

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.

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.

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

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
	Push button (Flush)	VM430-01-32Y	VM-32AY	Yellow
		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.

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

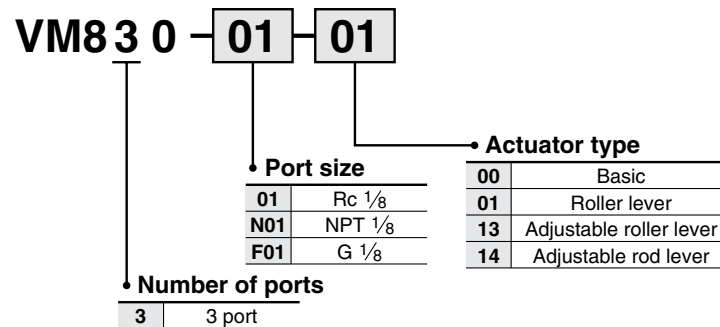
Model

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



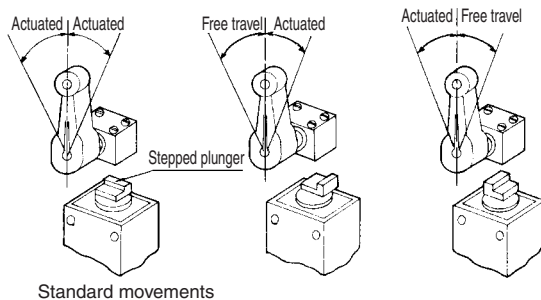
Actuator replacement is available.

How to Order

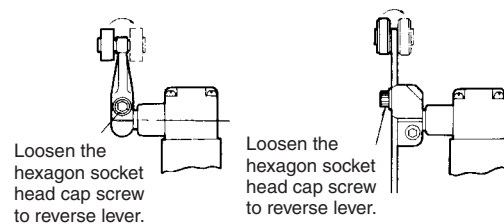


Application

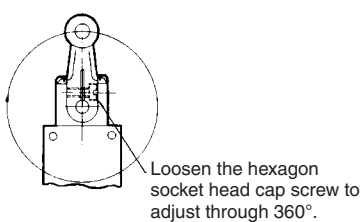
● Movement is changeable.



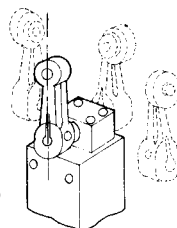
● Roller can be mounted to inside of lever.



● Lever location can be changed.



● Head direction can be changed.



● Lever length adjustment.

