1. DESCRIPTION
The Viking Micromatic® Standard Response Vertical Sidewall Sprinkler VK106 is a small thermosensitive glass bulb spray sprinklers designed for installation in either the upright or pendent position. They are available with finishes and temperature ratings to meet design requirements.

2. LISTINGS AND APPROVALS
- **FM Approved:** Class 2012
- **VdS:** Certificate G414007
  
Refer to the Approval Chart and Design Criteria for FM Approval requirements that must be followed.

3. TECHNICAL DATA
**Specifications:**
- Minimum Operating Pressure: 7 psi (0.5 bar)
- Rated to 175 psi (12 bar) water working pressure.
- Factory tested hydrostatically to 500 psi (34.5 bar)
- Thread size: 1/2” NPT, 15 mm BSP
- Nominal K-Factor: 5.6 U.S. (80.6 metric**)
- Glass-bulb fluid temperature rated to -65 °F (-55 °C)
- Overall Length: 2-1/4” (58 mm)

**Material Standards:**
- Frame Casting: Brass UNS-C84400 or QM Brass
- Deflector: Brass UNS-C23000
- Bulb: Glass, nominal 5 mm diameter
- Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
- Screw: Brass UNS-C36000
- Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

For Polyester Coated Sprinklers:
- Belleville Spring-Exposed

**Ordering Information:** (Also refer to the current Viking price list.)
Order Standard Response Vertical Sidewall Sprinklers by first adding the appropriate suffix for the sprinkler finish and then the appropriate suffix for the temperature rating to the sprinkler base part number.

**Finish Suffix:** Brass = A and Chrome = F
**Temperature Suffix:** 135 °F (57 °C) = A, 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, and 286 °F (141 °C) = G.
For example, sprinkler VK106 with a 1/2” NPT thread, Brass finish and a 155 °F (68 °C) temperature rating = Part No. 12996AB

**Available Finishes And Temperature Ratings:** Refer to Table 1.

**Accessories:** (Also refer to the Viking website.)
- **Sprinkler Wrench:**
  - **A ½” ratchet is required (not available from Viking).**

**Sprinkler Cabinets:**
- A. Six-head capacity: Part No. 01724A (available since 1971)
- B. Twelve-head capacity: Part No. 01725A (available since 1971)

4. INSTALLATION
Refer to appropriate NFPA Installation Standards.

5. OPERATION
During fire conditions, the heat-sensitive liquid in the glass bulb expands, causing the glass to shatter, releasing the pip cap and sealing spring assembly. Water flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish or control the fire.
6. INSPECTIONS, TESTS AND MAINTENANCE
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY
The Viking Micromatic® Standard Response Vertical Sidewall Sprinkler VK106 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact The Viking Corporation.

8. GUARANTEE
For details of warranty, refer to Viking’s current list price schedule or contact Viking directly.

### TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

<table>
<thead>
<tr>
<th>Sprinkler Temperature Classification</th>
<th>Sprinkler Nominal Temperature Rating¹</th>
<th>Maximum Ambient Ceiling Temperature²</th>
<th>Bulb Color</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ordinary</td>
<td>135 °F (57 °C)</td>
<td>100 °F (38 °C)</td>
<td>Orange</td>
</tr>
<tr>
<td>Ordinary</td>
<td>155 °F (68 °C)</td>
<td>100 °F (38 °C)</td>
<td>Red</td>
</tr>
<tr>
<td>Intermediate</td>
<td>175 °F (79 °C)</td>
<td>150 °F (65 °C)</td>
<td>Yellow</td>
</tr>
<tr>
<td>High</td>
<td>286 °F (141 °C)</td>
<td>225 °F (107 °C)</td>
<td>Blue</td>
</tr>
</tbody>
</table>

**Sprinkler Finishes:** Brass, and Chrome

**Footnotes**

¹ The sprinkler temperature rating is stamped on the deflector.
² Based on NFPA-13. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.

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**Figure 1:**
Standard Sprinkler Wrench 21475M/B
## Approval Chart

**Micromatic® Standard Response Vertical SideWall Sprinkler VK106**

<table>
<thead>
<tr>
<th>Base Part Number</th>
<th>SIN</th>
<th>Maximum Pressure</th>
<th>Thread Size</th>
<th>Nominal K-Factor</th>
<th>Overall Length</th>
<th>cULus</th>
<th>FM</th>
<th>VdS</th>
<th>LPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>12996</td>
<td>3</td>
<td>175 psi</td>
<td>1/2&quot;</td>
<td>15 mm</td>
<td>5.6</td>
<td>80.6</td>
<td>58</td>
<td>--</td>
<td>A1X</td>
</tr>
<tr>
<td>12991</td>
<td>3</td>
<td>175 psi</td>
<td>--</td>
<td>15 mm</td>
<td>5.6</td>
<td>80.6</td>
<td>58</td>
<td>--</td>
<td>A1X</td>
</tr>
</tbody>
</table>

**NOTICE - Product Below - Limited Availability (Contact Local Viking Office)**

<table>
<thead>
<tr>
<th>Base Part Number</th>
<th>SIN</th>
<th>Maximum Pressure</th>
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<th>FM</th>
<th>VdS</th>
<th>LPCB</th>
</tr>
</thead>
<tbody>
<tr>
<td>10226</td>
<td>3</td>
<td>175 psi</td>
<td>1/2&quot;</td>
<td>15 mm</td>
<td>5.6</td>
<td>80.6</td>
<td>58</td>
<td>--</td>
<td>B1X</td>
</tr>
<tr>
<td>17496</td>
<td>3</td>
<td>175 psi</td>
<td>1/2&quot;</td>
<td>15 mm</td>
<td>5.6</td>
<td>80.6</td>
<td>58</td>
<td>--</td>
<td>B1X</td>
</tr>
<tr>
<td>10186</td>
<td>3</td>
<td>175 psi</td>
<td>--</td>
<td>15 mm</td>
<td>5.6</td>
<td>80.6</td>
<td>58</td>
<td>--</td>
<td>B1X</td>
</tr>
</tbody>
</table>

### Approved Temperature Ratings

| A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) |
| B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) |

### Approved Finishes

1 - Brass and Chrome

### Approved Escutcheons

X - Installed with standard surface-mounted escutcheons

### Footnotes

1 Base part number shown. For complete part number, refer to Viking’s current price schedule.
2 Metric K-factor measurement shown is when pressure is measured in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.
3 This table shows the listings and approvals available at the time of printing. Other approvals may be in process.
4 Viking vertical sidewall sprinklers may be installed pendent or upright.
5 CE Certified: Standard EN 12259-1, EC-certificate of conformity 0786-CPD-40286

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### DESIGN CRITERIA

(Also refer to the Approval Chart above.)

**FM Approval Requirements:**

Vertical Sidewall Sprinkler VK106 is FM Approved as a standard response sidewall Non-Storage sprinkler, as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including 2-0) and Technical Advisory Bulletins. FM Global Loss Prevention Data Sheets and Technical Advisory Bulletins contain guidelines relating to, but not limited to: minimum water supply requirements, hydraulic design, ceiling slope and obstructions, minimum and maximum allowable spacing, and deflector distance below the ceiling.

**IMPORTANT:** Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to Form No. F_080614 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.