



TECHNICAL DATA

MICROFAST® QUICK RESPONSE CONVENTIONAL SPRINKLER VK354 (K8.0)

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 Microfast® Quick Response Conventional (Old Style) Sprinkler VK354 is a small, thermosensitive, glass-bulb spray sprinkler available in several different finishes, temperature ratings, and K-Factors to meet design requirements. The special Polyester, and Polytetrafluoroethylene (PTFE) 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. (Note: FM Global has no approval classification for PTFE and Polyester coatings as corrosion resistant.)



2. LISTINGS AND APPROVALS



cULus Listed: Category VNIV

LPCB Approved



CE Certified: Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001

NOTE: Other International approval certificates are available upon request.

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

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: 3/4" NPT, 20 mm BSP

Nominal K-Factor: 8.0 U.S. (115.2 metric**)

Glass-bulb fluid temperature rated to -65 °F (-55 °C)

Overall Length: 2-5/16" (59 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-C26000

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 PTFE Coated Sprinklers: Belleville Spring-Exposed, Screw-Nickel Plated, Pip Cap-PTFE Coated

For Polyester Coated Sprinklers: Belleville Spring-Exposed

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

Order Viking Microfast® Quick Response Conventional (Old Style) Sprinkler VK354 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 Black PTFE = N, ENT = JN

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

For example, sprinkler VK354 with a 3/4" thread, Brass finish and a 155 °F/68 °C temperature rating = Part No. 18261AB

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)

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.

4. INSTALLATION

Refer to appropriate NFPA Installation Standards.



TECHNICAL DATA

MICROFAST® QUICK RESPONSE CONVENTIONAL SPRINKLER VK354 (K8.0)

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

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.

6. INSPECTIONS, TESTS AND MAINTENANCE

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

7. AVAILABILITY

The Viking Microfast® Quick Response Conventional (Old Style) Sprinkler VK354 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 | 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, Black Polyester, Black PTFE, and ENT

Corrosion-Resistant Coatings³: White Polyester, Black Polyester, and Black PTFE. ENT in all temperature ratings except 135 °F (57 °C)

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 on pages 51c-e. 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, ENT, and PTFE coatings. For ENT coated automatic sprinklers, the waterway is coated.

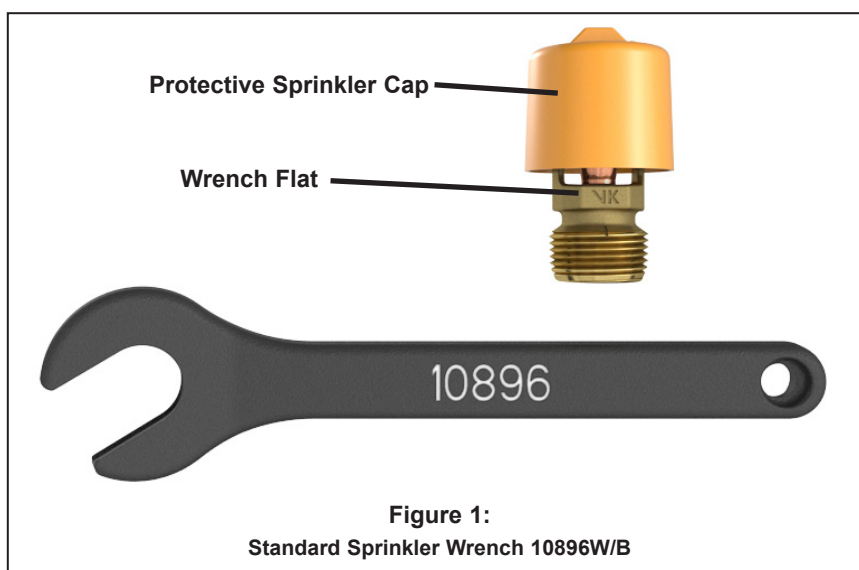


Figure 1:

Standard Sprinkler Wrench 10896W/B



TECHNICAL DATA

MICROFAST® QUICK RESPONSE CONVENTIONAL SPRINKLER VK354 (K8.0)

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

Approval Chart 1 (UL)

Viking Microfast® Quick Response Conventional Sprinkler VK354
Maximum 175 PSI (12 bar) WWP

| KEY | |
|-------------|----------------------------|
| Temperature | Temperature |
| Finish | Finish |
| A1X ← | Escutcheon (if applicable) |

| Base Part Number ¹ | SIN | Thread Size | | Nominal K-Factor | | Overall Length | | Listings and Approvals ³ (Refer also to Design Criteria.) | | | |
|--|-------|-------------|-------|------------------|---------------------|--|----|---|-----|------|-----------------|
| | | NPT | BSP | U.S. | metric ² | Inches | mm | cULus ⁴ | VdS | LPCB | CE |
| 18261 | VK354 | 3/4" | 20 mm | 8.0 | 115.2 | 2-5/16 | 59 | A1 | -- | A2 | B2 ⁷ |
| NOTICE - Product Below - Limited Availability (Contact Local Viking Office) | | | | | | | | | | | |
| 06768B | VK354 | 3/4" | 20 mm | 8.0 | 115.2 | 2-5/16 | 59 | A1 | -- | A2 | B2 ⁷ |
| Approved Temperature Ratings | | | | | | Approved Finishes | | | | | |
| A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C) | | | | | | 1 - Brass, Chrome, White Polyester ^{5,6} , Black Polyester ^{5,6} , and Black PTFE ⁵ | | | | | |
| B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141°C) | | | | | | 2 - Brass, Chrome, White Polyester ^{5,6} , and Black Polyester ^{5,6} | | | | | |
| 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 use in the U.S. and Canada. ⁵ cULus Listed as corrosion resistant. ⁶ Other colors are available on request with the same Listings and Approvals as the standard colors. ⁷ CE Certified, Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001 and 0832-CPD-2003 | | | | | | | | | | | |

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1)

cULus Listing Requirements:

The Viking Microfast® Quick Response Conventional Sprinkler VK354 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for old style (conventional) sprinklers.

- Designed for use in Light and Ordinary Hazard occupancies.
- The sprinkler installation rules contained in NFPA 13 for conventional sprinklers, refer to the installation guidelines for old style (conventional) sprinklers.

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, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.