1. DESCRIPTION
   Viking Quick Response Horizontal Sidewall Sprinkler VK360 is a thermosensitive glass
   bulb spray sprinkler available in several different finishes and temperature ratings to
   meet varying design requirements. The special Polyester and Electroless Nickel PTFE
   (ENT) coatings can be used in decorative applications where colors are desired. In ad-
   dition, these coatings have been investigated for installation in corrosive environments
   and are listed/approved as indicated in the Approval Chart(s).

2. LISTINGS AND APPROVALS
   cULus Listed: Category VNIV

   Refer to the Approval Chart and Design Criteria for Listing requirements that must
   be followed.

3. TECHNICAL DATA
   Specifications:
   Available since 2009.
   Minimum Operating Pressure: 7 psi (0.5 bar)
   Maximum Working Pressure: 175 psi (12 bar).
   Factory tested hydrostatically to 500 psi (34.5 bar)
   Thread Size: 3/4" (20 mm) NPT
   Nominal K-Factor: 8.0 U.S. (115.2 metric*)
   * 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.
   Glass-bulb fluid temperature rated to -65 °F (-55 °C)
   Overall Length: 2-5/8" (66 mm)
   Covered by the following US Patent Nos: 7,854,269 and 7,712,218

   Material Standards:
   Sprinkler Frame: Brass UNS-C84400
   Deflector: Brass UNS-C23000 or Phosphor Bronze UNS-C51000
   Bulb: Glass, nominal 3 mm diameter
   Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
   Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400
   Compression Screws: 18-8 Stainless Steel
   Yoke: Phosphor Bronze UNS-C51000
   Ejector Spring: 17-7 Stainless Steel
   For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pip Cap-ENT Coated
   For Polyester Coated Sprinklers: Belleville Spring-Exposed

   Ordering Information: (Also refer to the current Viking price list.)
   Order Quick Response Horizontal Sidewall Sprinklers by first adding the appropriate suffix for the sprinkler finish and then the ap-
   propriate suffix for the temperature rating to the sprinkler base part number.
   Finish Suffix: Brass = A, Chrome = F, White Polyester = M-W, Black Polyester = M-B, and ENT = JN
   For example, sprinkler VK360 with a Brass finish and a 155 °F/68 °C temperature rating = Part No. 15591AB

   Available Finishes And Temperature Ratings:
   Refer to Table 1.

   Accessories: (Also refer to the Viking website.)

   Sprinkler Wrenches:
   A. Standard Wrench: Part No. 21475M/B (available since 2017).
   B. Wrench for recessed sprinklers with protective shields: Part No. 13655W/B** (available since 2003)
   **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 yoke, 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
   Viking Quick Response Horizontal Sidewall Sprinklers are 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>
<thead>
<tr>
<th>Sprinkler Temperature Classification</th>
<th>Sprinkler Nominal Temperature Rating</th>
<th>Maximum Ambient Ceiling Temperature</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>Intermediate</td>
<td>200 °F (93 °C)</td>
<td>150 °F (65 °C)</td>
<td>Green</td>
</tr>
</tbody>
</table>

**Sprinkler Finishes:** Brass, Chrome, White Polyester\(^3,4\), Black Polyester\(^3,4\), and ENT\(^3,4,5\)

**Corrosion Resistant Sprinkler Coatings:** White Polyester\(^3,4\), Black Polyester\(^3,4\), and ENT\(^3,4,5\)

**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.
3. The corrosion-resistant coatings have passed the standard corrosion tests required by the approving agencies as indicated in the Approval Chart. These tests cannot and do not represent all possible corrosive environments. Prior to installation, verify through the end-user that the coatings are compatible with or suitable for the proposed environment. For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. For ENT automatic sprinklers, the waterway is coated. Note that the spring is exposed on sprinklers with Polyester and ENT coatings.
4. cULus Listed as corrosion resistant.
5. ENT finish is not available in 135 °F (57 °C).

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**Sprinkler Wrench Part No. 13655W/B*I must be used with Coated and/or Recessed Sprinkler VK360. (Recessed Sprinkler VK360 is shown.)

**Fit the wrench over the sprinkler and protective shield as shown.**

(Note the orientation of the shield in the wrench.)

**Protective Sprinkler Shield**

*Note: A 1/2" ratchet is required (not available from Viking).*

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**Figure 2: Installation of Coated and/or Recessed Sprinkler VK360**
**TECHNICAL DATA**

**QUICK RESPONSE**

**HORIZONTAL SIDEWALL**

**SPRINKLER VK360 (K8.0)**

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501  Technical Services: 877-384-5464  Fax: 269-818-1680  Email: techsvcs@vikingcorp.com

Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com

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**Approval Chart**

Quick Response Horizontal Sidewall Sprinkler VK360

For Light or Ordinary Hazard Occupancies.

Deflector must be located 4” to 12” (102 mm to 305 mm) below the ceiling.

<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>Listings and Approvals</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td>NPT  BSP U.S. metric</td>
<td></td>
<td></td>
<td>cULus</td>
</tr>
<tr>
<td>15591</td>
<td>VK360</td>
<td>175 psi</td>
<td>3/4”</td>
<td>20 mm 8.0 115.2</td>
<td>2-5/8 66</td>
<td>A1X, B2Y</td>
</tr>
</tbody>
</table>

**Approved Temperature Ratings**

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

B - 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)

**Approved Finishes**

1 - Brass, Chrome, White Polyester, and Black Polyester

2 - ENT

**Approved Escutcheons**

X - Installed with standard surface-mounted escutcheons or recessed with the Viking Micromatic® Model E-1 or E-2 Recessed Escutcheon, or the Model G-1 Recessed Escutcheon

Y - Installed with standard surface-mounted escutcheons or recessed with the Viking Micromatic Model E-1.

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**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 Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.

5 Meets New York City requirements, effective July 1, 2008.

6 cULus Listed as corrosion-resistant.

7 Other colors are available on request with the same Listings and Approvals as the standard colors.

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**Figure 3: Correct Deflector Orientation**

- Keep leading edge of the deflector oriented parallel to the ceiling. Measure from top of deflector to ceiling.
- Keep the sprinkler frame arms oriented parallel to the ceiling.
- Note top and bottom of the deflector. The top surface is marked ‘TOP’. The sprinkler MUST be oriented as shown.
- Ceiling

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Form No. F_092508  20.06.04  Rev 20.1
**TECHNICAL DATA**

**QUICK RESPONSE**

**HORIZONTAL SIDEWALL**

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The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058

Telephone: 269-945-9501  Technical Services: 877-384-5464  Fax: 269-818-1680  Email: techsvcs@vikingcorp.com

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**DESIGN CRITERIA**

(Also refer to the Approval Chart)

**cULus Listing Requirements:**

Quick Response Horizontal Sprinkler VK360 is cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for sidewall standard spray sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- Locate the deflector 4" to 12" (102 mm to 305 mm) below the ceiling.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m).
- Locate no less than 4" (102 mm) from end walls.
- Maximum distance from end walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for sidewall standard spray sprinklers must be followed.

**DEFLECTOR POSITION:** Install sprinkler VK360 with the leading edge of the deflector and the sprinkler frame arms oriented parallel to the ceiling (see Figure 3). THE TOP SURFACE OF THE DEFLECTOR IS MARKED “TOP”. The sprinkler must be oriented as shown in Figure 3.

**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.

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**Figure 4: Sidewall Sprinkler VK360 Dimensions with a Standard Escutcheon**

<table>
<thead>
<tr>
<th>Wall Opening Size:</th>
</tr>
</thead>
<tbody>
<tr>
<td>2-5/16&quot; (58.7 mm) minimum</td>
</tr>
<tr>
<td>2-1/2&quot; (63.5 mm) maximum</td>
</tr>
</tbody>
</table>

| Installed with |
|---|---|
| a standard 1/8" (3.1 mm) |
| surface-mounted escutcheon. |
Figure 5: Sidewall Sprinkler VK360 Dimensions with the Model E-1 and E-2 Recessed Escutcheons

Figure 6: Sprinkler VK360 Dimensions with the Model G-1 Escutcheon

Wall Opening Size:
2-5/16" (58.7 mm) minimum
2-1/2" (63.5 mm) maximum

Installed with a Micromatic Model E-1 Recessed Escutcheon.

Wall Openings:
2-5/8" (66 mm) Minimum
3-3/4" (95 mm) Maximum

(Removed Black PTFE)