

5 Port Mechanical Valve/Rubber Seal

Series **VFM300**

**Compact design,
Large flow capacity
N/min: 982
High cycle rate,
Long life/300c.p.m.**

Piping possible to any EXH port.

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

External pilot model available. (Option)

Foot bracket and manifold



Specifications

Fluid	Air, Inert gas
Operating pressure	0.15 to 0.9MPa ⁽¹⁾
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area (N/min)	18mm ² (891.50)
Maximum frequency (Mechanical operation style)	300 c.p.m or less
Lubrication	Not required/Turbine oil #1 (ISO VG32)
Port size	Main valve-SUP, CYL port 1/4, EXH port 1/8
Option	Pilot valve (EXH)/M5
Weight (Basic)	Foot bracket ⁽²⁾ 260g



* Contact SMC for manifold mounting style.

Note 1) External pilot style Main valve: 0 to 0.9MPa
Pilot valve: 0.15 to 0.9MPa

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

Model

	Actuator	Model	Actuator part No.	Application
Mechanical operation	Basic	VFM350-02-00	—	—
	Roller lever	VFM350-02-01	VM-01C	Polyacetal roller
		VFM350-02-01S	VM-01CS	Hard steel roller
	One way roller lever	VFM350-02-02	VM-02C	Polyacetal roller
		VFM350-02-02S	VM-02CS	Hard steel roller
	Straight plunger	VFM350-02-05	VM-05D	—
Roller plunger	VFM350-02-06	VM-06D	Polyacetal roller	
	VFM350-02-06S	VM-06DS	Hard steel roller	
Manual operation	Toggle lever	VFM350-02-08	VM-08D	—
	Push button (Mushroom)	VFM350-02-30R	VM-30CR	Red
		VFM350-02-30B	VM-30CB	Black
		VFM350-02-30G	VM-30CG	Green
		VFM350-02-30Y	VM-30CY	Yellow
	Push button (Extended)	VFM350-02-32R	VM-32CR	Red
		VFM350-02-32B	VM-32CB	Black
		VFM350-02-32G	VM-32CG	Green
		VFM350-02-32Y	VM-32CY	Yellow
	Push button (Flush)	VFM350-02-33	VM-33C	With a set of red, black, green, yellow
	Twist selector (2 position)	VFM350-02-34R	VM-34CR	Red
		VFM350-02-34B	VM-34CB	Black
		VFM350-02-34G	VM-34CG	Green
		VFM350-02-34Y	VM-34CY	Yellow
	Key selector (2 position)	VFM350-02-36	VM-36C	—



Note) Actuator replacement is available for all styles.

How to Order

E VFM35 **0** **02** **01** **S** **F**

• **Area code**

-	Japan, Asia, Australia, England
E	Europe
N	North America

• **Port size**

02	1/4
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• **Thread**

-	Rc(PT)
F	G(PF)
N	NPT
T	NPTF

• **Body option**

0	Internal pilot style
1	External pilot style

• **Actuator**

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 (Flash)
34	Twist selector (2 position)
36	Key selector (2 position)

• **Suffix of actuator**

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

Colour of push button

• **Option**

F	Foot bracket (Only internal pilot)
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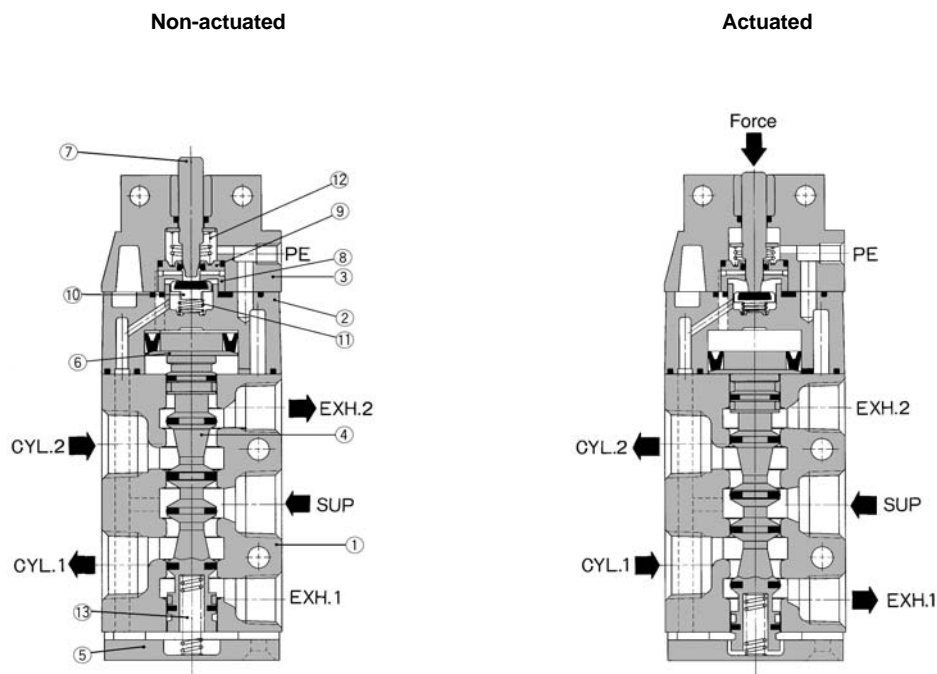
S□A

V□A

S□A

V□A

Construction



VM/R

VH

Component Parts

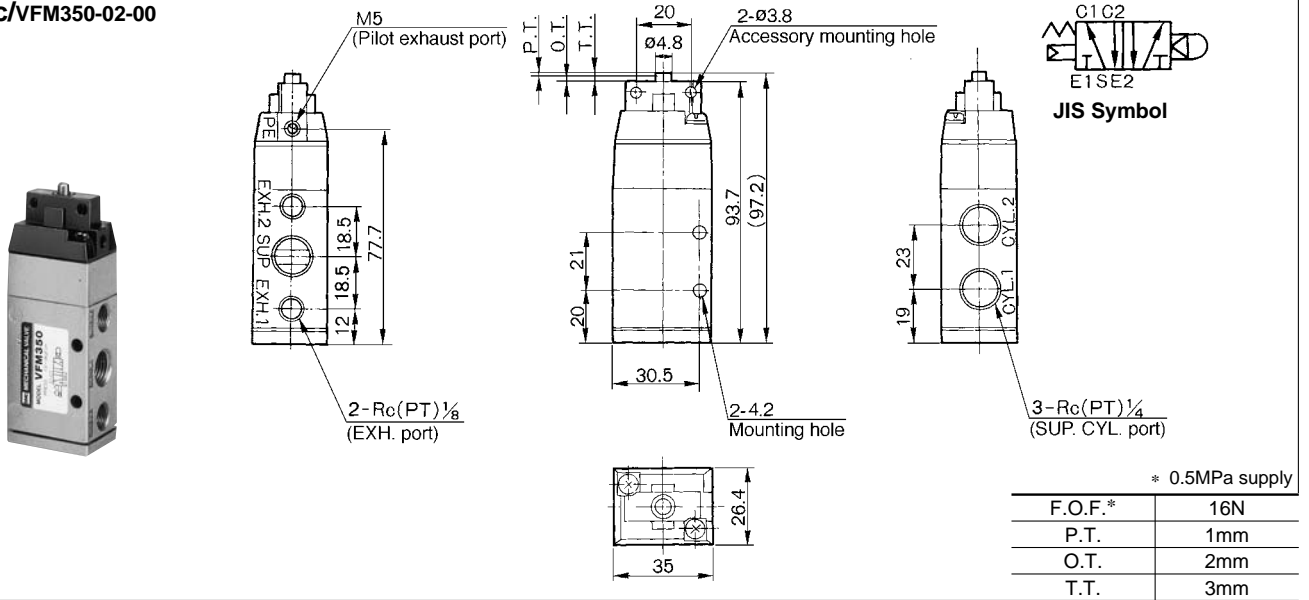
No.	Description	Material	Notes
①	Body	Aluminum alloy	Metallic plated
②	Pilot body	Zinc alloy	Metallic plated
③	Head cover	Zinc alloy	Black zinc chromate
④	Spool valve assembly		
⑤	End cover	Aluminum alloy	Metallic plated
⑥	Piston	Polyacetal	
⑦	Plunger	Stainless steel	

No.	Description	Material	Notes
⑧	Valve seat (A)	Brass	
⑨	Valve seat (B)	Brass	
⑩	Valve	Brass, NBR	
⑪	Valve spring	Stainless steel	
⑫	Return spring	Stainless steel	
⑬	Spool spring	Stainless steel	

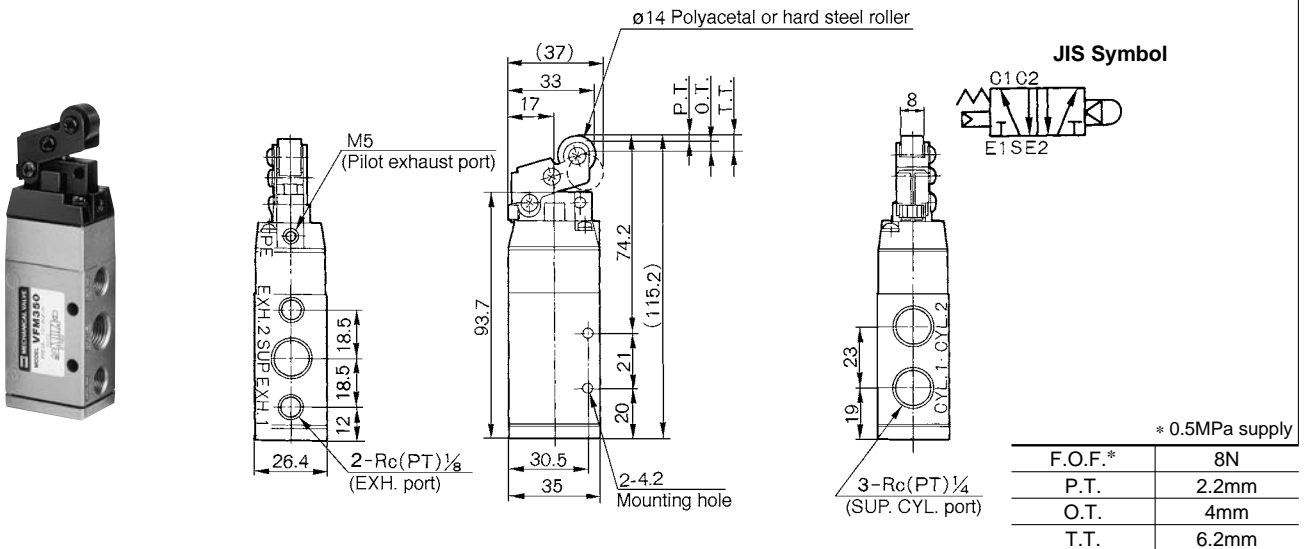
VFM300

Series VFM300

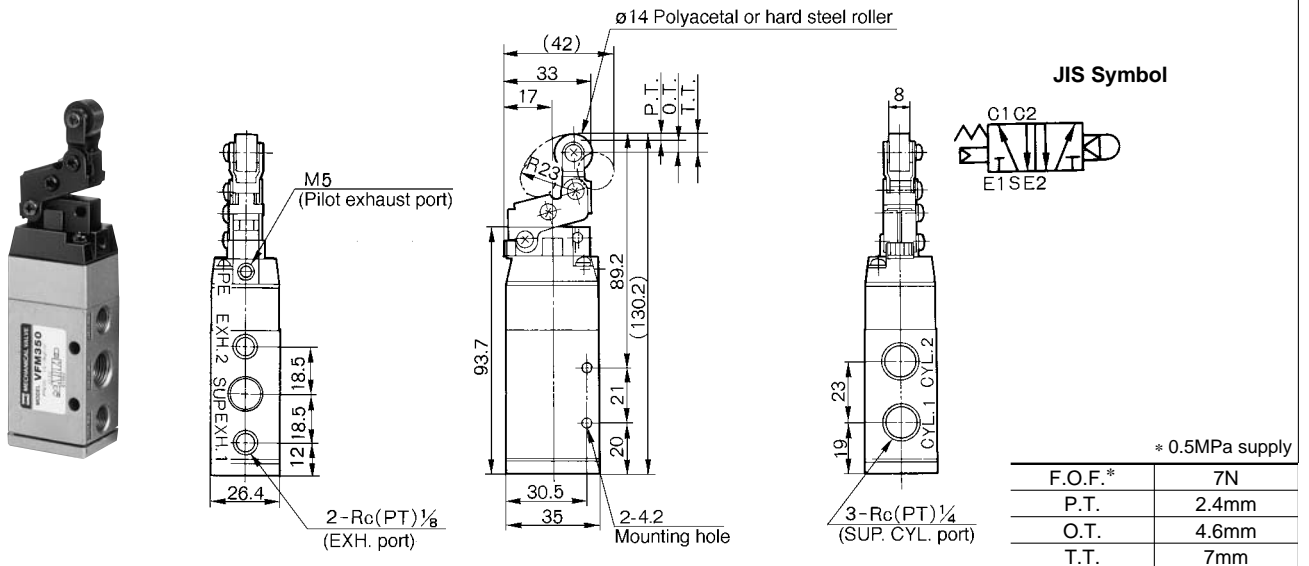
Basic/VFM350-02-00



Roller Lever/VFM350-02-01, VFM350-02-01S



One Way Roller Lever/VFM350-02-02, VFM350-02-02S



Series VFM300

Straight Plunger/VFM350-02-05

Panel mounted hole
 MIN.3
 MAX.11

JIS Symbol
 C1 C2
 E1 SE2

M18 x 1
 Lock nut 11mm thick,
 27mm A.F.

M5
 (Pilot exhaust port)

2-Rc(PT) 1/8
 (EXH. port)

3-Rc(PT) 1/4
 (SUP. CYL. port)

2-4.2 Mounting hole

* 0.5MPa supply

F.O.F.*	20N
P.T.	1.5mm
O.T.	2mm
T.T.	3.5mm

S□A

V□A

S□A

V□A

VM/VR

VH

Roller Plunger/VFM350-02-06, VFM350-02-06S

Panel mounted hole
 MIN.3
 MAX.11

JIS Symbol
 C1 C2
 E1 SE2

M18 x 1
 Lock nut 11mm thick,
 27mm A.F.

M5
 (Pilot exhaust port)

2-Rc(PT) 1/8
 (EXH. port)

3-Rc(PT) 1/4
 (SUP. CYL. port)

2-4.2 Mounting hole

* 0.5MPa supply

F.O.F.*	20N
P.T.	1.5mm
O.T.	2mm
T.T.	3.5mm

Toggle Lever/VFM350-02-08

Panel mounted hole
 MAX.7.5

JIS Symbol
 C1 C2
 E1 SE2

2-M18 x 1
 Lock nut 5.5mm thick,
 24mm A.F.

M5
 (Pilot exhaust port)

2-Rc(PT) 1/8
 (EXH. port)

3-Rc(PT) 1/4
 (SUP. CYL. port)

2-4.2 Mounting hole

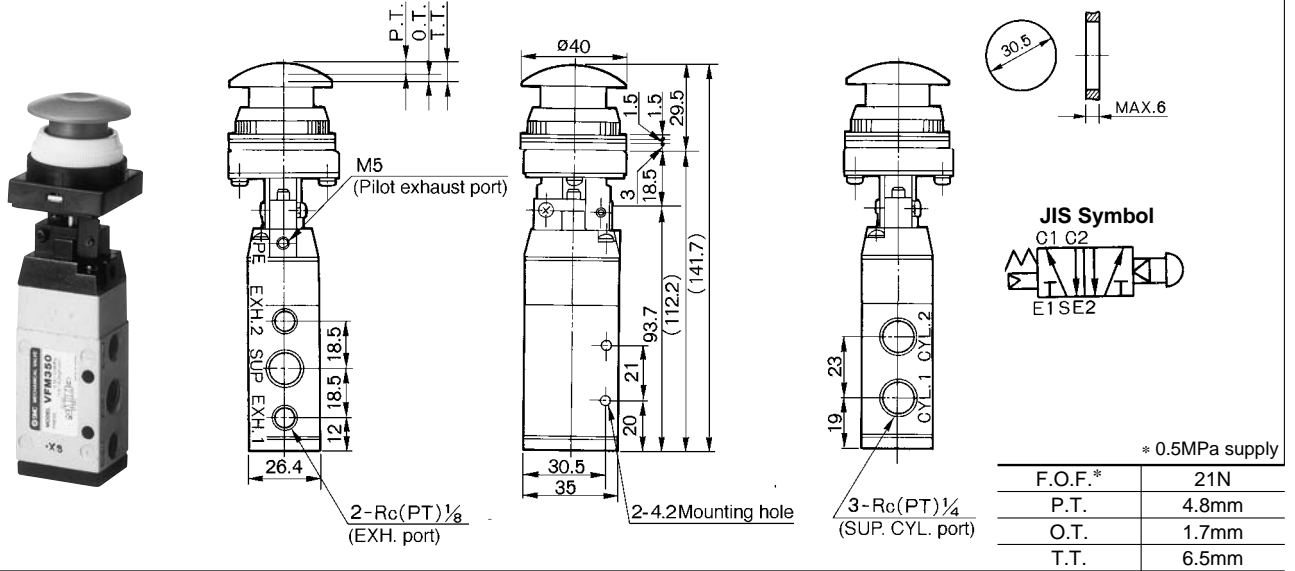
* 0.5MPa supply

F.O.F.*	15N
T.T.	40°

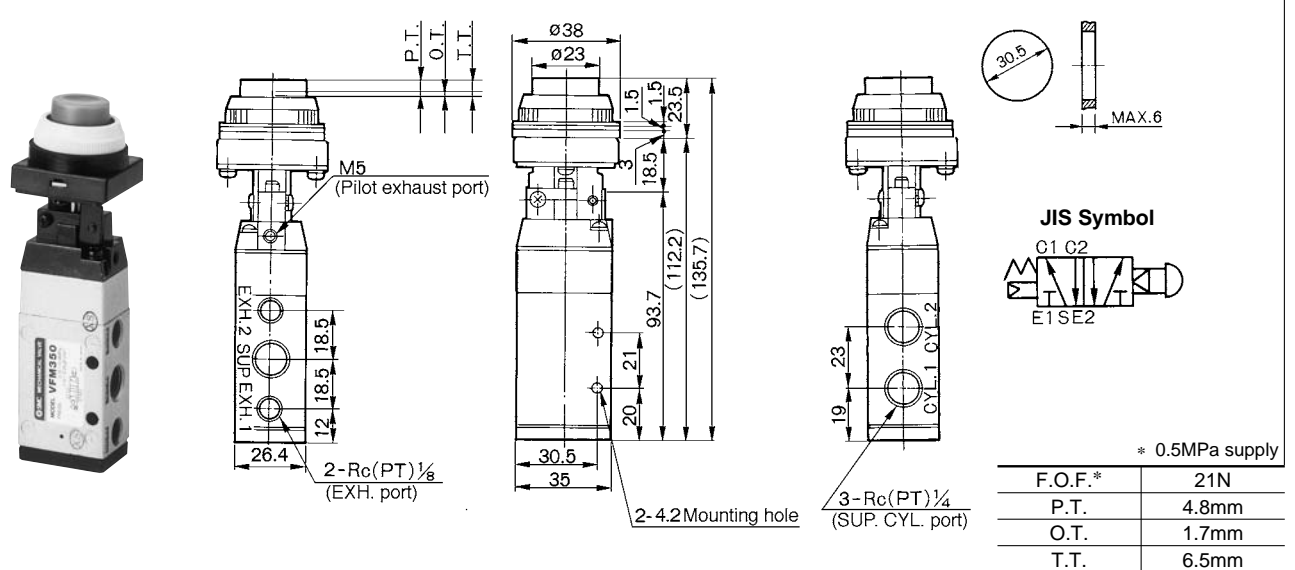
VFM300

Series VFM300

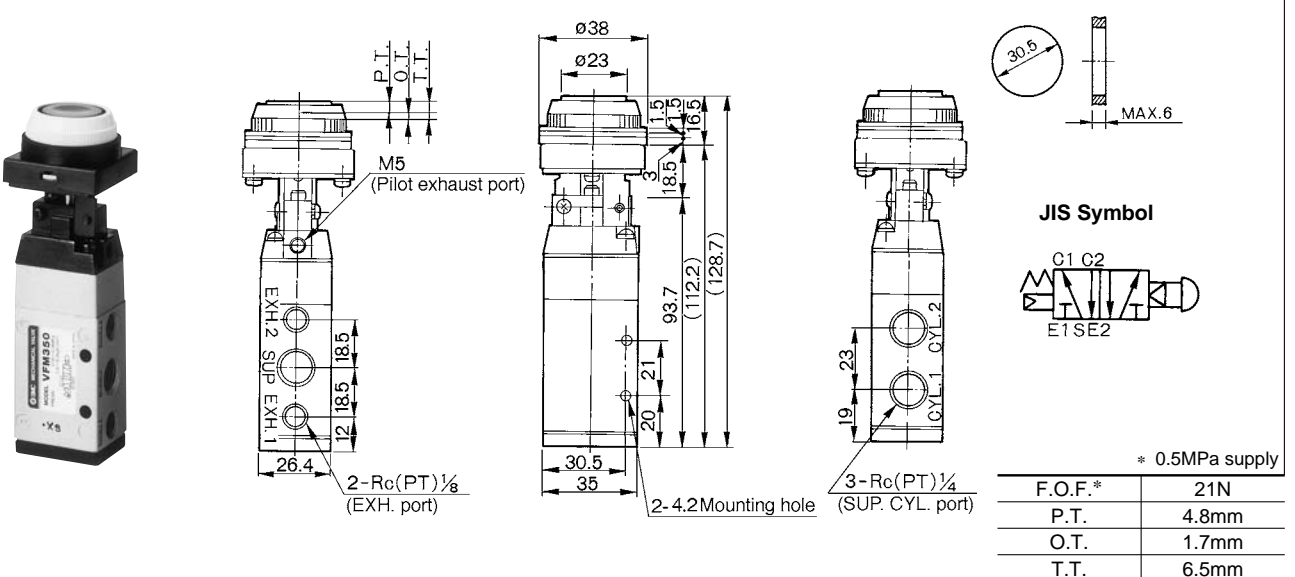
Push Button (Mushroom)/VFM350-02-30R, B, G, Y



Push Button (Extended)/VFM350-02-32R, B, G, Y

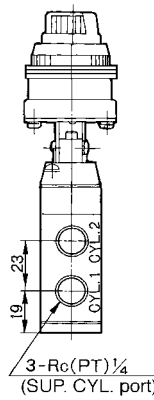
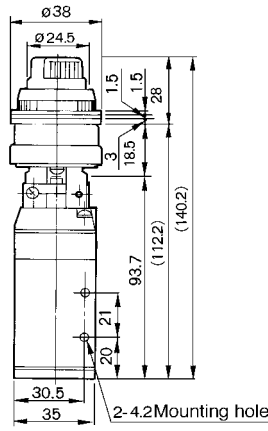
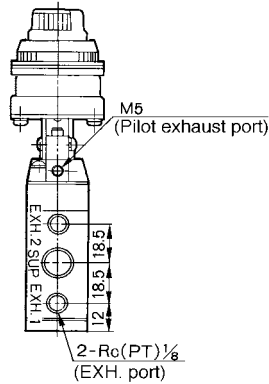


Push Button (Flush)/VFM350-02-33

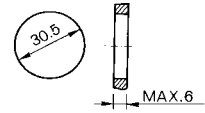


Series VFM300

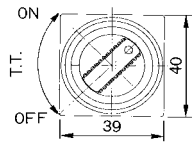
Twist Selector (2 position)/VFM350-02-34R, B, G, Y



Panel mounted hole



JIS Symbol



* 0.5MPa supply

F.O.F.*	23N
T.T.	90°

S□A

V□A

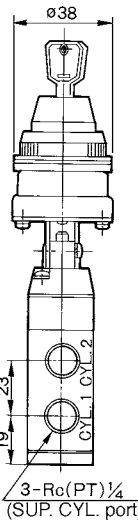
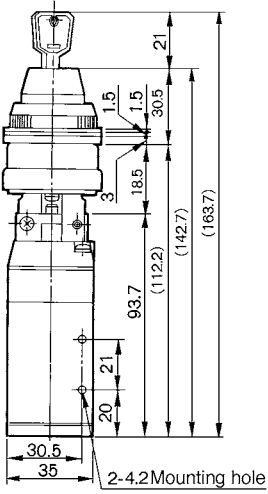
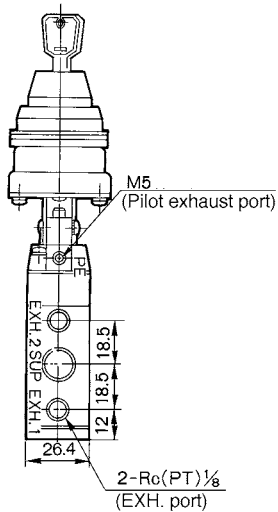
S□A

V□A

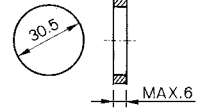
VMVR

VH

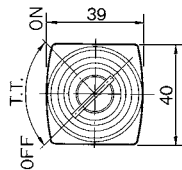
Key Selector (2 position)/VFM350-02-36



Panel mounted hole



JIS Symbol

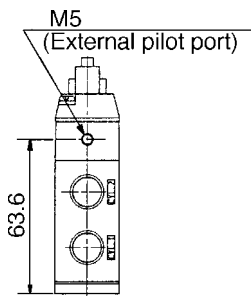


* 0.5MPa supply

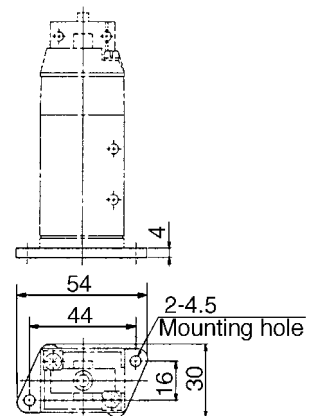
F.O.F.*	26N
T.T.	90°

Key can be removed in "on" and "off" positions.

External Pilot Style VFM351 Type



With Foot Bracket VFM350-02-□□-F



5 Port Mechanical Valve/Metal Seal

Series VFM200

**Compact design,
Large flow capacity/
N/min: 982**

**High cycle rate,
Long life/300c.p.m.**

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.

External pilot model available. (Option)

Foot bracket and manifold



Specifications

Fluid	Air, Inert gas
Operating pressure	0.1 to 1.0MPa ⁽¹⁾
Ambient and fluid temperature	-5 to 60°C (No freezing)
Effective area (N/min)	18mm ² (891.50)
Maximum frequency (Mechanical operation style)	300 c.p.m or less
Lubrication	Not required/Turbine oil #1 (ISO VG32)
Port size	Main valve 1/4
	Pilot valve (EXH)/M5
Option	Foot bracket ⁽²⁾
Weight (Basic)	300g



* Contact SMC for manifold mounting style.

Note 1) External pilot style Main valve: 0 to 1.0MPa
Pilot valve: 0.1 to 1.0MPa

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

Model

	Actuator	Model	Actuator part No.	Application
Mechanical operation	Basic	VFM250-02-00	—	—
	Roller lever	VFM250-02-01	VM-01C	Polyacetal roller
		VFM250-02-01S	VM-01CS	Hard steel roller
	One way roller lever	VFM250-02-02	VM-02C	Polyacetal roller
		VFM250-02-02S	VM-02CS	Hard steel roller
	Straight plunger	VFM250-02-05	VM-05D	—
	Roller plunger	VFM250-02-06	VM-06D	Polyacetal roller
		VFM250-02-06S	VM-06DS	Hard steel roller
Toggle lever	VFM250-02-08	VM-08D	—	
Manual operation	Push button (Mushroom)	VFM250-02-30R	VM-30CR	Red
		VFM250-02-30B	VM-30CB	Black
		VFM250-02-30G	VM-30CG	Green
		VFM250-02-30Y	VM-30CY	Yellow
	Push button (Extended)	VFM250-02-32R	VM-32CR	Red
		VFM250-02-32B	VM-32CB	Black
		VFM250-02-32G	VM-32CG	Green
		VFM250-02-32Y	VM-32CY	Yellow
	Push button (Flush)	VFM250-02-33	VM-33C	With a set of red, black, green, yellow
	Twist selector (2 position)	VFM250-02-34R	VM-34CR	Red
		VFM250-02-34B	VM-34CB	Black
		VFM250-02-34G	VM-34CG	Green
		VFM250-02-34Y	VM-34CY	Yellow
	Key selector (2 position)	VFM250-02-36	VM-36C	—



Note) Actuator replacement is available for all styles.

How to Order

E VFM25 **0** **02** **01** **S** **F**

• **Area code**

-	Japan, Asia, Australia, England
E	Europe
N	North America

• **Port size**

02	1/4
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• **Thread**

-	Rc(PT)
F	G(PF)
N	NPT
T	NPTF

• **Body option**

0	Internal pilot style
1	External pilot style

• **Actuator**

00	Basic
01	Roller lever
02	One way roller lever
05	Straight plunger
06	Roller plunger
08	Toggle lever
30	Push button (Mushroom)
32	Push button (Extended)
33	Push button (Flush)
34	Twist selector (2 position)
36	Key selector (2 position)

• **Suffix of actuator**

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

Colour of push button

• **Option**

F	Foot bracket (Only internal pilot)
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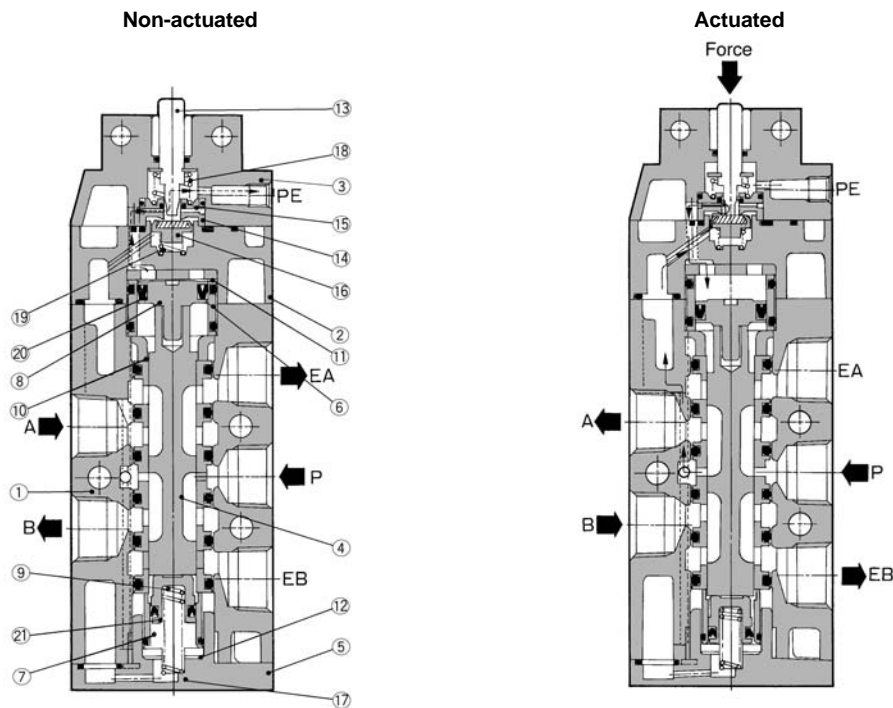
S□A

V□A

S□A

V□A

Construction



VM/R

VH

Component Parts

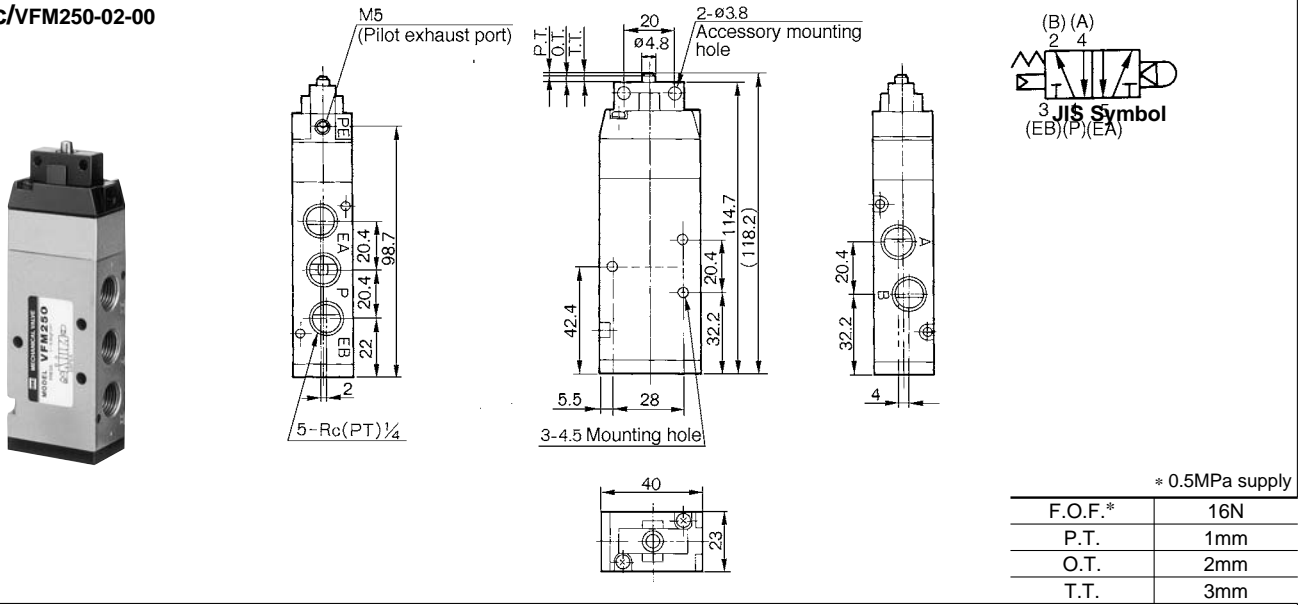
No.	Description	Material	Notes
①	Body	Aluminum alloy	Metallic plated
②	Pilot body	Zinc alloy	Metallic plated
③	Head cover	Zinc alloy	Black zinc chromate
④	Spool/sleeve	Stainless steel	
⑤	End cover	Polyacetal	
⑥	Piston guide	Brass	
⑦	Piston guide for end cover	Brass	
⑧	Piston	Polyacetal	
⑨	Piston for end cover	Polyacetal	
⑩	Guide bushing	Polyacetal	
⑪	Cushion	Urethane rubber	

No.	Description	Material	Notes
⑫	Cushion for end cover	Urethane rubber	
⑬	Plunger	Stainless steel	
⑭	Valve seat (A)	Brass	
⑮	Valve seat (B)	Brass	
⑯	Valve	NBR, Brass	
⑰	Return spring	Stainless steel	
⑱	Return spring	Stainless steel	
⑲	Valve spring	Stainless steel	
⑳	Mini Y packing	NBR	
㉑	Mini Y packing	NBR	

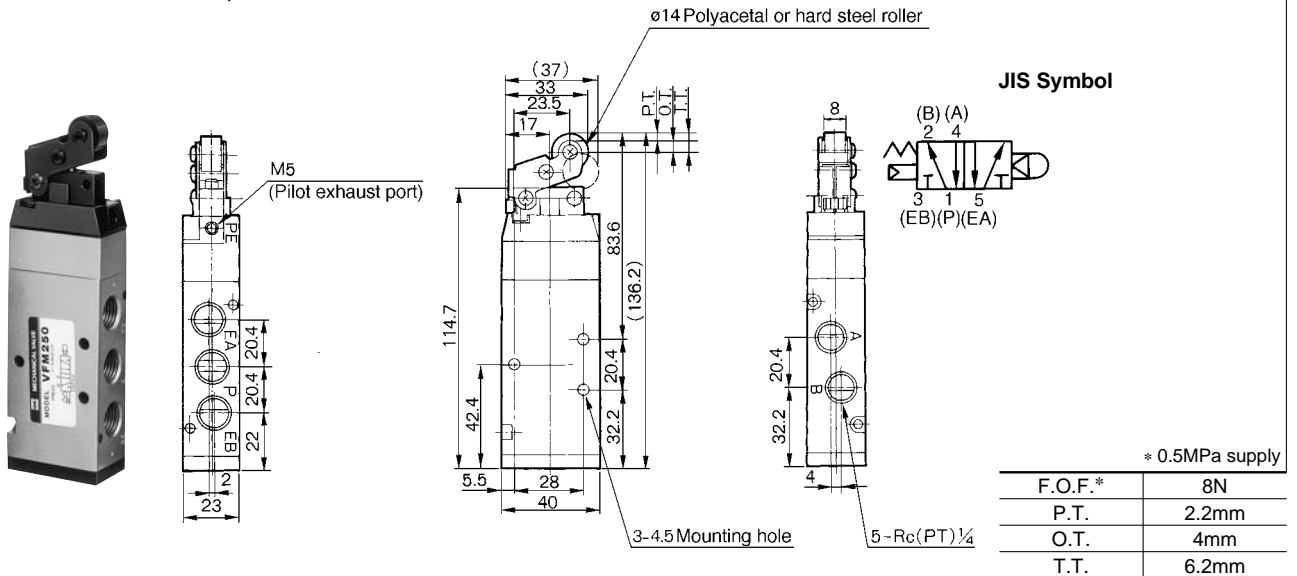
VFM200

Series VFM200

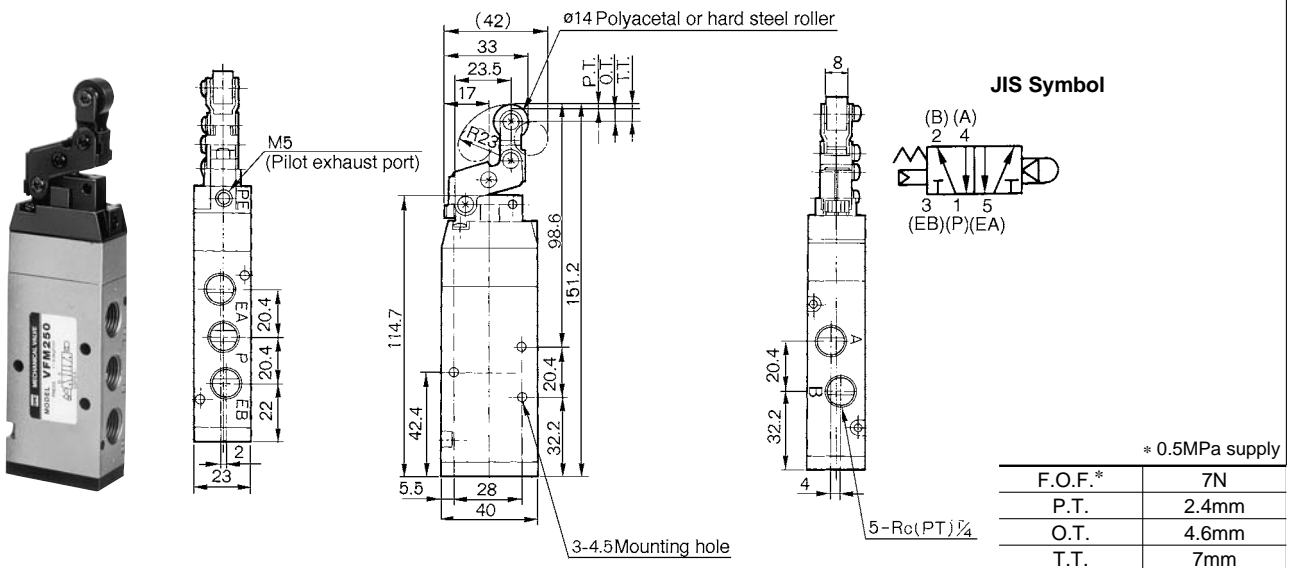
Basic/VFM250-02-00



Roller Lever/VFM250-02-01, VFM250-02-01S

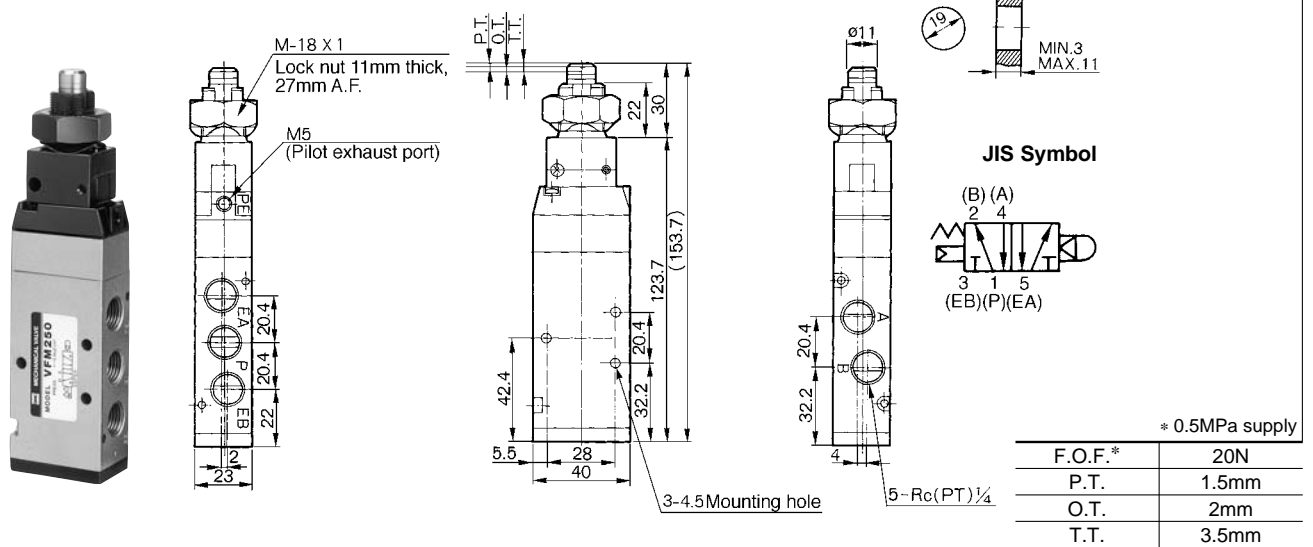


One Way Roller Lever/VFM250-02-02, VFM250-02-02S



Series VFM200

Straight Plunger/VFM250-02-05



S□A

V□A

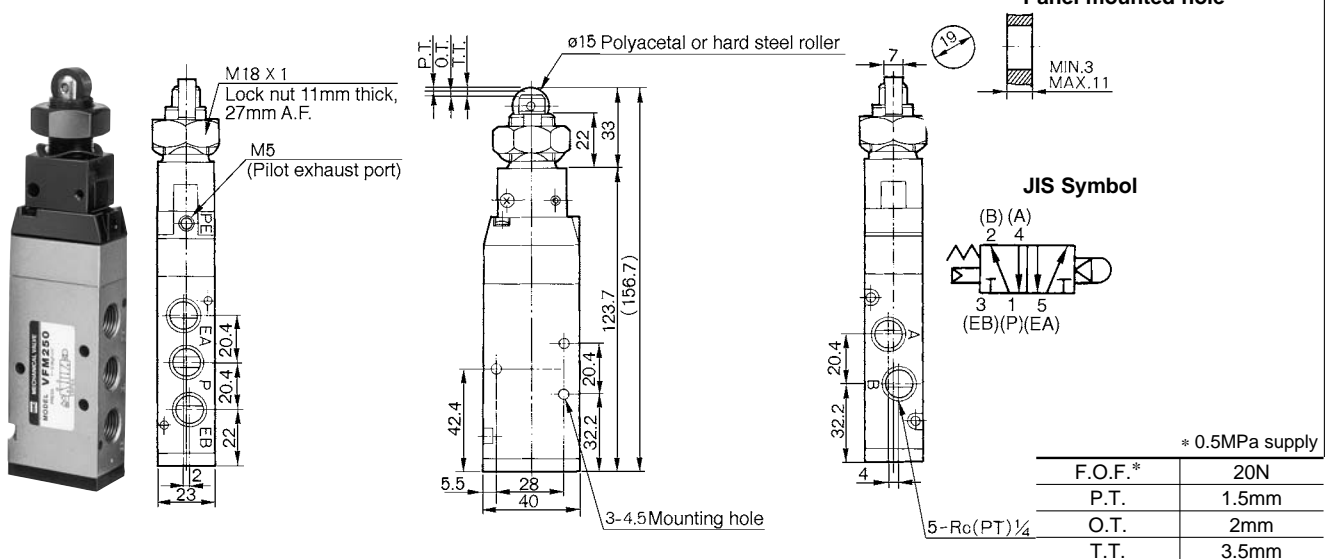
S□A

V□A

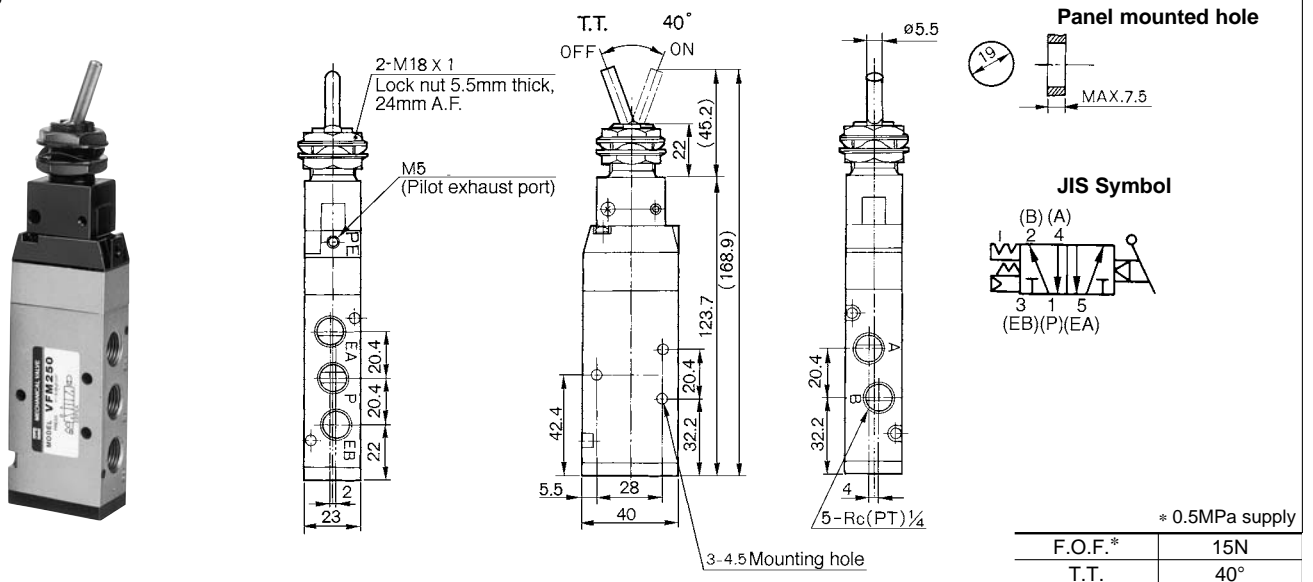
VM/VR

VH

Roller Plunger/VFM250-02-06, VFM250-02-06S



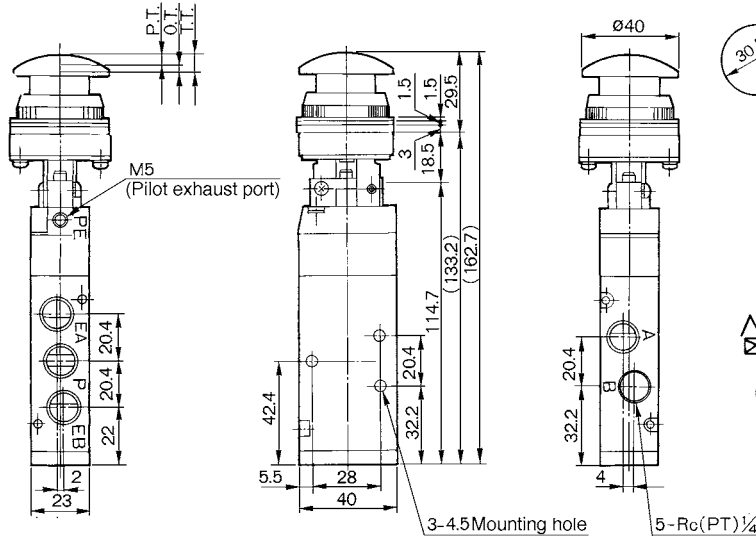
Toggle Lever/VFM250-02-08



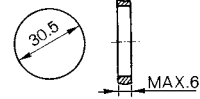
VFM200

Series VFM200

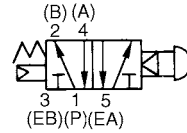
Push Button (Mushroom)/VFM250-02-30R, B, G, Y



Panel mounted hole

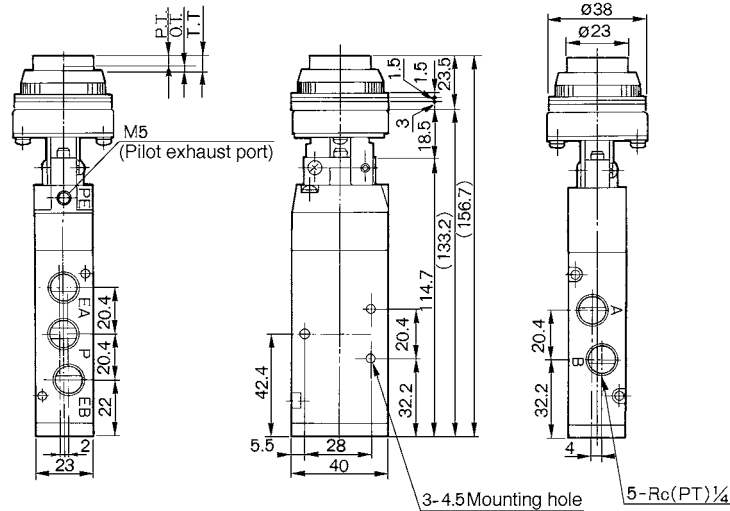


JIS Symbol

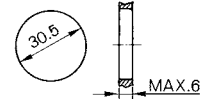


* 0.5MPa supply	
F.O.F.*	21N
P.T.	4.8mm
O.T.	1.7mm
T.T.	6.5mm

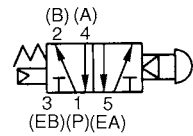
Push Button (Extended)/VFM250-02-32R, B, G, Y



Panel mounted hole

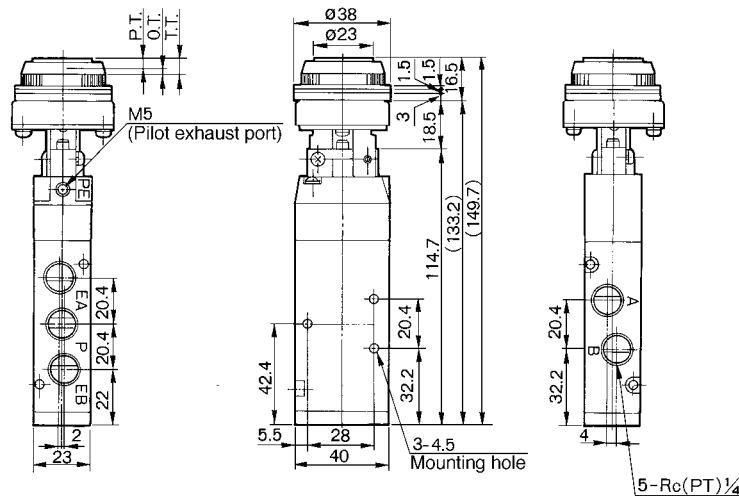


JIS Symbol

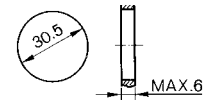


* 0.5MPa supply	
F.O.F.*	21N
P.T.	4.8mm
O.T.	1.7mm
T.T.	6.5mm

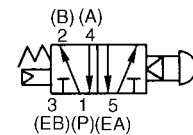
Push Button (Flush)/VFM250-02-33



Panel mounted hole



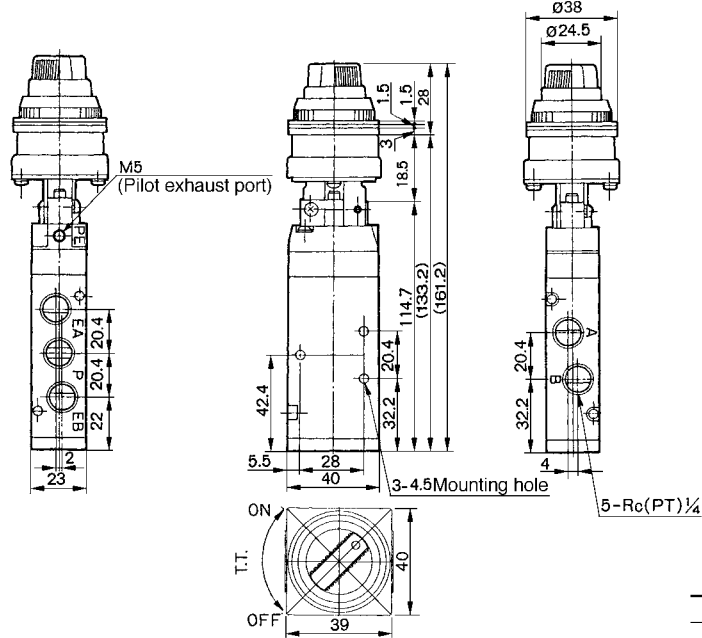
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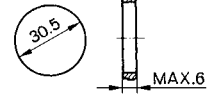
* 0.5MPa supply	
F.O.F.*	21N
P.T.	4.8mm
O.T.	1.7mm
T.T.	6.5mm

Series VFM200

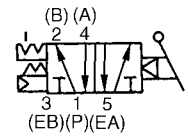
Twist Selector (2 position)/ VFM250-02-34R, B, G, Y



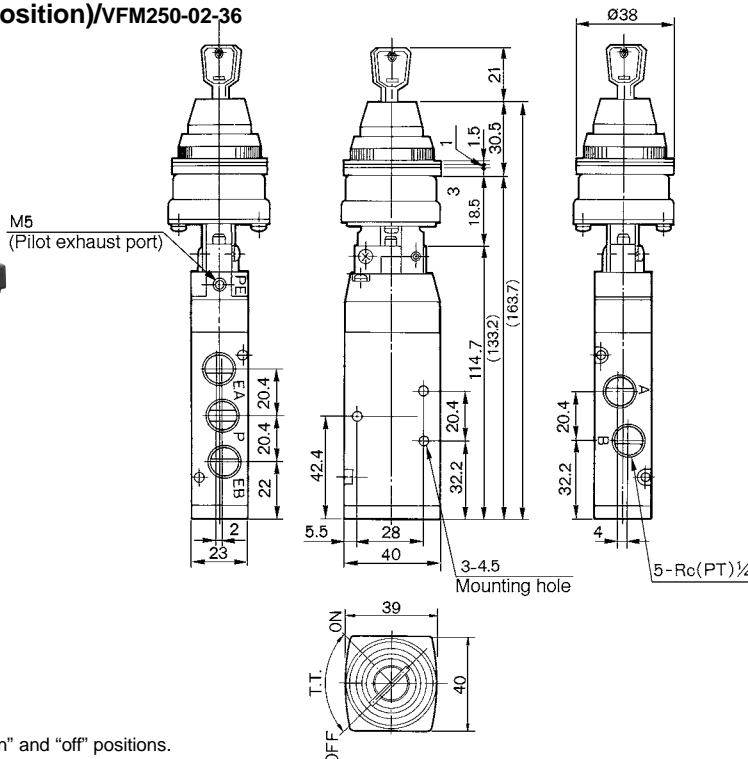
Panel mounted hole



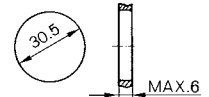
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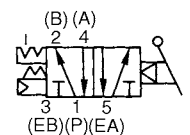
Key Selector (2 position)/VFM250-02-36



Panel mounted hole

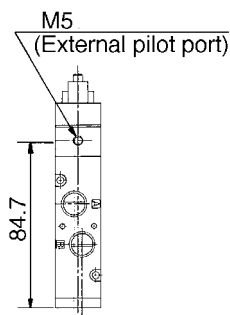


JIS Symbol



Key can be removed in "on" and "off" positions.

External Pilot Style VFM251 Type



With Foot Bracket VFM250-02-□□-F

