



## TECHNICAL DATA

### MICROMATIC® STANDARD RESPONSE VERTICAL SIDEWALL SPRINKLER VK106 (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 Micromatic® Standard Response Vertical Sidewall Sprinkler VK106 is a small thermosensitive glass bulb spray sprinklers designed for installation in either the upright or pendent position. They are available with finishes and temperature ratings to meet design requirements.

#### 2. LISTINGS AND APPROVALS



**FM Approved:** Class 2012



**VdS:** Certificate G414007

Refer to the Approval Chart and Design Criteria for FM Approval requirements that must be followed.

#### 3. TECHNICAL DATA

##### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)  
 Rated to 175 psi (12 bar) water working pressure.  
 Factory tested hydrostatically to 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 rated to -65 °F (-55 °C)  
 Overall Length: 2-1/4" (58 mm)

\*\* 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  
 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

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

Order Standard Response Vertical 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 and Chrome = F

Temperature Suffix: 135 °F (57 °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 VK106 with a 1/2" NPT thread, Brass finish and a 155 °F (68 °C) temperature rating = Part No. 12996AB

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

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

##### Sprinkler Wrench:

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

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

##### 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.

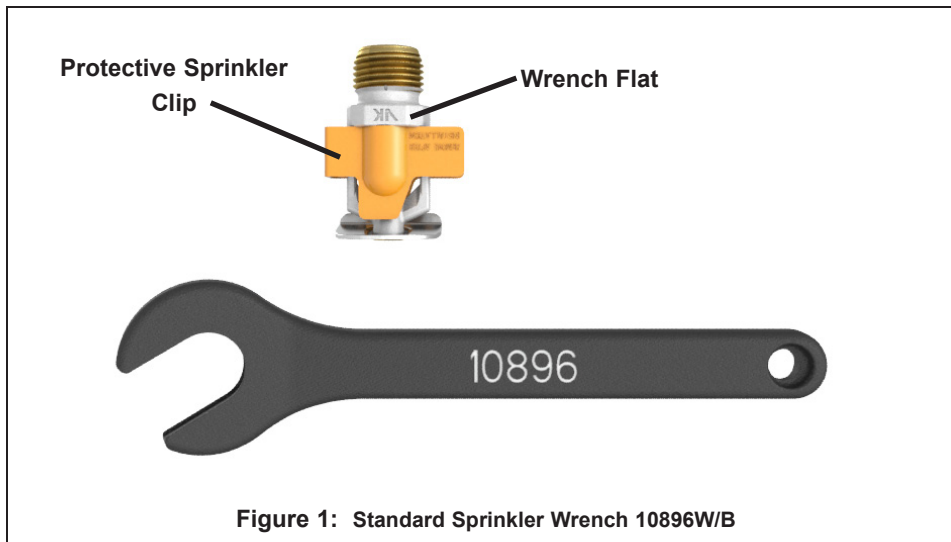
**7. AVAILABILITY**

The Viking Micromatic® Standard Response Vertical Sidewall Sprinkler VK106 is available through a network of domestic and international distributors. See The Viking Corporation web site for the closest distributor or contact TheViking 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
High	286 °F (141 °C)	225 °F (107 °C)	Blue
<b>Sprinkler Finishes:</b> Brass, and Chrome			
<b>Footnotes</b>			
<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.			



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<h3 style="margin: 0;">Approval Chart</h3> <p style="margin: 0; font-size: small;">Micromatic® Standard Response Vertical Sidewall Sprinkler VK106</p>														
Base Part Number <sup>1</sup>	SIN	Maximum Pressure	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals <sup>3</sup> (Refer also to Design Criteria below.)					
			NPT	BSP	U.S.	metric <sup>2</sup>	Inches	mm	cULus	FM <sup>4</sup>	VdS	LPCB	CE	
<b>Standard Orifice</b>														
12996 <sup>4</sup>	VK106	175 psi	1/2"	15 mm	5.6	80.6	2-1/4	58	--	A1X	A1	--	--	--
12991 <sup>4</sup>	VK106	175 psi	--	15 mm	5.6	80.6	2-1/4	58	--	A1X	--	--	--	--
<b>NOTICE - Product Below - Limited Availability (Contact Local Viking Office)</b>														
10226 <sup>4</sup>	VK106	175 psi	1/2"	15 mm	5.6	80.6	2-1/4	58	--	B1X	A1	--	A1	--
17496 <sup>4</sup>	VK106	175 psi	1/2"	15 mm	5.6	80.6	2-1/4	58	--	B1X	A1	--	A1	--
10186 <sup>4</sup>	VK106	175 psi	--	15 mm	5.6	80.6	2-1/4	58	--	B1X	A1	--	A1	--
<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) B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)					<b>Approved Finishes</b> 1 - Brass and Chrome					<b>Approved Escutcheons</b> X - Installed with standard surface-mounted escutcheons				
<b>Footnotes</b> <sup>1</sup> Base part number 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. Other approvals may be in process. <sup>4</sup> Viking vertical sidewall sprinklers may be installed pendent or upright. <sup>6</sup> CE Certified: Standard EN 12259-1, EC-certificate of conformity 0786-CPD-40286														

<h3 style="margin: 0;">DESIGN CRITERIA</h3> <p style="margin: 0; font-size: small;">(Also refer to the Approval Chart above.)</p>
<p><b>FM Approval Requirements:</b></p> <p>Vertical Sidewall Sprinkler VK106 is FM Approved as a standard response sidewall <b>Non-Storage</b> sprinkler, as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including 2-0) and Technical Advisory Bulletins. FM Global Loss Prevention Data Sheets and Technical Advisory Bulletins 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.</p>
<p><b>IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page SR1-3 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.</b></p>