Large flow capacity
Yet compact size.

Low power consumption
1.8 W (DC)

Exhausting equipment for pilot valve not required.
Common exhaust port for main and pilot valve (VF1000/3000)

VF1000
C: 0.53 dm³/(s·bar)
{4/2 → 5/3 (A/B → EA/EB)}
26.4 mm width

VF3000
C: 3.1 dm³/(s·bar)
{4/2 → 5/3 (A/B → EA/EB)}
32 mm width

VF5000
C: 12 dm³/(s·bar)
{4/2 → 5/3 (A/B → EA/EB)}
32 mm width
Series VF1000/3000/5000

Many combinations available to fit your needs.

Series Variations/Port Size

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>VF1000</th>
<th>VF3000</th>
<th>VF5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>2 position single</td>
<td>2 position double</td>
<td>2 position single</td>
<td></td>
</tr>
<tr>
<td>B port</td>
<td>B port</td>
<td>B port</td>
<td></td>
</tr>
<tr>
<td>Body mounted</td>
<td>Body mounted</td>
<td>Body mounted</td>
<td></td>
</tr>
<tr>
<td>VF1000</td>
<td>VF3000</td>
<td>VF5000</td>
<td></td>
</tr>
</tbody>
</table>

Piping

<table>
<thead>
<tr>
<th>Body ported</th>
<th>Base mounted</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF1000</td>
<td>VF3000</td>
</tr>
<tr>
<td>VF5000</td>
<td>(Illustration: VF3000)</td>
</tr>
</tbody>
</table>

Rated Voltage

<table>
<thead>
<tr>
<th>AC/DC</th>
<th>100 V, 200 V, 12 V* V, 24 V* V, 48 V*, 110 V*, 220 V* V, 240 V*</th>
</tr>
</thead>
<tbody>
<tr>
<td>DC/</td>
<td>24 V*, 6 V*, 12 V* V, 48 V*, 100 V* V, 110 V* (+ Option)</td>
</tr>
</tbody>
</table>

Surge Voltage Suppressor/Indicator Light

<table>
<thead>
<tr>
<th>With light/surge voltage suppressor (S) (Grommet type)</th>
</tr>
</thead>
</table>

Pilot Exhaust

<table>
<thead>
<tr>
<th>Pilot valve individual exhaust (Standard) Pilot exhaust port</th>
</tr>
</thead>
</table>

Manifold Variations

<table>
<thead>
<tr>
<th>Valve Type</th>
<th>VF1000</th>
<th>VF3000</th>
<th>VF5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Manifold type</td>
<td>A, B port</td>
<td>EXH type</td>
<td>Manifold type</td>
</tr>
<tr>
<td>B mount</td>
<td>Valve</td>
<td>Common, Individual</td>
<td>B mount</td>
</tr>
</tbody>
</table>

Note) VF1000/VF3000 only.

Electrical Entry

<table>
<thead>
<tr>
<th>Grommet (G)</th>
<th>Grommet terminal (E)</th>
<th>Conduit terminal (T)</th>
<th>Din terminal (D), (Y)</th>
<th>L plug connector (L)</th>
<th>M plug connector (M)</th>
</tr>
</thead>
</table>

Pilot Exhaust

<table>
<thead>
<tr>
<th>Common exhaust type for main and pilot valve (VF1000, VF3000)</th>
</tr>
</thead>
</table>

Manual Override

<table>
<thead>
<tr>
<th>Push type</th>
<th>Locking type B (Slotted)</th>
<th>Locking type C (Manual)</th>
</tr>
</thead>
</table>

AC/DC 24 V*, 6 V*, 12 V* V, 48 V*, 100 V* V, 110 V* (+ Option)
**Precautions**

Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 3-13-2.

### Light/Surge Voltage Suppressor

**Caution**

Exhaust air from pilot valve will flow to main valve exhaust port. Exhaust air from main valve will not flow to pilot valve side due to a check valve.

**Purpose**
- Not to exhaust mist from PE (Pilot Exhaust) port to protect the surrounding environment
- To lower the exhaust noise from PE port when switching valve.
- To prevent silencer mounted to PE port from getting plugged in dusty environments.

**Caution**
Common exhaust valves are effective for use with common exhaust manifolds, however an exhaust cleaner (Series AMC) should be installed when used in this manner. Make sure the exhaust port operates properly after installing the exhaust cleaner.

### Common Exhaust Type for Main and Pilot

Plugging one of the cylinder ports (A or B) enables use as a normally closed (N.C.) or normally open (N.O.) 3 port valve. It is convenient when 3 port valve is needed on a manifold, etc., but it can’t be used in special applications such as using as a non-leakage valve. Use it with the exhaust port leaving open.

### Interchangeability with V1000 and V3000

V1000 and V3000 are respectively interchangeable with VF1000 and VF3000. Mounts are the same however, care must be taken because the main valve switching differs from the VF3000 to the V3000.

1. **When cylinder port is body ported.**
   - Port position of CYL1 and CYL2 are opposites. Make sure of the port symbol and pipe so that back actuation does not occur.

2. **When cylinder port is base mounted.**
   - When the VF3000 is installed on sub-plate or base mounted manifold (B1, B2) in the same position with V3000, air flow will be reversed. Follow either of these installation procedures.
   - A. Install the VF3000 on the sub-plate or manifold base in the opposite direction.
   - B. Install the VF3000 in the same position as the V3000 but reverse the piping of the CYL port.

### Wiring

Grommet with surge voltage suppressor at DC voltage has +/- direction. Connect to the power source as follows. DIN connection and Terminal connection are free from +/- direction. Connect no.1 and 2 terminals to the power source.

#### For Grommet

- **Lead wire color**
  - Red
  - Black

- **Wiring**
  - DIN terminal and Terminal block
  - With DIN terminal block
  - With terminal block

  ![Diagram](image)

- **Applicable cable O.D.**
  - Type D: ø6 to ø8 mm
  - Type Y: ø4.5 to ø7 mm
  - Type T: ø6 to ø8 mm
  - Type E: ø2.3 to ø2.8 mm

- **Applicable crimp terminal**
  - Type E, T: 1.25-3, 1.25-3S, 1.25Y-3N, 1.25Y-3S
  - “Type R” or “Type Y” crimp terminal cannot be used in "Type D, Y".

---

**Table**

<table>
<thead>
<tr>
<th>Voltage model</th>
<th>Circuit Symbol</th>
<th>Voltage model</th>
<th>Circuit Symbol</th>
</tr>
</thead>
<tbody>
<tr>
<td>AC</td>
<td>☐</td>
<td>DC</td>
<td>☐</td>
</tr>
</tbody>
</table>

**Note**

- Surge voltage suppressor is available only for grommet type.

---

**Diagram**

- Light/Surge Voltage Suppressor
  - Grommet (G)
  - Conduit terminal (T)
  - DIN terminal (Y)
  - L plug connector (L)
  - M plug connector (M)

- Common Exhaust Type
  - Exhaust air from pilot valve will flow to main valve exhaust port. Exhaust air from main valve will not flow to pilot valve side due to a check valve.

- Interchangeability with V1000 and V3000
  - V1000 and V3000 are respectively interchangeable with VF1000 and VF3000. Mounts are the same however, care must be taken because the main valve switching differs from the VF3000 to the V3000.

- Precautions
  - Be sure to read before handling. For Safety Instructions and Solenoid Valve Precautions, refer to page 3-13-2.

---

**Image**

- Diagram of surge voltage suppressor and grommet connection.
**Caution**

<table>
<thead>
<tr>
<th>Series: VF1000/3000/5000</th>
</tr>
</thead>
</table>

**Supply**
- VF1000: P
- VF3000: P (SUP) P
- VF5000: P

**Cylinder**
- A, B
- A (CYL1)
- B (CYL2)

**EXH outlet**
- EA, EB
- R1 (EXH2)
- R2 (EXH1)

**JIS symbol**
- Single solenoid

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Lead wire</th>
</tr>
</thead>
<tbody>
<tr>
<td>1: P (SUP)</td>
<td>Red</td>
</tr>
<tr>
<td>2: B (CYL1)</td>
<td>Red</td>
</tr>
<tr>
<td>3: R2 (EXH1)</td>
<td>Gray</td>
</tr>
<tr>
<td>4: A (CYL2)</td>
<td>Blue</td>
</tr>
<tr>
<td>5: R1 (EXH2)</td>
<td>Gray</td>
</tr>
</tbody>
</table>

**2. Detaching**
To detach a socket from a connector, pull out the lead wire while pressing the socket's hook with a stick having a thin tip (approx. 1 mm). If the socket will be used again, first spread the hook outward.

**Plug Connector Lead Wire Length**
Standard length is 300 mm, but the following lengths are also available.

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Lead wire length</th>
</tr>
</thead>
<tbody>
<tr>
<td>Nil</td>
<td>300 mm</td>
</tr>
<tr>
<td>1</td>
<td>100 mm</td>
</tr>
<tr>
<td>2</td>
<td>150 mm</td>
</tr>
<tr>
<td>3</td>
<td>200 mm</td>
</tr>
<tr>
<td>4</td>
<td>250 mm</td>
</tr>
<tr>
<td>5</td>
<td>300 mm</td>
</tr>
</tbody>
</table>

**How to Order Connector Assembly**
DXT170 – 80 – A

**Mounting of Solenoid Valve and Pilot**
Install so that there is no slippage of a gasket, nor deformation, then tighten with the following tightening torque.

<table>
<thead>
<tr>
<th>Model</th>
<th>Pilot valve</th>
<th>Series VF1000</th>
<th>Series VF3000</th>
<th>Series VF5000</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF1</td>
<td>0.6 N·m</td>
<td>1.4 N·m</td>
<td>1.4 N·m</td>
<td>1.4 N·m</td>
</tr>
<tr>
<td>VF3</td>
<td>0.6 N·m</td>
<td>1.4 N·m</td>
<td>1.4 N·m</td>
<td>1.4 N·m</td>
</tr>
</tbody>
</table>

**Mounting Screw, Manifold Gasket**

<table>
<thead>
<tr>
<th>Model</th>
<th>Mounting screw</th>
<th>Gasket</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF1:30</td>
<td>Round head combination screw</td>
<td>DXT144-12</td>
</tr>
<tr>
<td>VF1:33</td>
<td>DXT031-44-1</td>
<td>DXT155-25-1</td>
</tr>
<tr>
<td>VF3:30</td>
<td>M4 x 39.5</td>
<td>DXT031-30-2</td>
</tr>
<tr>
<td>VF3:33</td>
<td>With washer</td>
<td>DXT156-9-1</td>
</tr>
<tr>
<td>VF3:50</td>
<td>AX620-32-1</td>
<td>DXT156-9-2</td>
</tr>
</tbody>
</table>

**How to Calculate the Flow Rate**
For obtaining the flow rate, refer to page 3-1-10.
5 Port Pilot Operated Solenoid Valve
Rubber Seal

Series VF1000

Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure range</td>
<td>0.15 to 0.9 MPa</td>
</tr>
<tr>
<td>2 position single</td>
<td>0.1 to 0.9 MPa</td>
</tr>
<tr>
<td>2 position double</td>
<td></td>
</tr>
</tbody>
</table>

| Ambient and fluid temperature | -10 to 50°C (No freezing. Refer to page 3-13-4.) |
| Response time (1)             | 20 ms or less (at the pressure of 0.5 MPa) |
| Max. operating frequency      | 10 Hz |
| Lubrication                   | Not required |
| Manual override               | Non-locking push, Locking slotted, Locking knob |
| Mounting orientation          | Unrestricted |
| Shock/Vibration resistance (2) | 300/50 m/s² |
| Enclosure                     | Dustproof |
| Pilot valve EXH               | Individual exhaust, Common exhaust for main valve and pilot valve |

Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)

Note 2) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)

Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Electrical entry

- Grommet, Grommet terminal, Conduit terminal
- DIN terminal, L plug connector, M plug connector

- Coil rated voltage (V)
  - AC 50/60 Hz
  - DC
  - 100, 200, 12, 24, 48, 110, 220, 240°

- Apparent power
  - AC Inrush
  - 5.6 VA (50 Hz), 5.0 VA (60 Hz)
  - 3.4 VA (50 Hz), 2.3 VA (60 Hz)

- Power consumption
  - DC
  - 1.8 W, 2 W (With indicator light)

- Light/Surge voltage suppressor
  - AC
  - ZNR (Varistor), Neon bulb (LED100 V or less)
  - DC
  - ZNR (Varistor), LED (Neon bulb100 V or more)

Option

- Description
- Part no.
- Note
  - Bracket
  - DIN terminal
  - VF1144-8-1A
  - For VF1220
  - VF1144-8-3A
  - For VF1120
  - Silencer
  - AN120-M5
  - M5 x 0.8
  - Throttle valve
  - DXT154-34-1A
  - With element

Flow Characteristics/Weight

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Type of actuation</th>
<th>Port size</th>
<th>Flow characteristics</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF1120</td>
<td>2 position single</td>
<td>1/8</td>
<td>C: 0.76, b: 0.22, cv: 0.17, C: 0.53, b: 0.28, cv: 0.13, 0.16</td>
<td></td>
</tr>
<tr>
<td>VF1220</td>
<td>2 position double</td>
<td>1/8</td>
<td>C: 0.76, b: 0.22, cv: 0.17, C: 0.53, b: 0.28, cv: 0.13, 0.25</td>
<td></td>
</tr>
</tbody>
</table>

Note) Weight stands for grommet type.

Manifold

<table>
<thead>
<tr>
<th>Model (Note)</th>
<th>Applicable manifold type</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF1□□□-□□□-□□</td>
<td>Type 30 Common Valve</td>
</tr>
<tr>
<td>VF1□□□-□□□-□□</td>
<td>Type 31 Individual Valve</td>
</tr>
</tbody>
</table>

Note) For common exhaust type for main and pilot valve, model number will be VF113□, VF123□.
How to Order Pilot Valve Assembly

**Series VF1000**

**How to Order**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-cast</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Aluminum die-cast</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
</tbody>
</table>

**Component Parts**

**Replacement Parts**

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>8</td>
<td>Pilot valve assembly</td>
<td>—</td>
<td>SF4-1DZ50</td>
</tr>
</tbody>
</table>

Note) Refer to “How to Order Pilot Valve Assembly” on the right above.
2 Position Single Solenoid

Grommet: VF1120-□G- M5

[Diagram]

Grommet terminal: VF1120-□E- M5

[Diagram]

Conduit terminal: VF1120-□T- M5

[Diagram]

DIN terminal: VF1120-□D- M5
VF1120-□Y- M5

[Diagram]

Applicable cable O.D.
ø6 to ø8

Applicable cable O.D.
Y: ø4.5 to ø7
D: ø6 to ø8

Mounting hole
PE port
(P, A, B port)

Mounting screw
(Mounting screw)

Bracket
(Mounting hole)

Manual override
(Non-locking)

Manual override
(Non-locking)

Mounting hole
(P, A, B port)

Mounting hole
(P, A, B port)

Mounting hole
(P, A, B port)

Mounting hole
(P, A, B port)

With light/surge voltage suppressor

With light/surge voltage suppressor

With light/surge voltage suppressor
2 Position Single Solenoid

L plug connector: VF1120-□L□-M5

M plug connector: VF1120-□M□-M5
2 Position Double Solenoid

Grommet: VF1220-□G-M5

Grommet terminal: VF1220-□E-M5

Conduit terminal: VF1220-□T-M5

DIN terminal: VF1220-□D-M5

VF1220-□Y-M5

---

Series VF1000
5 Port Pilot Operated Solenoid Valve
Rubber Seal
2 Position Double Solenoid

**Specifications: Silencer**

<table>
<thead>
<tr>
<th>Model</th>
<th>AN120-M5</th>
<th>AN110-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Maximum operating pressure</td>
<td>1.0 MPa</td>
<td>1.0 MPa</td>
</tr>
<tr>
<td>Fluid temperature</td>
<td>5 to 60°C</td>
<td>5 to 60°C</td>
</tr>
<tr>
<td>Noise reduction</td>
<td>18 dB or more</td>
<td>21 dB or more</td>
</tr>
<tr>
<td>Effective area</td>
<td>5 mm²</td>
<td>35 mm²</td>
</tr>
<tr>
<td>Port size</td>
<td>M5 x 0.8</td>
<td>R 1/4</td>
</tr>
<tr>
<td>Material Body</td>
<td>BC-6</td>
<td>BC-6</td>
</tr>
<tr>
<td>Weight</td>
<td>3.3 g</td>
<td>20 g</td>
</tr>
<tr>
<td>Application</td>
<td>Single unit, Manifold (Individual EXH type)</td>
<td>Manifold (Common EXH type)</td>
</tr>
</tbody>
</table>

*At 0.5 MPa*

**Dimensions: Silencer**

<table>
<thead>
<tr>
<th>Type</th>
<th>AN120-M5</th>
<th>AN110-01</th>
</tr>
</thead>
<tbody>
<tr>
<td>Dimensions</td>
<td>A 17 38</td>
<td>B 5 6</td>
</tr>
<tr>
<td></td>
<td>C 8 13</td>
<td></td>
</tr>
</tbody>
</table>

**Flow Characteristics: Throttle Valve DXT154-34-1A**

Effective area: \( S = 2.2 \text{ mm}^2 \), \( C_v = 0.12 \)

Air passage: A port \( \rightarrow \) EA port (Throttle valve)

**Dimensions: Throttle Valve DXT154-34-1A**
**Series VF1000**

**Manifold Specifications**

<table>
<thead>
<tr>
<th>Manifold type</th>
<th>B mount (Single base type)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. number of stations</td>
<td>Max. 20 stations (Note)</td>
</tr>
</tbody>
</table>

Note) For more than 8 stations, supply air to both sides of P port and exhaust air from both sides of R port.

<table>
<thead>
<tr>
<th>Manifold base model</th>
<th>Exhaust port type</th>
<th>Piping/Port location</th>
<th>Port size</th>
<th>Applicable manifold model</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV5F1-30</td>
<td>Common EXH</td>
<td>Side Base Top Valve</td>
<td>1/8</td>
<td>VF130</td>
</tr>
<tr>
<td>VV5F1-31</td>
<td>Individual EXH</td>
<td>Side Side Top Valve</td>
<td>1/8 M5</td>
<td>VF131</td>
</tr>
</tbody>
</table>

Note 1) Supply (P port) is common.

Note 2) Direction of single solenoid: Same side of P(SUP) port.

**Option**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Applicable manifold model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Throttle valve</td>
<td>DXT154-34-1A</td>
<td>VV5F1-31</td>
</tr>
<tr>
<td>Silencer</td>
<td>AN120-M5</td>
<td>VV5F1-31</td>
</tr>
<tr>
<td>Blanking plate assembly</td>
<td>DXT144-13-2A</td>
<td>VV5F1-30/31</td>
</tr>
</tbody>
</table>

**How to Order Manifold**

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example) VV5F1-30-051 ······ 1 pc. (Manifold base)  
VF1230-1G-01 ······ 2 pcs. (Valve)  
VF1130-1G-01 ······ 2 pcs. (Valve)  
DXT144-13-2A ······ 1 pc. (Blanking plate assembly)

The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

**B Mount (Integrated type)**

**Common SUP/Individual EXH type**

**Type 30**

VV5F1 – 30 – 05 1

<table>
<thead>
<tr>
<th>Stations</th>
<th>02</th>
<th>2 stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>20 stations</td>
<td></td>
</tr>
</tbody>
</table>

**Applicable solenoid valve**  
VF1; 30-3-3-3-3-3  
VF1; 33-3-3-3-3-3

**Common SUP/Individual EXH type**

**Type 31**

VV5F1 – 31 – 05 3

<table>
<thead>
<tr>
<th>Stations</th>
<th>02</th>
<th>2 stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>20</td>
<td>20 stations</td>
<td></td>
</tr>
</tbody>
</table>

**Applicable blanking plate assembly**  
DXT144-13-2A
Series VF1000

Manifold

Common EXH: VV5F1-30-□□1

<table>
<thead>
<tr>
<th>Layer</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>74.5 102.5 129.5 157</td>
</tr>
<tr>
<td>L2</td>
<td>64.5 92 119.5 147</td>
</tr>
</tbody>
</table>

Individual EXH: VV5F1-31-□□3

<table>
<thead>
<tr>
<th>Layer</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>74.5 102.5 129.5 157</td>
</tr>
<tr>
<td>L2</td>
<td>64.5 92 119.5 147</td>
</tr>
</tbody>
</table>

L Dimension

<table>
<thead>
<tr>
<th>Layer</th>
<th>Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>74.5 102.5 129.5 157</td>
</tr>
<tr>
<td>L2</td>
<td>64.5 92 119.5 147</td>
</tr>
</tbody>
</table>
5 Port Pilot Operated Solenoid Valve
Rubber Seal
Series VF3000

Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Fluid</th>
<th>Operating pressure range</th>
<th>Temperature (°C)</th>
<th>Max. operating frequency (Hz)</th>
<th>Lubrication</th>
<th>Manual override</th>
<th>Mounting orientation</th>
<th>Shock/Vibration resistance</th>
<th>Enclosure</th>
<th>Pilot valve EXH</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF3230 (DIN terminal)</td>
<td>Air</td>
<td>0.15 to 0.9 MPa</td>
<td>−10 to 50</td>
<td>10 Hz</td>
<td>Not required</td>
<td>Non-locking push</td>
<td>Unrestricted</td>
<td>Restrictive</td>
<td>Dustproof</td>
<td>Individual exhaust</td>
</tr>
<tr>
<td>VF3330 (M plug connector)</td>
<td>Air</td>
<td>0.15 to 0.9 MPa</td>
<td>−10 to 50</td>
<td>10 Hz</td>
<td>Not required</td>
<td>Non-locking push</td>
<td>Unrestricted</td>
<td>Restrictive</td>
<td>Dustproof</td>
<td>Individual exhaust</td>
</tr>
<tr>
<td>VF3130 (L plug connector)</td>
<td>Air</td>
<td>0.15 to 0.9 MPa</td>
<td>−10 to 50</td>
<td>10 Hz</td>
<td>Not required</td>
<td>Non-locking push</td>
<td>Unrestricted</td>
<td>Restrictive</td>
<td>Dustproof</td>
<td>Individual exhaust</td>
</tr>
</tbody>
</table>

Response time (ms)

- 2 position single/double: 20 (at the pressure of 0.5 MPa)
- 3 position: 40 (at the pressure of 0.5 MPa)

Electrical entry

<table>
<thead>
<tr>
<th>Description</th>
<th>Coil rated voltage (V)</th>
<th>Allowable voltage fluctuation</th>
<th>Apparent power</th>
<th>Power consumption (W)</th>
<th>Light/Surge voltage suppressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF3230 (L plug connector)</td>
<td>AC 50/60 Hz</td>
<td>24, 6, 12, 48, 100, 110</td>
<td>5.6 VA (50 Hz), 5.0 VA (60 Hz)</td>
<td>1.8 W, 2 W (With indicator light)</td>
<td>ZNR (Varistor), Neon bulb (LED 100 V or less)</td>
</tr>
<tr>
<td>VF3330 (M plug connector)</td>
<td>DC</td>
<td></td>
<td>3.4 VA (60 Hz), 2.3 VA (60 Hz)</td>
<td></td>
<td>ZNR (Varistor), LED (Neon bulb 100 V or more)</td>
</tr>
</tbody>
</table>

Option

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Applicable valve model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket</td>
<td>DXT031-40-3A</td>
<td>For VF3122 only</td>
</tr>
<tr>
<td>Silencer</td>
<td>AN110-01</td>
<td></td>
</tr>
</tbody>
</table>

JIS Symbol

Single

- VF3130
- VF3330
- VF3430
- VF3530

Double

- VF3230
- VF3240

For details about certified products conforming to international standards, visit us at www.smcworld.com.
**Flow Characteristics/Weight**

<table>
<thead>
<tr>
<th>Model (1)</th>
<th>Type of actuation</th>
<th>Port size (2)</th>
<th>Flow characteristics</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF3122...01-F</td>
<td>2 position single</td>
<td>1/8</td>
<td>3.0 0.38 0.78 2.8 0.30 0.67 0.24</td>
<td></td>
</tr>
<tr>
<td>VF3...00...01</td>
<td>2 position single</td>
<td>1/8</td>
<td>3.0 0.38 0.78 2.8 0.30 0.67 0.21</td>
<td></td>
</tr>
<tr>
<td>VF3122...02-F</td>
<td>2 position single</td>
<td>1/4</td>
<td>4.0 0.36 1.0 3.1 0.32 0.75 0.24</td>
<td></td>
</tr>
<tr>
<td>VF3...02...02</td>
<td>2 position single</td>
<td>1/4</td>
<td>4.0 0.36 1.0 3.1 0.32 0.75 0.29</td>
<td></td>
</tr>
<tr>
<td>VF3...03...03</td>
<td>2 position single</td>
<td>3/8</td>
<td>3.0 0.42 0.82 3.1 0.27 0.79 0.44</td>
<td></td>
</tr>
</tbody>
</table>

**How to Order Pilot Valve Assembly**

**SF4 - 1 DZ - 50**

(A) Coil rated voltage

1. 100 VAC, 50/60 Hz
2. 200 VAC, 50/60 Hz
3. 110 to 120 VAC, 50/60 Hz
4. 220 VAC, 50/60 Hz
5. 24 VDC
6. 12 VDC
7. 240 VAC, 50/60 Hz
8. Other

(B) Electrical entry, Light/Surge voltage suppressor

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Electrical entry</th>
<th>Light/Surge voltage suppressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>G</td>
<td>Grommet</td>
<td>None</td>
</tr>
<tr>
<td>GS</td>
<td>Grommet terminal</td>
<td>With surge voltage suppressor</td>
</tr>
<tr>
<td>H</td>
<td>Grommet terminal</td>
<td>With surge voltage suppressor</td>
</tr>
<tr>
<td>HS</td>
<td>Grommet terminal</td>
<td>With light/surge voltage suppressor</td>
</tr>
<tr>
<td>E</td>
<td>Conduit terminal</td>
<td>None</td>
</tr>
<tr>
<td>T</td>
<td>Conduit terminal</td>
<td>With light/surge voltage suppressor</td>
</tr>
<tr>
<td>D</td>
<td>DIN terminal</td>
<td>None</td>
</tr>
<tr>
<td>DZ</td>
<td>DIN terminal</td>
<td>With light/surge voltage suppressor</td>
</tr>
<tr>
<td>DO</td>
<td>DIN terminal</td>
<td>None</td>
</tr>
<tr>
<td>DOZ</td>
<td>DIN terminal</td>
<td>None</td>
</tr>
<tr>
<td>L</td>
<td>L plug connector</td>
<td>None</td>
</tr>
<tr>
<td>LZ</td>
<td>L plug connector</td>
<td>None</td>
</tr>
<tr>
<td>LN</td>
<td>Without lead wire</td>
<td>None</td>
</tr>
<tr>
<td>LNZ</td>
<td>Without lead wire</td>
<td>None</td>
</tr>
<tr>
<td>LO</td>
<td>Without lead wire</td>
<td>None</td>
</tr>
<tr>
<td>LOZ</td>
<td>Without lead wire</td>
<td>None</td>
</tr>
<tr>
<td>M</td>
<td>M plug connector</td>
<td>None</td>
</tr>
<tr>
<td>MN</td>
<td>M plug connector</td>
<td>None</td>
</tr>
<tr>
<td>MO</td>
<td>Without connector</td>
<td>None</td>
</tr>
<tr>
<td>MOZ</td>
<td>Without connector</td>
<td>None</td>
</tr>
</tbody>
</table>

**Manifold**

<table>
<thead>
<tr>
<th>Model (Note)</th>
<th>Manifold type</th>
<th>Type</th>
<th>EXH</th>
<th>A, B (CYL) port</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF3...30...30</td>
<td>B mount Type 30</td>
<td>Common</td>
<td>Valve</td>
<td></td>
</tr>
<tr>
<td>VF3...40...40</td>
<td>Type 40</td>
<td>Common</td>
<td>Base</td>
<td></td>
</tr>
<tr>
<td>VF3...50...50</td>
<td>Type 50 Individual</td>
<td>Base</td>
<td></td>
<td></td>
</tr>
<tr>
<td>VF3...60...60</td>
<td>Type 60, 61</td>
<td>Common</td>
<td>Valve</td>
<td></td>
</tr>
<tr>
<td>VF3...70...70</td>
<td>Type 70, 71 Individual</td>
<td>Valve</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Note**

1) For common exhaust type for main and pilot valve, model number will be VF3...33, VF3...43, VF3...83.
### How to Order

#### Body option

<table>
<thead>
<tr>
<th>0</th>
<th>Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>3</td>
<td>Common exhaust type for main and pilot valve</td>
</tr>
</tbody>
</table>

### Type of actuation

1. Single solenoid
2. Double solenoid
3. Closed center
4. Exhaust center
5. Pressure center

### Body type

6. For type 60 and 61 manifolds
7. For type 70 and 71 manifolds

### Rated voltage

<table>
<thead>
<tr>
<th>1</th>
<th>100 VAC, 50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>200 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>3</td>
<td>110 V to 120 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>4</td>
<td>220 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>5</td>
<td>24 VDC</td>
</tr>
<tr>
<td>6</td>
<td>12 VDC</td>
</tr>
<tr>
<td>7</td>
<td>240 VAC, 50/60 Hz</td>
</tr>
<tr>
<td>9</td>
<td>Other</td>
</tr>
</tbody>
</table>

### Light/Surge voltage suppressor

| 0 | None |
| 1 | With light/surge voltage suppressor |
| 2 | With surge voltage suppressor |

### Thread type

<table>
<thead>
<tr>
<th>Nil</th>
<th>Rc</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>N</td>
<td>NPT</td>
</tr>
<tr>
<td>T</td>
<td>NPTF</td>
</tr>
</tbody>
</table>

### Body ported single solenoid with bracket

**VF3122**

- 1
- G
- 02
- F

### Base mounted

#### For type 40 manifold

**VF3**

- 1
- 4
- 0
- 1
- G
- 02

### For type 50 manifold

**VF3**

- 1
- 50
- 0
- 1
- G
- 02

### For type 60, 61, 70, 71 manifold

**VF3**

- 1
- 6
- 0
- 1
- G
- 02

### Option

- F With bracket
- L, M plug connector: Max. 220 VAC
- L plug connector: AU: Max. 220 VAC

#### Electrical entry

- G Grommet (Lead wire: 300 mm)
- H Grommet (Lead wire: 600 mm)
- E Grommet terminal
- T Conduit terminal
- D DIN terminal
- L With lead wire
- LN Without lead wire
- LO Without connector
- M With lead wire
- MN Without lead wire
- MO Without connector

#### Manual override

- nil
- Non-locking push type
- B Locking type B
- C Locking type C

#### Port size (P, A, B port)

| 01 | 1/8 |
| 02 | 1/4 |

#### Port size (A, B port)

| 01 | 1/8 |
| 02 | 1/4 |

#### Port size

- Nil
- Sub-plate None
- 02
- 1/4
- 03
- 3/8

#### Electrical entry

- G Grommet (Lead wire: 300 mm)
- H Grommet (Lead wire: 600 mm)
- E Grommet terminal
- T Conduit terminal
- D DIN terminal
- L With lead wire
- LN Without lead wire
- LO Without connector
- M With lead wire
- MN Without lead wire
- MO Without connector
Series VF3000

Construction

Single solenoid

Double solenoid

3 position closed center

Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin (1)</td>
<td>Black (3)</td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Aluminum die-casted</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
</tbody>
</table>

Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-plate</td>
<td>DXT031-41-3EP</td>
<td>3/6 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT031-41-4EP</td>
<td>1/4 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td>Pilot valve assembly</td>
<td>SF4-□□□□□50</td>
<td>Refer to &quot;How to Order&quot; on page 3-4-14.</td>
</tr>
</tbody>
</table>

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

Thread type

Nil Rc  F G
N NPT T NPTF

Note 1) 3 position: Zinc die-casted
Note 2) 3 position: Aluminum
Note 3) 3 position: Metallic paint

Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin (1)</td>
<td>Black (3)</td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Aluminum die-casted</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
</tbody>
</table>

Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-plate</td>
<td>DXT031-41-3EP</td>
<td>3/6 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT031-41-4EP</td>
<td>1/4 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td>Pilot valve assembly</td>
<td>SF4-□□□□□50</td>
<td>Refer to &quot;How to Order&quot; on page 3-4-14.</td>
</tr>
</tbody>
</table>

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

Thread type

Nil Rc  F G
N NPT T NPTF

Note 1) 3 position: Zinc die-casted
Note 2) 3 position: Aluminum
Note 3) 3 position: Metallic paint

Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin (1)</td>
<td>Black (3)</td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Aluminum die-casted</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
</tbody>
</table>

Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-plate</td>
<td>DXT031-41-3EP</td>
<td>3/6 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT031-41-4EP</td>
<td>1/4 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td>Pilot valve assembly</td>
<td>SF4-□□□□□50</td>
<td>Refer to &quot;How to Order&quot; on page 3-4-14.</td>
</tr>
</tbody>
</table>

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

With Bracket/Body Ported: 2 Position Single Solenoid

Grommet: VF3122-□G-□/□F

Thread type

Nil Rc  F G
N NPT T NPTF

Note 1) 3 position: Zinc die-casted
Note 2) 3 position: Aluminum
Note 3) 3 position: Metallic paint

Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin (1)</td>
<td>Black (3)</td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Aluminum die-casted</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, NBR</td>
<td></td>
</tr>
</tbody>
</table>

Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Sub-plate</td>
<td>DXT031-41-3EP</td>
<td>3/6 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT031-41-4EP</td>
<td>1/4 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td>Pilot valve assembly</td>
<td>SF4-□□□□□50</td>
<td>Refer to &quot;How to Order&quot; on page 3-4-14.</td>
</tr>
</tbody>
</table>
Series VF3000

Body Ported: 2 Position Single Solenoid

L plug connector: VF3130-□L-□

- Light window (With light/surge voltage suppressor)
- Manual override (Non-locking)
- 3-Rc 1/8, 1/4 (P, A, B port)
- 2-ø4.3 (Mounting hole for manifold)
- 110.5 x 105.5 x 67

M plug connector: VF3130-□M-□

- Light window (With light/surge voltage suppressor)
- Manual override (Non-locking)
- 3-Rc 1/8, 1/4 (P, A, B port)
- 2-ø4.3 (Mounting hole for manifold)
- 122.5 x 67 x 61.5

- Lead wire length: ≅ 300

3-Rc 1/8, 1/4
(P, A, B port)

2-ø4.3
(Mounting hole for manifold)

2-ø4.2
(Mounting hole)

M5×0.8
(PE port)

3-Rc 1/8, 1/4
(P, A, B port)
Body Ported: 2 Position Double solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet: VF3□30-G-□0□

Grommet terminal: VF3□30-E-□0□

Conduit terminal: VF3□30-T-□0□

DIN terminal: VF3□30-D-□0□
VF3□30-Y-□0□
Series VF3000

Body Ported: 2 Position Double Solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

L plug connector: VF3□30-□□-□□

M plug connector: VF3□30-□□-□□
Base Mounted (With sub-plate): 2 Position Single Solenoid

Grommet: VF3140-G-03

Grommet terminal: VF3140-E-03

Conduit terminal: VF3140-T-03

DIN terminal: VF3140-D-03

Applicable cable O.D.: ø2.3 to ø2.8

Manual override (Non-locking) (Mounting hole)

PE port
(Piping port)

5-Rc 1/4, 3/8
(Piping port)

Applicable cable O.D.: ø6 to ø8

PE port
(Pilot EXH)

5-Rc 1/4, 3/8
(Piping port)

Applicable cable O.D.: ø4.5 to ø7

PE port
(Pilot EXH)

5-Rc 1/4, 3/8
(Piping port)

With light/surge voltage suppressor

Series VF3000
5 Port Pilot Operated Solenoid Valve
Rubber Seal
Series VF3000

Base Mounted (With sub-plate): 2 Position Single Solenoid

L plug connector: VF3140-□L□-03

M plug connector: VF3140-□M□-03
5 Port Pilot Operated Solenoid Valve
Rubber Seal Series VF3000

Base Mounted (With sub-plate): 2 Position Double Solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet: VF3□40□G-□0□

Grommet terminal: VF3□40□E-□0□

Conduit terminal: VF3□40□T-□0□

DIN terminal: VF3□40□D-□0□

Manual override (Non-locking)

Manual override (Non-locking)

Applicable cable O.D. ø2.3 to ø2.8

Applicable cable O.D. ø6 to ø8

: With light/surge voltage suppressor
Series VF3000

Base Mounted (With sub-plate): 2 Position Double Solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

**L plug connector: VF3□40-□L□-□□**

**M plug connector: VF3□40-□M□-□□**
Manifold Specifications

Option

- **How to Order Manifold**

  Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no. (Example) VV5F3-40-052-02····1 pc. (Manifold base) 
  
  VVF3140-1G············2 pcs. (Valve) 
  
  DXT031-38-1A·······1 pc. (Blanking plate assembly)

  In the case of more than 8 stations for B mount or more than 4 stations for S mount, supply air from both sides of P (SUP) port and exhaust from both sides of R (EXH) port.

  **Note 1)** Supply (P port) is common.
  
  **Note 2)** Common exhaust type for main and pilot valve is possible only in the valves of common exhaust.

**Series VF3000**

**Manifold Specifications**

<table>
<thead>
<tr>
<th>Style</th>
<th>Manifold base model</th>
<th>R (EXH) type</th>
<th>Piping/Port location</th>
<th>Port size</th>
<th>Applicable manifold model</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>B mount</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VV5F3-30</td>
<td>Common</td>
<td>Side</td>
<td>Top</td>
<td>¼</td>
<td>VF3-30</td>
</tr>
<tr>
<td>VV5F3-40</td>
<td>Common</td>
<td>Side</td>
<td>Bottom</td>
<td>¼</td>
<td>VF3-40</td>
</tr>
<tr>
<td>VV5F3-60</td>
<td>Individual</td>
<td>Side</td>
<td>Top</td>
<td>¼</td>
<td>VF3-60</td>
</tr>
<tr>
<td>VV5F3-61</td>
<td>Common</td>
<td>Side plate</td>
<td>Top</td>
<td>¼</td>
<td>VF3-61</td>
</tr>
<tr>
<td>VV5F3-70</td>
<td>Individual</td>
<td>Side plate</td>
<td>Bottom</td>
<td>¼</td>
<td>VF3-70</td>
</tr>
<tr>
<td>VV5F3-71</td>
<td>Individual</td>
<td>Side plate</td>
<td>Top</td>
<td>¼</td>
<td>VF3-71</td>
</tr>
<tr>
<td><strong>S mount</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>VV5F3-30</td>
<td>Common</td>
<td>Side plate</td>
<td>Top</td>
<td>¼</td>
<td>VF3-30</td>
</tr>
<tr>
<td>VV5F3-40</td>
<td>Common</td>
<td>Side plate</td>
<td>Bottom</td>
<td>¼</td>
<td>VF3-40</td>
</tr>
<tr>
<td>VV5F3-60</td>
<td>Individual</td>
<td>Side plate</td>
<td>Top</td>
<td>¼</td>
<td>VF3-60</td>
</tr>
<tr>
<td>VV5F3-61</td>
<td>Common</td>
<td>Side plate</td>
<td>Bottom</td>
<td>¼</td>
<td>VF3-61</td>
</tr>
<tr>
<td>VV5F3-70</td>
<td>Individual</td>
<td>Side plate</td>
<td>Top</td>
<td>¼</td>
<td>VF3-70</td>
</tr>
<tr>
<td>VV5F3-71</td>
<td>Individual</td>
<td>Side plate</td>
<td>Bottom</td>
<td>¼</td>
<td>VF3-71</td>
</tr>
</tbody>
</table>

**Note)** Used to exhaust air individually from certain valves mounted on common exhaust manifolds “Type 30” and “Type 40”.

**B Mount (Integrated type)**

**Top ported/Common EXH type**

- **Type 30**

- **Type 40**

**Bottom ported/Common EXH type**

- **Applicable solenoid valve**

  - VFF30-02-02-000-50-05-01
  - VFF33-02-02-000-50-05-01
  - VFF34-02-02-000-50-05-01
  - VFF35-02-02-000-50-05-01

- **Applicable blanking plate assembly**

  - DX0T03-38-1A
  - DX0T03-38-1A
  - DX0T03-38-1A
  - DX0T03-38-1A

- **Applicable individual EXH spacer assembly**

  - DXT155-17-1A
  - DXT155-17-1A
  - DXT155-17-1A
  - DXT155-17-1A
Series VF3000

B Mount (Integrated type)

Bottom ported/Individual EXH type
Type 50

Applicable solenoid valve
VF3170-L50132

Applicable blanking plate assembly
DXT031-38-1A

S Mount (Separated type)

Top ported/Common EXH type
Type 60

Applicable solenoid valve
VF360-L50132

VF363-L50132

Side ported/Common EXH type
Type 61

Applicable solenoid valve
VF361-L50132

Top ported/Individual EXH type
Type 70

Applicable solenoid valve
VF3170-L50132

Side ported/Individual EXH type
Type 71

Applicable solenoid valve
VF3170-L50132
B Mount: VV5F3-30

Common EXH: VV5F3-30

Manual override (Non-locking)

<table>
<thead>
<tr>
<th>n</th>
<th>Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>L Dimension</td>
</tr>
</tbody>
</table>

| | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 |
| L | 83.5 | 111 | 136.5 | 166 | 191.5 | 221 | 246.5 | 276 | 303.5 | 331 | 355 | 386 | 413 | 441 | 469.5 | 496 | 533 | 551 | 578.5 |
| L | 71.5 | 99 | 126.5 | 154 | 181.5 | 209 | 236.5 | 264 | 291.5 | 319 | 346.5 | 374 | 401.5 | 429 | 456.5 | 484 | 511.5 | 539 | 566.5 |

: With light/surge voltage suppressor

Double

2n-Rc 1/8, 1/4

A, B port dimensions

Mounting hole dimension

(Pitch)

6-Rc 1/4

(Applicable cable O.D.)

ø2.3 to ø2.8

ø6 to ø8

Applicable cable O.D.

ø4.5 to ø7

ø6 to ø8

Mounting hole dimension

(Mountinghole)

---

VK
VZ
VF
VFR
VP4
VZS
VFS
VS4
VQ7
EVS
VFN
**B Mount: VV5F3-50, Spacer for Individual Exhaust**

**Individual EXH: VV5F3-50-□□4-02**

**Bottom ported**  
2n-Rc 1/4 (A, B port)  
6-Rc 1/4 (P, R port)  
\( \approx 300 \) (Lead wire length)  
\( 158.5 \text{ (3 position: 179)} \)  
\( 79 \text{ (3 position: 89.5)} \)  
\( 67.5 \text{ (3 position: 78)} \)  
\( 41.5 \text{ (3 position: 52)} \)  
\( 160.5 \text{ (3 position: 181)} \)  
\( 80 \text{ (3 position: 90.5)} \)  
\( \approx 300 \) (Lead wire length)

**L Dimension**

<table>
<thead>
<tr>
<th>n</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>83.5</td>
<td>111</td>
<td>136.5</td>
<td>166</td>
<td>195.5</td>
<td>221</td>
<td>246.5</td>
<td>276</td>
<td>302.5</td>
<td>331</td>
<td>355.5</td>
<td>386</td>
<td>413.5</td>
<td>441</td>
<td>468.5</td>
<td>496</td>
<td>533.5</td>
<td>551</td>
<td>578.5</td>
</tr>
<tr>
<td>L2</td>
<td>71.5</td>
<td>99</td>
<td>126.5</td>
<td>154</td>
<td>181.5</td>
<td>209</td>
<td>236.5</td>
<td>264</td>
<td>291.5</td>
<td>319</td>
<td>346.5</td>
<td>374</td>
<td>401.5</td>
<td>429</td>
<td>456.5</td>
<td>484</td>
<td>511.5</td>
<td>539</td>
<td>566.5</td>
</tr>
</tbody>
</table>

**Spacer for individual EXH/Applicable model: VV5F3-30, VV5F3-40**

**L Dimension**

<table>
<thead>
<tr>
<th>n</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
<th>13</th>
<th>14</th>
<th>15</th>
<th>16</th>
<th>17</th>
<th>18</th>
<th>19</th>
<th>20</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>83.5</td>
<td>111</td>
<td>136.5</td>
<td>166</td>
<td>195.5</td>
<td>221</td>
<td>246.5</td>
<td>276</td>
<td>302.5</td>
<td>331</td>
<td>355.5</td>
<td>386</td>
<td>413.5</td>
<td>441</td>
<td>468.5</td>
<td>496</td>
<td>533.5</td>
<td>551</td>
<td>578.5</td>
</tr>
<tr>
<td>L2</td>
<td>71.5</td>
<td>99</td>
<td>126.5</td>
<td>154</td>
<td>181.5</td>
<td>209</td>
<td>236.5</td>
<td>264</td>
<td>291.5</td>
<td>319</td>
<td>346.5</td>
<td>374</td>
<td>401.5</td>
<td>429</td>
<td>456.5</td>
<td>484</td>
<td>511.5</td>
<td>539</td>
<td>566.5</td>
</tr>
</tbody>
</table>
5 Port Pilot Operated Solenoid Valve
Rubber Seal Series VF3000

S Mount: VV5F3-70, VV5F3-71

Individual EXH: VV5F3-70-□□3

With light/surge voltage suppressor

Individual EXH: VV5F3-71-□□3

With light/surge voltage suppressor

L Dimension

<table>
<thead>
<tr>
<th>n</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>L1</td>
<td>127.5</td>
<td>154</td>
<td>180</td>
<td>206.5</td>
<td>233</td>
<td>259.5</td>
<td>286</td>
<td>312</td>
<td>338.5</td>
</tr>
<tr>
<td>L2</td>
<td>115.5</td>
<td>142</td>
<td>168</td>
<td>194.5</td>
<td>221</td>
<td>247.5</td>
<td>274</td>
<td>300</td>
<td>326.5</td>
</tr>
<tr>
<td>L3</td>
<td>99</td>
<td>125</td>
<td>151.5</td>
<td>178</td>
<td>204.5</td>
<td>231</td>
<td>257</td>
<td>283.5</td>
<td>310</td>
</tr>
</tbody>
</table>

n: Stations

P: 2n-Rc 1/8, 1/4

M: 4-M5

L: 8-M5 x 0.8 (Bracket mounting screw)

Mounting hole: 158.5 (3 position: 179)

79 (3 position: 89.5)

67.5 (3 position: 78)

41.5 (3 position: 52)

Mounting hole

Pilot EXH: 2n-Rc 1/4

EXH port

SUP port

Lead wire length

Applicable cable O.D.

ø2.3 to ø2.8

ø6 to ø8

ø4.5 to ø7

ø6 to ø8

ø7 to ø8

ø8 to ø8
5 Port Pilot Operated Solenoid Valve
Rubber Seal

Series VF5000

Compact and lightweight: 32 mm width
Compact yet provides a large flow capacity:
Sonic conductance:
C: 12 dm³/(s·bar)
{4/2 → 5/3(A/B → EA/EB)}
Low power consumption: 1.8 W (DC)

VF5220 (DIN terminal)
VF5220 (Grommet)
VF5544 (DIN terminal)
VF5544 (Grommet terminal)
VF5520 (Grommet)
VF5120 (Conduit terminal)
VF5120 (Grommet terminal)
Body ported
VF5244 (Grommet)

JIS Symbol

Single
VF5120
Double
VF5220
Closed center
VF5320
Exhaust center
VF5420
Pressure center
VF5520

Specifications

<table>
<thead>
<tr>
<th>Fluid</th>
<th>Air</th>
</tr>
</thead>
<tbody>
<tr>
<td>Operating pressure range</td>
<td>0.15 to 0.9 MPa</td>
</tr>
<tr>
<td>2 position single/3 position</td>
<td>0.1 to 0.9 MPa</td>
</tr>
<tr>
<td>2 position double</td>
<td>(No freezing, refer to page 3-13-4.)</td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>10 to 50°C</td>
</tr>
<tr>
<td>Response time (1)</td>
<td>2 position single/double 30 ms or less (at the pressure of 0.5 MPa)</td>
</tr>
<tr>
<td>3 position</td>
<td>50 ms or less (at the pressure of 0.5 MPa)</td>
</tr>
<tr>
<td>Max. operating frequency</td>
<td>5 Hz</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required</td>
</tr>
<tr>
<td>Manual override</td>
<td>Non-looking push type, Locking type B, Locking type C</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Shock/Vibration resistance (2)</td>
<td>300/50 m/s²</td>
</tr>
<tr>
<td>Enclosure</td>
<td>Dustproof</td>
</tr>
</tbody>
</table>

Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)
Note 2) Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)
Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)

Electrical entry

<table>
<thead>
<tr>
<th>Coil rated voltage (V)</th>
<th>AC50/60 Hz</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grommet, Grommet terminal</td>
<td>DC</td>
</tr>
<tr>
<td>100, 200, 124, 24, 48, 110, 220, 240</td>
<td></td>
</tr>
<tr>
<td>Allowable voltage fluctuation</td>
<td>24, 6, 12, 24, 48, 100, 110</td>
</tr>
<tr>
<td>−15 to +10% of rated voltage</td>
<td>100, 200, 124, 24, 48, 110, 220, 240</td>
</tr>
</tbody>
</table>

Apparent power (1)

| AC | Inrush |
| 5.6 VA (50 Hz), 5.0 VA (60 Hz) | 3.4 VA (50 Hz), 2.3 VA (60 Hz) |

Power consumption (Note)

| DC | 1.8 W, 2 W (With indicator light) |
| ZNR (Varistor), Neon bulb (LED 100 V or less) | |

Light/Surge voltage suppressor

| AC | ZNR (Varistor), Neon bulb (LED 100 V or less) |
| DC | ZNR (Varistor), LED (Neon bulb 100 V or more) |

Note 1) At rated voltage

Flow Characteristics/Weight

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Type of actuation</th>
<th>Port size</th>
<th>Flow characteristics</th>
<th>Weight (kg)</th>
</tr>
</thead>
<tbody>
<tr>
<td>VF5520-20-02</td>
<td>2 position single</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>VF5520-20-03</td>
<td>2 position double</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>VF5520-20-02</td>
<td>3 position closed center</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>VF5520-20-03</td>
<td>3 position closed center</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>VF5520-20-02</td>
<td>3 position exhaust center</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
<tr>
<td>VF5520-20-03</td>
<td>3 position exhaust center</td>
<td>2/3</td>
<td>1/4</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) With sub-plate
Note 2) Weight stands for grommet type
Note 3) Normal position

3-4-33
### How to Order

#### Type of actuation
- 1 Single solenoid
- 2 Double solenoid
- 3 Closed center
- 4 Exhaust center
- 5 Pressure center

#### Port size
- 02 1/4
- 03 5/8

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

#### Body ported VF5

<table>
<thead>
<tr>
<th>Port size</th>
<th>Manual override</th>
</tr>
</thead>
<tbody>
<tr>
<td>02 1/4</td>
<td>Nil</td>
</tr>
<tr>
<td>03 5/8</td>
<td>Non-locking push type</td>
</tr>
</tbody>
</table>

#### Base mounted VF5

<table>
<thead>
<tr>
<th>Port size</th>
<th>Manual override</th>
</tr>
</thead>
<tbody>
<tr>
<td>02 1/4</td>
<td>Nil</td>
</tr>
<tr>
<td>03 5/8</td>
<td>Non-locking push type</td>
</tr>
</tbody>
</table>

#### Electrical entry
- G Grommet (Lead wire length: 300 mm)
- H Grommet (Lead wire length: 600 mm)
- E Grommet terminal
- T Conduit terminal
- D DIN terminal
- DO DIN terminal

#### Light/Surge voltage suppressor
- Nil
- Z With light/surge voltage suppressor
- S With surge voltage suppressor

#### How to Order Pilot Valve Assembly

**SF4**

- **A** Coil rated voltage
  - 1 100 VAC, 50/60 Hz
  - 2 200 VAC, 50/60 Hz
  - 3 110 to 120 VAC, 50/60 Hz
  - 4 220 VAC, 50/60 Hz
  - 5 24 VDC
  - 6 12 VDC
  - 7 240 VAC, 50/60 Hz
  - 9 Other
- **B** Electrical entry, Light/Surge voltage suppressor
  - Symbol: G, GS, H, HS, E, EZ, T, TZ, D, DO, DOZ
  - Electrical entry: Lead wire length
  - Light/Surge voltage suppressor: None, With surge voltage suppressor, With light/surge voltage suppressor
- **C** Manual override
  - Nil
  - B Locking type B
  - C Locking type C

*Interchangeable with the previous model, “DXT154-A-□□□□□□”.*
Construction

Single solenoid

Double solenoid

3 position closed center

Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td>Platinum silver</td>
</tr>
<tr>
<td>2</td>
<td>Adapter plate</td>
<td>Resin (1)</td>
<td>Black (3)</td>
</tr>
<tr>
<td>3</td>
<td>End cover</td>
<td>Resin (11)</td>
<td>Black</td>
</tr>
<tr>
<td>4</td>
<td>Pilot body</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>5</td>
<td>Pilot cover</td>
<td>Resin</td>
<td></td>
</tr>
<tr>
<td>6</td>
<td>Piston</td>
<td>Resin (2)</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>Spool valve</td>
<td>Aluminum, HNBR</td>
<td></td>
</tr>
</tbody>
</table>

Note 1) 3 position: Aluminum die-casted
Note 2) 3 position: Aluminum
Note 3) 3 position: Metallic paint

Replacement Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Part no.</th>
<th>Note</th>
</tr>
</thead>
<tbody>
<tr>
<td>6</td>
<td>Sub-plate</td>
<td>DXT156-24-1aP</td>
<td>1/4 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT156-24-2aP</td>
<td>1/2 Aluminum die-casted</td>
</tr>
<tr>
<td></td>
<td></td>
<td>DXT156-24-3aP</td>
<td>1/2 Aluminum die-casted</td>
</tr>
<tr>
<td>9</td>
<td>Pilot valve assembly</td>
<td>SF4-□□□□-50</td>
<td>Refer to “How to Order” on page 3-4-34.</td>
</tr>
</tbody>
</table>

Sub-plate Part No.

DXT156-24-3/4P

Thread type

<table>
<thead>
<tr>
<th>Nil</th>
<th>Rc</th>
</tr>
</thead>
<tbody>
<tr>
<td>F</td>
<td>G</td>
</tr>
<tr>
<td>N</td>
<td>NPT</td>
</tr>
<tr>
<td>T</td>
<td>NPTF</td>
</tr>
</tbody>
</table>
Series VF5000

Body Ported: 2 Position Single Solenoid

**Grommet: VF5120-□G-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Grommet terminal: VF5120-□E-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Conduit terminal: VF5120-□T-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**DIN terminal: VF5120-□D-□□ VF5120-□Y-□□**

- Manual override (Non-locking)
- Applicable cable O.D. Y: ø4.5 to ø7
  D: ø6 to ø8

---

Series VF5000

Body Ported: 2 Position Single Solenoid

**Grommet: VF5120-□G-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Grommet terminal: VF5120-□E-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Conduit terminal: VF5120-□T-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**DIN terminal: VF5120-□D-□□ VF5120-□Y-□□**

- Manual override (Non-locking)
- Applicable cable O.D. Y: ø4.5 to ø7
  D: ø6 to ø8

---

Series VF5000

Body Ported: 2 Position Single Solenoid

**Grommet: VF5120-□G-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Grommet terminal: VF5120-□E-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**Conduit terminal: VF5120-□T-□□**

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)

**DIN terminal: VF5120-□D-□□ VF5120-□Y-□□**

- Manual override (Non-locking)
- Applicable cable O.D. Y: ø4.5 to ø7
  D: ø6 to ø8

---

SMC
Body Ported: 2 Position Double Solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet: VF5□20-□G-□□

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)
- 3-Ø4.3 (Mounting hole)
- 172.5 (3 position: 201.5)
- 120.5 (3 position: 149.5)
- 110.5 (3 position: 139.5)
- 196 (3 position: 225)
- 120.5 (3 position: 149.5)
- 110.5 (3 position: 139.5)
- 196 (3 position: 225)
- 197.5 (3 position: 226.5)

Conduit terminal: VF5□20-□T-□□

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)
- 110.5 (3 position: 139.5)
- 196 (3 position: 225)
- MAX.10
- 218.5 (3 position: 247.5)
- 120.5 (3 position: 149.5)
- 3-Ø4.3 (Mounting hole)
- 27
- 46
- ø6 to ø8
- Applicable cable O.D.

DIN terminal: VF5□20-□D-□□
VF5□20-□Y-□□

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)
- 110.5 (3 position: 139.5)
- 196 (3 position: 225)
- MAX.10
- 218.5 (3 position: 247.5)
- 120.5 (3 position: 149.5)
- 3-Ø4.3 (Mounting hole)
- 27
- 46
- ø4.5 to ø7
- ø6 to ø8

Applicable cable O.D.
Y: ø4.5 to ø7
D: ø6 to ø8

: With light/surge voltage suppressor

Grommet terminal: VF5□20-□E-□□

- Manual override (Non-locking)
- 2-Ø4.3 (Mounting hole for manifold)
- 110.5 (3 position: 139.5)
- 196 (3 position: 225)
- MAX.10
- 218.5 (3 position: 247.5)
- 120.5 (3 position: 149.5)
- 3-Ø4.3 (Mounting hole)
- 27
- 46
- ø2.3 to ø2.8

Applicable cable O.D.

: With light/surge voltage suppressor

Applicable cable O.D.
Y: ø2.3 to ø2.8
D: ø6 to ø8

MAX.10

Y: 217.5 (3 position: 246.5)
D: 218.5 (3 position: 247.5)

Applicable cable O.D.

: With light/surge voltage suppressor

Mounting hole

Mounting hole for manifold

Manual override
(Non-locking)

Piping port

PE port

Series VF5000

Rubber Seal

Series VF5000

VF

VZ

VK

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN
Base Mounted: 2 Position Single Solenoid

Grommet: VF5144-G-04

Conduit terminal: VF5144-T-04

DIN terminal: VF5144-Y-04

Series VF5000
Base Mounted: 2 Position Double Solenoid, 3 Position Closed Center/Exhaust Center/Pressure Center

Grommet: VF5□44□G-02-03

Conduit terminal: VF5□44□T-02-04

DIN terminal: VF5□44□D-02-04

Grommet terminal: VF5□44□E-02-04

With light/surge voltage suppressor
< >: 3 position
**Series VF5000**

**Manifold Specifications**

<table>
<thead>
<tr>
<th>Manifold base model</th>
<th>R (EXH) port type</th>
<th>Piping/Port location</th>
<th>Port size Rc</th>
<th>Applicable valves model</th>
</tr>
</thead>
<tbody>
<tr>
<td>VV5F5-20</td>
<td>Common</td>
<td>Side Base Side Valve</td>
<td>3/8</td>
<td>VFS20</td>
</tr>
<tr>
<td>VV5F5-21</td>
<td>Common</td>
<td>Side Side block Top Valve</td>
<td>1/2</td>
<td>VFS44</td>
</tr>
<tr>
<td>VV5F5-40</td>
<td>Common</td>
<td>Side Side block Bottom Valve</td>
<td>3/8</td>
<td>VFS44</td>
</tr>
</tbody>
</table>

* Its flow characteristics is 80% of that with sub-plate.

Note 1) P (SUP) port is all common.

Note 2) Model number for valve unit is that for application manifold.

**Option**

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Applicable manifold model</th>
</tr>
</thead>
<tbody>
<tr>
<td>Individual EXH spacer assembly</td>
<td>DXT156-20-1A</td>
<td>VV5F5-20/21</td>
</tr>
<tr>
<td></td>
<td>DXT156-20-3A</td>
<td>VV5F5-40</td>
</tr>
<tr>
<td>Blanking plate assembly</td>
<td>DXT156-19-1A</td>
<td>VV5F5-20/21</td>
</tr>
<tr>
<td></td>
<td>DXT156-19-2A</td>
<td>VV5F5-40</td>
</tr>
</tbody>
</table>

* Spacer is used when it is necessary to exhaust from certain valves individually.

**How to Order Manifold**

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.

(Example) VV5F5-20-051------1 pc. (Manifold base)  
VF5120-1G-03----2 pcs. (Valve)  
VF5220-1G-03----2 pcs. (Valve)  
DXT156-19-1A------1 pc. (Blanking plate assembly)

* The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.
B Mount (Integrated type)

Top ported/Common EXH type Type 20

Applicable solenoid valve
VF50/L50132/L50132/L50132/L50132

Applicable individual EXH spacer assembly
DXT156-20-1A

Applicable blanking plate assembly
DXT156-19-1A

Top ported/Common EXH type Type 21

Applicable solenoid valve
VF50/L50132/L50132/L50132/L50132

Applicable individual EXH spacer assembly
DXT156-20-1A

Applicable blanking plate assembly
DXT156-19-1A

Bottom ported/Common EXH type Type 40

Applicable solenoid valve
VF5044/L50132/L50132/L50132/L50132

Applicable individual EXH spacer assembly
DXT156-20-3A

Applicable blanking plate assembly
DXT156-19-2A
Common EXH: VV5F5-20, VV5F5-21

Individual EXH spacer assembly

L Dimension

<table>
<thead>
<tr>
<th>n: Stations</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁</td>
<td>93</td>
<td>126</td>
<td>159</td>
<td>192</td>
<td>225</td>
<td>258</td>
<td>291</td>
<td>324</td>
<td>357</td>
</tr>
<tr>
<td>L₂</td>
<td>80</td>
<td>113</td>
<td>146</td>
<td>179</td>
<td>212</td>
<td>245</td>
<td>278</td>
<td>311</td>
<td>344</td>
</tr>
</tbody>
</table>

Common EXH: VV5F5-21-□□1

Individual EXH spacer assembly

L Dimension

<table>
<thead>
<tr>
<th>n: Stations</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁</td>
<td>163</td>
<td>196</td>
<td>229</td>
<td>262</td>
<td>295</td>
<td>328</td>
<td>361</td>
<td>394</td>
<td>427</td>
</tr>
<tr>
<td>L₂</td>
<td>128</td>
<td>161</td>
<td>194</td>
<td>227</td>
<td>260</td>
<td>293</td>
<td>326</td>
<td>359</td>
<td>392</td>
</tr>
</tbody>
</table>
Common EXH: VV5F5-40

- With light/surge voltage suppressor

<table>
<thead>
<tr>
<th>L Dimension</th>
<th>n: Stations</th>
</tr>
</thead>
<tbody>
<tr>
<td>L₁</td>
<td>1</td>
</tr>
<tr>
<td>60</td>
<td>93</td>
</tr>
<tr>
<td>L₂</td>
<td>47</td>
</tr>
</tbody>
</table>

- Manual override (Non-locking)
- Double Port
- Single Port
- Pitch Mounting hole
- With individual EXH spacer
- 2n-Rc 1/4 (A, B port)
- 3-4-43 Series VF5000 5 Port Pilot Operated Solenoid Valve
- Rubber Seals: VK, VZ, VF, VFR, VP4, VZS, VFS, VS4, VQ7, EVS, VFN