heavy Duty Type

Series VM800

Sturdy construction.

Either N.C. or N.O. is available.

Piping possible to any port.

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

Many actuator positions and orientation options.



Specifications

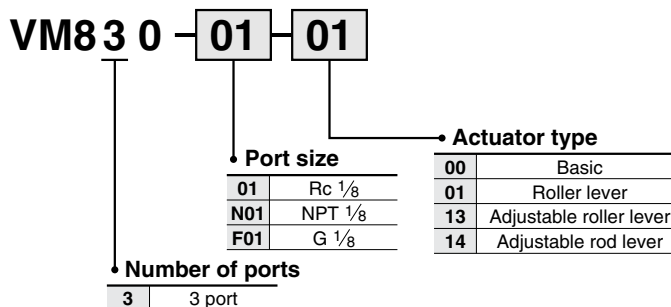
Fluid	Air/Inert gas
Operating pressure	-100 kPa to 1.0 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area	6 mm ²
Lubrication	Not required (Use turbine oil Class 1 ISO VG32, if lubricated.)
Port size	1/8
Weight (Basic)	180 g

Model

Actuator	Model	Actuator part no.
Basic	VM830-01-00	—
Roller lever	VM830-01-01	VM-01F
Adjustable roller lever	VM830-01-13	VM-13F
Adjustable rod lever	VM830-01-14	VM-14F

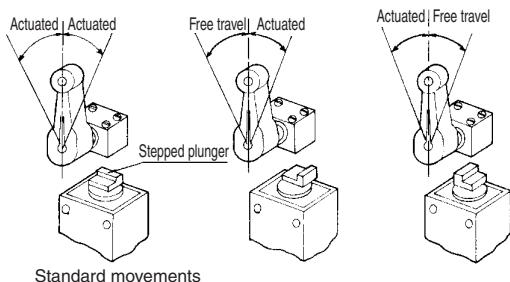
Actuator replacement is available.

How to Order

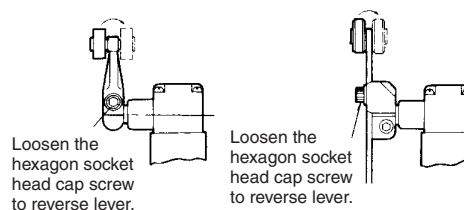


Application

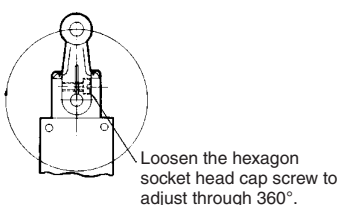
● Movement is changeable.



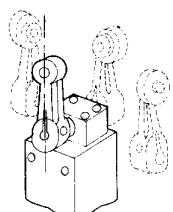
● Roller can be mounted to inside of lever.



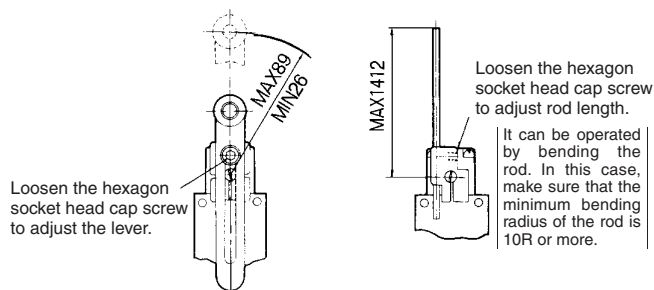
● Lever location can be changed.



● Head direction can be changed.

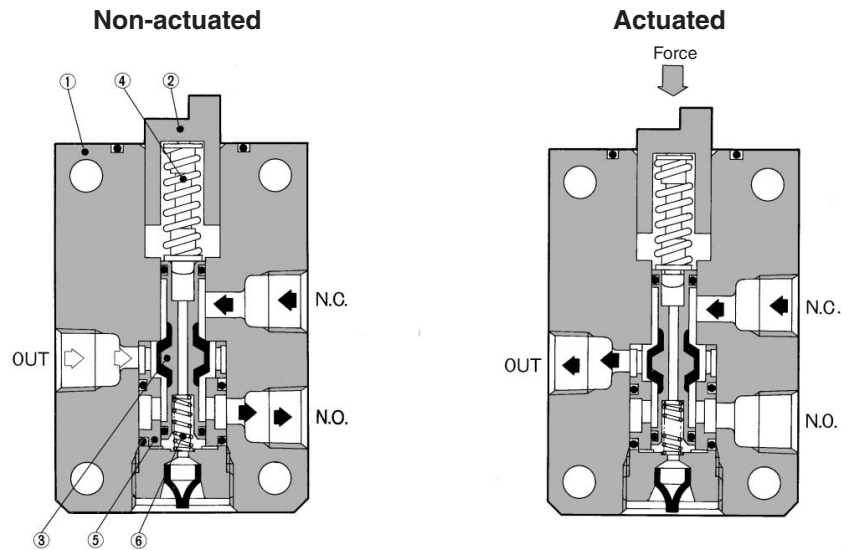


● Lever length adjustment.



3 Port Mechanical Valve: Heavy Duty Type Series VM800

Construction



- A
- A
- A
- VM
- VR
- VH
- VHS

Component Parts

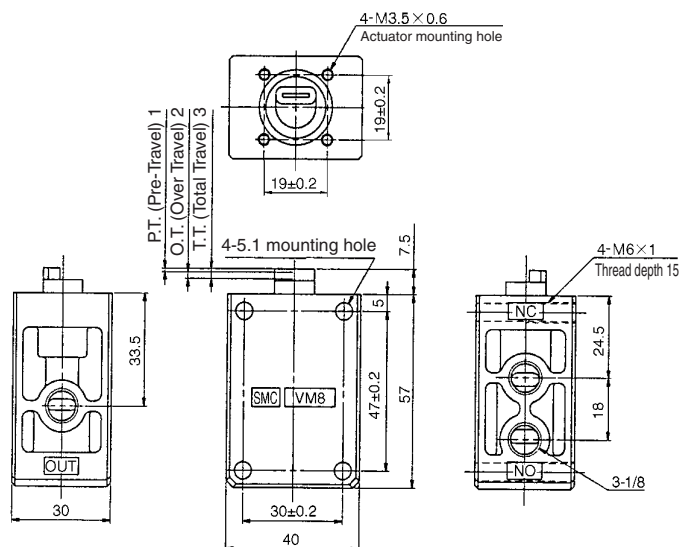
No.	Description	Material	Note
①	Body	ADC	Metallic plated
②	Plunger	POM	
③	Spool valve	Aluminum alloy, NBR	Rubber lined

No.	Description	Material	Note
④	Over travel spring	Stainless steel	
⑤	Retainer	Brass	
⑥	Spring	Steel	Zinc chromated

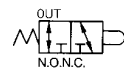
Series VM800

Basic

VM830-01-00



JIS Symbol

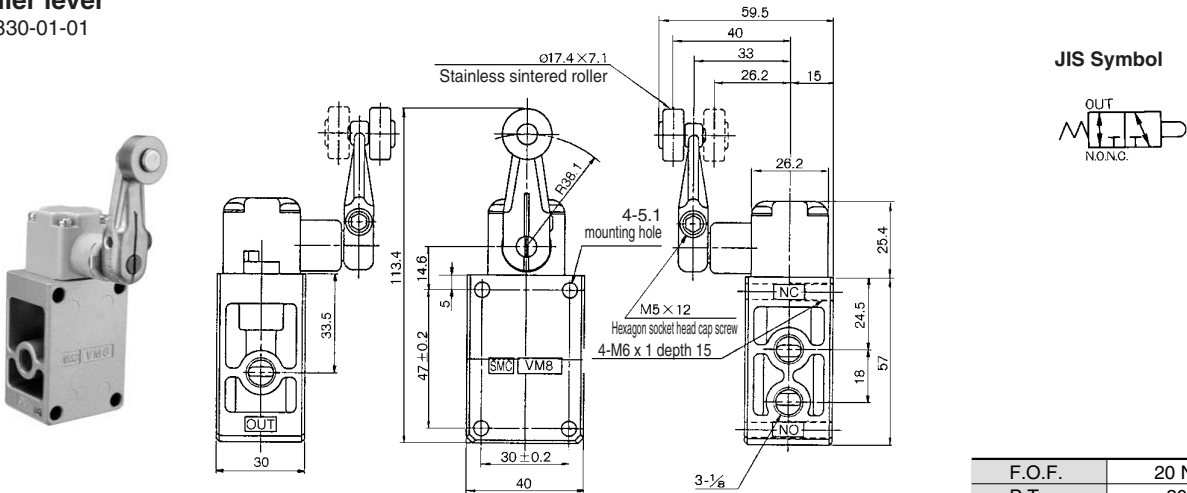


F.O.F.	23 N
P.T.	1.0 mm
O.T.	2.0 mm
T.T.	3.0 mm

Series VM800

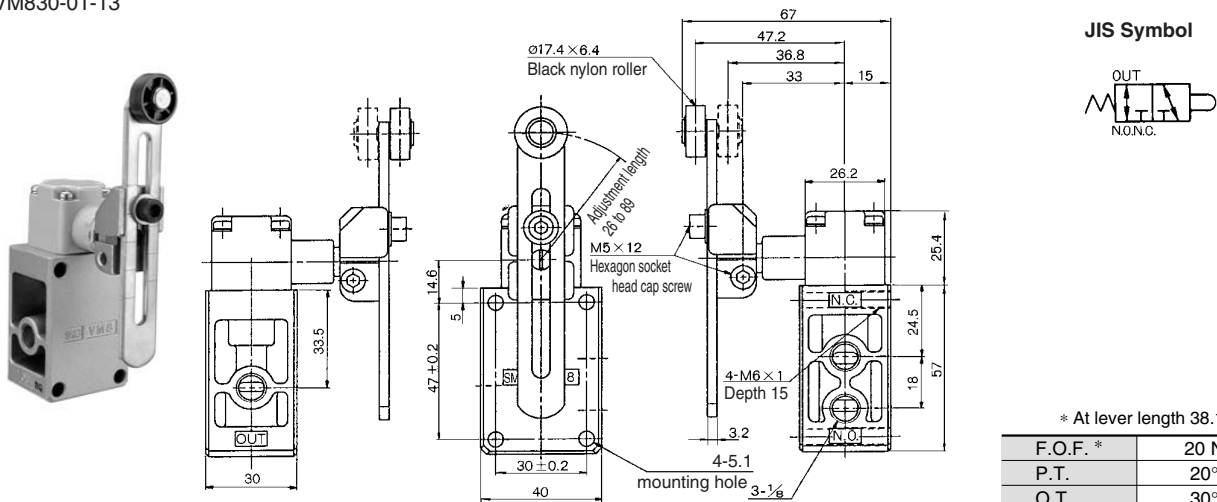
Series VM800

Roller lever VM830-01-01



F.O.F.	20 N
P.T.	20°
O.T.	30°
T.T.	50°

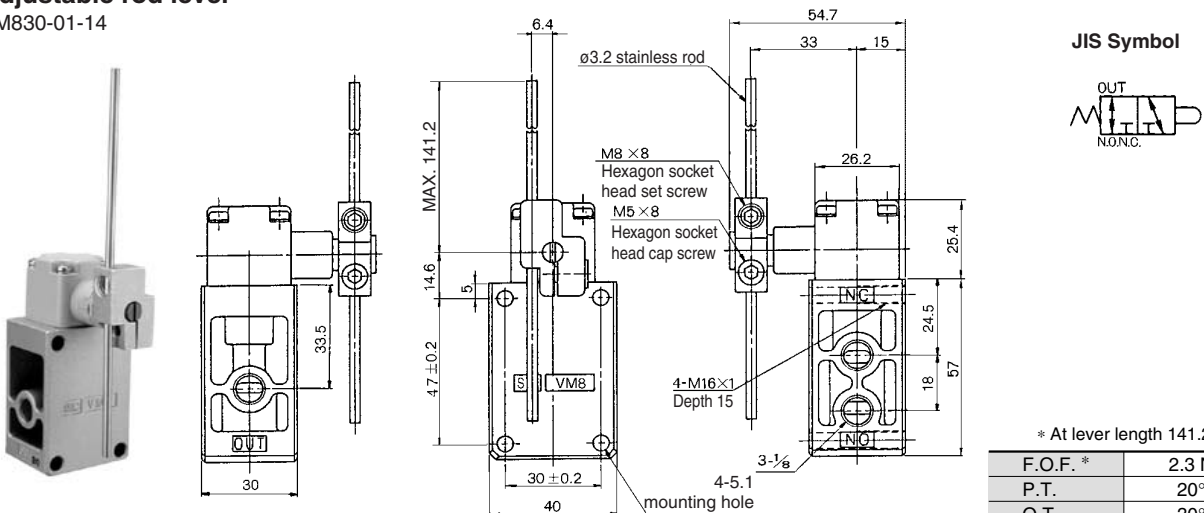
Adjustable roller lever VM830-01-13



* At lever length 38.1 mm

F.O.F. *	20 N
P.T.	20°
O.T.	30°
T.T.	50°

Adjustable rod lever VM830-01-14



* At lever length 141.2 mm

F.O.F. *	2.3 N
P.T.	20°
O.T.	30°
T.T.	50°