



TECHNICAL DATA

STANDARD/QR EXTENDED COVERAGE LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER VK617

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

1. DESCRIPTION

Viking Standard/QR EC Light Hazard ELO Fusible Element Pendent Sprinkler VK617 is a thermosensitive spray sprinkler available in several different finishes and temperature ratings to meet varying design requirements. The sprinkler has both quick response and standard response listings as indicated in the Approval Charts on pages 85k-l.

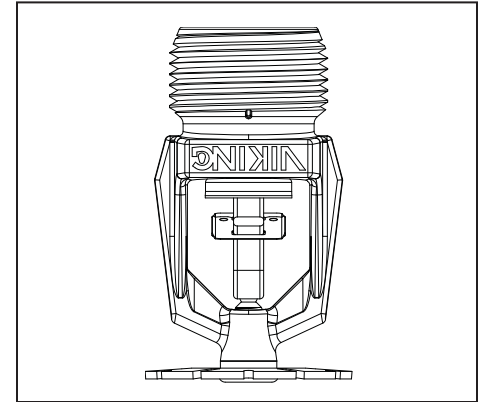
The special Polyester coating can be used in decorative applications where colors are desired.

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

FM Approved: Classes 2020 and 2022

Refer to Approval Chart 1 and Design Criteria on page 85k for cULus Listing requirements, and refer to Approval Chart 2 and Design Criteria on page 85l for FM Approval requirements that must be followed.



For Light Hazard Occupancies Only

3. TECHNICAL DATA

Specifications:

Available since 2007.

Minimum Operating Pressure: Refer to the Approval Chart.

Maximum Working Pressure: 175 psi (12 Bar). Factory tested hydrostatically to 500 psi (34.5 bar).

Factory tested hydrostatically to 500 psi (34.5 bar).

Thread size: 3/4" (20 mm) NPT

Nominal K-Factor: 11.2 U.S. (161.3 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.

Overall Length: 2-5/16" (59 mm)

Material Standards:

Sprinkler Frame: Brass UNS-C84400

Deflector: Phosphor Bronze UNS-C51000

Fusible Element Assembly: Nickel Alloy

Trigger and Support: Stainless Steel UNS-S31600

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with Teflon Tape

Seat and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

Screw: Brass UNS-C36000

For Teflon® Coated Sprinklers: Belleville Spring-Exposed, Screw-Nickel Plated, Pip Cap-Teflon® Coated

For Polyester Coated Sprinklers: Belleville Spring-Exposed

Ordering Information: (Also refer to the current Viking price list.)

Order Standard/QR EC Light Hazard ELO Fusible Element Pendent Sprinkler VK617 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, Chrome-Enloy® = F, White Polyester = M-W, Black Polyester = M-B, and Black Teflon® = N

Temperature Suffix (°F/°C): 165°/74° = C and 205°/96° = E

For example, sprinkler VK617 with a Brass finish and a 165 °F/74 °C temperature rating = Part No. 14141AC

Available Finishes And Temperature Ratings: Refer to Table 1

Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrenches:

A. Standard Wrench: Part No. 05118CW/B (available since 1981)

B. Wrench for recessed pendent sprinkler: Part No. 11663W/B** (available since 2001)

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

Viking Technical Data may be found on
The Viking Corporation's Web site at
<http://www.vikinggroupinc.com>.
The Web site may include a more recent
edition of this Technical Data Page.

| | | |
|---|------------------------------|--|
|  | <p>TECHNICAL DATA</p> | <p>STANDARD/QR EXTENDED COVERAGE LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER VK617</p> |
|---|------------------------------|--|

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

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 fusible element assembly disengages, releasing the seat and spring assemblies to open the waterway. 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

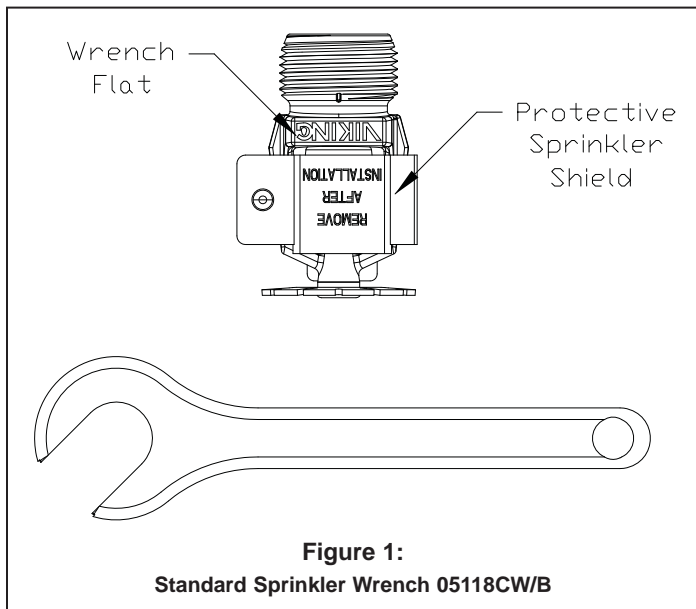
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Sprinkler VK617 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.



| | | |
|---|-----------------------|---|
|  | TECHNICAL DATA | STANDARD/QR EXTENDED COVERAGE LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER VK617 |
|---|-----------------------|---|

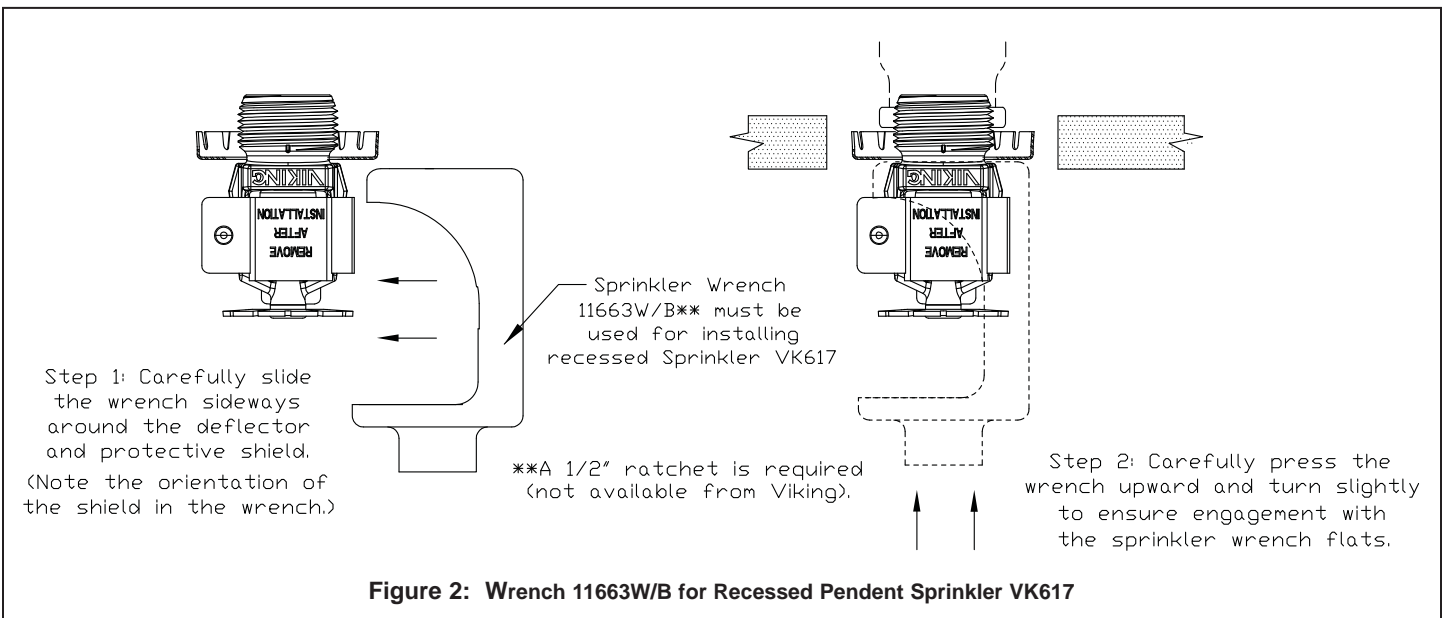
The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services: 877-384-5464 Fax: 269-818-1680 Email: techsvcs@vikingcorp.com

| TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES | | | |
|---|---|--|-------------------|
| Sprinkler Temperature Classification | Sprinkler Nominal Temperature Rating ¹ | Maximum Ambient Ceiling Temperature ² | Frame Paint Color |
| Ordinary | 165 °F (74 °C) | 100 °F (38 °C) | None |
| Intermediate | 205 °F (96 °C) | 150 °F (65 °C) | White |

Sprinkler Finishes: Brass, Chrome-Enloy®, White Polyester³, Black Polyester³, and Black Teflon^{®3}

Footnotes

- ¹ Decorative sprinklers may not be color coded. The 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 For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only. Note that the spring is exposed on sprinklers with Polyester and Teflon[®] coatings. For Teflon[®] coated open sprinklers only, the waterway is coated.



| | | |
|---|--|--|
|  | <h2 style="margin: 0;">TECHNICAL DATA</h2> | <p>STANDARD/QR EXTENDED COVERAGE LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER VK617</p> |
|---|--|--|

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

| Sprinkler Base Part Number ¹ | SIN | NPT Thread Size | | Nominal K-Factor | | Maximum Water Working Pressure | Overall Length | |
|---|-------|-----------------|----|------------------|---------------------|--------------------------------|----------------|----|
| | | Inches | mm | U.S. | metric ² | | inches | mm |
| 14141 | VK617 | 3/4 | 20 | 11.2 | 161.3 | 175 psi (12 Bar) | 2-5/16 | 59 |

| | | | | | | | |
|--|--|-------------|------------|--------|--|----------------------------------|--|
| <p>Approval Chart 1 (UL) Standard Response/QR ELO Pendent Sprinkler VK617 For Light Hazard Occupancies Only</p> | <table border="1" style="border-collapse: collapse;"> <tr> <td style="font-size: small;">Temperature</td> <td style="text-align: center;">KEY</td> </tr> <tr> <td style="font-size: small;">Finish</td> <td></td> </tr> <tr> <td style="font-size: small;">A1X ← Escutcheon (if applicable)</td> <td></td> </tr> </table> | Temperature | KEY | Finish | | A1X ← Escutcheon (if applicable) | |
| Temperature | KEY | | | | | | |
| Finish | | | | | | | |
| A1X ← Escutcheon (if applicable) | | | | | | | |

| Maximum Sprinkler Spacing ⁴ (Length x Width) | Maximum Area per Sprinkler | Minimum Water Supply Requirements ⁴ | Listings and Approvals ³ (Refer also to Design Criteria below.) | |
|--|--|--|---|-----------------|
| | | | cULus ⁵ | NYC |
| Standard Response⁷ | | | | |
| 12 ft. x 12 ft. (3.7 m x 3.7 m) | 144 ft ² (13.4 m ²) | 30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar) | A1Y | See Footnote 6. |
| 14 ft. x 14 ft. (4.3 m x 4.3 m) | 196 ft ² (18.2 m ²) | 30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar) | A1Y | See Footnote 6. |
| Quick Response | | | | |
| 16 ft. x 16 ft. (4.9 m x 4.9 m) | 256 ft ² (23.8 m ²) | 30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar) | C1Y, B1X | See Footnote 6. |
| 18 ft. x 18 ft. (5.5 m x 5.5 m) | 324 ft ² (30.1 m ²) | 33 gpm @ 8.7 psi (124.9 L/min @ .60 Bar) | C1Y | See Footnote 6. |

| | | |
|---|--|---|
| <p>Approved Temperature Ratings A - 165 °F (74 °C) and 205 °F (96 °C) B - 205 °F (96 °C) C - 165 °F (74 °C)</p> | <p>Approved Finishes 1 - Brass, Chrome-Enloy®, White Polyester, Black Polyester, and Black Teflon®</p> | <p>Approved Escutcheons X - Standard surface-mounted escutcheons or the Microfast® Model F-1 Adjustable Escutcheon Y - Standard surface-mounted escutcheons or the Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Micromatic® Model E-1 or E-2 Recessed Escutcheon</p> |
|---|--|---|

Footnotes

¹ Part number shown is the base part number. For complete part number, refer to current Viking price list 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 chart shows listings and approvals available at time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.

⁴ For areas of coverage smaller than shown, use the "Minimum Water Supply Requirement" for the next larger area listed. Flows and pressures listed are per sprinkler.

⁵ cULus Listed for use in the U.S. and Canada for Light Hazard occupancies with smooth, flat, horizontal ceilings only.

⁶ Meets New York City requirements, effective July 1, 2008.

⁷ Listings are limited to Light Hazard Occupancies where allowed by the installation standards being applied.

DESIGN CRITERIA - UL
 (Also refer to Approval Chart 1 above.)

cULus Listing Requirements:
 Standard/QR ELO Fusible Element Pendent Sprinkler VK617 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for extended coverage pendent spray sprinklers:

- Limited to Light Hazard occupancies, where allowed by the installation standards being applied, with smooth, flat, horizontal ceilings only.
- Minimum spacing allowed is 8 ft. (2.4 m) unless baffles are installed in accordance with NFPA 13.
- Minimum distance from walls is 4 in. (102 mm).
- Maximum distance from 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 extended coverage pendent spray sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to pages EC1-3 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, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

| | | |
|---|-----------------------|---|
|  | TECHNICAL DATA | STANDARD/QR EXTENDED COVERAGE LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER VK617 |
|---|-----------------------|---|

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

| Sprinkler Base Part Number ¹ | SIN | NPT Thread Size | | Nominal K-Factor | | Maximum Water Working Pressure | Overall Length | |
|---|-------|-----------------|----|------------------|---------------------|--------------------------------|----------------|----|
| | | Inches | mm | U.S. | metric ² | | Inches | mm |
| 14141 | VK617 | 3/4 | 20 | 11.2 | 161.3 | 175 psi (12 Bar) | 2-5/16 | 59 |

| | | | | | | | |
|--|---|-------------|------------|--------|--|----------------------------------|--|
| Approval Chart 2 (FM) Quick Response Extended Coverage ELO Pendent Sprinkler VK617 | <table border="1" style="font-size: small;"> <tr> <td style="text-align: center;">Temperature</td> <td style="text-align: center;">KEY</td> </tr> <tr> <td style="text-align: center;">Finish</td> <td></td> </tr> <tr> <td style="text-align: center;">A1X ← Escutcheon (if applicable)</td> <td></td> </tr> </table> | Temperature | KEY | Finish | | A1X ← Escutcheon (if applicable) | |
| Temperature | KEY | | | | | | |
| Finish | | | | | | | |
| A1X ← Escutcheon (if applicable) | | | | | | | |

| Maximum Sprinkler Spacing ⁴ (Length x Width) | Maximum Area per Sprinkler | Minimum Water Supply Requirements ⁴ | FM Approvals ³ (Refer also to Design Criteria below.) |
|--|--|--|---|
| 16 ft. x 16 ft. (4.9 m x 4.9 m) | 256 ft ² (23.8 m ²) | 30 gpm @ 7.2 psi (113.6 L/min @ .50 Bar) | A1X |
| 18 ft. x 18 ft. (5.5 m x 5.5 m) | 324 ft ² (30.1 m ²) | 33 gpm @ 8.7 psi (124.9 L/min @ .60 Bar) | A1X |

| | | |
|--|--|--|
| Approved Temperature Rating A - 165 °F (74 °C) | Approved Finishes 1 - Brass, Chrome-Enloy®, White Polyester, and Black Polyester | Approved Escutcheons X - Standard surface-mounted escutcheons or the Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Micromatic® Model E-1 or E-2 Recessed Escutcheon |
|--|--|--|

Footnotes

¹ Part number shown is the base part number. For complete part number, refer to current Viking price list 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 chart shows listings and approvals available at time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.
⁴ For areas of coverage smaller than shown, use the "Minimum Water Supply Requirement" for the next larger area listed. Flows and pressures listed are per sprinkler.

DESIGN CRITERIA - FM
 (Also refer to Approval Chart 2 above.)

FM Approval Requirements:
 Sprinkler VK617 is FM Approved as a quick response **Non-Storage** extended coverage pendent sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets 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.
NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to pages EC1-3 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.



TECHNICAL DATA

**STANDARD/QR EXTENDED
COVERAGE LIGHT HAZARD
ELO FUSIBLE ELEMENT
PENDENT SPRINKLER VK617**

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

