



## TECHNICAL DATA

### MicromaticHP® STANDARD RESPONSE PENDENT HIGH PRESSURE SPRINKLER VK122 (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

#### 1. DESCRIPTION

The Viking MicromaticHP® Standard Response Pendent High Pressure VK122 Sprinkler is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester, and Polytetrafluoroethylene (PTFE) coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive atmospheres and are listed/approved as corrosion resistant as indicated in the Approval Charts.

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.



#### 2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

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

Refer to Approval Chart 1 and UL Design Criteria for cULus Listing requirements that must be followed.

#### 3. TECHNICAL DATA

##### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)†  
**Maximum Working Pressure:** 250 psi (17 bar) wwp  
 Factory tested hydrostatic rating: 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 rating: -65 °F (-55 °C)  
 Overall Length: 2-1/4" (58 mm)

† cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar).

##### Material Standards:

Frame Casting: Brass UNS-C84400  
 Deflector: Brass UNS-C26000  
 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 PTFE Coated Sprinklers: Belleville Spring-Exposed, Screw-Nickel Plated, Pip Cap-PTFE Coated  
For Polyester Coated Sprinklers: Belleville Spring-Exposed

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

Order MicromaticHP® Standard Response Pendent High Pressure Sprinkler VK122 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 Suffixes: Brass = A, Chrome = F, White Polyester = M-/W, Black Polyester = M-/B, Black PTFE = N  
 Temperature Suffixes: 135 °F (57 °C) = A, 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, 286 °F (141 °C) = G,  
 360 °F (182 °C) = H, 500 °F (260 °C) = L, OPEN = Z (PTFE only).

For example, sprinkler VK122 with a 1/2" thread, Brass finish and a 155 °F (68 °C) temperature rating = Part No. 09992AB

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

**Accessories:** (Also refer to the current Viking price list.)

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  
 revision of this Technical Data Page.



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#### Sprinkler Wrenches:

- A. Standard Wrench: Part No. 10896W/B (available since 2000).
- B. Wrench for Recessed Pendent Sprinklers: Part No. 13655W/B\* (available since 2006)
- C. Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool\*\* Part No. 15915 (available since 2010.)
- D. Wrench for Wax Coated Sprinklers: Part No. 13577W/B\* (available since 2006)

\*A ½" ratchet is required (not available from Viking).

\*\*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.

#### 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 MicromaticHP® Standard Response Pendent High Pressure Sprinkler VK122 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: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES**

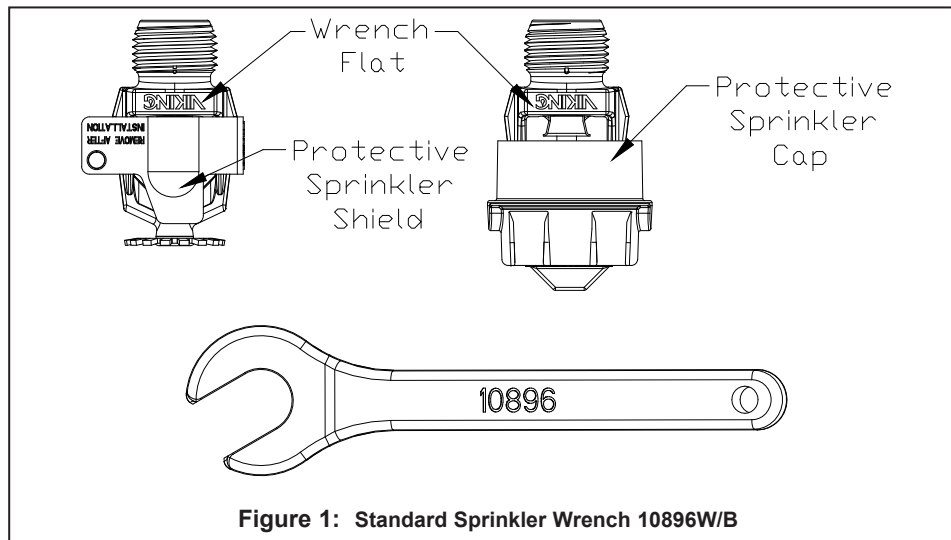
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating <sup>1</sup>	Maximum Ambient Ceiling Temperature <sup>2</sup>	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue
Extra High	360 °F (182 °C)	300 °F (149 °C)	Mauve
Ultra High <sup>3</sup>	500 °F (260 °C)	465 °F (240 °C)	Black

**Sprinkler Finishes:** Brass, Chrome, White Polyester, Black Polyester, and Black PTFE


**Corrosion-Resistant Coatings<sup>4</sup>:** White Polyester, Black Polyester, and Black PTFE in all temperature ratings.

**Footnotes**

- <sup>1</sup> The sprinkler temperature rating is stamped on the deflector.
- <sup>2</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.
- <sup>3</sup> Sprinklers of Ultra-High temperature rating are intended for use in 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>4</sup> The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. These tests 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 PTFE coatings. For PTFE coated automatic sprinklers, the waterway is coated.



**Figure 1: Standard Sprinkler Wrench 10896WB**

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Approval Chart 1 (UL)								<table border="1" style="font-size: 8px;"> <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 ←</td><td style="text-align: center;">Escutcheon (if applicable)</td></tr> </table>		Temperature	KEY	Finish		A1X ←	Escutcheon (if applicable)
Temperature	KEY														
Finish															
A1X ←	Escutcheon (if applicable)														
MicromaticHP® Standard Response Pendent Sprinkler VK122 Maximum 250 PSI (17 bar) WWP															
Sprinkler Base Part Number <sup>1</sup>	SIN	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals <sup>3</sup> (Refer also to UL Design Criteria.)							
		NPT	BSP	U.S.	metric <sup>2</sup>	Inches	mm	cULus <sup>4</sup>							
Standard Orifice															
09992	VK122	1/2"	15 mm	5.6	80.6	2-1/4"	57	A1Y, B2Y							
<b>Approved Temperature Ratings</b> A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), 360 °F (182 °C), B - 500 °F (260 °C) <sup>7</sup>				<b>Approved Finishes</b> 1 - Brass, Chrome, White Polyester <sup>5,6</sup> , Black Polyester <sup>5,6</sup> , and Black PTFE <sup>5</sup> 2 - Brass, Chrome				<b>Approved Escutcheons</b> Y - Standard surface-mounted es- cutcheon or the Viking Microfast® Model F-1 Adjustable Escutcheon or recessed with the Viking Micromatic® Model E-1, E-2, or E-3 Recessed Escutcheon							
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> Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada. <sup>5</sup> cULus Listed as corrosion resistant. <sup>6</sup> Other colors are available on request with the same Listings and Approvals as the standard colors. <sup>7</sup> Sprinklers of Ultra-High temperature rating are intended for use in 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.															

DESIGN CRITERIA - UL (Also refer to Approval Chart 1.)
<p><b>cULus Listing Requirements:</b></p> <p>The Viking MicromaticHP® Standard Response Pendent Sprinkler VK122 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.</p> <ul style="list-style-type: none"> <li>• Designed for use in Light, Ordinary, and Extra Hazard occupancies.</li> <li>• The sprinkler installation rules contained in NFPA 13 for standard spray pendent sprinklers must be followed.</li> </ul>
<p><b>IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page 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></p>



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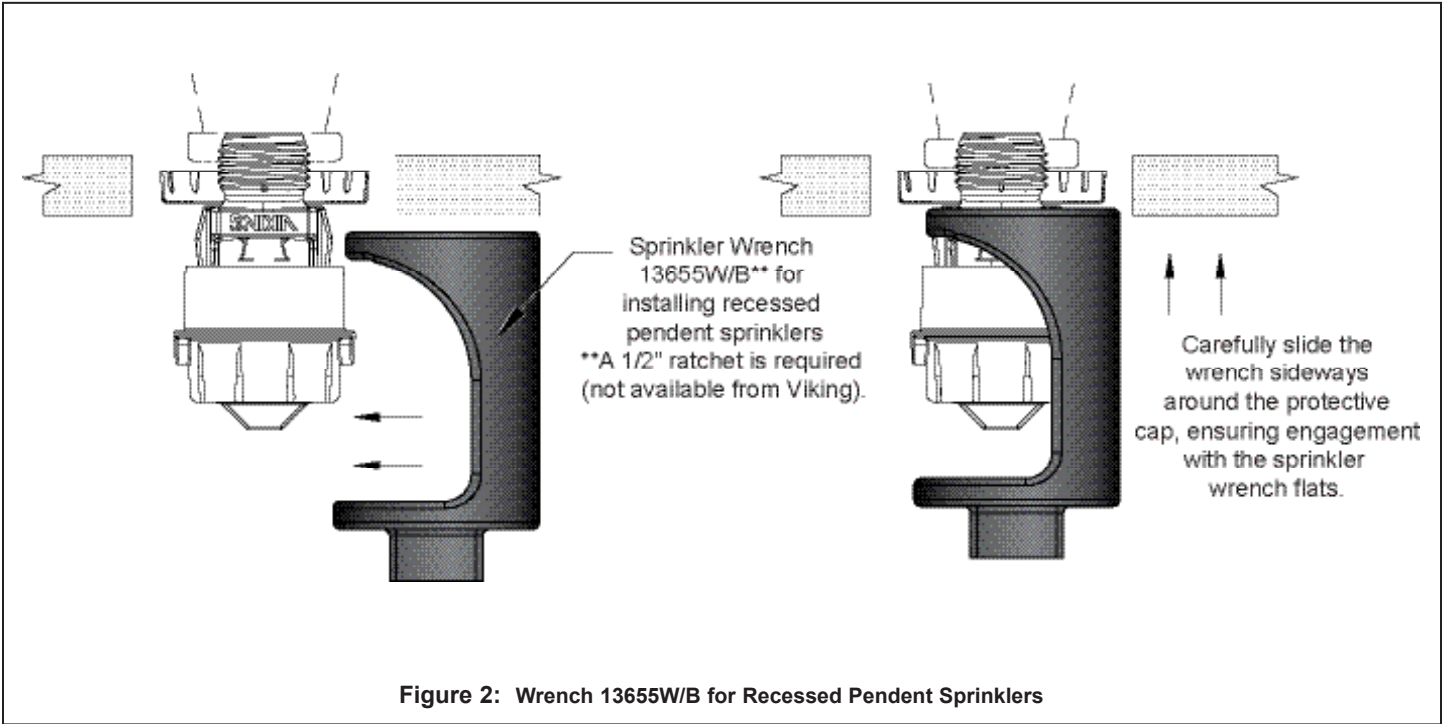


Figure 2: Wrench 13655W/B for Recessed Pendent Sprinklers

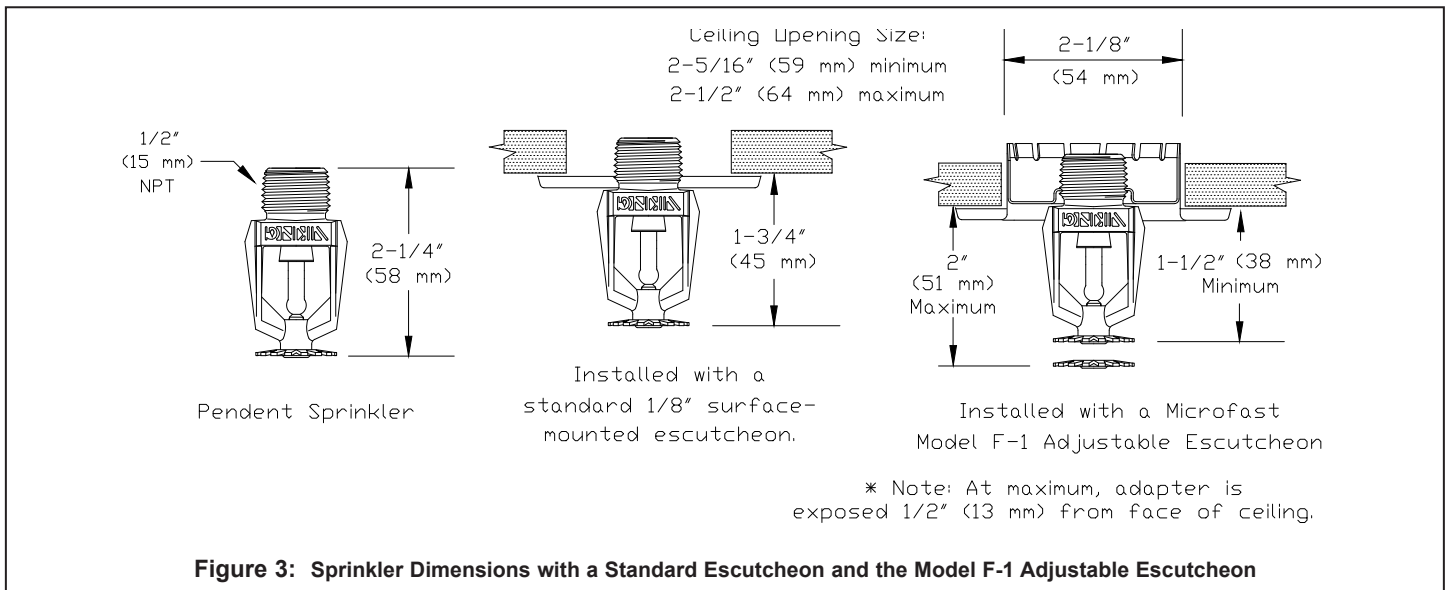


Figure 3: Sprinkler Dimensions with a Standard Escutcheon and the Model F-1 Adjustable Escutcheon



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