



TECHNICAL DATA

QUICK RESPONSE EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER SIN VK630 (K8.0)

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

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

1. DESCRIPTION

Viking Quick Response Extended Coverage Horizontal Sidewall Sprinkler SIN VK630 is a thermosensitive spray sprinkler available in several different finishes and temperature ratings to meet varying design requirements. The small glass bulb operating element and special deflector combine speed of operation and area of coverage to meet quick response extended coverage standards.

The special Polyester and Teflon® coatings can be used in decorative applications where colors are desired. In addition, these finishes are cULus listed as corrosion resistant as indicated in the Approval Chart. (Note: FM Global has no approval classification for Teflon® and Polyester coatings as corrosion resistant.)

2. LISTINGS AND APPROVALS

cULus Listed: Category VNIV

FM Approved: Class 2020

NYC Approval: MEA 89-92-E, Volume 32

Refer to the Approval Chart on page 80c and Design Criteria on page 80d for cULus Listing and FM Approval requirements that must be followed.

3. TECHNICAL DATA

Specifications:

Maximum Working Pressure: 175 psi (12 bar). Factory tested hydrostatically to 500 psi (34.5 bar).

Testing: U.S.A. Patent No. 4,831,870

Thread size: 3/4" (20 mm) NPT

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

†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.

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

Overall Length: 2-9/16" (65 mm)

Patents Pending

Material Standards:

Sprinkler Frame: Brass UNS-C84400

Deflector: Bronze UNS-C51000

Bulb: Glass, nominal 3 mm diameter

Pip Cap and Insert Assembly: Copper UNS-C11000 and Stainless Steel UNS-S30400

Compression Screws: 18-8 Stainless Steel

Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with Teflon Tape

Yoke: Bronze UNS-C51000

Ejector Spring: 17-7 Stainless Steel

For Teflon® Coated Sprinklers: Belleville Spring-Exposed, Screw-Nickel Plated, Pip Cap-Teflon® Coated

For Polyester Coated Sprinklers: Belleville Spring-Exposed

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

Order Sprinkler VK630 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.

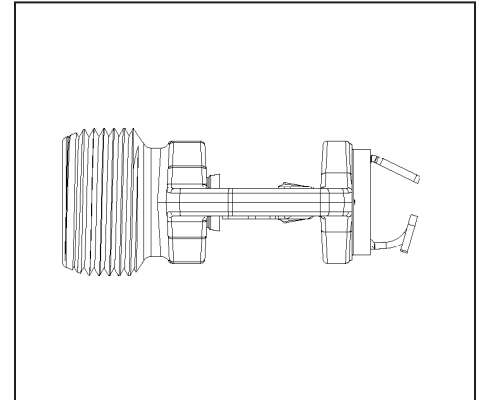
Finish Suffix: Brass = A, Chrome-Enloy® = F, White Polyester = M-/W, Black Polyester = M-/B, and Black Teflon = N

Temperature Suffix (°F/°C): 135°/57° = A, 155°/68° = B, 175°/79° = D

For example, sprinkler VK630 with a Brass finish and a 155 °F/68 °C temperature rating = Part No. 13500AB.

Available Finishes And Temperature Ratings:

Refer to Table 1



For Light Hazard Occupancies Only

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.

	TECHNICAL DATA	QUICK RESPONSE EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER SIN VK630 (K8.0)
---	-----------------------	--

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

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

Accessories: (Also refer to the “Sprinkler Accessories” section of the Viking data book.)

Sprinkler Wrenches:

- A. Standard Wrench: Part No. 10896W/B (available since 2000)
- B. Wrench for coated and/or recessed sprinklers: Part No. 13655W/B†† (available since 2006)
††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 bulb to shatter, releasing the yoke, 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 Model VK630 Sprinkler 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.

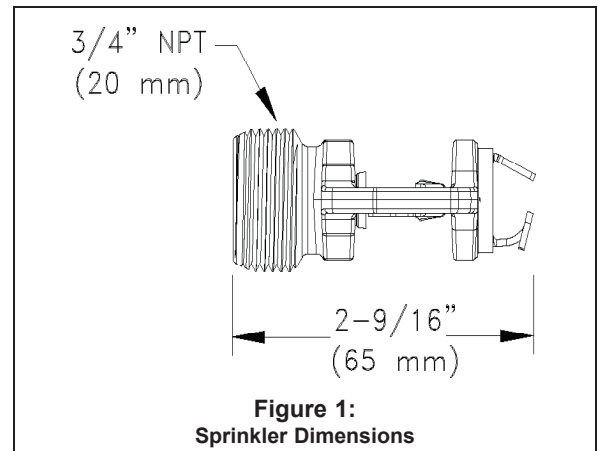


TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

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

Available Sprinkler Finishes: Brass, Chrome-Enloy® (patents pending), White Polyester, Black Polyester, and Black Teflon®
Corrosion-Resistant Coatings³: White Polyester, Black Polyester, and Black Teflon®

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 standard corrosion tests required by particular approving agencies as indicated in the Approval Chart. 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. The coatings indicated are applied to the exposed exterior surfaces only. For Teflon® coated open sprinklers only, the waterway is coated.

NOTE: The spring is exposed on sprinklers with Teflon® and Polyester coatings.

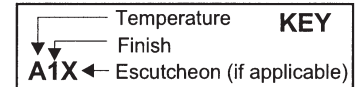
	<h2 style="margin: 0;">TECHNICAL DATA</h2>	<p>QUICK RESPONSE EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER SIN VK630 (K8.0)</p>
---	--	---

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

Sprinkler Base Part Number ¹	NPT Thread Size		Nominal K-Factor		Maximum Water Working Pressure	Overall Length	
	Inches	mm	U.S.	metric ²		Inches	mm
13500	3/4	20	8.0	115.2	175 psi (12 Bar)	2-9/16	65

Approval Chart

Quick Response EC HSW Sprinkler SIN VK630
 For Light Hazard Occupancies Only.
 For installation below smooth, flat, horizontal ceilings only.



Maximum Areas of Coverage ³ (Width x Throw)	Minimum Water Supply Requirements ³	Deflector-to-Ceiling Distance	Listings and Approvals ⁴		
			cULus ⁵	FM ⁶	NYC ⁷
14' x 24' (4.3 m x 7.3 m)	34 gpm @ 18.1 psi (128.7 L/min @ 1.24 Bar)	4 to 6" (102 to 152 mm)	A1X	--	A1X
14' x 24' (4.3 m x 7.3 m)	36 gpm @ 20.3 psi (136.3 L/min @ 1.4 Bar)	6 to 12" (152 to 305 mm)	A1X	--	A1X
14' x 26' (4.3 m x 7.9 m)	38 gpm @ 22.6 psi (144 L/min @ 1.56 Bar)	4 to 6" (102 to 152 mm)	B1X	--	B1X
14' x 26' (4.3 m x 7.9 m)	46 gpm @ 33.1 psi (174.1 L/min @ 2.28 Bar)	6 to 12" (152 to 305 mm)	B1X	--	B1X
16' x 16' (4.9 m x 4.9 m)	26 gpm @ 10.6 psi (98.4 L/min @ 0.73 Bar)	4 to 12" (102 to 305 mm)	A1X	--	A1X
16' x 16' (4.9 m x 4.9 m)	32 gpm @ 16.0 psi (121.1 L/min @ 1.1 Bar)	4 to 12" (102 to 305 mm)	--	A2X	--
16' x 18' (4.9 m x 5.5 m)	29 gpm @ 13.1 psi (109.8 L/min @ 0.91 Bar)	4 to 12" (102 to 305 mm)	A1X	--	A1X
16' x 18' (4.9 m x 5.5 m)	36 gpm @ 20.3 psi (136.3 L/min @ 1.4 Bar)	4 to 12" (102 to 305 mm)	--	A2X	--
16' x 20' (4.9 m x 6.2 m)	32 gpm @ 16.0 psi (121.1 L/min @ 1.1 Bar)	4 to 12" (102 to 305 mm)	A1X	--	A1X
16' x 20' (4.9 m x 6.2 m)	40 gpm @ 25.0 psi (151.4 L/min @ 1.73 Bar)	4 to 12" (102 to 305 mm)	--	A2X	--
16' x 22' (4.9 m x 6.7 m)	36 gpm @ 20.3 psi (136.3 L/min @ 1.4 Bar)	4 to 12" (102 to 305 mm)	B1X	--	B1X
16' x 22' (4.9 m x 6.7 m)	44 gpm @ 30.3 psi (166.6 L/min @ 2.09 Bar)	4 to 12" (102 to 305 mm)	--	A2X	--
16' x 24' (4.9 m x 7.3 m)	39 gpm @ 23.8 psi (147.6 L/min @ 1.64 Bar)	4 to 12" (102 to 305 mm)	B1X	--	B1X
16' x 24' (4.9 m x 7.3 m)	48 gpm @ 36.0 psi (181.7 L/min @ 2.48 Bar)	4 to 12" (102 to 305 mm)	--	A2X	--
18' x 18' (5.5 m x 5.5 m)	33 gpm @ 17.0 psi (124.9 L/min @ 1.2 Bar)	4 to 12" (102 to 305 mm)	B1X	--	B1X
18' x 20' (5.5 m x 6.2 m)	36 gpm @ 20.3 psi (136.3 L/min @ 1.4 Bar)	4 to 12" (102 to 305 mm)	B1X	--	B1X
18' x 22' (5.5 m x 6.7 m)	40 gpm @ 25.0 psi (151.4 L/min @ 1.73 Bar)	4 to 12" (102 to 305 mm)	B1X	--	B1X

<p>Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), and 175 °F (79 °C) B - 135 °F (57 °C) and 175 °F (79 °C)</p>	<p>Approved Finishes 1 - Brass, Chrome-Enloy[®], White Polyester[®], Black Polyester[®], and Black Teflon[®] 2 - Brass, Chrome-Enloy[®], White Polyester, and Black Polyester</p>	<p>Approved Escutcheons X - Standard surface-mounted escutcheon or the Viking Microfast[®] Model F-1 Adjustable Escutcheon⁹, or Recessed with the Viking Micromatic[®] Model E-1 or E-2 Recessed Escutcheon</p>
---	---	--

Footnotes

- ¹ Part number shown is the base part number. For complete part number, refer to current Viking price list 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 For areas of coverage smaller than shown, use the "Minimum Water Supply Requirement" for the next larger area listed. Flows and pressures listed are per sprinkler.
- ⁴ This chart shows the listings and approvals available at the time of printing. Other approvals may be in process. Check with the manufacturer for any additional approvals.
- ⁵ Listed by Underwriter's Laboratories, Inc. for use in the U.S. and Canada for Light-Hazard occupancies with smooth, flat, horizontal ceilings only.
- ⁶ FM Approved for Light Hazard occupancies only. Limited to ceiling configurations and heights allowed by appropriate FM Loss Prevention Data Sheets.
- ⁷ Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. 32.
- ⁸ cULus Listed as corrosion resistant.
- ⁹ The Viking Microfast[®] Model F-1 Adjustable Escutcheon is considered a surface-mounted escutcheon because it does not allow the fusible element of the sprinkler to be recessed behind the face of the wall or ceiling.

	<h2 style="margin: 0;">TECHNICAL DATA</h2>	<p>QUICK RESPONSE EXTENDED COVERAGE HORIZONTAL SIDEWALL SPRINKLER SIN VK630 (K8.0)</p>
---	--	---

The Viking Corporation, 210 N Industrial Park Road, Hastings MI 49058
 Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com

DESIGN CRITERIA
 (Also refer to the Approval Chart on page 80c.)

cULus Listing Requirements: Quick Response Extended Coverage HSW Sprinkler SIN VK630 is cULus Listed as indicated in the Approval Chart for installation in accordance with the latest edition of NFPA 13 for extended coverage sidewall spray sprinklers:

- Limited to Light Hazard occupancies with smooth, flat, horizontal ceilings only.
- Refer to the Approval Chart for required deflector distance below the ceiling. Install with the leading edge of the deflector and sprinkler frame arms oriented parallel to the ceiling (see Figure 3). **THE TOP SURFACE OF THE DEFLECTOR IS MARKED "TOP"**. The sprinkler must be oriented as shown in Figure 3.
- Minimum distance from end walls is 4 in. (102 mm).
- Maximum distance from the end wall 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 extended coverage sidewall spray sprinklers must be followed.

FM Approval Requirements: Quick Response Extended Coverage HSW Sprinkler SIN VK630 is FM Approved as indicated in the Approval Chart for installation in accordance with the latest applicable FM Loss Prevention Data Sheets 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.

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

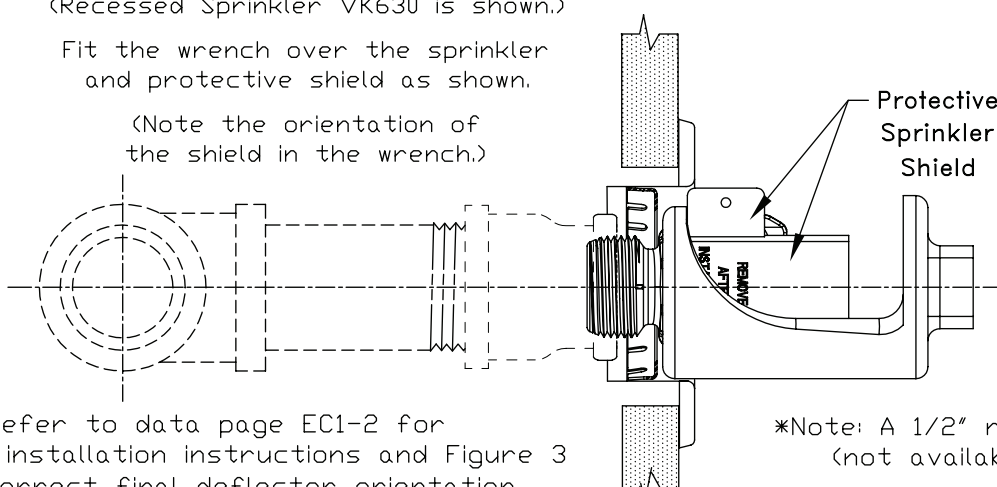
IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to pages EC1-2 for general care, installation, and maintenance information. Viking sprinklers are to be installed in accordance with the latest edition of Viking technical data, the appropriate standards of NFPA, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

Sprinkler Wrench Part No. 13655W/B* must be used with Coated and/or Recessed Sprinkler VK630. (Recessed Sprinkler VK630 is shown.)

Fit the wrench over the sprinkler and protective shield as shown.

(Note the orientation of the shield in the wrench.)

Refer to data page EC1-2 for complete installation instructions and Figure 3 for correct final deflector orientation.



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

Figure 2:
Installation of Coated and/or Recessed Sprinkler VK630

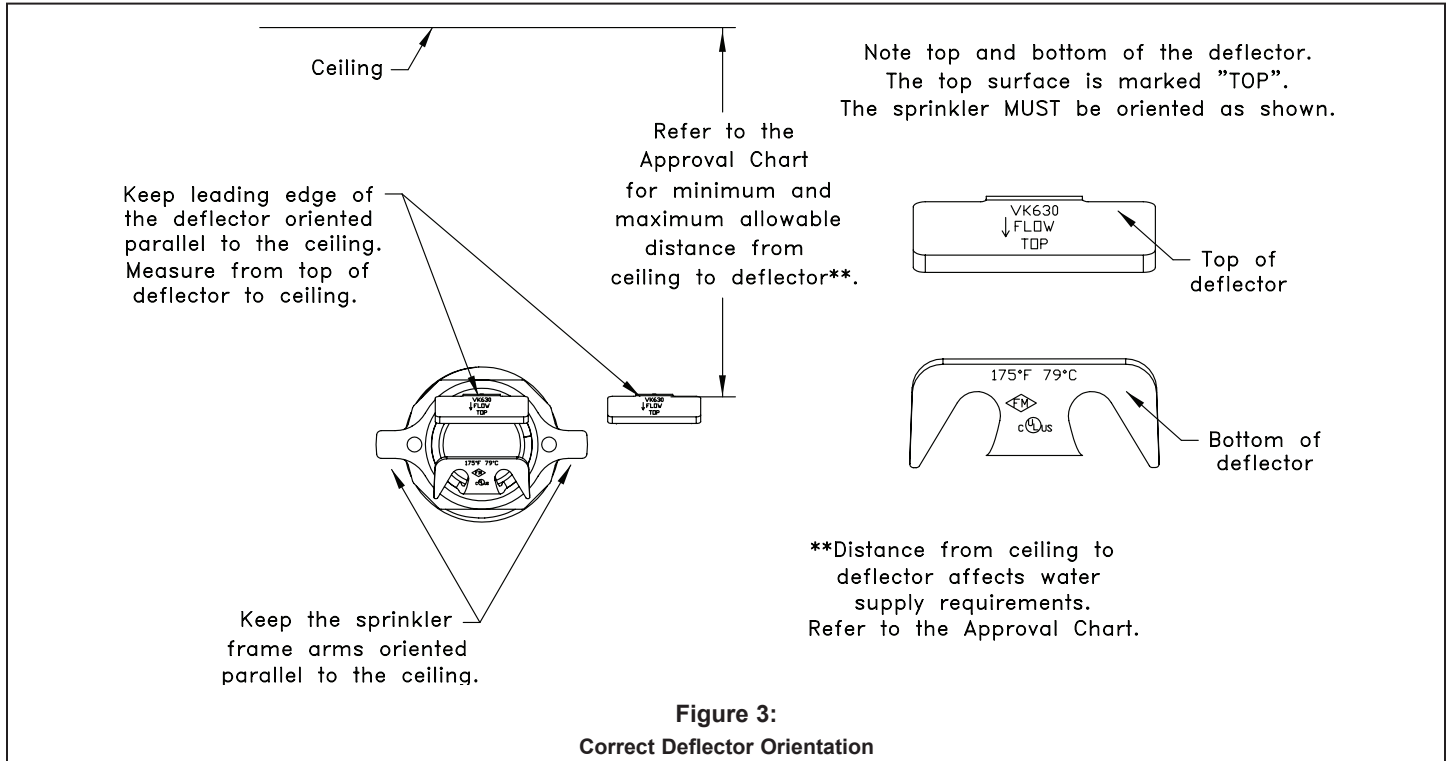


TECHNICAL DATA

QUICK RESPONSE
EXTENDED COVERAGE
HORIZONTAL SIDEWALL
SPRINKLER SIN VK630 (K8.0)

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

Telephone: 269-945-9501 Technical Services 877-384-5464 Fax: 269-945-4495 Email: techsvcs@vikingcorp.com



**THIS PAGE
INTENTIONALLY
LEFT BLANK**