



TECHNICAL DATA

MicrofastHP® QUICK RESPONSE FUSIBLE ELEMENT UPRIGHT HIGH PRESSURE SPRINKLER VK316 (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

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

1. DESCRIPTION

The Viking MicrofastHP® Quick Response Upright High Pressure Sprinkler VK316 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.

2. LISTINGS AND APPROVALS

 **cULus Listed:** Category VNIV

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

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 BSPT
 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
 Deflector: Brass UNS-C23000 or Copper UNS-C19500
 Fusible Element Assembly: Nickel Alloy
 Trigger and Support: Stainless Steel UNS-S31600
 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 ENT Coated Sprinklers: Belleville Spring-Exposed, Screw and Pip Cap-ENT Coated

For Polyester Coated Sprinklers: Belleville Spring-Exposed

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

Order Viking Microfast® Quick Response Fusible Element Upright High Pressure Sprinkler VK316 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 VK316 with a 1/2" NPT thread, Brass finish and a 165 °F (74 °C) temperature rating = Part No. 13953AB

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.

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.



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

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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 VK316 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

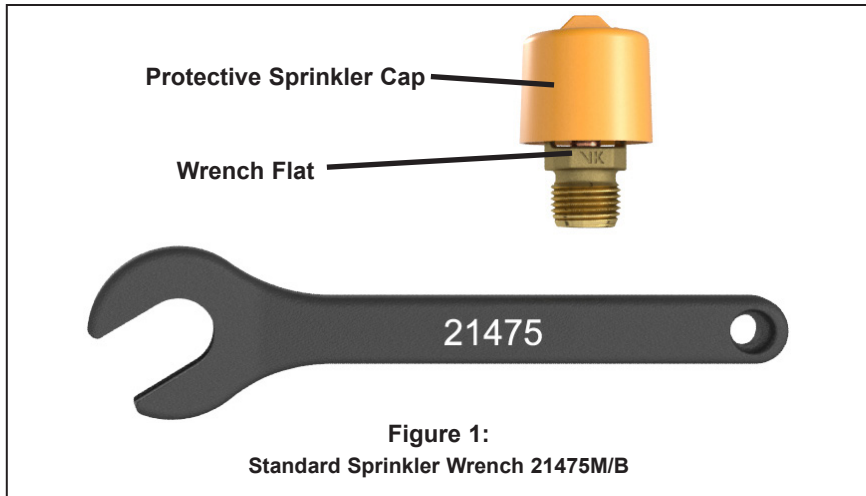
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Frame Paint Color
Ordinary	165 °F (74 °C)	100 °F (38 °C)	None
Intermediate	205 °F (96 °C)	150 °F (65 °C)	White
High	280 °F (138 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass, Chrome, White Polyester⁴, Black Polyester⁴, and ENT^{3,5}

Corrosion Resistant Sprinkler Coatings: ENT^{3,5}

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 For automatic sprinklers, the coatings indicated are applied to the exposed exterior surfaces only.
- ⁵ cULus Listed as corrosion resistant.





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Approval Chart

Viking MicrofastHP® Quick Response Upright
 High Pressure Sprinkler VK316
 Maximum 250 PSI (17 bar) WWP

KEY	
Temperature	↓
Finish	←
A1X ← Escutcheon (if applicable)	

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
13953	VK316	1/2"	15 mm	5.6	80.6	2-3/16	56	A1	--	--	--
Approved Temperature Ratings A - 165 °F (74 °C), 205 °F (96 °C), and 280 °F (138 °C)							Approved Finishes 1 - Brass, Chrome, White Polyester ⁵ , Black Polyester ⁵ , and ENT ⁶				

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 cULus Listed as corrosion resistant.

DESIGN CRITERIA

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

Quick Response Fusible Element Upright Sprinkler VK316 is cULus Listed as indicated in the Approval Chart 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 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.