5 Port Mechanical Valve/Metal Seal

**Series VZM400**

**Specifications**

<table>
<thead>
<tr>
<th><strong>Fluid</strong></th>
<th>Air, Inert gas</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Operating pressure</strong></td>
<td>0.15 to 1.0MPa</td>
</tr>
<tr>
<td><strong>Ambient and fluid temperature</strong></td>
<td>0 to 80°C (No freezing)</td>
</tr>
<tr>
<td><strong>Effective area (Cv)</strong></td>
<td>9.9mm² (0.55)</td>
</tr>
<tr>
<td><strong>Maximum frequency (Mechanical operation style)</strong></td>
<td>300 c.p.m or less</td>
</tr>
<tr>
<td><strong>Lubrication</strong></td>
<td>Not required/Turbine oil #1 (ISO VG32)</td>
</tr>
<tr>
<td><strong>Port size (Nominal size)</strong></td>
<td>Pilot valve (EXH): M5 X 0.8</td>
</tr>
<tr>
<td><strong>Option</strong></td>
<td>Foot bracket (1)</td>
</tr>
</tbody>
</table>

| **Weight (Basic)** | 150g |

- Contact SMC for manifold mounting style.

**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>Polyaetal roller</td>
</tr>
<tr>
<td>One way roller lever</td>
<td>VZM450-01-02S</td>
<td>VM-02CS</td>
<td>Polyaetal roller</td>
</tr>
<tr>
<td>Straight plunger</td>
<td>VZM450-01-05S</td>
<td>VM-05C</td>
<td>-</td>
</tr>
<tr>
<td>Roller plunger</td>
<td>VZM450-01-06S</td>
<td>VM-06S</td>
<td>Polyaetal 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>Push button (Extended)</td>
<td>VZM450-01-32B</td>
<td>VM-32CB</td>
<td>Black</td>
</tr>
</tbody>
</table>

- Note) Actuator replacement is available for all styles.

**Note**

1) External pilot Main valve: 0 to 1.0MPa
Pilot valve: 0.15 to 1.0MPa

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

---

**Compact design,**
Large flow capacity/Cv.0.55
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 mounting possible.**
### VZM400

#### How to Order

**VZM45**

- **Port size**
  - 0: Rc(PF) 1/8

- **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

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

#### Construction

**Non-actuated**

**Actuated**

#### Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>ADC</td>
<td>Metallic plated</td>
</tr>
<tr>
<td>2</td>
<td>Pilot body</td>
<td>PBT</td>
<td>Only external pilot style: ZDC</td>
</tr>
<tr>
<td>3</td>
<td>Head cover</td>
<td>ZDC</td>
<td>Black zinc chromated</td>
</tr>
<tr>
<td>4</td>
<td>Spool sleeve</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>End cover</td>
<td>POM</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Plunger</td>
<td>POM</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Valve seat (A)</td>
<td>POM</td>
<td></td>
</tr>
<tr>
<td>8</td>
<td>Valve seat (B)</td>
<td>POM</td>
<td></td>
</tr>
<tr>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Notes</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Valve</td>
<td>NBR</td>
<td></td>
</tr>
<tr>
<td>11</td>
<td>Piston guide B</td>
<td>Aluminum alloy</td>
<td></td>
</tr>
<tr>
<td>12</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>13</td>
<td>Cushion</td>
<td>Rubber</td>
<td></td>
</tr>
<tr>
<td>14</td>
<td>Cushion</td>
<td>Rubber</td>
<td></td>
</tr>
<tr>
<td>15</td>
<td>Valve spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>16</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>17</td>
<td>Piston B</td>
<td>POM</td>
<td></td>
</tr>
</tbody>
</table>

3.5-35
Series VZM400

Basic/VZM450-01-00

Roller Lever/VZM450-01-01, VZM450-01-01S

One Way Roller Lever/VZM450-01-02, VZM450-01-02S

F.O.P.  |  16N  |
---|---|
P.T.  |  1mm  |
O.T.  |  3mm  |
T.T.  |  3mm  |

F.O.P.  |  8N  |
P.T.  |  2.2mm  |
O.T.  |  4mm  |
T.T.  |  6.2mm  |

F.O.P.  |  7N  |
P.T.  |  2.4mm  |
O.T.  |  4.6mm  |
T.T.  |  7mm  |
**Series VZM400**

**Straight Plunger/VZM450-01-05**

![Diagram of Straight Plunger]

**Panel mounted hole**

- **JIS Symbol**
- **F.O.F.**
- **P.T.**
- **O.T.**
- **T.T.**

*0.5MPa supply*

**Roller Plunger/VZM450-01-06, VZM450-01-06S**

![Diagram of Roller Plunger]

**Panel mounted hole**

- **JIS Symbol**
- **F.O.F.**
- **P.T.**
- **O.T.**
- **T.T.**

*0.5MPa supply*

**Toggle Lever/VZM450-01-08**

![Diagram of Toggle Lever]

**Panel mounted hole**

- **JIS Symbol**
- **F.O.F.**
- **T.T.**

*0.5MPa supply*
Series VZM400

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

Panel mounted hole

JIS Symbol

Panel mounted hole

JIS Symbol

Panel mounted hole

JIS Symbol

Panel mounted hole

Panel mounted hole

F.O.P.  P.T.  O.T.  T.T.
21N  4.8mm  1.7mm  6.5mm

F.O.P.  P.T.  O.T.  T.T.
21N  4.8mm  1.7mm  6.5mm

F.O.P.  P.T.  O.T.  T.T.
21N  4.8mm  1.7mm  6.5mm

F.O.P.  P.T.  O.T.  T.T.
21N  4.8mm  1.7mm  6.5mm

0.5MPa supply

0.5MPa supply

0.5MPa supply

0.5MPa supply

VM/VR Series
Series VZM400

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

Panel mounted hole

Panel mounted hole

JIS Symbol

JIS Symbol

Key Selector (2 position)/VZM50-01-36

Panel mounted hole

Panel mounted hole

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

External Pilot Style

VZM451 Type

With Foot Bracket

VZM450-01-F

3.5-39