



## TECHNICAL DATA

## MICROMATIC® STANDARD RESPONSE UPRIGHT SPRINKLER VK145 (K5.6)

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](http://www.vikinggroupinc.com)

### 1. DESCRIPTION

The Viking Micromatic® Standard Response Upright Sprinkler VK145 is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes, temperature ratings, and K-factors to meet design requirements. The special Polyester and Electroless Nickel PTFE (ENT) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive environments and are listed/approved as indicated in the Approval Chart(s). Viking standard response sprinklers may be ordered and/or used as open sprinklers (glass bulb and pip cap assembly removed) on deluge systems. Refer to Ordering Instructions.



**WARNING:** Cancer and Reproductive Harm-  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### 2. LISTINGS AND APPROVALS



**FM Approved:** Class Series 2000



**VdS Approved:** Certificate G414003 and G4980001



**LPCB Approved:** Certificate 096e/06



**CE:** Standard EN 12259-1, DOP Sprinklers\_LPCB\_5-2-19 and DOP\_VK145ENT\_25-5-20

**China Approval:** Approved according to China GB standard.



**MED Certified:** Standard EN 12259-1, EC-certificate 0832-MED-1003



**UKCA Approved:** Standard EN 12259-1; Certificate Number 0832-UKCA-CPR-S5029; UKCA DOC\_S5029; 2021

**NOTE: Other International approval certificates are available upon request.**

Refer to Approval Chart(s) and Design Criterion for Listing and Approval requirements that must be followed.

### 3. TECHNICAL DATA

#### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)\*  
 Maximum Working Pressure: 175 psi (12 bar) wwp  
 Factory tested hydrostatically to 500 psi (34.5 bar)  
 Thread size: 1/2" NPT, 15 mm BSPT  
 Nominal K-factor: 5.6 U.S. (80.6 metric\*\*)  
 Glass-bulb fluid temperature rated to -65 °F (-55 °C)  
 Overall Length: 2-3/16" (56 mm)

\*cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

\*\* Metric K-factor measurement shown is in Bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

#### Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass  
 Deflector: Brass UNS-C23000 or Phosphor Bronze UNS-C51000  
 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  
 For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pip Cap-ENT Coated

**Ordering Information:** Refer to Table 1.

### 4. INSTALLATION

Refer to appropriate NFPA Installation Standards.



**TECHNICAL DATA**

**MICROMATIC® STANDARD  
RESPONSE UPRIGHT  
SPRINKLER VK145 (K5.6)**

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**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 Upright Sprinkler VK145 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.



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**TABLE 1: ORDERING INFORMATION**  
 Instructions: Using the sprinkler base part number,  
 (1) add the suffix for the desired Finish  
 (2) add the suffix for the desired Temperature Rating.

| Sprinkler<br>Base Part<br>No. | Size        |            | 1: Finishes        |                     | 2: Temperature Ratings |               |                          |  |        |
|-------------------------------|-------------|------------|--------------------|---------------------|------------------------|---------------|--------------------------|--|--------|
|                               | NPT<br>Inch | BSPT<br>mm | Description        | Suffix <sup>1</sup> | Nominal<br>Rating      | Bulb<br>Color | Hazard<br>Classification | Max. Ambient Ceiling<br>Temperature <sup>2</sup> | Suffix |
| 13001                         | 1/2         | --         | Brass              | A                   | 135 °F (57 °C)         | Orange        | Ordinary                 | 100 °F (38 °C)                                   | A      |
| 12990                         | --          | 15         | Chrome             | F                   | 155 °F (68 °C)         | Red           | Ordinary                 | 100 °F (38 °C)                                   | B      |
| 20228 <sup>8</sup>            | --          | 15         | White Polyester    | M-/W                | 175 °F (79 °C)         | Yellow        | Intermediate             | 150 °F (65 °C)                                   | D      |
|                               |             |            | Black Polyester    | M-/B                | 200 °F (93 °C)         | Green         | Intermediate             | 150 °F (65 °C)                                   | E      |
|                               |             |            | Wax                | C                   | 212 °F (100 °C)        | Green         | Intermediate             | 150 °F (65 °C)                                   | M      |
|                               |             |            | Wax over Polyester | V-/W                | 286 °F (141 °C)        | Blue          | High                     | 225 °F (107 °C)                                  | G      |
|                               |             |            | ENT <sup>3</sup>   | JN                  | 360 °F (182 °C)        | Mauve         | Extra High               | 300 °F (149 °C)                                  | H      |
|                               |             |            |                    |                     | 500 °F (260 °C)        | Black         | Ultra High <sup>6</sup>  | 465 °F (240 °C)                                  | L      |

**Example:** 13001MB/W = VK145 with White Polyester Finish and 155 °F (68 °C) Nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 100 °F (38 °C) meaning if the area will experience temperatures above the maximum ambient rating, you shall use a higher temperature-rated sprinkler.

### Corrosion Resistant Coatings<sup>5</sup>

- White Polyester and Black Polyester in all temperature ratings.
- ENT in all temperature ratings except 135 °F (57 °C).
- Wax-Coated Brass and Wax over Polyester<sup>7</sup> for sprinklers with the following temperature ratings:  
 155 °F (68 °C) Lt. Brown Wax | 175 °F (79 °C) Brown Wax | 200 °F (93 °C) Brown Wax | 286 °F (141 °C) Dk. Brown Wax<sup>7</sup>

### Accessories

#### Sprinkler Wrenches (see Figure 1):

- Standard Wrench: Part No. 21475M/B
- Standard Wrench for Wax Coated Sprinklers: Part No. 10896W/B
- Socket Wrench for Recessed Pendent Sprinklers: Part No. 13655W/B (A 1/2" ratchet is required, not available from Viking)
- Socket Wrench for Wax Coated Sprinklers: Part No. 13577W/B (A 1/2" ratchet is required, not available from Viking)
- Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool<sup>9</sup>: Part No. 15915

#### Sprinkler Cabinet:

- Up to 6 sprinklers: Part number 01724A (available since 1971).
- 6-12 Sprinklers: Part number 01725A (available since 1971).

### Footnotes

- Where a dash (-) is shown in the Finish suffix designation, insert the desired Temperature Rating suffix. See example above.
- Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.
- FM Approved corrosion resistant.
- The corrosion resistant and corrosion proofing coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart(s). 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. Note that the spring is exposed on sprinklers with Polyester and ENT coatings. For ENT coated automatic sprinklers, the waterway is coated.
- Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F (149 °C), response time may be severely retarded.
- Wax melting point is 170 °F (76 °C) for 286 °F (141 °C) temperature rated sprinklers. For more information regarding wax coatings, refer to [Bulletin Form No. F\\_010201](#).
- Allows use from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Ideal for sprinkler cabinets. Refer to [Bulletin F\\_051808](#).
- Approved according to China GB Standard.



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RESPONSE UPRIGHT  
SPRINKLER VK145 (K5.6)

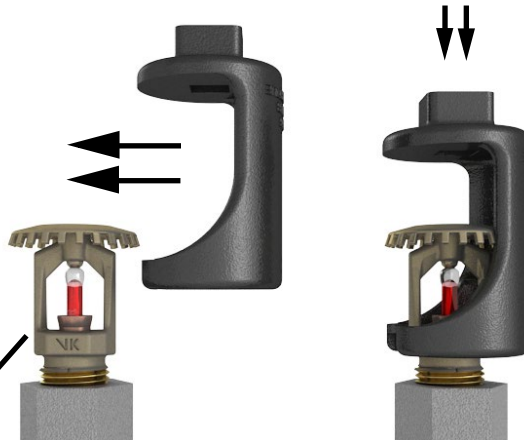
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Figure 1: Sprinkler Wrenches

Sprinkler wrench 13577W/B\*\*  
must be used for installing  
wax coated sprinklers.

Step 1: Carefully slide the  
wrench sideways around the  
deflector, ensuring engage-  
ment with the sprinkler  
wrench flats.



Wax Coated  
Upright Sprinkler

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

Step 2: Carefully press the wrench downward  
and ensure engagement with the sprinkler  
wrench flats.

Figure 2: Wrench 13577W/B for Wax Coated Sprinklers



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### Approval Chart 1

Micromatic® Standard Response Upright Sprinkler VK145  
 Maximum 175 PSI (12 bar) WWP

| KEY                        |   |
|----------------------------|---|
| Temperature                | — |
| Finish                     | — |
| Escutcheon (if applicable) | — |

| Base Part Number <sup>1</sup> | SIN   | Thread Size |       | Nominal K-factor |                     | Overall Length |    | Listings/Approvals <sup>3</sup> |        |        |     |                |        |
|-------------------------------|-------|-------------|-------|------------------|---------------------|----------------|----|---------------------------------|--------|--------|-----|----------------|--------|
|                               |       | NPT         | BSPT  | U.S.             | metric <sup>2</sup> | Inches         | mm | VdS                             | LPCB   | CE     | MED | China Approval | UKCA   |
| 13001                         | VK145 | 1/2"        | 15 mm | 5.6              | 80.6                | 2 3/16         | 56 | A1                              | A1, B2 | A1, D4 | C1  | --             | A1, B2 |
| 12990                         | VK145 | --          | 15 mm | 5.6              | 80.6                | 2 3/16         | 56 | A1                              | A1, B2 | A1, D4 | C1  | --             | A1, B2 |
| 20228 <sup>6</sup>            | VK145 | --          | 15 mm | 5.6              | 80.6                | 2 3/16         | 56 | --                              | --     | --     | --  | D3             | --     |

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

|       |       |      |       |     |      |        |    |    |        |    |    |    |    |
|-------|-------|------|-------|-----|------|--------|----|----|--------|----|----|----|----|
| 10233 | VK145 | 1/2" | 15 mm | 5.6 | 80.6 | 2 3/16 | 56 | A1 | A1, B2 | A1 | C1 | -- | -- |
| 10174 | VK145 | --   | 15 mm | 5.6 | 80.6 | 2 3/16 | 56 | A1 | A1, B2 | -- | -- | -- | -- |

#### Approved Temperature Ratings

A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C)

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

C - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C)

D - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C)

#### Approved Finishes

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

2 - Wax-Coated Brass and Wax over Polyester

3 - Chrome

4 - ENT

#### Footnotes

<sup>1</sup> Base part number is shown. For complete part number, refer to Viking's current price schedule.

<sup>2</sup> Metric K-factor shown is for use when pressure is measured in bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

<sup>3</sup> This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.

<sup>4</sup> CE: Standard EN 12259-1 Declaration of Performance DOP SPRINKLERS\_LPCB\_5-2-19 and DOP\_VK145ENT\_25-5-20

<sup>5</sup> MED Certified, Standard EN 12259-1, EC-certificate 0832-MED-1003.

<sup>6</sup> Approved according to China GB standard.

<sup>7</sup> UKCA Approved: Standard EN 12259-1; Certificate Number 0832-UKCA-CPR-S5029; UKCA DOC\_S5029; 2021

**IMPORTANT: Always refer to Bulletin Form No. F\_091699 - Care and Handling of Sprinklers. Also refer to Bulletin 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, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.**

|   |                       |   |
|---|-----------------------|---|
|  | <b>TECHNICAL DATA</b> | <b>MICROMATIC® STANDARD<br/>RESPONSE UPRIGHT<br/>SPRINKLER VK145 (K5.6)</b> |
|---|-----------------------|---|

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| Approval Chart 2 (FM)   |     |  |  |  |  |  |  |             |     |        |  |                                  |  |
|---|-----|--|--|--|--|--|--|-------------|-----|--------|--|----------------------------------|--|
| Micromatic® Standard Response Upright Sprinkler VK145<br>Maximum 175 PSI (12 bar) WWP |     |  |  |  |  |  |  |             |     |        |  |                                  |  |
|   |     |  |  |  |  |  | <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)  |     |  |  |  |  |  |  |             |     |        |  |                                  |  |

| Sprinkler Base Part Number <sup>1</sup> | SIN   | Thread Size |       | Nominal K-factor |                     | Overall Length |    | FM Approvals <sup>3</sup><br>(Refer also to Design Criteria below.) |
|---|-------|-------------|-------|------------------|---------------------|----------------|----|---|
|   |       | NPT         | BSPT  | U.S.             | metric <sup>2</sup> | Inches         | mm |   |
| 13001                                   | VK145 | 1/2"        | 15 mm | 5.6              | 80.6                | 2-3/16         | 56 | A1, B2, C3, D1, E4  |
| 12990                                   | VK145 | --          | 15 mm | 5.6              | 80.6                | 2-3/16         | 56 | A1, B2, D1, E4  |
| 20228 <sup>6</sup>                      | VK145 | --          | 15 mm | 5.6              | 80.6                | 2-3/16         | 56 | F5  |

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

|       |       |      |       |     |      |        |    |                |
|-------|-------|------|-------|-----|------|--------|----|----------------|
| 10233 | VK145 | 1/2" | 15 mm | 5.6 | 80.6 | 2-3/16 | 56 | A1, B2, C3, D1 |
| 10174 | VK145 | --   | 15 mm | 5.6 | 80.6 | 2-3/16 | 56 | A1, B2, D1     |

|  |   |
|--|---|
| <p><b>Approved Temperature Ratings</b></p> <p>A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 212 °F (100 °C), 286 °F (141 °C), and 360 °F (182 °C)</p> <p>B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)</p> <p>C - 286 °F (141 °C)</p> <p>D - 500 °F (260 °C)<sup>4</sup></p> <p>E - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 212 °F (100 °C), and 286 °F (141 °C)</p> <p>F - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)</p> | <p style="text-align: center;"><b>Approved Finishes</b></p> <p>1 - Brass, Chrome, White Polyester, and Black Polyester</p> <p>2 - White Polyester and Wax-Coated Brass (corrosion resistant)</p> <p>3 - 200 °F (93 °C) High-Temperature Wax Coating (corrosion resistant); maximum ambient temperature allowed at ceiling = 150 °F (65 °C)</p> <p>4 - ENT<sup>5</sup></p> <p>5 - Chrome</p> |
|--|---|

**Footnotes**

<sup>1</sup> Base part number is shown. For complete part number, refer to Viking's current price schedule.

<sup>2</sup> Metric K-factor shown is for use when pressure is measured in bar. When pressure is measured in kPa, divide the metric K-factor shown by 10.0.

<sup>3</sup> This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.

<sup>4</sup> Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F (149 °C), the response time of the Ultra-High temperature rated sprinkler may be severely retarded.

<sup>5</sup> FM Approved as corrosion resistant.

<sup>6</sup> Approved according to China GB standard

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

**FM Approval Requirements:**  
 Sprinkler VK145 is FM Approved as standard response **Non-Storage** upright sprinklers 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 Bulletin 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.**



## BULLETIN

CARE AND HANDLING  
OF SPRINKLERS

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

## SPRINKLERS ARE FRAGILE - HANDLE WITH CARE!

### General Handling and Storage:

- Store sprinklers in a cool, dry place.
- Protect sprinklers during storage, transport, handling, and after installation.
- Use the original shipping containers. DO NOT place sprinklers loose in boxes, bins, or buckets.
- Keep sprinklers separated at all times. DO NOT allow metal parts to contact sprinkler operating elements.

### For Pre-Assembled Drops:

- Protect sprinklers during handling and after installation.
- For recessed assemblies, use the protective sprinkler cap (Viking Part Number 10364).

### Sprinklers with Protective Shields or Caps:

- DO NOT remove shields or caps until after sprinkler installation and there no longer is potential for mechanical damage to the sprinkler operating elements.
- **Sprinkler shields or caps MUST be removed BEFORE placing the system in service!**
- Remove the sprinkler shield by carefully pulling it apart where it is snapped together.
- Remove the cap by turning it slightly and pulling it off the sprinkler.

### Sprinkler Installation:

- DO NOT use the sprinkler deflector or operating element to start or thread the sprinkler into a fitting.
- **Use only the designated sprinkler head wrench!** Refer to the current sprinkler technical data page to determine the correct wrench for the model of sprinkler used.
- DO NOT install sprinklers onto piping at the floor level.
- Install sprinklers after the piping is in place to prevent mechanical damage.
- DO NOT allow impacts such as hammer blows directly to sprinklers or to fittings, pipe, or couplings in close proximity to sprinklers. Sprinklers can be damaged from direct or indirect impacts.
- DO NOT attempt to remove drywall, paint, etc., from sprinklers.
- **Take care not to over-tighten the sprinkler and/or damage its operating parts!**

#### Maximum Torque:

1/2" NPT: 14 ft-lbs. (19.0 N-m)

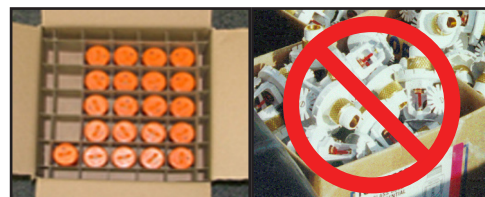
3/4" NPT: 20 ft-lbs. (27.1 N-m)

1" NPT: 30 ft-lbs. (40.7 N-m)



**CORRECT**  
(Original container used)

**INCORRECT**  
(Placed loose in box)



**CORRECT**  
(Protected with caps)

**INCORRECT**  
(Protective caps not used)



**CORRECT**  
(Piping is in place at the ceiling)

**INCORRECT**  
(Sprinkler at floor level)



**CORRECT**  
(Special installation wrenches)

**INCORRECT**  
(Designated wrench not used)



**WARNING:** Cancer and Reproductive Harm-  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

### **! WARNING**

Any sprinkler with a loss of liquid from the glass bulb or damage to the fusible element should be destroyed. Never install sprinklers that have been dropped, damaged, or exposed to temperatures exceeding the maximum ambient temperature allowed. Sprinklers that have been painted in the field must be replaced per NFPA 13. Protect sprinklers from paint and paint overspray in accordance with the installation standards. Do not clean sprinklers with soap and water, ammonia, or any other cleaning fluid. Do not use adhesives or solvents on sprinklers or their operating elements.

**Refer to the appropriate technical data page and NFPA standards for complete care, handling, installation, and maintenance instructions. For additional product and system information Viking data pages and installation instructions are available on the Viking Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).**



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## PROTECTIVE SPRINKLER SHIELDS AND CAPS

### General Handling and Storage:

Many Viking sprinklers are available with a plastic protective cap or shield temporarily covering the operating elements. The snap-on shields and caps are factory installed and are intended to help protect the operating elements from mechanical damage during shipping, storage, and installation. NOTE: It is still necessary to follow the care and handling instructions on the appropriate sprinkler technical data sheets\* when installing sprinklers with bulb shields or caps.

### WHEN TO REMOVE THE SHIELDS AND CAPS:

NOTE: SHIELDS AND CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!

Remove the shield or cap from the sprinkler only after checking all of the following:

- The sprinkler has been installed\*.
- The wall or ceiling finish work is completed where the sprinkler is installed and there no longer is a potential for mechanical damage to the sprinkler operating elements.

**SHIELDS AND CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!**



Figure 1: Sprinkler shield being removed from a pendent sprinkler.



Figure 2: Sprinkler cap being removed from a pendent sprinkler.



Figure 3: Sprinkler cap being removed from an upright sprinkler.

## HOW TO REMOVE SHIELDS AND CAPS:

No tools are necessary to remove the shields or caps from sprinklers. DO NOT use any sharp objects to remove them! **Take care not to cause mechanical damage to sprinklers when removing the shields or caps.** When removing caps from fusible element sprinklers, use care to prevent dislodging ejector springs or damaging fusible elements. NOTE: Squeezing the sprinkler cap excessively could damage sprinkler fusible elements.

- To remove the shield, simply pull the ends of the shield apart where it is snapped together. Refer to Figure 1.
- To remove the cap, turn it slightly and pull it off the sprinkler. Refer to Figures 2 and 3.

### NOTICE

Refer to the current sprinkler technical data page to determine the correct sprinkler wrench for the model of sprinkler used.

### WARNING

Never install sprinklers that have been dropped, damaged, or exposed to temperatures in excess of the maximum ambient temperature allowed.

\* Refer to the appropriate current technical data pages for complete care, handling, and installation instructions. Data pages are included with each shipment from Viking or Viking distributors. They can also be found on the Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).





## BULLETIN

CARE AND HANDLING  
OF SPRINKLERS

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



**CONCEALED COVER ASSEMBLIES ARE FRAGILE!**  
**TO ASSURE SATISFACTORY PERFORMANCE OF THE PRODUCT, HANDLE WITH CARE.**



Concealed Sprinkler and Adapter  
 Assembly with Protective Cap

Concealed Sprinkler and Adapter  
 Assembly (Protective Cap Removed)



Cover Plate Assembly  
 (Pendent Cover 12381 shown)



#### GENERAL HANDLING AND STORAGE INSTRUCTIONS:

- Do not store in temperatures exceeding 100 °F (38 °C). Avoid direct sunlight and confined areas subject to heat.
- Protect sprinklers and cover assemblies during storage, transport, handling, and after installation.
  - Use original shipping containers.
  - Do not place sprinklers or cover assemblies loose in boxes, bins, or buckets.
- Keep the sprinkler bodies covered with the protective sprinkler cap any time the sprinklers are shipped or handled, during testing of the system, and while ceiling finish work is being completed.
- Use only the designated Viking recessed sprinkler wrench (refer to the appropriate sprinkler data page) to install these sprinklers. **NOTE:** The protective cap is temporarily removed during installation and then placed back on the sprinkler for protection until finish work is completed.
- Do not over-tighten the sprinklers into fittings during installation.
- Do not use the sprinkler deflector to start or thread the sprinklers into fittings during installation.
- Do not attempt to remove drywall, paint, etc., from the sprinklers.
- Remove the plastic protective cap from the sprinkler before attaching the cover plate assembly. **PROTECTIVE CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!**

Refer to the appropriate current technical data pages for complete care, handling, and installation instructions. Data pages are included with each shipment from Viking or Viking distributors. They can also be found on the Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).



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## USE THE FOLLOWING PRECAUTIONS WHEN HANDLING WAX-COATED SPRINKLERS

Many of Viking's sprinklers are available with factory-applied wax coating for corrosion resistance. These sprinklers MUST receive appropriate care and handling to avoid damaging the wax coating and to assure satisfactory performance of the product.

### General Handling and Storage of Wax-Coated Sprinklers:

- Store the sprinklers in a cool, dry place (in temperatures below the maximum ambient temperature allowed for the sprinkler temperature rating. Refer to Table 1 below.)
- Store containers of wax-coated sprinklers separate from other sprinklers.
- Protect the sprinklers during storage, transport, handling, and after installation.
- Use original shipping containers.
- Do not place sprinklers in loose boxes, bins, or buckets.

### Installation of Wax-Coated Sprinklers:

Use only the special sprinkler head wrench designed for installing wax-coated Viking sprinklers (any other wrench may damage the unit).

- Take care not to crack the wax coating on the units.
- For touching up the wax coating after installation, wax is available from Viking in bar form. Refer to Table 1 below. The coating MUST be repaired after sprinkler installation to protect the corrosion-resistant properties of the sprinkler.
- Use care when locating sprinklers near fixtures that can generate heat. Do not install sprinklers where they would be exposed to temperatures exceeding the maximum recommended ambient temperature for the temperature rating used.
- Inspect the coated sprinklers frequently soon after installation to verify the integrity of the corrosion resistant coating. Thereafter, inspect representative samples of the coated sprinklers in accordance with NFPA 25. Close up visual inspections are necessary to determine whether the sprinklers are being affected by corrosive conditions.

TABLE 1

| Sprinkler Temperature Rating (Fusing Point) | Wax Part Number | Wax Melting Point | Maximum Ambient Ceiling Temperature <sup>1</sup> | Wax Color   |
|---|-----------------|-------------------|--|-------------|
| 155 °F (68 °C) / 165 °F (74 °C)             | 02568A          | 148 °F (64 °C)    | 100 °F (38 °C)                                   | Light Brown |
| 175 °F (79 °C)                              | 04146A          | 161 °F (71 °C)    | 150 °F (65 °C)                                   | Brown       |
| 200 °F (93 °C)                              | 04146A          | 161 °F (71 °C)    | 150 °F (65 °C)                                   | Brown       |
| 220 °F (104 °C)                             | 02569A          | 170 °F (76 °C)    | 150 °F (65 °C)                                   | Dark Brown  |
| 286 °F (141 °C)                             | 02569A          | 170 °F (76 °C)    | 150 °F (65 °C)                                   | Dark Brown  |

<sup>1</sup> 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.



Never install sprinklers that have been dropped, damaged, or exposed to temperatures in excess of the maximum ambient temperature allowed.

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**BULLETIN****REGULATORY AND HEALTH  
WARNINGS**

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](mailto:techsvcs@vikingcorp.com)

Visit the Viking website for the latest edition of this technical data page [www.vikinggroupinc.com](http://www.vikinggroupinc.com)

**1. DESCRIPTION**

Regulatory and Health Warnings applying to materials used in the manufacture and construction of fire protection products are provided herein as they relate to legally mandated jurisdictional regions.

**⚠ WARNING****STATE OF CALIFORNIA, USA**

Installing or servicing fire protection products such as sprinklers, valves, piping etc. can expose you to chemicals including, but not limited to, lead, nickel, butadiene, titanium dioxide, chromium, carbon black, and acrylonitrile which are known to the State of California to cause cancer or birth defects or other reproductive harm.

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**2. WARRANTY TERMS AND CONDITIONS**

For details of warranty, refer to Viking's current list price schedule at [www.vikinggroupinc.com](http://www.vikinggroupinc.com) or contact Viking directly.