Compact design, large flow capacity 9.9 mm²
High cycle rate, long life/300 c.p.m. or less
Piping possible to any EXH port.
Proper countermeasures can be taken for applications in which the noise of the exhaust could cause problems to the surroundings.

External pilot model available. (Option)
Foot bracket and manifold mounting possible.

---

Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air/Inert gas</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure</td>
<td>0.15 to 1.0 MPa (1)</td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>−5 to 60°C (No freezing)</td>
</tr>
<tr>
<td>Effective area</td>
<td>9.9 mm²</td>
</tr>
<tr>
<td>Maximum frequency (Mechanical operation type)</td>
<td>300 c.p.m. or less</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required (Use turbine oil class 1 ISO VG32, if lubricated.)</td>
</tr>
<tr>
<td>Port size</td>
<td>Pilot valve/Exh/M5 x 0.8</td>
</tr>
<tr>
<td>Option</td>
<td>Foot bracket (2)</td>
</tr>
<tr>
<td>Weight (Basic)</td>
<td>150 g</td>
</tr>
</tbody>
</table>

*Please contact SMC for manifold mounting style.*

Note 1) External pilot type Main valve: 0 to 1.0 MPa
Pilot valve: 0.15 to 1.0 MPa
Note 2) The standard body cannot be retrofitted with a foot bracket.

---

Model

<table>
<thead>
<tr>
<th>Actuator</th>
<th>Model</th>
<th>Actuator part no.</th>
<th>Application</th>
</tr>
</thead>
<tbody>
<tr>
<td>Basic</td>
<td>VZM450-01-00</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>Roller lever</td>
<td>VZM450-01-01</td>
<td>VM-01C</td>
<td>Polycetal roller</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-01S</td>
<td>VM-01CS</td>
<td>Hard steel roller</td>
</tr>
<tr>
<td>One way roller lever</td>
<td>VZM450-01-02</td>
<td>VM-02C</td>
<td>Polycetal roller</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-02S</td>
<td>VM-02CS</td>
<td>Hard steel roller</td>
</tr>
<tr>
<td>Straight plunger</td>
<td>VZM450-01-05</td>
<td>VM-05C</td>
<td>—</td>
</tr>
<tr>
<td>Roller plunger</td>
<td>VZM450-01-06</td>
<td>VM-06C</td>
<td>Polycetal roller</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-06S</td>
<td>VM-06CS</td>
<td>Hard steel roller</td>
</tr>
<tr>
<td>Toggle lever</td>
<td>VZM450-01-08</td>
<td>VM-08C</td>
<td>—</td>
</tr>
<tr>
<td>Push button (Mushroom)</td>
<td>VZM450-01-30R</td>
<td>VM-30CR</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-30B</td>
<td>VM-30CB</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-30G</td>
<td>VM-30CG</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-30Y</td>
<td>VM-30CY</td>
<td>Yellow</td>
</tr>
<tr>
<td>Push button (Extended)</td>
<td>VZM450-01-32R</td>
<td>VM-32CR</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-32B</td>
<td>VM-32CB</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-32G</td>
<td>VM-32CG</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-32Y</td>
<td>VM-32CY</td>
<td>Yellow</td>
</tr>
<tr>
<td>Push button (Flush)</td>
<td>VZM450-01-33</td>
<td>VM-33C</td>
<td>With a set of red, black, green, yellow</td>
</tr>
<tr>
<td>Twist selector (2 position)</td>
<td>VZM450-01-34R</td>
<td>VM-34CR</td>
<td>Red</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-34B</td>
<td>VM-34CB</td>
<td>Black</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-34G</td>
<td>VM-34CG</td>
<td>Green</td>
</tr>
<tr>
<td></td>
<td>VZM450-01-34Y</td>
<td>VM-34CY</td>
<td>Yellow</td>
</tr>
<tr>
<td>Key selector (2 position)</td>
<td>VZM450-01-36</td>
<td>VM-36C</td>
<td>—</td>
</tr>
</tbody>
</table>

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.
### Series VZM400

#### How to Order

**VZM45**

- **Port size**
  - 01: Rc 1/8
  - N01: NPT 1/8
  - F01: G 3/8

- **Actuator type**
  - 00: Basic
  - 01: Roller lever
  - 02: One Way Roller Lever
  - 05: Straight plunger
  - 06: Roller plunger
  - 08: Toggle lever
  - 30: Push button (Mushroom)
  - 32: Push button (Extended)
  - 33: Push button (Flush)
  - 34: Twist selector (2 position)
  - 36: Key selector (2 position)

- **Suffix for actuator**
  - S: Hard steel roller
  - R: Red
  - B: Black
  - G: Green
  - Y: Yellow
  - Color of push button selector

- **Foot bracket** (Only internal pilot)
  - F

**Body option**
- 0: Internal pilot type
- 1: External pilot type

#### Construction

**Non-actuated**

- Force

**Actuated**

#### Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>01</td>
<td>Body</td>
<td>ADC</td>
<td>Metallic plated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>02</td>
<td>Pilot body</td>
<td>PBT</td>
<td>Metallic plated</td>
<td></td>
<td></td>
</tr>
<tr>
<td>03</td>
<td>Head cover</td>
<td>ZDC</td>
<td>Black zinc chromated</td>
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<td></td>
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<tr>
<td>04</td>
<td>Spool/sleeve</td>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>05</td>
<td>End cover</td>
<td>POM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>06</td>
<td>Piston A</td>
<td>POM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>07</td>
<td>Plunger</td>
<td>POM</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>08</td>
<td>Valve seat (A)</td>
<td>POM</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>09</td>
<td>Valve seat (B)</td>
<td>POM</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>10</td>
<td>Valve</td>
<td>NBR</td>
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<tr>
<td>11</td>
<td>Piston guide B</td>
<td>Aluminum alloy</td>
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<tr>
<td>12</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Cushion</td>
<td>Rubber</td>
<td></td>
<td></td>
<td></td>
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<tr>
<td>14</td>
<td>Cushion</td>
<td>Rubber</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Valve spring</td>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Piston B</td>
<td>POM</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
### Series VZM400

#### Basic
**VZM450-01-00**

![Basic Diagram]

#### Roller lever
**VZM450-01-01**
**VZM450-01-01S**

![Roller lever Diagram]

#### One way roller lever
**VZM450-01-02**
**VZM450-01-02S**

![One way roller lever Diagram]

---

<table>
<thead>
<tr>
<th>Model</th>
<th>Description</th>
<th>Symbol</th>
<th>F.O.F.*</th>
<th>P.T.</th>
<th>O.T.</th>
<th>T.T.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VZM450-01-00</td>
<td>Basic</td>
<td><img src="image" alt="Symbol" /></td>
<td>16 N</td>
<td>1.0 mm</td>
<td>2.0 mm</td>
<td>3.0 mm</td>
</tr>
<tr>
<td>VZM450-01-01</td>
<td>Roller lever</td>
<td><img src="image" alt="Symbol" /></td>
<td>8 N</td>
<td>2.2 mm</td>
<td>2.0 mm</td>
<td>6.2 mm</td>
</tr>
<tr>
<td>VZM450-01-02</td>
<td>One way roller lever</td>
<td><img src="image" alt="Symbol" /></td>
<td>7 N</td>
<td>2.4 mm</td>
<td>4.6 mm</td>
<td>7.0 mm</td>
</tr>
</tbody>
</table>

*0.5 MPa supply
**Series VZM400**

### Straight plunger

**VZM450-01-05**

- 2-3.5 mounting hole
- 23.3, 17
- 12.8, 38
- Ø8.5
- 17.5, 17.5
- 100
- M14 × 1
- Hexagon nut thick 8, across flats 22
- M5 × 0.8
- (Pilot exhaust port)

### JIS Symbol

- (B)(A)
- (E8)(P)(E9)

---

### Roller plunger

**VZM450-01-06**

- 2-3.5 mounting hole
- ø12 polyacetal or hard steel roller
- 23.3, 17
- 12.8, 38
- 17.5, 17.5
- 100
- M14 × 1
- Hexagon nut thick 8, across flats 22
- M5 × 0.8
- (Pilot exhaust port)

### JIS Symbol

- (B)(A)
- (E8)(P)(E9)

---

### Toggle lever

**VZM450-01-08**

- 2-M14 × 1
- Hexagon nut thick 5, across flats 17
- M5 × 0.8
- (Pilot exhaust port)

### Panel mounting hole

- MIN 2.5
- MAX 9.5

---

- **0.5 MPa supply**
- F.O.F. " 18 N
- P.T. 1.5 mm
- O.T. 2.0 mm
- T.T. 3.5 mm

---

- **0.5 MPa supply**
- F.O.F. " 15 N
- T.T. 40°
### Series VZM400

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

- Panel mounting hole

<table>
<thead>
<tr>
<th>JIS Symbol</th>
<th>Panel mounting hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B)/(A)</td>
<td>MAX 6</td>
</tr>
</tbody>
</table>

- **Dimensions:**
  - O.T.: 1.7 mm
  - T.T.: 6.5 mm

- **F.O.F.**
  - 21 N

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

- Panel mounting hole

<table>
<thead>
<tr>
<th>JIS Symbol</th>
<th>Panel mounting hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B)/(A)</td>
<td>MAX 6</td>
</tr>
</tbody>
</table>

- **Dimensions:**
  - O.T.: 1.7 mm
  - T.T.: 6.5 mm

- **F.O.F.**
  - 21 N

- **Pilot exhaust port:**
  - 2-3.5 mounting hole

#### Push button (Flush)
**VZM450-01-33**

- Panel mounting hole

<table>
<thead>
<tr>
<th>JIS Symbol</th>
<th>Panel mounting hole</th>
</tr>
</thead>
<tbody>
<tr>
<td>(B)/(A)</td>
<td>MAX 6</td>
</tr>
</tbody>
</table>

- **Dimensions:**
  - O.T.: 1.7 mm
  - T.T.: 6.5 mm

- **F.O.F.**
  - 21 N

- **Pilot exhaust port:**
  - 2-3.5 mounting hole

---

*0.5 MPa supply*

- Panel mounting hole
- **Dimensions:**
  - O.T.: 1.7 mm
  - T.T.: 6.5 mm

- **F.O.F.**
  - 21 N
5 Port Mechanical Valve Series VZM400

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

Key selector (2 position)  
VZM450-01-36

External pilot type  
VZM451 type

With foot bracket  
VZM450-01-□□□-F

Panel mounting hole

JIS Symbol

Key can be removed at the “on” and “off” positions.

* 0.5 MPa supply

F.O.F. * 23 N  
T.T. 90°

Panel mounting hole

JIS Symbol

2-3.5 mounting hole

M5 × 0.8 (Pilot exhaust port)

2-3.5 mounting hole

2-4.5 mounting hole

2-3.5 mounting hole

M5 × 0.8 (Pilot exhaust port)

Pilot exhaust port

Panel mounting hole

F.O.F. * 26 N  
T.T. 90°