



## TECHNICAL DATA

## STANDARD RESPONSE STAINLESS STEEL PEN- DENT SPRINKLER VK368

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](http://www.vikinggroupinc.com)

### 1. DESCRIPTION

The Viking Standard Response Stainless Steel Sprinklers are small, solder link standard spray sprinklers. The design consists of a solid stainless steel frame and deflector, with a solder link operating element. These sprinklers can withstand many harsh corrosive environments that may cause regular brass sprinklers to deteriorate.

### 2. LISTINGS AND APPROVALS



UL Listed: Category VNIV - Corrosion Resistant Sprinkler



FM Approved: Class 2042

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

### 3. TECHNICAL DATA

#### Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)

Rated to: 175 psi (12 bar).

Factory tested hydrostatically to 500 psi (34.5 bar).

Thread size: 3/4" NPT or 20 mm BSPT

Nominal K-Factor: 8.0 U.S. (115 metric\*)

\* 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:

Sprinkler Body: Stainless Steel UNS-J92800

Deflector: Stainless Steel UNS-S32205

Seat: Stainless Steel UNS-S31600

Compression Screw: Nickel Alloy

Belleville Spring Sealing Assembly: Nickel Alloy, encapsulated in PTFE and coated on both sides with PTFE tape

Shipping Cap: Polyethylene

Solder: Eutectic

Fusible Element: Beryllium Nickel UNS-N03360, painted and coated with clear lacquer.

#### Ordering Information: (Refer to Table 1 and the current Viking price list.)

Sprinkler Part Number: 21928E

### 4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

### 5. OPERATION

During fire conditions, the heat-sensitive fusible link disengages, the seat and spring are released, and the waterway is opened. 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 Sprinkler Model VK368 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.



**WARNING:** Cancer and Reproductive Harm-  
[www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)



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**TABLE 1: ORDERING INFORMATION**

Sprinkler Part Number	Size		Temperature Classification	Nominal Temperature Rating	Maximum Ambient Ceiling Temperature <sup>1</sup>	Fusible Element Paint Dot Color
	NPT Inch	BSPT mm				
21928E	3/4	-	Intermediate	205 °F (96 °C)	150 °F (65 °C)	White
22611E	-	20				

**Example:** 21928E = VK368 with 205 °F (96 °C) Nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 150 °F (65 °C) meaning if the area will experience temperatures above the maximum ambient rating, you shall use a higher temperature-rated sprinkler.

**Accessories**

**Sprinkler Wrenches (see Figure 1):**

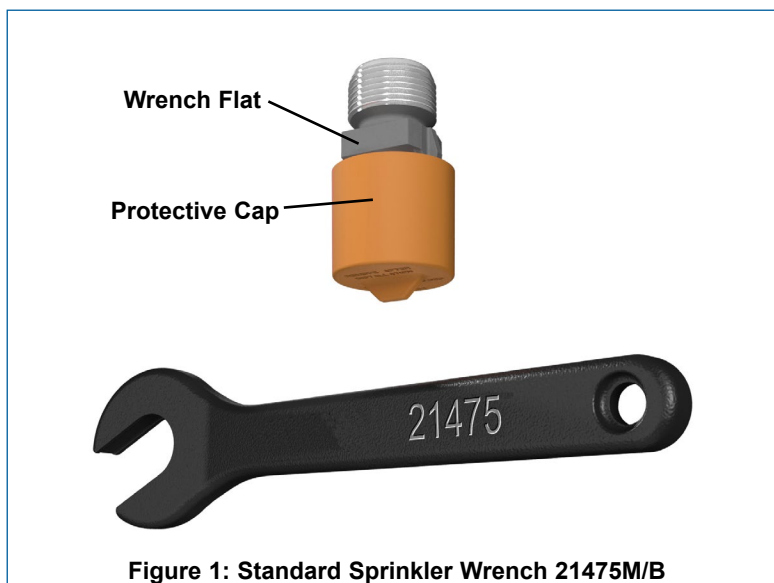
- A. Standard Wrench: Part No. 21475M/B.

**Sprinkler Cabinet:**

- A. Up to 6 sprinklers: Part number 01724A.
- B. 6-12 Sprinklers: Part number 01725A.

**Footnote**

<sup>9</sup>. Based on NFPA 13, NFPA 13R, and NFPA 13D. Other limits may apply, depending on fire loading, sprinkler location, and other requirements of the Authority Having Jurisdiction. Refer to specific installation standards.



**Figure 1: Standard Sprinkler Wrench 21475M/B**



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### Approval Chart 1 (UL)

Standard Response Stainless Steel Sprinklers  
 Maximum 175 PSI (12 bar) WWP

Sprinkler Base Part Number <sup>1</sup>	SIN	Thread Size		Nominal K-Factor		Overall Height		Listings and Approvals <sup>3</sup> (Refer also to Design Criteria below.)	
		NPT	BSPT	U.S.	metric <sup>2</sup>	Inches	mm	cULus <sup>4</sup>	
21928	VK368	3/4"	--	8.0	115	2-3/8	60	A1X	
22611	VK368	--	20 mm	8.0	115	2-3/8	60	A1X	
<b>Approved Temperature Ratings</b> A - 205 °F (96 °C)				<b>Approved Finishes</b> 1 - Stainless Steel			<b>Approved Escutcheons</b> X - Standard surface-mounted escutcheons		

#### Footnotes

1. Base part number is shown. For complete part number, refer to Viking's current price schedule.
2. 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.
3. This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.
4. Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.

**NOTE: The stainless steel sprinklers have passed the standard corrosion test required by the listed approving agencies. These tests cannot and do not represent all possible corrosive environments. Prior to installation, consult the end-user to verify that the sprinkler components are compatible with or suitable for the proposed environment.**

### DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

#### cULus Listing Requirements:

Stainless Steel Standard Sprinklers are cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray upright and pendent sprinklers.




- Designed for use in Light, Ordinary, and Extra Hazard occupancies.
- 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) unless baffles are installed in accordance with NFPA 13.
- Locate no less than 4" (102 mm) from walls.
- Maximum distance from walls shall be no more than one-half of the allowable distance between sprinklers. The distance shall be measured perpendicular to the wall.
- The sprinkler installation and obstruction rules contained in NFPA 13 for standard spray upright and 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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<b>Approval Chart 2 (FM)</b> Standard Response Stainless Steel Sprinklers Maximum 175 PSI (12 bar) WWP									
Sprinkler Base Part Number <sup>1</sup>	SIN	Thread Size		Nominal K-Factor		Overall Height		FM Approvals <sup>3</sup> (Refer also to Design Criteria below.)	
		NPT	BSPT	U.S.	metric <sup>2</sup>	Inches	mm		
21928	VK368	3/4"	--	8.0	115	2-3/8	60	A1X	
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<b>Footnotes</b> 1. Base part number is shown. For complete part number, refer to Viking's current price schedule. 2. 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. 3. This chart shows the FM Approvals available at the time of printing. Check with the manufacturer for any additional approvals. <b>NOTE: The stainless steel sprinklers have passed the standard corrosion test required by the listed approving agencies. These tests cannot and do not represent all possible corrosive environments. Prior to installation, consult the end-user to verify that the sprinkler components are compatible with or suitable for the proposed environment.</b>									

 Temperature	<b>KEY</b>
 Finish	
 Escutcheon (if applicable)	

**DESIGN CRITERIA - FM**  
(Also refer to Approval Chart 2 above.)

**FM Approval Requirements:**  
 Micromatic® Stainless Steel Sprinkler VK368 is FM Approved as a **Special Protection** pendent sprinkler for corrosive environments, and as standard response **Non-Storage** pendent sprinklers as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets 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.

**NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria.**

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