3 Port Solenoid Valve Direct Operated Poppet Type

**Power consumption**

- **4 W** (Standard type)
  - Existing product: 4.8 W
- **1.8 W** (Energy-saving type)
  - Existing product: 2 W

**Vacuum applications**

-101.2 kPa

**A single valve with various valve functions**

(Universal porting type)

<table>
<thead>
<tr>
<th>Type</th>
<th>Function</th>
</tr>
</thead>
<tbody>
<tr>
<td>N.C. valve</td>
<td>N.O. valve</td>
</tr>
<tr>
<td>Divider</td>
<td>Selector valve</td>
</tr>
<tr>
<td>etc.</td>
<td></td>
</tr>
</tbody>
</table>

**Low concentration ozone resistant**

Rubber seal material: HNBR for main valve

**Mounting dimensions are interchangeable with existing product**

**Series VT307**
A variety of valve options

Continuous duty type
Vacuum specification type
Energy-saving type
Energy-saving type + Vacuum specification type

Application examples

1. Blow-off valve
2. Pressure release valve
3. Selector valve
4. Valve for vacuum
5. Divider valve
6. Single-acting cylinder drive
7. Double-acting cylinder drive
8. Double-acting cylinder drive (Exhaust center)

3 Port Solenoid Valve, Universal Porting Type Variations

<table>
<thead>
<tr>
<th>Poppet type</th>
<th>Direct operated poppet type</th>
<th>Pilot poppet type</th>
</tr>
</thead>
<tbody>
<tr>
<td>Series</td>
<td>VT307 VT317 VT325 VP300/500/700</td>
<td>New N.O. N.C. N.C. N.C.</td>
</tr>
<tr>
<td>Cv (P→A)</td>
<td>0.19 0.62 1.4 0.8 to 3.6</td>
<td>0.8 to 3.6</td>
</tr>
</tbody>
</table>

Refer to the SMC website for details: http://www.smcworld.com

Features 1
# 3 Port Solenoid Valve
Direct Operated Poppet Type

## Series VT307

### Rubber Seal

## How to Order

<table>
<thead>
<tr>
<th>Body type</th>
<th>Valve option</th>
<th>Pressure specifications</th>
<th>Rated voltage</th>
<th>Light/Surge voltage suppressor</th>
</tr>
</thead>
<tbody>
<tr>
<td>T Body ported</td>
<td>Nil Standard type</td>
<td>Nil Standard type (0.7 MPa)</td>
<td>1 100 VAC, 50/60 Hz</td>
<td>S With surge voltage suppressor (Grommet type only)</td>
</tr>
<tr>
<td>O For manifold</td>
<td>E Continuous duty type</td>
<td>K High-pressure type (1 MPa)</td>
<td>2 200 VAC, 50/60 Hz</td>
<td>Z With light/surge voltage suppressor (DIN terminal type only)</td>
</tr>
</tbody>
</table>

### Valve option

- Nil: Standard type
- E: Continuous duty type
- Y: Energy-saving type
- V: Vacuum specification type
- W: Energy-saving type, Vacuum specification type

### Pressure specifications

- Nil: Standard type (0.7 MPa)
- K: High-pressure type (1 MPa)

### Rated voltage

- 1 100 VAC, 50/60 Hz
- 2 200 VAC, 50/60 Hz
- 3 110 VAC, 50/60 Hz
- 4 220 VAC, 50/60 Hz
- 5 24 VDC
- 6 12 VDC
- 7 240 VAC, 50/60 Hz

### Electrical entry

<table>
<thead>
<tr>
<th>Grommet</th>
<th>DIN terminal</th>
</tr>
</thead>
<tbody>
<tr>
<td>G: 300 mm lead wire</td>
<td>D: With connector</td>
</tr>
</tbody>
</table>

### CE-compliant

<table>
<thead>
<tr>
<th>Nil</th>
<th>Q CE-compliant</th>
</tr>
</thead>
</table>

### Bracket

- Nil: None
- F: With bracket

### Thread type

- Nil: None
- F: G
- N: NPT
- T: NPTF

### Port size

- Nil: Without port (For manifold)
- 01: 1/8 (6A)
- 02: 1/4 (8A)

### Manifold

<table>
<thead>
<tr>
<th>Model</th>
<th>Applicable manifold type</th>
<th>Accessories</th>
</tr>
</thead>
<tbody>
<tr>
<td>VO307-Q</td>
<td>Common or individual exhaust</td>
<td>Function plate (DXT152-14-1A) Mounting screw (NXT013-3)</td>
</tr>
</tbody>
</table>

Note: It is not applicable to the continuous duty type. Refer to the accessories on page 5.

### Option

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bracket</td>
<td>DXT152-25-1A (With screw)</td>
</tr>
</tbody>
</table>
**Series VT307**

**Standard Specifications**

<table>
<thead>
<tr>
<th>Type of actuation</th>
<th>Direct operated type 2 position single solenoid</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fluid</td>
<td>Air</td>
</tr>
<tr>
<td>Operating pressure range</td>
<td>0 to 1 MPa (High-pressure type), 0 to 0.7 MPa (Standard type)</td>
</tr>
<tr>
<td>Ambient and fluid temperature</td>
<td>−10 to 50°C (No freezing)</td>
</tr>
<tr>
<td>Response time (Note 1)</td>
<td>20 ms or less (at 0.5 MPa)</td>
</tr>
<tr>
<td>Max. operating frequency</td>
<td>10 Hz</td>
</tr>
<tr>
<td>Lubrication</td>
<td>Not required (Use turbine oil Class 1 ISO VG332, if lubricated.)</td>
</tr>
<tr>
<td>Manual override</td>
<td>Non-locking push type</td>
</tr>
<tr>
<td>Mounting orientation</td>
<td>Unrestricted</td>
</tr>
<tr>
<td>Impact/Vibration resistance (Note 2)</td>
<td>150/50 m/s²</td>
</tr>
<tr>
<td>Electrical entry</td>
<td>Grommet, DIN terminal</td>
</tr>
<tr>
<td>Coil rated voltage (V)</td>
<td>AC (50/60 Hz) 100, 200, 110°, 220°, 240°</td>
</tr>
<tr>
<td></td>
<td>DC (24, 12°)</td>
</tr>
<tr>
<td>Apparent power (Note 3)</td>
<td>AC</td>
</tr>
<tr>
<td></td>
<td>Inrush 12.7 VA (50 Hz), 10.7 VA (60 Hz)</td>
</tr>
<tr>
<td></td>
<td>Holding 7.6 VA (50 Hz), 5.4 VA (60 Hz)</td>
</tr>
<tr>
<td>Power consumption</td>
<td>DC</td>
</tr>
<tr>
<td></td>
<td>Without indicator light: 4 W, With indicator light: 4.2 W</td>
</tr>
<tr>
<td>Light/Surge voltage suppressor (DIN terminal type only)</td>
<td>AC</td>
</tr>
<tr>
<td></td>
<td>Varistor, LED</td>
</tr>
<tr>
<td></td>
<td>DC</td>
</tr>
<tr>
<td></td>
<td>Diode, LED</td>
</tr>
</tbody>
</table>

**Flow-rate Characteristics/Weight**

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Port size</th>
<th>Flow-rate characteristics</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>VT307</td>
<td>1/8</td>
<td>1 → 2 (P → A) b Cv</td>
<td>0.71</td>
</tr>
<tr>
<td>VT307V (Vacuum spec. type)</td>
<td>1/8</td>
<td>0.68 0.27 0.17</td>
<td>0.35</td>
</tr>
<tr>
<td>VT307E (Continuous duty type)</td>
<td>1/8</td>
<td>0.65 0.36 0.17</td>
<td>0.35</td>
</tr>
<tr>
<td>VT307V (Energy-saving type)</td>
<td>1/8</td>
<td>0.63 0.35 0.17</td>
<td>0.35</td>
</tr>
<tr>
<td>VT307W (Energy-saving, Vacuum spec. type)</td>
<td>1/8</td>
<td>0.15 kg</td>
<td></td>
</tr>
<tr>
<td>VT307</td>
<td>1/4</td>
<td>0.71 0.31 0.19</td>
<td>0.15</td>
</tr>
<tr>
<td>VT307V (Vacuum spec. type)</td>
<td>1/4</td>
<td>0.71 0.31 0.19</td>
<td>0.15</td>
</tr>
<tr>
<td>VT307E (Continuous duty type)</td>
<td>1/4</td>
<td>0.71 0.31 0.19</td>
<td>0.15</td>
</tr>
<tr>
<td>VT307V (Energy-saving type)</td>
<td>1/4</td>
<td>0.71 0.31 0.19</td>
<td>0.15</td>
</tr>
<tr>
<td>VT307W (Energy-saving, Vacuum spec. type)</td>
<td>1/4</td>
<td>0.15 kg</td>
<td></td>
</tr>
</tbody>
</table>

Note) Values for a single valve unit. It is not applicable to the manifold. Refer to the manifold specifications on page 5.

**Valve Options**

**Continuous duty type: VT307E**

Exclusive use of VT307E is recommended for continuous duty with long time loading.

**Caution**

1. This model is for continuous duty, not for high cycle rates. But even in low cycle rates, if energizing the valve more than once a day, please consult with SMC.
2. Energizing solenoid should be done at least once in 30 days.

Specifications different from standard are as follows.

| Apparent power/AC | Inrush 7.9 VA (50 Hz), 6.2 VA (60 Hz) |
|                   | Holding 5.8 VA (50 Hz), 3.5 VA (60 Hz) |
| Power consumption/AC | 1.8 W, With indicator light: 2 W |
| Response time (Note 3) | 30 ms or less (at 0.5 MPa) |

Note) Refer to Note 1) of the standard specifications.

**Energy-saving type: VT307Y (VT307W)**

If low power consumption is required for electronic control, “VT307Y(W)” (1.8 W) is recommended.

Specifications different from standard are as follows.

- Power consumption/DC | 1.8 W, With indicator light: 2 W |
- Response time (Note 4) | 25 ms or less (at 0.5 MPa) |

Note) Refer to Note 1) of the standard specifications.

**Vacuum spec. type: VT307V (VT307W)**

This vacuum model has less air leakage than the standard model under low pressure. It is recommended for vacuum application.

**Caution**

Since this valve has slight air leakage, it can not be used for vacuum holding (including positive pressure holding) in the pressure container.

Specifications different from standard are as follows.

| Operating pressure range | −101.2 kPa to 0.1 MPa |

---

**Note**

Make sure that dust and/or other foreign materials do not enter the valve from the unused port (e.g. exhaust port).
## Construction

### De-energized

**Manual override**

Port 2 \(\rightarrow\) Block, Port 1 \(\leftarrow\) Block

### Energized

When energizing the molded coil 4, the armature 5 is magnetically attracted to the core 6, and through the push rod 7, it pushes down the poppet valve 2 and port 3 is closed. Then, port 1 and port 2 are connected. At this time, there will be gaps between the armature 5 and the core 6, but the armature 5 will be magnetically firmly attracted to the core 6.

**Air flow direction:**

Port 3 \(\rightarrow\) Block, Port 1 \(\leftarrow\) Block

### Component Parts

<table>
<thead>
<tr>
<th>No.</th>
<th>Description</th>
<th>Material</th>
<th>Color: White</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Body</td>
<td>Aluminum die-casted</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>Poppet valve</td>
<td>Aluminum, HNBR</td>
<td></td>
</tr>
<tr>
<td>3</td>
<td>Return spring</td>
<td>Stainless steel</td>
<td></td>
</tr>
<tr>
<td>4</td>
<td>Molded coil</td>
<td>Resin</td>
<td></td>
</tr>
</tbody>
</table>

### How to Use DIN Terminal

#### 1. Disassembly

1) After loosening the screw 1, then if the housing 2 is pulled in the direction of the screw 1, the connector will be removed from the body of equipment (solenoid, etc.).
2) Pull the screw 1 out of the housing 2.
3) On the bottom part of the terminal block 3, there’s a cut-off part 5. If a small flat head screwdriver is inserted between the opening in the bottom, terminal block 3 will be removed from the housing 2.
4) Remove the cable gland 4, plain washer 3 and rubber seal 6.

#### 2. Wiring

1) Pass the cable 7 through the cable gland 4, plain washer 5 and rubber seal 6 in this order, and then insert them into the housing 2.
2) Loosen the screw 1 attached to the terminal block 3. Then, pass the lead wire 13 through the terminal block 3 and tighten the screw 1 again.
   - Note 1: Tighten within the tightening torque of 0.5 N·m ±20%.
   - Note 2: Cable 13 outside diameter: ø6 to ø8 mm
   - Note 3: Crimped terminal like round-shape or Y-shape cannot be used.

#### 3. Assembly

1) Pass the cable 7 through the cable gland 4, plain washer 5 and rubber seal 6 in this order and connect to the terminal block 3. Then, mount the terminal block 3 on the housing 2.
2) Put the rubber seal 6 and plain washer 5 in this order into the cable entry of the housing 2, and then tighten the cable gland 4 securely.
3) Insert the gasket 8 between the bottom part of terminal block 3 and the plug attached to the equipment. Then, screw in 1 from the top of the housing 2 to tighten it.
   - Note 1: Tighten within the tightening torque of 0.5 N·m ±15%.
   - Note 2: Connector orientation can be changed 180° depending on how the housing 2 and the terminal block 3 are assembled.

### Connector for DIN Terminal

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>DIN connector</td>
<td>B1B09-2A (Standard)</td>
</tr>
<tr>
<td></td>
<td>GM209NJ-B17 (CE-compliant)</td>
</tr>
</tbody>
</table>

## Caution

### Light/Surge Voltage Suppressor

**AC**

- In the case of indicator light assembly

**DC**

- In the case of indicator light assembly

### Electrical Connection

DIN terminal is connected inside as in the figure below. Connect to the corresponding power supply.

#### DIN terminal block

- Terminal no. 1 (+) DIN terminal 1 2
- Ground
- Terminal no. 2 (-) DIN terminal 2 3

- Applicable cable O.D. ø6 to ø8

### Lead Wire Color

<table>
<thead>
<tr>
<th>Voltage</th>
<th>Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>100 VAC</td>
<td>Blue</td>
</tr>
<tr>
<td>200 VAC</td>
<td>Red</td>
</tr>
<tr>
<td>DC</td>
<td>Red (+), Black (−)</td>
</tr>
<tr>
<td>Others</td>
<td>Gray</td>
</tr>
</tbody>
</table>
Note) There is also “VT307-□H1” (lead wire length: 600 mm).

DIN terminal: VT307-□D1
### Series VT307

**Manifold Specifications**

VT307 manifold is available both as a common exhaust and individual exhaust model.

Manifold valve can be easily converted from N.C. (Normally Closed) to N.O. (Normally Open) merely by turning over the function plate.

#### How to Order Manifold Base

**VV307-01-05 2-01-F**

- **Dummy symbol**
- **VT307 manifold**
- **Valve stations**
  - 02: 2 stations
  - 20: 20 stations
- **Thread type**
  - Nil
  - Rc
  - F
  - G
  - N
  - NPT
  - T
  - NPTF
- **A port size (Base mounted)**
  - 01: 1/8 common exhaust/individual exhaust
  - 02: 1/4 individual exhaust
- **Exhaust port type**
  - 2: Common exhaust
  - 3: Individual exhaust

#### Manifold Specifications

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function plate (With gasket)</td>
<td>DXT060-51-13A</td>
</tr>
</tbody>
</table>

#### Option

- Blanking plate (With gasket, screw) | DXT060-51-13A |

#### Accessories for Applicable Solenoid Valve

<table>
<thead>
<tr>
<th>Description</th>
<th>Part no.</th>
<th>Qty.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Function plate (With gasket)</td>
<td>DXT152-14-1A</td>
<td>1 pc.</td>
</tr>
<tr>
<td>Mounting screws</td>
<td>NXT013-3</td>
<td>2 pcs.</td>
</tr>
</tbody>
</table>

Note: DXT060-51-13B, DXT152-14-1B are for the continuous duty type.

#### Flow-rate Characteristics/Weight

<table>
<thead>
<tr>
<th>Valve model</th>
<th>Flow-rate characteristics</th>
<th>Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>VO307</td>
<td>1 → 2 (P → A) 0.34</td>
<td>0.15 kg</td>
</tr>
<tr>
<td>VO307T (Vacuum spec. type)</td>
<td>0.34</td>
<td>0.089</td>
</tr>
<tr>
<td>VO307E (Continuous duty type)</td>
<td>0.34</td>
<td>0.28</td>
</tr>
<tr>
<td>VO307Y (Energy-saving type)</td>
<td>0.30</td>
<td>0.70</td>
</tr>
<tr>
<td>VO307W (Energy-saving, Vacuum spec. type)</td>
<td>0.30</td>
<td>0.15</td>
</tr>
</tbody>
</table>
Series VT307

Dimensions: Common Exhaust

VV307-01□2-01-F

\[ L_1 = 26 \times n + 36 \]
\[ L_2 = 26 \times n + 10 \]

Dimensions: Common Exhaust
VV307-01□2-01-F

DIN terminal (D, DZ)
Applicable cable O.D.
6 to 8

Grommet (G, H)
Manual override
(Non-locking)
For 4 x M4
(FG mounting)

Max. 10

(Applicable to 4 ports)

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>L_1</td>
<td>88</td>
<td>114</td>
<td>140</td>
<td>166</td>
<td>192</td>
<td>218</td>
<td>244</td>
<td>270</td>
<td>296</td>
</tr>
<tr>
<td>L_2</td>
<td>62</td>
<td>88</td>
<td>114</td>
<td>140</td>
<td>166</td>
<td>192</td>
<td>218</td>
<td>244</td>
<td>270</td>
</tr>
</tbody>
</table>

Formula

\[ L_1 = 26 \times n + 36 \]
\[ L_2 = 26 \times n + 10 \]
Dimensions: Individual Exhaust

**VV307-01-□3-□-F**

<table>
<thead>
<tr>
<th>n: Stations</th>
<th>L1</th>
<th>L2</th>
</tr>
</thead>
<tbody>
<tr>
<td>2</td>
<td>76</td>
<td>64</td>
</tr>
<tr>
<td>3</td>
<td>102</td>
<td>90</td>
</tr>
<tr>
<td>4</td>
<td>128</td>
<td>116</td>
</tr>
<tr>
<td>5</td>
<td>154</td>
<td>142</td>
</tr>
<tr>
<td>6</td>
<td>180</td>
<td>168</td>
</tr>
<tr>
<td>7</td>
<td>206</td>
<td>194</td>
</tr>
<tr>
<td>8</td>
<td>232</td>
<td>220</td>
</tr>
<tr>
<td>9</td>
<td>258</td>
<td>246</td>
</tr>
<tr>
<td>10</td>
<td>284</td>
<td>272</td>
</tr>
</tbody>
</table>

**Formula**

- \( L_1 = 26 \times n + 24 \)
- \( L_2 = 26 \times n + 12 \)
Series VT307
Specific Product Precautions
Be sure to read before handling. Refer to back cover for Safety Instructions and “Handling Precautions for SMC Products” (M-E03-3) for 3/4/5 Port Solenoid Valve Precautions.

Mounting

⚠️ Warning
When mounting a valve on the manifold base, N.C. and N.O. can be reversed by the function plate orientation. Also, since the cylinder operates in reverse, confirm if the function plate is correctly mounted or not.

⚠️ Caution
1. Each valve is fixed to the manifold base with two M4 mounting screws. Tighten the screws firmly when re-mounting.
2. For mounting, tighten M4 or equivalent screws evenly into the mounting holes of the manifold base.
   Tightening torque of the mounting screw (M4): 1.4 N-m

Changing from N.C. to N.O.

⚠️ Caution
This product is delivered as N.C. valve.
If N.O. valve is required, remove mounting screws of the required valve and turn over the function plate. (Make sure that there are gaskets on both sides of the plate.) Then, tighten the mounting screws to fix the valve to the manifold base.

Caution
1. For the common exhaust type, pressurization or evacuation of the 3(R) port can cause a malfunction.

Piping
Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)\(^1\), and other safety regulations.

**Safety Instructions**

**Caution:** Indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

**Warning:** Indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

**Danger:** Indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

---

1. **Warning**

   **1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.**

   Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalog information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

   **2. Only personnel with appropriate training should operate machinery and equipment.**

   The product specified here may become unsafe if handled incorrectly. The assembly, operation, maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

   **3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.**

   1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.

   2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.

   3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

   **4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.**

   1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.

   2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalog.

   3. An application which could have negative effects on people, property, or animals requiring special safety analysis.

   4. An application which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

---

1. **Warning**

   **1. The product is provided for use in manufacturing industries.**

   The product herein described is basically provided for peaceful use in manufacturing industries. If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary.

   **If anything is unclear, contact your nearest sales branch.**

---

**Limited warranty and Disclaimer/ Compliance Requirements**

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”.

Read and accept them before using the product.

**Limited warranty and Disclaimer**

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first.\(^2\)
   
   Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.

2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided.

3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalog for the particular products.

   \(^2\) Vacuum pads are excluded from this 1 year warranty.

   A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

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**Compliance Requirements**

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.

2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

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**Safety Instructions**

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.