

VIKING**TECHNICAL DATA****MICROFAST® AND
MICROFASTHP® QR
SMALL ORIFICE HSW
SPRINKLERS VK333 & VK344****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 Microfast® and MicrofastHP® Quick Response Small Orifice Horizontal Sidewall Sprinklers are small thermosensitive glass bulb spray sprinklers available with various finishes and temperature ratings to meet design requirements. The special Polyester and Teflon® 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 cULus listed as corrosion resistant as indicated in the Approval Chart.

2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

Refer to the Approval Chart and Design Criteria on page 52d for cULus Listing requirements that must be followed.

3. TECHNICAL DATA**Specifications:**

Available since 1987.

Minimum Operating Pressure: 7 psi (0.5 bar)

Maximum Working Pressure: Sprinkler VK344 is rated for use with water working pressures ranging from the minimum 7 psi (0.5 bar) up to 250 psi (17 bar) for High Pressure systems. High Pressure (HP) sprinklers can be identified by locating "250" stamped on the deflector. Sprinkler VK333 is rated to a maximum 175 psi (12 bar) wwp.

Factory tested hydrostatically to 500 psi (34.5 bar)

Nominal K-Factor: 2.8 U.S. (40.3 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.

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Overall Length: 2-11/16" (68.5 mm)

Material Standards:

Frame Casting: Brass UNS-C84400

Deflector: Copper UNS-C19500

Bushing: Brass UNS-C36000

Bulb: Glass, nominal 3 mm diameter

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

Screw: Brass UNS-C36000

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

Pip Cap Attachment: 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 Quick Response Horizontal Sidewall Sprinklers 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: 135 °F/68 °C = A, 155 °F/68 °C = B, 175 °F/79 °C = D, 200 °F/93 °C = E, and 286 °F/141 °C = G

For example, sprinkler VK333 with a Brass finish and a 155 °F/68 °C temperature rating = Part No. 10035AB

Available Finishes And Temperature Ratings:

Refer to Table 1.

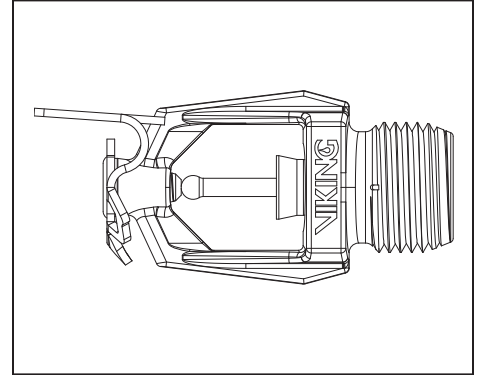
Accessories: (Also refer to the "Sprinkler Accessories" section of the Viking data book.)

Sprinkler Wrenches:

A. Standard Wrench: Part No. 10896W/B (available since 2000).


B. Wrench for recessed sprinklers with protective shields: Part No. 13655W/B** (available since 2003)

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



(Sprinkler VK333 Shown)

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.

	TECHNICAL DATA	MICROFAST® AND MICROFASTHP® QR SMALL ORIFICE HSW SPRINKLERS VK333 & VK344
---	-----------------------	--

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 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

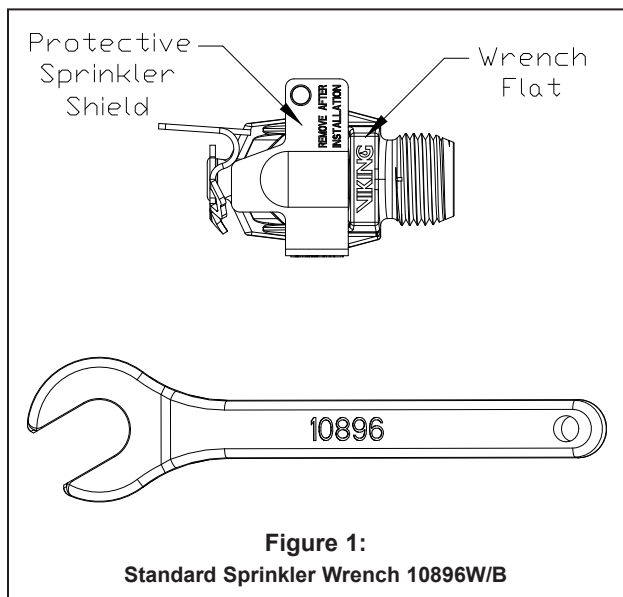
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

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.



	TECHNICAL DATA	MICROFAST® AND MICROFASTHP® QR SMALL ORIFICE HSW SPRINKLERS VK333 & VK344
---	-----------------------	--

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

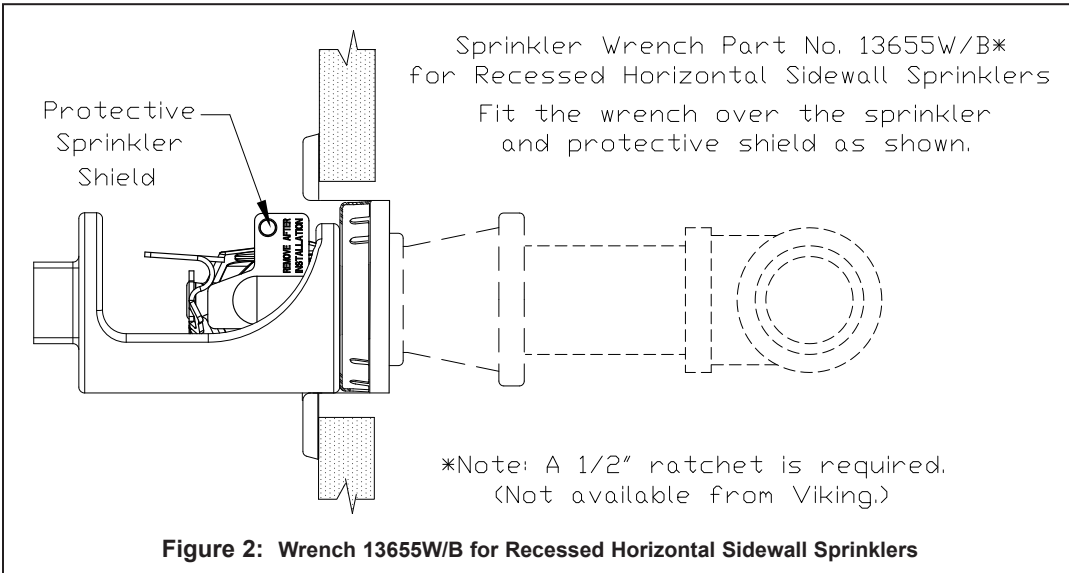
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Bulb Color
Ordinary	135 °F (57 °C)	100 °F (38 °C)	Orange
Ordinary	155 °F (68 °C)	100 °F (38 °C)	Red
Intermediate	175 °F (79 °C)	150 °F (65 °C)	Yellow
Intermediate	200 °F (93 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome-Enloy®, White Polyester, Black Polyester, and Black Teflon®

Corrosion-Resistant Coatings³: White Polyester, Black Polyester, and Black Teflon®



















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 Charts. 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:** 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>MICROFAST® AND MICROFASTHP® QR SMALL ORIFICE HSW SPRINKLERS VK333 & VK344</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

Approval Chart																	
Microfast® and MicrofastHP® Quick Response Small Orifice® HSW Sprinklers For Light Hazard Occupancies Only Deflector must be located 4" to 6" (102 mm to 152 mm) below the ceiling.												<table border="1" style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;"> <table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">  Temperature  Finish  A1X ← Escutcheon (if applicable) </td> <td style="width: 50%; text-align: center; vertical-align: middle;"> KEY </td> </tr> </table> </td> <td style="width: 50%;"></td> </tr> </table>		<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">  Temperature  Finish  A1X ← Escutcheon (if applicable) </td> <td style="width: 50%; text-align: center; vertical-align: middle;"> KEY </td> </tr> </table>	 Temperature  Finish  A1X ← Escutcheon (if applicable)	KEY	
<table style="width: 100%; border-collapse: collapse;"> <tr> <td style="width: 50%; text-align: center;">  Temperature  Finish  A1X ← Escutcheon (if applicable) </td> <td style="width: 50%; text-align: center; vertical-align: middle;"> KEY </td> </tr> </table>	 Temperature  Finish  A1X ← Escutcheon (if applicable)	KEY															
 Temperature  Finish  A1X ← Escutcheon (if applicable)	KEY																
Maximum 175 PSI (12 Bar) WWP																	
Base Part Number ¹	SIN	Maximum Pressure	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals ³ (Refer also to Design Criteria below.)								
			NPT	BSP	U.S.	metric ²	Inches	mm	cULus ⁴	NYC ⁵	LPCB	CE	⚙️				
100357	VK333	175 psi	1/2"	15 mm	2.8	40.3	2-11/16	68.5	A1X, B1W	A1X	--	--	--				
Maximum 250 PSI WWP																	
122877	VK344	250 psi	1/2"	15 mm	2.8	40.3	2-11/16	68.5	A1X, B1W	A1X	--	--	--				
Approved Temperature Ratings			Approved Finishes				Approved Escutcheons										
A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)			1 - Brass, Chrome-Enloy®, White Polyester®, Black Polyester®, and Black Teflon®				W - Installed with standard surface-mounted escutcheons or the Viking Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Viking Micromatic® Model E-1, E-2, or G-1 Recessed Escutcheon X - Installed with standard surface-mounted escutcheons or the Viking Microfast® Model F-1 Adjustable Escutcheon										
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 Accepted for use, City of New York Department of Buildings, MEA 89-92-E, Vol. 16. ⁶ Listings are limited to Light Hazard Occupancies, with hydraulically calculated wet systems. Exception: 4.2K sprinklers may be installed on hydraulically calculated dry pipe systems where piping is corrosion resistant or internally galvanized. ⁷ The sprinkler orifice is bushed. ⁸ cULus Listed as corrosion-resistant.																	

DESIGN CRITERIA - UL

(Also refer to the Approval Chart above.)

cULus Listing Requirements:

Microfast® and MicrofastHP® Quick Response Horizontal Sidewall Sprinklers are cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for sidewall standard spray sprinklers.

- Limited to Light Hazard occupancies only (*Small orifice sprinklers are limited to Light Hazard where allowed by the installation standards being applied, with hydraulically calculated wet systems only. Exception: 4.2K sprinklers may be installed on hydraulically calculated dry pipe systems where piping is corrosion resistant or internally galvanized.*)
- 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 the deflector 4" to 6" (102 mm to 152 mm) below the ceiling. Align with the leading edge of the deflector parallel to the ceiling.
- 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. Minimum distance from end walls is 4 in. (102 mm).
- The sprinkler installation and obstruction rules contained in NFPA 13 for sidewall standard spray sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page QR1-3 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.

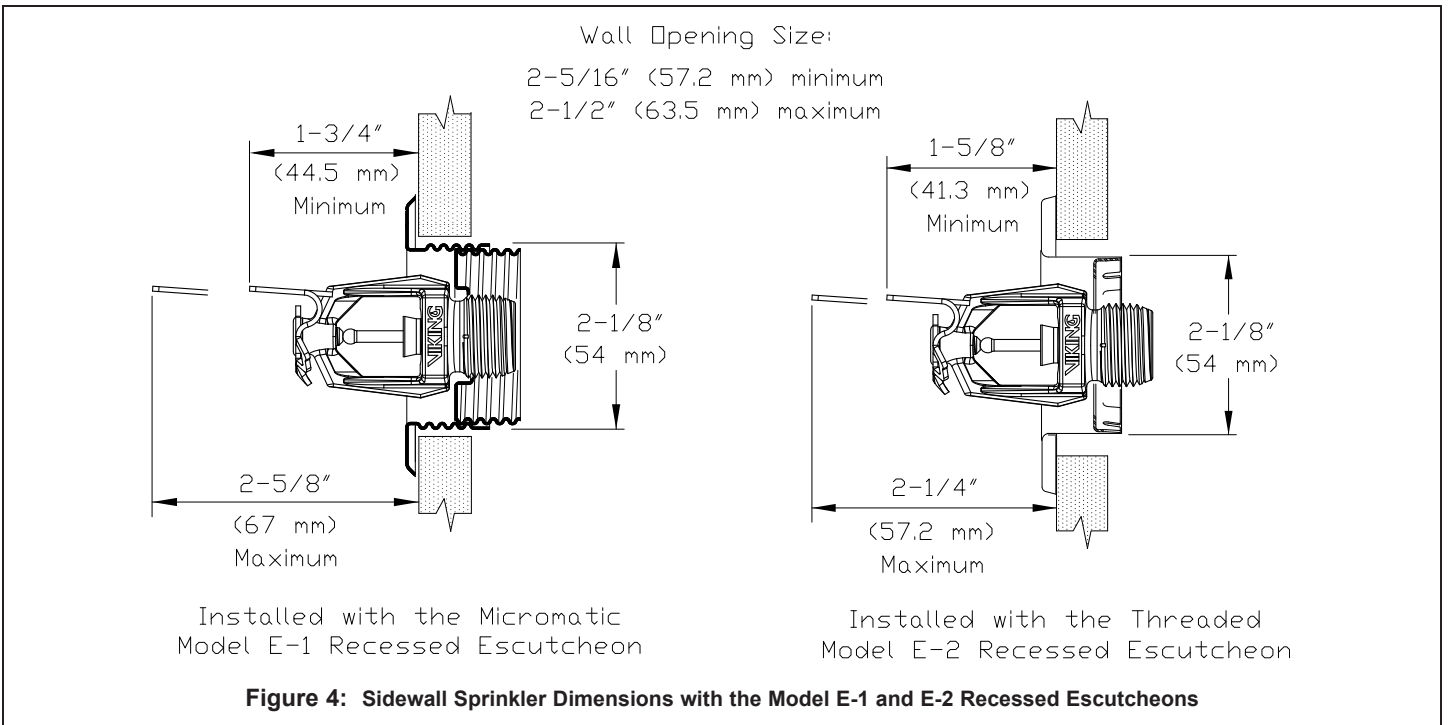
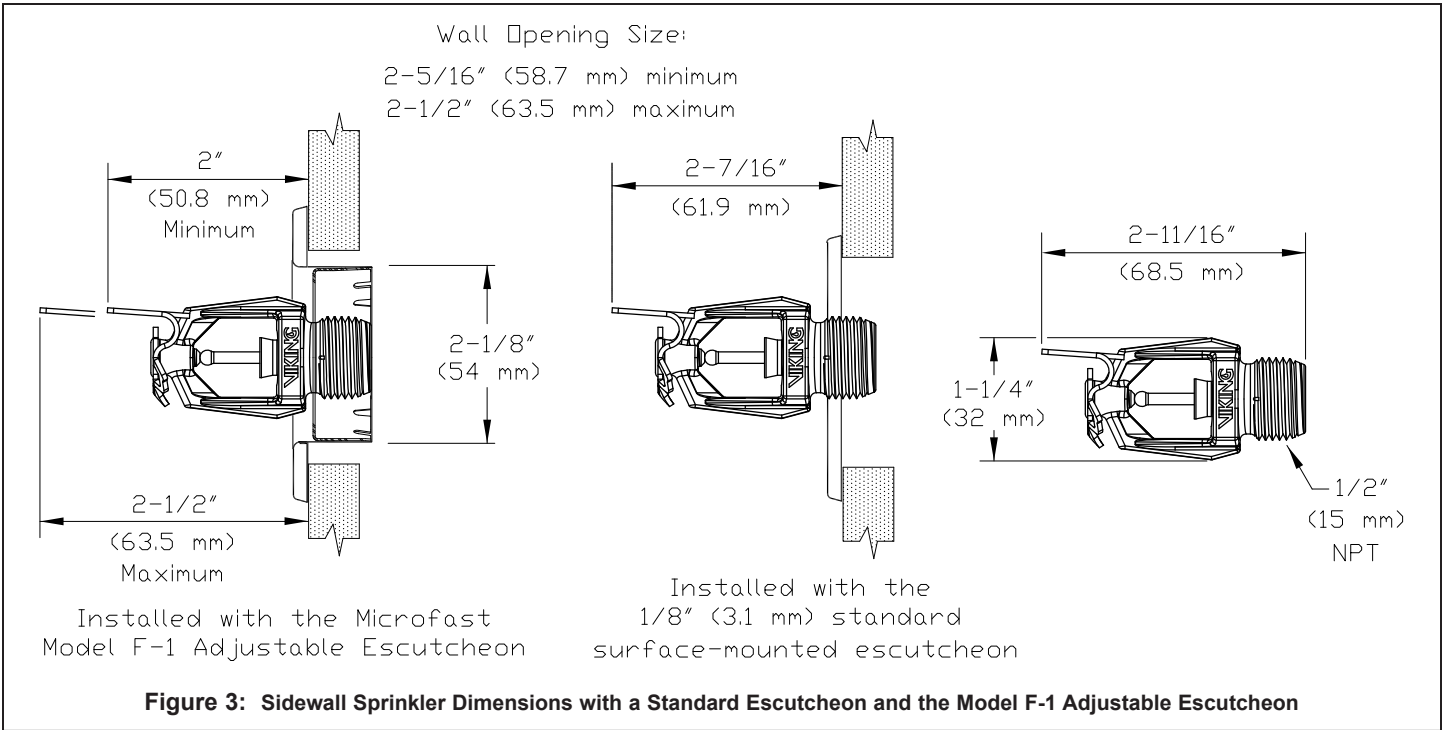


TECHNICAL DATA

**MICROFAST® AND
MICROFASTHP® QR
SMALL ORIFICE HSW
SPRINKLERS VK333 & VK344**

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





TECHNICAL DATA

**MICROFAST® AND
MICROFASTHP® QR
SMALL ORIFICE HSW
SPRINKLERS VK333 & VK344**

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

