



## TECHNICAL DATA

### MicrofastHP® QUICK RESPONSE UPRIGHT HIGH PRESSURE SPRINKLER VK315 (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 MicrofastHP® Quick Response Upright High Pressure Sprinkler VK315 is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester 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.

#### 2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

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

#### 3. TECHNICAL DATA

##### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)\*  
 Maximum Working Pressure: 250 psi (17 bar) wwp.  
 Factory tested hydrostatically to 500 psi (34.5 bar)  
 Testing: U.S.A. Patent No. 4,831,870  
 Thread size: 1/2" NPT, 15 mm BSP  
 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)

##### Material Standards:

Frame Casting: Brass UNS-C84400 or QM Brass  
 Deflector: Brass UNS-C23000 or Copper UNS-C19500  
 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

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

Order Viking MicrofastHP® Quick Response Upright High Pressure Sprinkler VK315 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, and Black Polyester = M-/B

Temperature Suffix (°F/°C): 135°/57° = A, 155°/68° = B, 175°/79° = D, 200°/93° = E, and 286°/141° = G

For example, sprinkler VK315 with a 1/2" NPT thread, Brass finish and a 155 °F/68 °C temperature rating = Part No. 12281AB

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

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

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

##### 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.



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.

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**6. INSPECTIONS, TESTS AND MAINTENANCE**

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

**7. AVAILABILITY**

The Viking MicrofastHP® Quick Response Upright High Pressure Sprinkler VK315 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.

**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

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

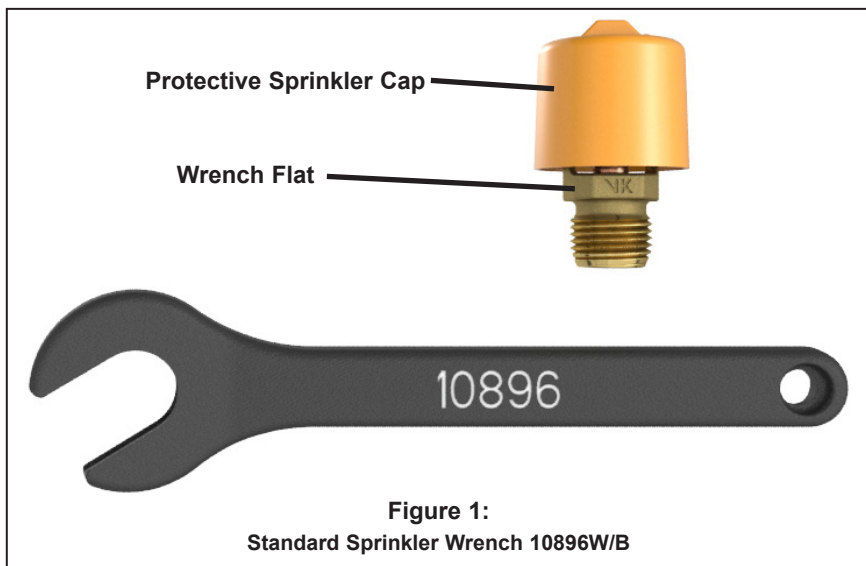
**Corrosion-Resistant Coatings<sup>3</sup>:** White Polyester and Black Polyester.

**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> 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 that the spring is exposed on sprinklers with Polyester coatings.



**Figure 1:  
Standard Sprinkler Wrench 10896W/B**



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#### Approval Chart 1 (UL)

Viking MicrofastHP® Quick Response Upright  
High Pressure Sprinkler VK315  
Maximum 250 PSI (17 bar) WWP

KEY	
Temperature	—
Finish	▼
Escutcheon (if applicable)	◀

Base Part Number <sup>1</sup>	SIN	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals <sup>3</sup>			
		NPT	BSP	U.S.	metric <sup>2</sup>	Inches	mm	cULus	VdS	LPCB	CE
12281	VK315	1/2"	15 mm	5.6	80.6	2-3/16	56	A1	--	--	--
<p><b>Approved Temperature Ratings</b> A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C)</p>							<p><b>Approved Finishes</b> 1 - Brass, Chrome, White Polyester<sup>5,6</sup>, and Black Polyester<sup>5,6</sup></p>				
<p><b>Footnotes</b></p> <p><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 measurement shown is 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 us in the U.S. and Canada  <sup>5</sup> Other colors are available on request with the same Listings and Approvals as the standard colors.  <sup>6</sup> cULus Listed as corrosion resistant.</p>											

#### DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

##### cULus Listing Requirements:

The Viking MicrofastHP® Quick Response Upright High Pressure Sprinkler VK315 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler installation rules contained in NFPA 13 for standard spray upright 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, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.**