



TECHNICAL DATA

MICROFAST® QUICK RESPONSE FUSIBLE ELEMENT UPRIGHT SPRINKLER VK328 (K4.2)

The Viking Corporation, 210 N Industrial Park Drive, Hastings MI 49058


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Visit the Viking website for the latest edition of this technical data page www.vikinggroupinc.com.

1. DESCRIPTION

The Viking Microfast® Quick Response Upright Fusible Element Sprinkler VK328 is a small, thermosensitive, solder link spray sprinkler available in several different 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, The ENT coating has been investigated for installation in corrosive environments and is listed/approved as indicated in the Approval Chart(s).

2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

Refer to Approval Chart and Design Criteria for cULus Listing requirements that must be followed.



WARNING: Cancer and Reproductive Harm-
www.P65Warnings.ca.gov

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)*
Maximum Working Pressure: 175 psi (12 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 BSPT
Nominal K-Factor: 4.2 U.S. (57 metric**)
Overall Length: 2-3/16" (56 mm)

*cULus Listing, FM Approval, and NFPA 13 installs require a minimum of 7 psi (0.5 bar). The minimum operating pressure for LPCB and CE Approvals ONLY is 5 psi (0.35 bar).

Material Standards:

Frame Casting: Brass UNS-C84400
Deflector: Brass UNS-C23000 or Copper UNS-C19500
Bushing: Brass UNS-C36000
Fusible Element Assembly: Nickel Alloy
Trigger and Support: UNS-S31603
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Seat and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400
Screw: Brass UNS-C36000

For Polyester Coated Sprinklers: Belleville Spring-Exposed

For ENT Coated Sprinklers: Belleville Spring-Exposed, Screw-ENT Plated, Pip Cap-ENT Coated

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

Order Viking Microfast® Quick Response Fusible Element Upright Sprinkler VK328 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: 165 °F (74 °C) = C, 205 °F (96 °C) = E, and 280 °F (138 °C)

For example, sprinkler VK328 with a 1/2" NPT thread, Brass finish and a 165 °F (74 °C) temperature rating = Part No. 13958AB

Available Finishes And Temperature Ratings: Refer to Table 1.

Accessories: (Also refer to the Viking website.)

Sprinkler Wrench: Standard Wrench: Part No. 21475M/B (available since 2017)

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.

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5. OPERATION

During fire conditions, the heat-sensitive fusible element assembly disengages, releasing the seat and spring assemblies to open the waterway. 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 Microfast® Quick Response Upright Fusible Element Sprinkler VK328 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

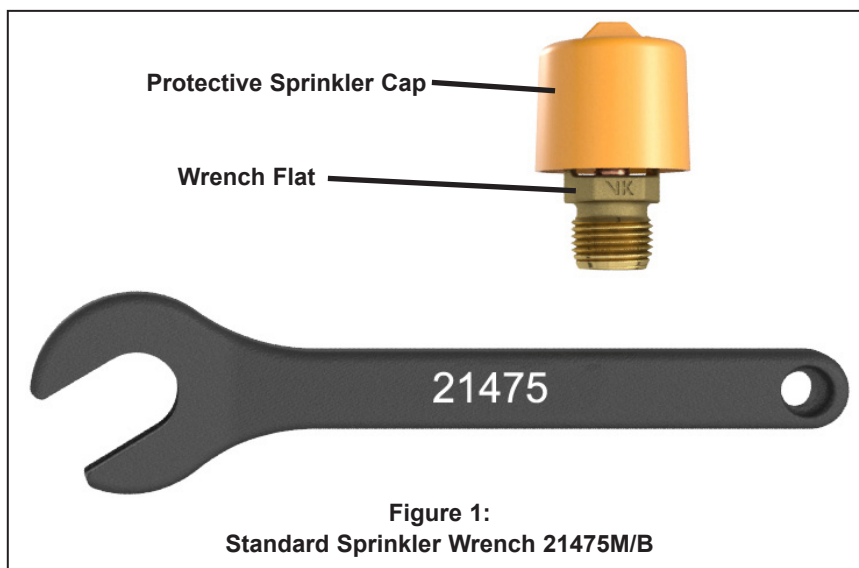
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Frame Paint Color
Ordinary	165 °F (74 °C)	100 °F (38 °C)	None
Intermediate	205 °F (96 °C)	150 °F (65 °C)	White
High	280 °F (138 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome, White Polyester⁵, Black Polyester⁵ and ENT^{3,4}

Corrosion Resistant Sprinkler Coatings: ENT^{3,4}

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. Note that the spring is exposed on sprinklers with ENT coatings. For ENT coated automatic sprinklers, the waterway is coated.
- ⁴ cULus Listed as corrosion resistant.
- ⁵ 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 21475M/B**



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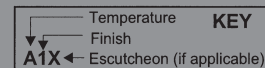
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Approval Chart 1 (UL)

Microfast® Quick Response Fusible Element
Upright Sprinkler VK328
Maximum 175 PSI (12 bar) WWP



Base Part Number ¹	SIN	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals ³			
		NPT	BSPT	U.S.	metric ²	Inches	mm	cULus	VdS	LPCB	CE
13958 ^{6,7}	VK328	1/2"	15 mm	4.2	57	2-3/16	56	A1	--	--	--
21270 ⁶	VK328	1/2"	15 mm	4.2	57	2-3/16	56	A1, A2	--	--	--

Approved Temperature Ratings

A - 165 °F (74 °C), 205 °F (96 °C), 280 °F (138 °C)

Approved Finishes

1 - Brass, Chrome, White Polyester⁵ and Black Polyester⁵
2 - ENT⁸

Footnotes

¹ Base part number is 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. Check with the manufacturer for any additional approvals.

⁴ Listed by Underwriters Laboratories Inc. for us in the U.S. and Canada

⁵ Other colors are available on request with the same Listings and Approvals as the standard colors.

⁶ Listings and Approvals limited to Light Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems only.

⁷ The sprinkler orifice is bushed.

⁸ cULus Listed as corrosion resistant.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

Quick Response Fusible Element Upright Sprinkler VK328 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. Exception: 4.2K sprinklers may be installed on hydraulically calculated dry pipe systems where piping is corrosion resistant or internally galvanized.
- 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 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, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.