# 3 Port Air Operated Valve

## VZA200/400 Series

### Fluid

| Operating pressure range (MPa) | VZA212/24-1P | 0.1 to 1.0 |
| Pilot pressure range (MPa) | VZA212/24-1P | 0.15 to 1.0 |
| Ambient and fluid temperature (°C) | VZA212/24-1P | –10 to 60 (No freezing.) |

### Model

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Type of actuation</th>
<th>Pilot</th>
<th>Port size</th>
<th>Flow rate characteristics ^[2] [C (=) (\text{dm}^3/(s \cdot \text{bar}))]</th>
<th>Pilot port size</th>
</tr>
</thead>
<tbody>
<tr>
<td>VZA212-P-M5</td>
<td>N.C. Body side</td>
<td>M5 x 0.8</td>
<td>0.60</td>
<td>0.43 b 0.15 0.52 b 0.35 0.13</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA222-P-M5</td>
<td>N.O. Body side</td>
<td>M5 x 0.8</td>
<td>0.60</td>
<td>0.43 b 0.15 0.52 b 0.35 0.13</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA214-1P-01</td>
<td>N.C. Sub-plate side</td>
<td>Rc 1/8</td>
<td>1.0</td>
<td>0.30 b 0.25 0.85 b 0.35 0.22</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA224-2P-01</td>
<td>N.O. Sub-plate side</td>
<td>Rc 1/8</td>
<td>0.90</td>
<td>0.25 b 0.21 0.85 b 0.35 0.22</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA242-2P-01</td>
<td>N.O. Body side</td>
<td>Rc 1/8</td>
<td>0.90</td>
<td>0.25 b 0.21 0.85 b 0.35 0.22</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA412-P-01</td>
<td>N.C. Body side</td>
<td>Rc 1/8</td>
<td>2.0</td>
<td>0.17 b 0.49 2.2 b 0.17 0.53</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA422-P-01</td>
<td>N.O. Body side</td>
<td>Rc 1/8</td>
<td>2.0</td>
<td>0.17 b 0.49 2.2 b 0.17 0.53</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA414-1P-01</td>
<td>N.C. Sub-plate side</td>
<td>Rc 1/8</td>
<td>2.4</td>
<td>0.19 b 0.57 2.2 b 0.11 0.49</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA414-2P-01</td>
<td>N.C. Body side</td>
<td>Rc 1/8</td>
<td>2.4</td>
<td>0.19 b 0.57 2.2 b 0.11 0.49</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA424-1P-01</td>
<td>N.O. Sub-plate side</td>
<td>Rc 1/8</td>
<td>2.4</td>
<td>0.19 b 0.57 1.9 b 0.32 0.45</td>
<td>M5 x 0.8</td>
</tr>
<tr>
<td>VZA424-2P-01</td>
<td>N.O. Body side</td>
<td>Rc 1/8</td>
<td>2.4</td>
<td>0.19 b 0.57 1.9 b 0.32 0.45</td>
<td>M5 x 0.8</td>
</tr>
</tbody>
</table>

Note 1) Base mounted type model no. without sub-plate are VZA2124-1P, VZA4124-1P.

Note 2) Value at the maximum port size

### Caution

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 3 to 9 for 3/4/5 Port Solenoid Valve Precautions.

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**Symbol**

1. VZA212\(\frac{1}{2}\)
2. VZA222\(\frac{1}{2}\)
3. VZA412\(\frac{1}{2}\)
4. VZA422\(\frac{1}{2}\)

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### Impact/Vibration resistance (m/s²)

- Impact resistance: No malfunction from test using drop impact tester, to axis and right angle direction of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)
- Vibration resistance: No malfunction from test with 45 to 2000 Hz one sweep, to axis and right angle direction of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

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How to Order Manifold

**VV3ZA2** - 50 - 03 1 - 01

- **Manifold specifications** (P, EA, EB port size)
  - Symbol | Piping type | P, EA, EB port size
  - 20 | Body ported | Rc1/8
  - 50 | Base mounted | Nil

- **Thread type**
  - Nil
  - Rc
  - N
  - NPT
  - F
  - NPTF
  - T
  - G

- **Cylinder port size on the base**
  - Nil
  - Body ported 20 type
  - M5
  - M5 x 0.8
  - 01
  - Rc1/8
  - C4
  - Built-in ø4 One-touch fitting
  - C6
  - Built-in ø6 One-touch fitting

- **Combination symbol** (port specifications)
  - 1
  - P, EA, EB common/side ported

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How to Order Valve

**VZA2** 1 4 - P - -

- **Actuation**
  - 1
  - Normally closed
  - 2
  - Normally open

- **Body type**
  - 2
  - Body ported
  - 4
  - Base mounted

- **Option**
  - F
  - With foot bracket

- **Thread type**
  - Nil
  - Rc, M5
  - N
  - NPT
  - F
  - NPTF
  - T
  - G

- **Port size**
  - Symbol (Body ported/Base mounted)
  - Nil
  - Without sub-plate
  - M5
  - M5 x 0.8
  - 01
  - Rc1/8

- **Pilot port piping type**
  - Nil
  - Body ported (Body side)
  - 1
  - Sub-plate side (Internal)
  - 2
  - Base side (External)

With Bracket

<table>
<thead>
<tr>
<th>VZA200</th>
<th>Air operated valve model</th>
<th>VZA200-2-P-M5-F</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Bracket assembly part no.</td>
<td>VZ2000-37A-2</td>
</tr>
</tbody>
</table>

* To order valves and blanking plate assembly mounted onto the manifold, list valves and blanking plate assembly with manifold base part number.

<Example: VZA200 Body ported>

VZ3ZA2-20-031 ........................................1 pc.
VZA212-P-M5 ........................................2 pcs.
VVZ200-32A-1 ........................................1 pc.

<Example: VZA200 Base mounted>

VZ3ZA2-50-031-01 ....................................1 pc.
VZA214-P ..............................................2 pcs.
VVZ200-31A-1 ........................................1 pc.

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[SMC]
VZA200/400 Series

How to Order Manifold

VZA400 Series Manifold

**Manifold specifications**

(P, EA, EB port size)

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Piping type</th>
<th>P, EA, EB port size</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>Body ported</td>
<td>Rc1/4</td>
</tr>
<tr>
<td>50</td>
<td>Base mounted</td>
<td></td>
</tr>
</tbody>
</table>

**Stations**

- 02: 2 Stations
- 10: 10 Stations

**Thread type**

- Nil
- Rc
- N: NPT
- T: NPTF
- F: G

**Cylinder port size on the base**

- Nil: Body ported 20 type
- 01: Rc1/8
- 02: Rc1/4
- C6: Built-in ø6 One-touch fitting
- C8: Built-in ø8 One-touch fitting

**Combination symbol (port specifications)**

- 1: P, EA, EB common/side ported

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How to Order Valve

**VZA4 1 4 - 2 P**

**Actuation**

- 1: Normally closed
- 2: Normally open

**Body type**

- 2: Body ported
- 4: Base mounted

**Option**

- F: With foot bracket

**Thread type**

- Nil
- Rc
- N: NPT
- T: NPTF
- F: G

**Port size**

- Symbol: Body ported, Base mounted
- Nil: Without sub-plate
- M5: M5 x 0.8
- 01: Rc1/8

**Pilot port piping type**

- Nil: Body ported (Body side)
- 1: Sub-plate side (Internal)
- 2: Base side (External)

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With Bracket

<table>
<thead>
<tr>
<th>VZA400</th>
<th>Air operated valve model</th>
<th>VZA4-4-2-P-01-F</th>
<th>Bracket assembly part no.</th>
<th>VZ4000-22A</th>
</tr>
</thead>
</table>

* To order valves and blanking plate assembly mounted onto the manifold, list valves and blanking plate assembly with manifold base part number.

Example: VZA400 Body ported

- VV3ZA4-20-031 - 1 pc.
- VZA412-P-01 - 2 pcs.
- VVZ400-32A-1 - 1 pc.

Example: VZA400 Base mounted

- VV3ZA4-45-003-02 - 1 pc.
- VZA414-2P - 2 pcs.
- VVZ400-32A-2 - 1 pc.

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*Note:* Only VZA4-4-2-P-01 applicable.
Dimensions

Body ported: VZA2□2-P-M5

Foot bracket
Body ported: VZA2□2-P-M5-F

3 Port Air Operated Valve  VZA200/400 Series
**VZA200/400 Series**

**Dimensions**

**Base mounted: VZA2□-4□-01**

![Diagram of the VZA200 Series valve](image)

**International Thread Standards Other than Rc**

Rc specifications are standard for all ports, however, NPT, NPTF and G are available for international markets. Add the appropriate symbol following the port size in the standard part number.

**<How to Order Valve>**

- **VZA412 – P – 01**
- **VZA414 –1P – 01**

![Thread type chart](chart)

**<How to Order Manifold>**

**VV3ZA2 – 50 – 031 – 01**

![Thread type chart](chart)

**<How to Order Sub-plate>**

**VZA200 – S – 01**

![Thread type chart](chart)

* Mounting bolt and gasket are not included.

**Sub-plate Assembly Part No.**

<table>
<thead>
<tr>
<th>Model</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>VZA200</td>
<td>VZA200-S-01</td>
</tr>
<tr>
<td>VZA400</td>
<td>VZA400-S-01</td>
</tr>
</tbody>
</table>

**Dimensions**

- **Base mounted: VZA2□-4□-01**

![Diagram of the VZA200 Series valve](image)
3 Port Air Operated Valve  VZA200/400 Series

Dimensions

Body ported: VZA4□2-P-01

- Pilot port
- M5 x 0.8 Mounting hole
- 2 x ø3.4
- 2 x ø3.4 mounting hole (Non-locking)

Base mounted: VZA4□4□01-□02

- Pilot port
- Body side M5 x 0.8
- 2 x ø4.5 mounting hole

Sub-plate side M5 x 0.8

3 x Rc 1/8

Dimensions:

Body ported: VZA4□2-P-01

- Body ported: VZA4□2-P-01

Base mounted: VZA4□4□01-□02

- Base mounted: VZA4□4□01-□02

SYA
SYJA
VZA
VFA
VFRA
VPA4
SYJA
VZA
VTA
VGA
VPA
VPA3