



TECHNICAL DATA

MicrofastHP® QUICK RESPONSE PENDENT HIGH PRESSURE SPRINKLER VK342 (K2.8)

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.

1. DESCRIPTION

The Viking MicrofastHP® Quick Response Pendent High Pressure Sprinkler VK342 is a small thermosensitive glass bulb spray sprinkler available with various finishes and temperature ratings 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 Charts.

2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

Refer to Approval Chart 1 and Design Criteria cULus Listing requirements.

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)
 Rated to 250 psi (17 bar) water working pressure
 Factory tested hydrostatically to 500 psi (34.5 bar)
 Thread size: 1/2" NPT, 15 mm BSPT
 Nominal K-Factor: 2.8 U.S. (40.3 metric**)
 Glass-bulb fluid temperature rated to -65 °F (-55 °C)
 Overall Length: 2-3/16" (56 mm)

Material Standards:

Frame Casting: Brass UNS-C84400
 Deflector: Brass UNS-C26000
 Bushing: Brass UNS-C36000
 Bulb: Glass, nominal 3 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 Plated

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

Order Viking MicrofastHP® Quick Response Pendent High Pressure Sprinkler VK342 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 = F, White Polyester = M-/W, Black Polyester = M-/B, and ENT = JN
 Temperature Suffix: 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
 For example, sprinkler VK342 with a Brass finish and a 155 °F (68 °C) temperature rating = Part No. 12290AB

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the Viking website.)

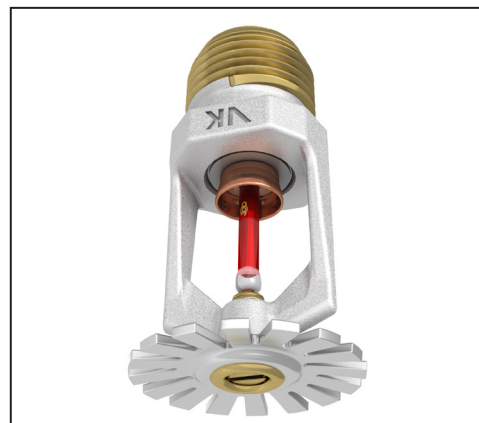
Sprinkler Wrenches (See Figure 1:

- Standard Wrench: Part No. 21475M/B (available since 2017).
 - Wrench for Recessed Pendent Sprinklers: Part No. 13655W/B** (available since 2006)
 - Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool*** Part No. 15915 (available since 2010)
- **A 1/2" ratchet is required (not available from Viking).

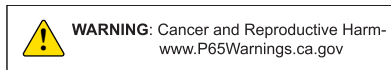
***Allows use from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Ideal for sprinkler cabinets. Refer to Bulletin F_051808.

Sprinkler Cabinets:

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



For Light Hazard Occupancies Only





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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 MicrofastHP® Quick Response Pendent High Pressure Sprinkler VK342 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.

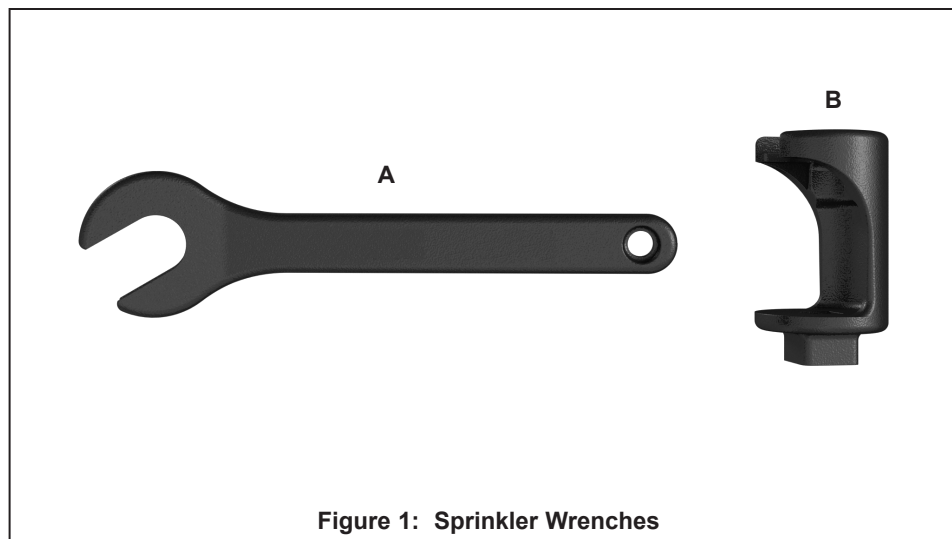


Figure 1: Sprinkler Wrenches



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TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	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

Sprinkler Finishes: Brass, Chrome, White Polyester, Black Polyester, and ENT
Corrosion-Resistant Coatings³: White Polyester, Black Polyester, and ENT

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 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.

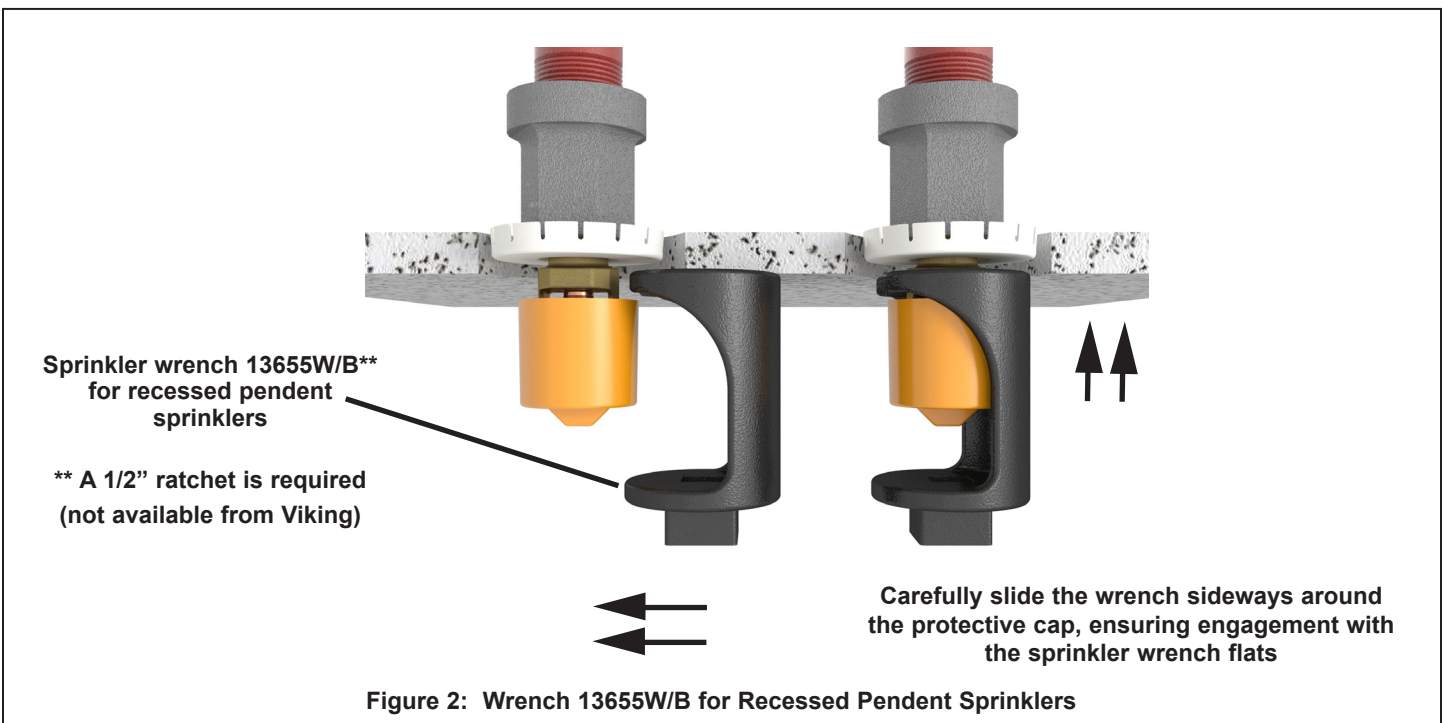


Figure 2: Wrench 13655W/B for Recessed Pendent Sprinklers



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Approval Chart 1 (UL)

The Viking MicrofastHP® Quick Response Pendent
 High Pressure Sprinkler VK342
 Maximum 250 PSI (17 bar) WWP

KEY	
Temperature	Temperature
Finish	Finish
A1X	Escutcheon (if applicable)

Base Part Number ¹	SIN	Sprinkler Style	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals ³ (Refer also to Design Criteria.)			
			NPT	BSPT	U.S.	metric ²	Inches	mm	cULus ⁴	VdS	LPCB	CE
20993 ⁷	VK342	Pendent	1/2"	15 mm	2.8	40.3	2-3/16	56	A1X, B1Y, C2X, D2Z	--	--	--
Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °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)			Approved Finishes 1 - Brass, Chrome, White Polyester ^{5,6} , and Black Polyester ^{5,6} 2 - ENT ⁵			Approved Escutcheons X - Standard surface-mounted escutcheon Y - Standard surface-mounted escutcheon or recessed with the Viking Micromatic® Model E-1, E-2, or E-3 Recessed Escutcheon Z - Standard surface-mounted escutcheon or recessed with the Viking Micromatic® Model E-1 Recessed Escutcheon						
D - 155 °F (68 °C), 175 °F (79 °C) and 200 °F (93 °C)			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 cULus Listed as corrosion-resistant. ⁶ Other colors are available on request with the same Listings and Approvals as the standard colors. ⁷ Listings and Approvals limited to Light Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems only. Listings and Approvals limited to Light Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems only.									

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

The Viking MicrofastHP® Quick Response Pendent High Pressure Sprinkler VK342 is cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Small orifice sprinklers are limited to Light Hazard where allowed by the installation standards being applied, with hydraulically calculated wet systems only .
- The sprinkler installation rules contained in NFPA 13 for standard spray pendent sprinklers must be followed.

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, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.



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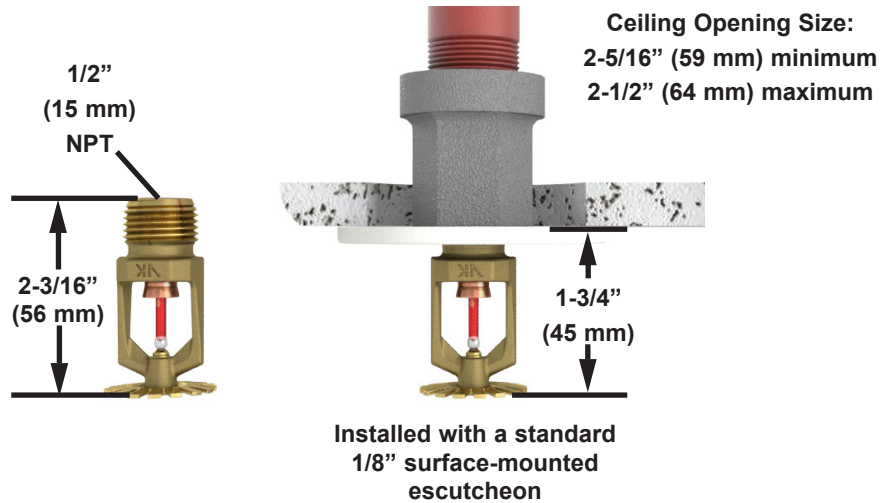


Figure 3: Sprinkler Dimensions with a Standard Escutcheon

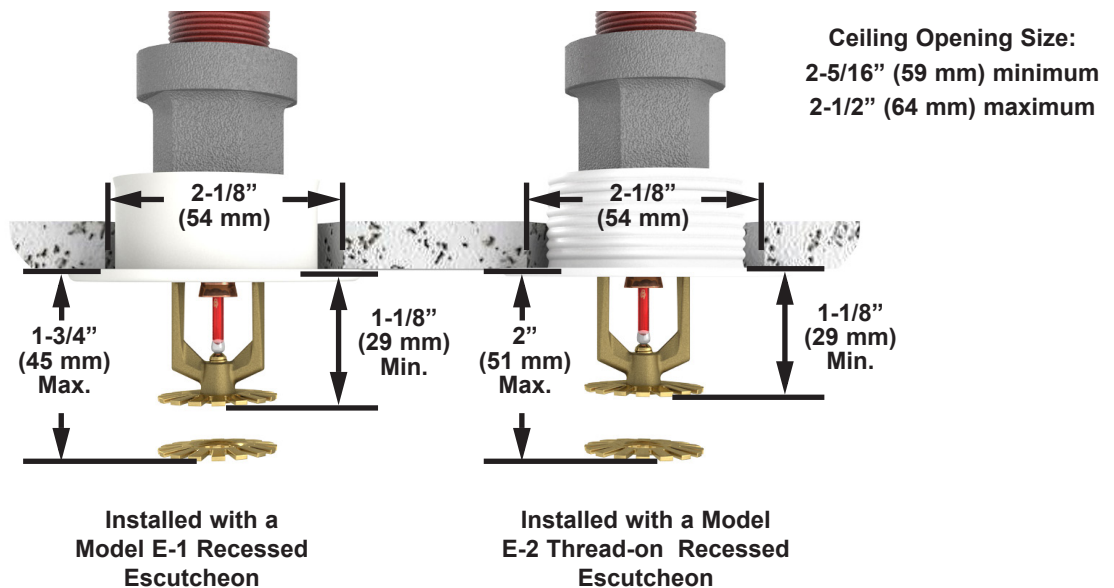


Figure 4: Sprinkler Dimensions with the Model E-1 and E-2 Recessed Escutcheons