Master valve  Discrete/manifold
5 port pilot operated valve

### 4F Series

- Applicable cylinder bore size: 10 to 250mm

#### Common specifications

<table>
<thead>
<tr>
<th>Descriptions</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Valve and solenoid type</td>
<td>Pilot operated soft spool</td>
</tr>
<tr>
<td>Working fluid</td>
<td>Compressed air</td>
</tr>
<tr>
<td>Max. working pressure (MPa)</td>
<td>1.0</td>
</tr>
<tr>
<td>Min. working pressure (MPa)</td>
<td>Refer to the main pressure on the below table.</td>
</tr>
<tr>
<td>Ambient temperature (°C)</td>
<td>-10 to 60</td>
</tr>
<tr>
<td>Fluid temperature (°C)</td>
<td>5 to 60</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required</td>
</tr>
<tr>
<td>Vibration/impact (m/s² (G))</td>
<td>50 (5) or less/300 (30) or less</td>
</tr>
<tr>
<td>Working environment</td>
<td>Not to be subject to corrosive environment</td>
</tr>
</tbody>
</table>

#### Individual specifications (valve discrete/manifold)

<table>
<thead>
<tr>
<th>Position No. of solenoid</th>
<th>Specifications</th>
<th>*1</th>
<th>Port size</th>
<th>Series No.</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td>Model No.</td>
</tr>
<tr>
<td></td>
<td></td>
<td></td>
<td>Effective sectional area (mm²)</td>
<td>Main pressure (MPa)</td>
</tr>
<tr>
<td></td>
<td>Model</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Air supply port</td>
<td></td>
<td>Cylinder port</td>
<td>Exhaust port</td>
</tr>
<tr>
<td></td>
<td>Port size</td>
<td></td>
<td></td>
<td>Port size</td>
</tr>
<tr>
<td></td>
<td>Series No.</td>
<td></td>
<td></td>
<td>Series No.</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>2-position single</th>
<th>2-position double</th>
<th>3-position A/B/R connection</th>
<th>3-position P/A/B connection</th>
</tr>
</thead>
<tbody>
<tr>
<td>(C1) (C2)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

#### Individual specifications (valve discrete/manifold)

- Port sizes other than the table above are available as option. Refer to "How to order" on the following page.
How to order discrete valve/body porting

**Example of model number**
4F111-06-P
Model: 4F1
- **A** Solenoid position : 2-position single
- **B** Port size : Rp 1/8
- **C** Option : P type foot bracket

How to order discrete valve/sub base porting

**Example of model number**
4F411-08-P
Model: 4F4
- **A** Solenoid position : 2-position single
- **B** Port size : Rc 1/4
- **C** Option : P type foot bracket
How to order manifold/body porting

• Master valve for manifold

- 4F2
  - 1
  - 1
  - 08

- 4F3
  - 1
  - 8
  - 08

- Refer to following cautions.

- 4F3: Until S5
- 4F1.2: Until S4
- 4F0: Until S2

• Manifold

- M
  - 4F3
  - 1
  - 1
  - 08
  - 3

- CU
  - S1
  - S2
  - S3
  - S4
  - S5
  - MP

When mix manifold, indicate usage of solenoid type. Please refer to Page 602.

<table>
<thead>
<tr>
<th>Model</th>
<th>Body porting</th>
</tr>
</thead>
<tbody>
<tr>
<td>M4F0</td>
<td>GASKET KIT</td>
</tr>
<tr>
<td>M4F1</td>
<td>GASKET KIT</td>
</tr>
<tr>
<td>M4F1-i</td>
<td>GASKET KIT</td>
</tr>
</tbody>
</table>

Caution for model No. selection

Use the proper discrete master valve of manifold according to following examples.

- When 4F0 to 4F1

  - 4F1
    - A
    - 1
    - B

  When repair parts are necessary, please purchase gasket kit as following together.

  - M4F0-GASKET KIT
  - M4F1-GASKET KIT
  - M4F1-i-GASKET KIT

- When 4F2/4F3

  - Exhaust air mounting style CL, CU, IL, IU

    - 4F3
      - A
      - 1
      - B

  When repair parts are necessary, please purchase gasket kit as following together.

  - M4F2-GASKET KIT
  - M4F3-GASKET KIT

- When exhaust air mounting style C and I

  - 4F3
    - A
    - 8
    - B
    - D

  (When “D” is C: Blank, while I: Indicate I.)

  When repair parts are necessary, please purchase gasket kit as following together.

  - M4F2-2-GASKET KIT
  - M4F3-2-GASKET KIT

Example of model number

M4F341-08-5-C

- Model: M4F3
  - A: Solenoid position : 3-position A/B/R connection
  - B: Port size : Rp 1/4
  - C: Station No. : 5 station
  - D: Exhaust air mounting style : Common exhaust
How to order manifold/sub base porting

- Master valve for manifold

4F4 1 8 00

- Manifold

M 4F4 1 08 3 C S1 S2 S3 S4 S5 MP

When mix manifold, indicate usage of solenoid type. Please refer to Page 626.

<Example of model number>

M4F441-08-5-C
Model: M4F4
A Solenoid position: 3-position A/B/R connection
B Port size: Rc 1/4
C Station No.: 5 station
D Exhaust air mounting style: Common exhaust

Symbol | Descriptions
--- | ---
A | Solenoid position
1 | 2-position single
2 | 2-position double
3 | 3-position all ports closed
4 | 3-position A/B/R connection
5 | 3-position P/A/B connection
8 | Mix manifold

B | Port size
08 | Rc 1/4
08Y | Rp1/4 (cylinder port rear side)
10 | Rc 3/8
10Y | Rc 3/8 (cylinder port on rear side)
D15 | Rc 1/2
E20 | Rc 3/4

C | Station #
2 | 2 station
to | to
10 | 10 station

d | Exhaust air mounting style
0E | Common exhaust
4F0 to 4F1 Series
Master valve: Body porting

Dimensions

A4F011
• 2-position single

4F021
• 2-position double

4F111/4F121
• 2-position single, double

4F131/4F141
• 3-position all ports closed, A/B/R connection

Symbol | Port size | Port C | Fixing hole | Pilot port
-------|-----------|--------|-------------|------------
M5     | Rp 1/8    | 10.4   | 06          | 15

Symbol | Port size | Port C | Fixing hole | Pilot port
-------|-----------|--------|-------------|------------
4F111  | 84.5      | 146    | 47.5        | 41.5
4F121  | 86        | 17     | 17          | 47.5

Symbol | Port size | Port C | Fixing hole | Pilot port
-------|-----------|--------|-------------|------------
06     | Rp 1/8    | 20     | 08          | 22
**4F2 to 4F3 Series**

**Master valve: Body porting**

### 4F211/4F221
- 2-position single, double

### 4F231/4F241
- 3-position all ports closed, A/B/R connection

### 4F311/4F321
- 2-position single, double

### 4F331/4F341
- 3-position all ports closed, A/B/R connection

---

**Dimensions**

**Symbol**

<table>
<thead>
<tr>
<th>Port Size</th>
<th>D</th>
</tr>
</thead>
<tbody>
<tr>
<td>08</td>
<td>Rc 1/4</td>
</tr>
<tr>
<td>10</td>
<td>Rc 3/8</td>
</tr>
</tbody>
</table>
4F4 to 4F5 Series
Master valve: Sub base porting

Dimensions

4F411/4F421
- 2-position single

4F511/4F521
- 2-position single, double

4F431/4F441/4F451
- 3-position all ports closed, A/B/R connection

4F531/4F541/4F551
- 3-position all ports closed, A/B/R connection

Symbol

<table>
<thead>
<tr>
<th>Port size D</th>
<th>08</th>
<th>Rc 1/4</th>
</tr>
</thead>
<tbody>
<tr>
<td>10</td>
<td>Rc 3/8</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Port size D</th>
<th>Symbol</th>
<th>10</th>
<th>Rc 3/8</th>
</tr>
</thead>
<tbody>
<tr>
<td>15</td>
<td>Rc 1/2</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
4F6 to 4F7 Series
Master valve: Sub base porting

Dimensions

4F611/4F621
- 2-position single, double

4F631/4F641/4F651
- 3-position all ports closed, A/B/R connection

4F711/4F721
- 2-position single, double

4F731/4F741/4F751
- 3-position all ports closed, A/B/R connection

Symbol
Port size D

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size D</th>
</tr>
</thead>
<tbody>
<tr>
<td>D</td>
<td>Rc 1/2</td>
</tr>
<tr>
<td></td>
<td>Rc 3/4</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size D</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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<tr>
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