



## TECHNICAL DATA

### EXTENDED COVERAGE UPRIGHT SPRINKLER VK595 (K25.2) (CMDA/CMSA)

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

Viking Extended Coverage Upright Sprinkler VK595 is a thermosensitive solder link spray sprinkler with a nominal K-factor of 25.2 for maximum coverage areas of 14 feet by 14 feet (196 sq. ft.). The sprinkler is UL Listed as a standard response extended coverage Control Mode Density Area (CMDA) sprinkler for storage applications. It is also FM Approved as a quick response extended CMDA sprinkler and as a CMSA sprinkler. The VK595 is FM Approved for storage applications. It is available with an ordinary or intermediate temperature rating to meet design requirements. The VK595 is especially advantageous as a means of decreasing the number of required sprinklers to protect occupancies requiring an area/density application of water.

#### 2. LISTINGS AND APPROVALS

**cULus Listed:** Category VNIV

**FM Approved:** Class 2022-AS, EC Type

**NOTE:** This sprinkler is NOT Listed or Approved as an Early Suppression Fast Response Sprinkler. Refer to Approval Chart 1 and Design Criteria for cULus requirements, and refer to Approval Chart 2 and Design Criteria for FM Approval requirements that must be followed.

#### 3. TECHNICAL DATA

##### Specifications:

Available since 2011.

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

Thread Sizes: Base Part No. 16859: 1" NPT

Base Part No. 16885: 25 mm BSP

Nominal K-factor: 25.2 U.S. (363 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.

Overall Length: 3-3/4" (95.3 mm)

##### Material Standards:

Sprinkler Frame: Brass

Deflector: Copper

Deflector Nut: Brass

Link Assembly: Solder, nickel

Sealing Assembly: Beryllium nickel with polytetrafluoroethylene (PTFE).

Compression Screw: Stainless steel

Button: Brass

Hook: Monel

Strut: Monel

Ejection Spring: Inconel

#### 4. INSTALLATION

Refer to the appropriate NFPA or FM installation standards.

#### 5. OPERATION

During fire conditions, when the temperature around the sprinkler reaches its operating temperature, the heat-sensitive solder melts and the two link halves separate, allowing the sprinkler to activate. 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 VK595 sprinkler is available through a network of domestic and international distributors. See The Viking Corporation website for the closest distributor or contact The Viking Corporation.

#### 8. GUARANTEE

For warranty details, 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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### Ordering Instructions

1. Choose a sprinkler base part number with the required thread size and listing or approval (refer to the approval chart).
2. Add the suffix for the desired finish.
3. Add the suffix for the desired temperature rating.

**EXAMPLE:** 16859AC = VK595 with brass finish and 165 °F (74 °C) nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 100 °F (38 °C).

**NOTE:** The "TQ" suffix for the part numbers below indicates a special protective cap (Figure 2-B) intended for use with InstaSea® fittings. When ordering sprinklers with TQ suffixes in combination with InstaSea® fittings, refer to Form No. F\_021223 for installation instructions.

Sprinkler Base Part Number	
Part Number	Thread Size
16859	1" NPT
16885	25 mm BSPT
16859XX-TQ*	1" NPT
16885XX-TQ*	25 mm BSPT

Finish	
Description	Suffix
Brass	A

Temperature Ratings			
Temperature Rating	Frame Paint Color	Maximum Ambient Ceiling Temperature	Suffix
165 °F (74 °C)	None	100 °F (38 °C)	C
212 °F (100 °C)	White	150 °F (66 °C)	E

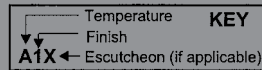
\* Where "XX" is shown in the base part number, enter the desired suffixes for finish and temperature rating (EXAMPLE: 16859AC-TQ)

Accessories
Standard Wrench: Part no. 16888M/B
Sprinkler Cabinet: Up to 6 sprinklers: Part no. 01725A

	<b>TECHNICAL DATA</b>	<b>EXTENDED COVERAGE UPRIGHT SPRINKLER VK595 (K25.2) (CMDA/CMSA)</b>
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<b>Approval Chart 1 (UL)</b> Standard Response Extended Coverage Upright Sprinkler VK595 (K25.2) Maximum 175 PSI (12 Bar) WWP									
Base Part Number <sup>1</sup>	SIN	Sprinkler Style	Thread Size		Nominal K-factor		Overall Length		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>
16859	VK595	Upright	1"	--	25.2	363	3-3/4"	95.3	A1
16885			--	25 mm					A1
16859XX-TQ			1"	--					A1
16885XX-TQ			--	25 mm					A1
<b>Approved Temperature Ratings</b> A - 165 °F (74 °C) and 212 °F (100 °C)							<b>Approved Finish</b> 1 - Brass		
<b>Footnotes</b> <sup>1</sup> Base part number shown. For complete part number, refer to Viking's current price schedule. <sup>2</sup> 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. <sup>3</sup> This table shows the listings and approvals available at the time of printing. Other approvals may be in process. <sup>4</sup> Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.									



**DESIGN CRITERIA - UL**  
 (Also refer to Approval Chart 1 above.)

**cULus Listing Requirements:**

Sprinkler VK595 is cULus Listed as a standard response extended coverage upright sprinkler for storage protection. VK595 installation must be in accordance with the latest edition of NFPA 13 and in conjunction with the following guidelines:

- Acceptable system types: Wet, dry, and preaction
- Suitable for the protection of extra hazard and high-piled storage occupancies where area/density design criteria is provided.
- Suitable for "unobstructed" or "non-combustible obstructed" construction.
- Sprinkler VK595 has been specifically tested and listed for non-combustible obstructed construction and is suitable for use within trusses or bar joists that have non-combustible web members greater than 1 inch (25.4 mm) when applying the 4-times obstruction criteria rule defined under "Obstructions to Sprinkler Discharge Pattern Development."
- The maximum area of coverage per sprinkler is 196 sq. ft. (18.2 sq. m). The maximum distance between sprinklers is 14 feet (4.3 m). The minimum distance between sprinklers is 8 feet (2.44 m). For a protection area of 144 sq. ft. (13.3 sq. m), the maximum distance between sprinklers is 15 feet (4.5 m), which is in accordance to NFPA 13.
- The minimum flow requirement is to be based on the design density applied over the actual area of coverage per sprinkler.
- The minimum clearance between the deflector and the top of storage is 36 inches (0.9 m). For clearances of 36 inches (0.9 m) up to 48 inches (1.21 m), the minimum design pressure is 22 PSI (1.52 bar). For clearances of 48 inches (1.21 m) and greater, the minimum design pressure is established by the minimum flow requirement; however, the pressure can never be less than 7 PSI (.5 bar).
- The ordinary and intermediate temperature-rated VK595 sprinklers have been investigated for use in high-piled storage occupancies at the hydraulic demand normally associated with high-temperature sprinklers. As such, the VK595 sprinklers are listed storage sprinklers, having a K-factor greater than 11.2 and having ordinary and intermediate temperature ratings (that is, 165 °F and 212 °F). Consequently, the VK595 sprinklers, in accordance with the latest edition of NFPA 13, may be used in conjunction with the density curves for high-temperature sprinklers specified in the latest NFPA 13 edition.
- Sprinkler VK595 complies with the criterion for the protection of retail stores, as described in NFPA 13.

**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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### Approval Chart 2 (FM)

Quick Response Extended Coverage Upright Sprinkler VK595 (K25.2)  
Maximum 175 PSI (12 Bar) WWP

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

Base Part Number <sup>1</sup>	SIN	Sprinkler Style	Thread Size		Nominal K-factor		Overall Length		Listings and Approvals <sup>3</sup> (Refer also to Design Criteria below.)
			NPT	BSPT	U.S.	metric <sup>2</sup>	Inches	mm	FM Approvals <sup>3</sup>
16859	VK595	Upright	1"	--	25.2	363	3-3/4"	95.3	A1
16885			--	25 mm					A1
16859XX-TQ			1"	--					A1
16885XX-TQ			--	25 mm					A1
<b>Approved Temperature Ratings</b> A - 165 °F (74 °C) and 212 °F (100 °C)							<b>Approved Finish</b> 1 - Brass		
<b>Footnotes</b>									
<sup>1</sup> Base part number shown. For complete part number, refer to Viking's current price schedule. <sup>2</sup> 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. <sup>3</sup> This table shows the listings and approvals available at the time of printing. Other approvals may be in process.									

### DESIGN CRITERIA- FM

(Also refer to Approval Chart 2 above.)

#### FM Approval Requirements:

- Sprinkler VK595 is FM Approved as a quick response extended coverage upright **storage** sprinkler, as indicated in the FM Approval Guide.
  - For specific application and installation requirements, refer to the latest applicable FM Loss Prevention datasheets (including datasheets 2-0 and 8-9).
- Approved storage sprinklers are also FM Approved for use as **non-storage** sprinklers.
  - For specific application and installation requirements, refer to the latest applicable FM Loss Prevention datasheets (including datasheet 2-0).

FM Global Loss Prevention datasheets 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.

- System type: Wet systems ONLY.

**NOTE: The FM installation guidelines may differ from cULus and/or NFPA criteria. For example, FM installation guidelines indicate the minimum spacing for this sprinkler is 10 ft. (3 m) .**

**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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**NOTE:** Handle the sprinkler only by the frame arms and by using Sprinkler Wrench 16888M/B. **DO NOT** grip or apply any force to the fusible link assembly. Apply a minimum-to-maximum torque of 20 to 30 ft. lbs. (26.8 to 40.2 Nm).

After installation, inspect the link assembly of each VK595 Sprinkler for damage. Verify that the link assembly and hook are positioned as illustrated in Figure 2, and that the link assembly has not been bent, creased, or forced out of its normal position in any way.

Figure 1: Sprinkler Wrench 16888M/B

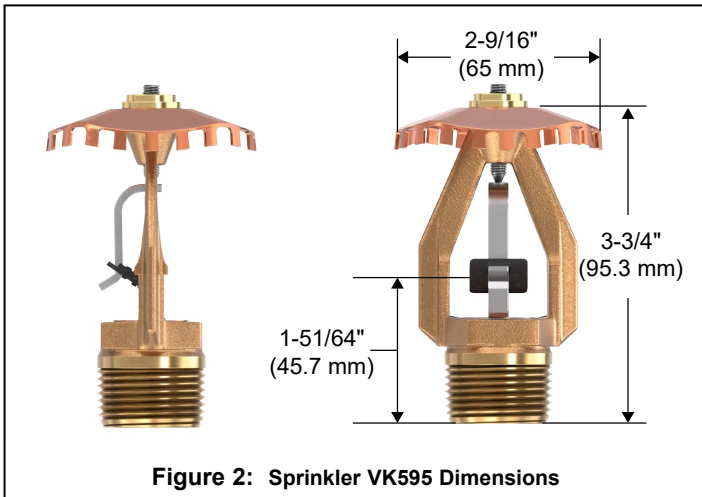


Figure 2: Sprinkler VK595 Dimensions



Figure 3: VK595 with Torque Assist Cap

	bg	Инсталирайте и пуснете продукта в експлоатация само ако следната инструкция е ясно разбрана.	lv	Produkta iemontēšanu un ekspluatācijas sākšanai veikt tikai tad, ja dotā instrukcija ir pilnībā saprasta.
	cs	Namontujte a spust'te do provozu produkt pouze tehdy, když jste jasně pochopili tento návod.	lt	Produktą montuokite ir pradėkite eksploatuoti tik tuomet, jei aiškiai suprantate šią instrukciją.
	de	Du må kun montere og idriftsætte produktet, hvis du har forstået følgende vejledning til fulde.	mt	Installa u ħaddem il-prodott biss jekk l-istruzzjonijiet li ġejjin jinftiehm u b'mod ċar.
	de	Produkt nur einbauen und in Betrieb nehmen, wenn die nachfolgende Anleitung klar verstanden wird.	nl	Product alleen installeren en in gebruik nemen, als de volgende instructies begrepen zijn.
	el	Η εγκατάσταση και θέση σε λειτουργία του προϊόντος επιτρέπονται μόνο εάν οι ακόλουθες οδηγίες έχουν γίνει κατανοητές.	no	Ikke installer og ta i bruk produktet uten at følgende anvisninger er tydelig forstått.
	en	Do not install and commission the product unless you have clearly understood the instructions below.	pl	Produkt należy montować i uruchamiać tylko wtedy, gdy poniższe instrukcje są w pełni zrozumiałe.
	es	Instalar el producto y ponerlo en funcionamiento solo cuando se hayan comprendido claramente las siguientes instrucciones.	pt	Instalar e colocar o produto em funcionamento somente se as instruções a seguir forem claramente compreendidas.
	et	Paigaldage toode ja kasutage seda ainult siis, kui saate alljärgnevast juhendist selgelt aru.	ro	Montați produsul și puneți-l în funcțiune numai dacă instrucțiunea următoare este înțelesă clar.
	fi	Tuotteen saa asentaa ja ottaa käyttöön vain, jos jäljempänä oleva ohje ymmärretään selvästi.	ru	Не устанавливайте и не принимайте оборудование в эксплуатацию, если вы четко не поняли инструкции ниже
	fr	N'installer et ne mettre en service le produit que si les instructions suivantes ont été clairement comprises.	sk	Namontujte a spustite do prevádzky výrobok iba vtedy, pokiaľ ste jasne pochopili tento návod.
	ga	Ná déan an táirge a shuiteail agus a choimisiunu mura dtuigeann tu na teoracha thíos go soileir.	sl	Izdelek vgradite in zaženite samo, če ste dobro razumeli navodila v nadaljevanju.
	hr	Ne instalirajte i ne puštajte proizvod u rad ako niste jasno razumjeli donje upute.	sr	Ne instalirajte i ne puštajte proizvod u rad ako niste jasno razumeli uputstva u nastavku.
	hu	Csak akkor építse be a terméket és helyezze üzembe, ha a következő útmutatót egyértelműen megértette.	sv	Montera och driftsätt produkten endast om du förstår den efterföljande instruktionen.
	is	Settu ekki upp eða taktu vöruna í notkun nema þú hafir skilið greinilega leiðbeiningarnar hér að neðan.	tr	Aşağıdaki talimatları açıkça anlamadan ürünü kurmayın ve devreye almayın.
	it	Montare il prodotto e metterlo in funzione solo se si sono comprese appieno le seguenti istruzioni.		



## TECHNICAL BULLETIN

## VK595 UPRIGHT SPRINKLER (CMDA/CMSA)

### 1. INTENDED FOR

This bulletin is intended for sprinkler installations in IS-W2 InstaSeal® fittings only. For more information on proper InstaSeal installation, refer to F\_021223. For standard sprinkler installations, refer to the sprinkler's technical data sheet.

### 2. PRODUCT IDENTIFICATION

This bulletin covers the following products, hereafter referred to as "sprinkler":

- VK595 Upright Sprinkler K25.2 (365)

### 3. OTHER APPLICABLE DOCUMENTS

For intended use and relevant conditions for the safe use of the specific sprinkler refer to the appropriate *Technical Data Sheet*.

### 4. TRANSPORT AND HANDLING

#### **⚠ WARNING**

**A damaged or compromised sprinkler poses the risk of fatal consequences.**

**Damaged or compromised sprinklers will not operate properly which could lead to loss of life.**

- **NEVER** use a sprinkler that has been exposed to temperatures exceeding the maximum allowed ambient temperature.
- **NEVER** use a sprinkler with a loss of liquid from the glass bulb or damage to the fusible element. A small bubble should be visible within the glass bulb; rotate the sprinkler to a horizontal position while observing the bulb to see the bubble.
- **NEVER** use a sprinkler that has been dropped or damaged.
- **ALWAYS** Protect the sprinkler from mechanical damage during storage, transport, and handling.
- **NEVER** use sprinklers that have been painted by anyone other than the manufacturer.
- **ALWAYS** protect sprinklers from being painted during installation or replacement in accordance with the installation standards.
- **NEVER** clean sprinklers with anything other than 7 psi or lower compressed air.
- **NEVER** apply soap, water, ammonia, adhesives, solvents or any other fluids on sprinklers.
- **Destroy** every damaged or compromised sprinkler.

#### **NOTICE**

**Protect sprinklers during transport and handling.**

- **ALWAYS** handle the sprinkler with care.
- **ALWAYS** keep the protective cap on the sprinkler during transport and handling.
- **NEVER** remove the protective cap until the fire sprinkler system is placed in service and the potential for mechanical damage no longer exists.
- **ALWAYS** protect the sprinkler from direct sunlight during transport and handling.
- **ALWAYS** store sprinkler in a cool, dry, protected area.
- **ALWAYS** use original manufacturer's shipping containers.
- **NEVER** store a sprinkler loose in a box, bin, bucket, or other type of container.
- **ALWAYS** keep the sprinkler separated from other sprinklers.
- **NEVER** allow metal parts to contact the sprinkler operating elements.



## 5. INSTALLATION

### **⚠ WARNING**

Installation by insufficiently qualified personnel poses the risk of fatal consequences.

- This sprinkler must be installed properly by qualified personnel familiar with safe practices and applicable and recognized design and installation standards issued, for example, by NFPA, FM, VdS, or LPCB, and trained how to properly perform the installation procedures.

### **⚠ CAUTION**

Cutting Hazard.

Sprinklers, accessories, cabinets, and packaging can have sharp edges that can cause cuts.

- Wear appropriate personal protective equipment (gloves) while handling product.

### **NOTICE**

Do NOT use a wrench to install a sprinkler into an InstaSeal fitting. InstaSeal sprinkler installations require hand tightening or an alignment tool. Failure to comply may cause permanent damage to the gasket.

### **NOTICE**

Refer to the InstaSeal Welded Sprinkler Fittings IS-W2 1" technical data sheet F\_021223 for additional installation information related to the IS-W2 fittings.

1. Install all required piping in the intended installation location.
2. Verify that the sprinkler model/style, K-factor, temperature rating, and response characteristics are appropriate for the intended installation location.
3. Inspect the sprinkler for damage. Destroy every damaged or compromised sprinkler. The following are examples in which sprinklers are considered damaged or compromised. Replace the sprinkler in the following cases:
  - Sprinkler with damage to the fusible element.
  - Sprinklers that have been field painted, caulked, or mechanically damaged.
  - Sprinklers showing signs of corrosion.
4. Verify that the sprinkler is protected with the protective cap.

### **NOTICE**

- For steps 5-7, place fingers in the proper areas of the protective cap to thread the sprinkler. Failure to do so may result in losing the protective cap and/or a damaged sprinkler deflector.
- Do not use the deflector to thread the sprinkler in the fitting.



5. Verify the gasket is present in the IS-W2 fitting (white surface visible). With the protective cap still on, thread the sprinkler by hand into the InstaSeal fitting, as shown in Figure 1. Stop when resistance is felt. (Indicates gasket contact.)

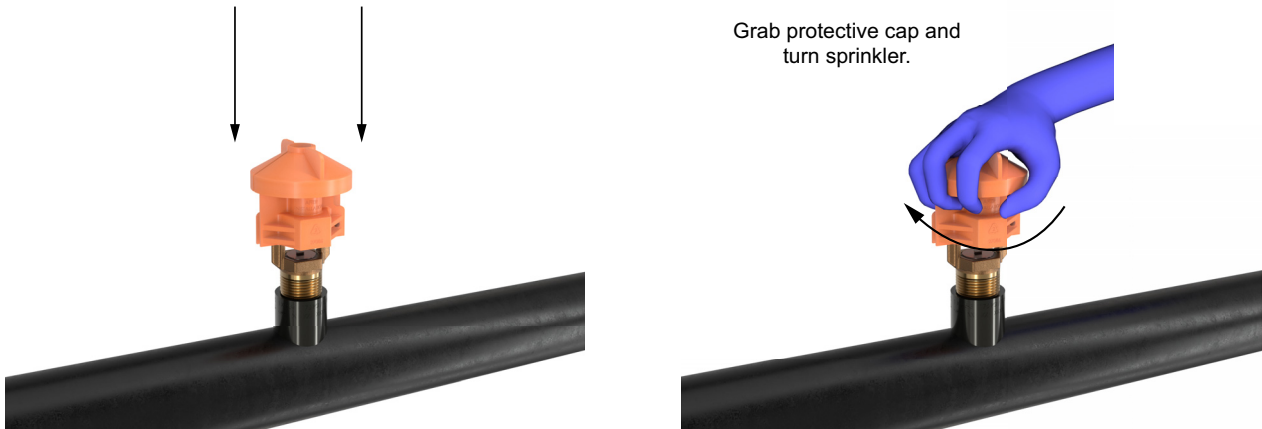


Figure – 1: Protective Cap Tabs

6. Take note of the position of the sprinkler's frame arms before proceeding.

### NOTICE

Over-tightening the sprinkler can cause permanent sprinkler damage. For a 1" NPT (25 mm BPST) sprinkler, tighten up to a recommended maximum torque of 8 ft-lbs.

7. Place fingers on the open flat surface on the protective cap under the deflector. Turn the sprinkler 180° (1/2 turn). (See Figure 2.)

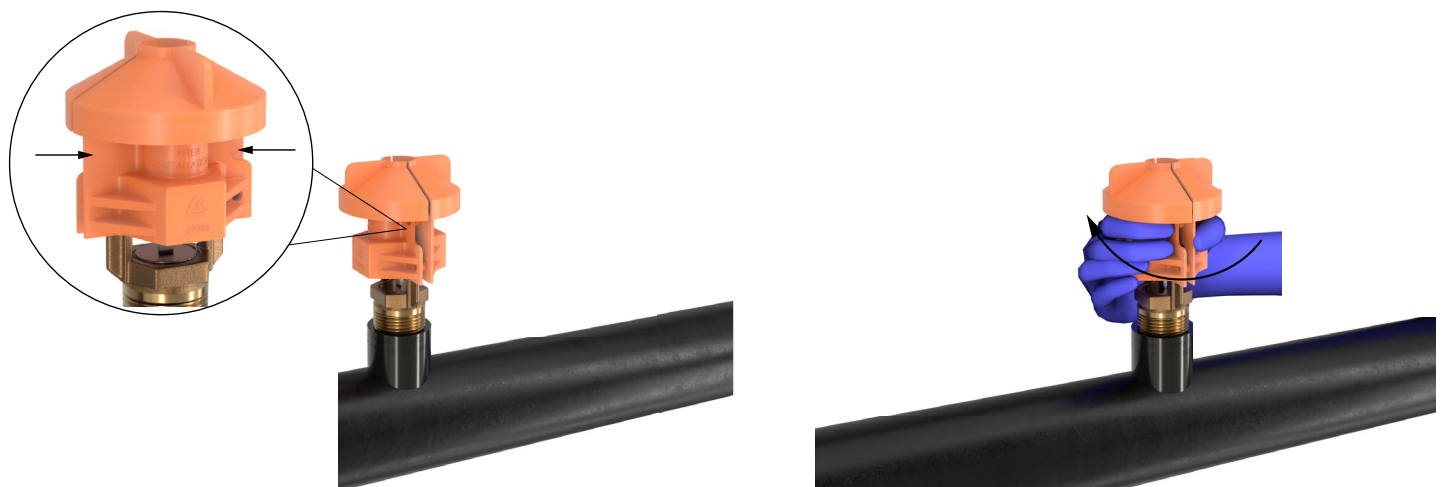


Figure – 2: Place Fingers on Open Flat Surfaces

8. If needed, carefully slide the approved alignment tool onto the sprinkler’s wrench flats (refer to Figure 3) and turn the sprinkler up to a maximum 180° (1/2 turn) in order to align the sprinkler frame arms parallel to the pipe.

**NOTICE**

Do NOT use a wrench to install a sprinkler into an InstaSeal fitting. InstaSeal sprinkler installations require hand tightening or an alignment tool. Failure to comply may cause permanent damage to the gasket.

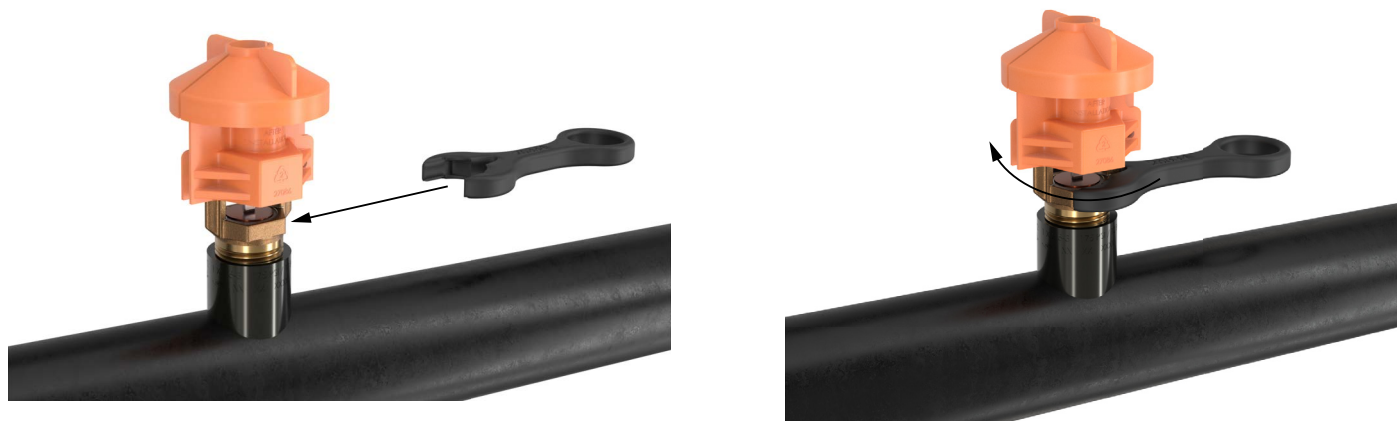


Figure – 3: Use Alignment Tool on Sprinkler

9. Once the system is in service, remove the protective cap.

**NOTICE**

The sprinkler protective cap must NOT be removed from the sprinkler until placing the system in service. Test the entire sprinkler system. Refer to the applicable system documentation, regulations, and standards.

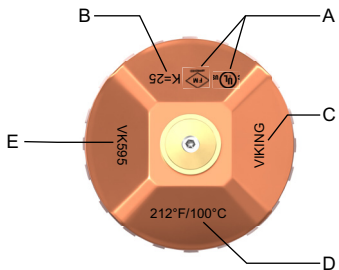
Table 1: Sprinkler Markings	
Ref	Parameter
A	Listings and approvals
B	K-factor
C	Manufacturer name
D	Nominal temperature rating
E	Manufacturer’s Sprinkler Identification Number (SIN)
	

Figure – 4


**TECHNICAL  
BULLETIN**
**VK595 UPRIGHT  
SPRINKLER (CMDA/CMSA)**
**6. CONTACT**

The sprinkler and accessories are available through Viking distributors only. Contact your local Viking sales office which can be found on our website:

Americas and Asia: [www.vikinggroupinc.com/locations](http://www.vikinggroupinc.com/locations) OR Europe, Middle East, Africa (EMEA): [www.viking-emea.com/contact](http://www.viking-emea.com/contact)

**Manufacturer:**

The Viking Corporation  
5150 Beltway SE  
Caledonia, MI 49316  
Tel.: (800) 968-9501  
Fax: 269-818-1680  
Technical Services: 1-877-384-5464  
[techsvcs@vikingcorp.com](mailto:techsvcs@vikingcorp.com)

**Importer EU:**

Viking S.A.  
21, Z.I, Haneboesch  
L-4562 Differdange / Nieder Korn  
Tel.: +352 58 37 37 – 1  
Fax: +352 58 37 36  
[vikinglux@viking-emea.com](mailto:vikinglux@viking-emea.com)

**Asia Pacific (APAC) Main Office:**

The Viking Corporation (Far East) Pte. Ltd.  
69 Tuas View Square  
Westlink Techpark, Singapore 637621  
Tel: (+65) 6 278 4061  
Fax: (+65) 6 278 4609  
[vikingAPAC@vikingcorp.com](mailto:vikingAPAC@vikingcorp.com)



## BULLETIN

CARE AND HANDLING  
OF SPRINKLERS

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

## SPRINKLERS ARE FRAGILE - HANDLE WITH CARE!

### General Handling and Storage:

- Store sprinklers in a cool, dry place.
- Protect sprinklers during storage, transport, handling, and after installation.
- Use the original shipping containers. DO NOT place sprinklers loose in boxes, bins, or buckets.
- Keep sprinklers separated at all times. DO NOT allow metal parts to contact sprinkler operating elements.

### For Pre-Assembled Drops:

- Protect sprinklers during handling and after installation.
- For recessed assemblies, use the protective sprinkler cap (Viking Part Number 10364).

### Sprinklers with Protective Shields or Caps:

- DO NOT remove shields or caps until after sprinkler installation and there no longer is potential for mechanical damage to the sprinkler operating elements.
- **Sprinkler shields or caps MUST be removed BEFORE placing the system in service!**
- Remove the sprinkler shield by carefully pulling it apart where it is snapped together.
- Remove the cap by turning it slightly and pulling it off the sprinkler.

### Sprinkler Installation:

- DO NOT use the sprinkler deflector or operating element to start or thread the sprinkler into a fitting.
- **Use only the designated sprinkler head wrench!** Refer to the current sprinkler technical data page to determine the correct wrench for the model of sprinkler used.
- DO NOT install sprinklers onto piping at the floor level.
- Install sprinklers after the piping is in place to prevent mechanical damage.
- DO NOT allow impacts such as hammer blows directly to sprinklers or to fittings, pipe, or couplings in close proximity to sprinklers. Sprinklers can be damaged from direct or indirect impacts.
- DO NOT attempt to remove drywall, paint, etc., from sprinklers.
- **Take care not to over-tighten the sprinkler and/or damage its operating parts!**

#### Maximum Torque:

1/2" NPT: 14 ft-lbs. (19.0 N-m)

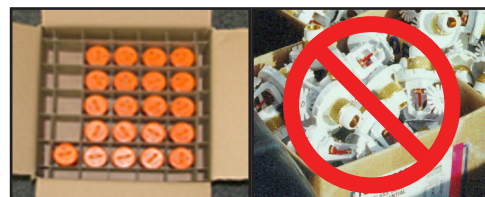
3/4" NPT: 20 ft-lbs. (27.1 N-m)

1" NPT: 30 ft-lbs. (40.7 N-m)



**CORRECT**  
(Original container used)

**INCORRECT**  
(Placed loose in box)



**CORRECT**  
(Protected with caps)

**INCORRECT**  
(Protective caps not used)



**CORRECT**  
(Piping is in place at the ceiling)

**INCORRECT**  
(Sprinkler at floor level)



**CORRECT**  
(Special installation wrenches)

**INCORRECT**  
(Designated wrench not used)



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

### **! WARNING**

Any sprinkler with a loss of liquid from the glass bulb or damage to the fusible element should be destroyed. Never install sprinklers that have been dropped, damaged, or exposed to temperatures exceeding the maximum ambient temperature allowed. Sprinklers that have been painted in the field must be replaced per NFPA 13. Protect sprinklers from paint and paint overspray in accordance with the installation standards. Do not clean sprinklers with soap and water, ammonia, or any other cleaning fluid. Do not use adhesives or solvents on sprinklers or their operating elements.

**Refer to the appropriate technical data page and NFPA standards for complete care, handling, installation, and maintenance instructions. For additional product and system information Viking data pages and installation instructions are available on the Viking Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).**



## BULLETIN

CARE AND HANDLING  
OF SPRINKLERS

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

## PROTECTIVE SPRINKLER SHIELDS AND CAPS

### General Handling and Storage:

Many Viking sprinklers are available with a plastic protective cap or shield temporarily covering the operating elements. The snap-on shields and caps are factory installed and are intended to help protect the operating elements from mechanical damage during shipping, storage, and installation. NOTE: It is still necessary to follow the care and handling instructions on the appropriate sprinkler technical data sheets\* when installing sprinklers with bulb shields or caps.

### WHEN TO REMOVE THE SHIELDS AND CAPS:

NOTE: SHIELDS AND CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!

Remove the shield or cap from the sprinkler only after checking all of the following:

- The sprinkler has been installed\*.
- The wall or ceiling finish work is completed where the sprinkler is installed and there no longer is a potential for mechanical damage to the sprinkler operating elements.

**SHIELDS AND CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!**

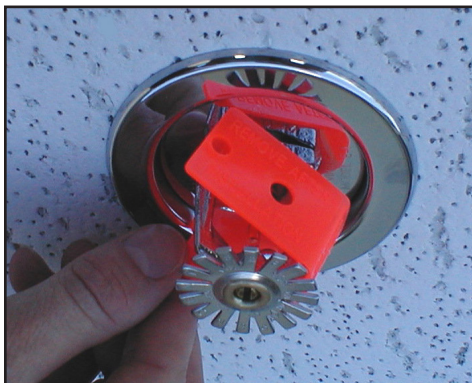


Figure 1: Sprinkler shield being removed from a pendent sprinkler.



Figure 2: Sprinkler cap being removed from a pendent sprinkler.



Figure 3: Sprinkler cap being removed from an upright sprinkler.

## HOW TO REMOVE SHIELDS AND CAPS:

No tools are necessary to remove the shields or caps from sprinklers. DO NOT use any sharp objects to remove them! **Take care not to cause mechanical damage to sprinklers when removing the shields or caps.** When removing caps from fusible element sprinklers, use care to prevent dislodging ejector springs or damaging fusible elements. NOTE: Squeezing the sprinkler cap excessively could damage sprinkler fusible elements.

- To remove the shield, simply pull the ends of the shield apart where it is snapped together. Refer to Figure 1.
- To remove the cap, turn it slightly and pull it off the sprinkler. Refer to Figures 2 and 3.

### NOTICE

Refer to the current sprinkler technical data page to determine the correct sprinkler wrench for the model of sprinkler used.

### WARNING

Never install sprinklers that have been dropped, damaged, or exposed to temperatures in excess of the maximum ambient temperature allowed.

\* Refer to the appropriate current technical data pages for complete care, handling, and installation instructions. Data pages are included with each shipment from Viking or Viking distributors. They can also be found on the Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).





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**CONCEALED COVER ASSEMBLIES ARE FRAGILE!**  
**TO ASSURE SATISFACTORY PERFORMANCE OF THE PRODUCT, HANDLE WITH CARE.**



Concealed Sprinkler and Adapter  
Assembly with Protective Cap

Concealed Sprinkler and Adapter  
Assembly (Protective Cap Removed)



Cover Plate Assembly  
(Pendent Cover 12381 shown)



#### GENERAL HANDLING AND STORAGE INSTRUCTIONS:

- Do not store in temperatures exceeding 100 °F (38 °C). Avoid direct sunlight and confined areas subject to heat.
- Protect sprinklers and cover assemblies during storage, transport, handling, and after installation.
  - Use original shipping containers.
  - Do not place sprinklers or cover assemblies loose in boxes, bins, or buckets.
- Keep the sprinkler bodies covered with the protective sprinkler cap any time the sprinklers are shipped or handled, during testing of the system, and while ceiling finish work is being completed.
- Use only the designated Viking recessed sprinkler wrench (refer to the appropriate sprinkler data page) to install these sprinklers. **NOTE:** The protective cap is temporarily removed during installation and then placed back on the sprinkler for protection until finish work is completed.
- Do not over-tighten the sprinklers into fittings during installation.
- Do not use the sprinkler deflector to start or thread the sprinklers into fittings during installation.
- Do not attempt to remove drywall, paint, etc., from the sprinklers.
- Remove the plastic protective cap from the sprinkler before attaching the cover plate assembly. **PROTECTIVE CAPS MUST BE REMOVED FROM SPRINKLERS BEFORE PLACING THE SYSTEM IN SERVICE!**

Refer to the appropriate current technical data pages for complete care, handling, and installation instructions. Data pages are included with each shipment from Viking or Viking distributors. They can also be found on the Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).



## BULLETIN

CARE AND HANDLING  
OF SPRINKLERS

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

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## USE THE FOLLOWING PRECAUTIONS WHEN HANDLING WAX-COATED SPRINKLERS

Many of Viking's sprinklers are available with factory-applied wax coating for corrosion resistance. These sprinklers MUST receive appropriate care and handling to avoid damaging the wax coating and to assure satisfactory performance of the product.

### General Handling and Storage of Wax-Coated Sprinklers:

- Store the sprinklers in a cool, dry place (in temperatures below the maximum ambient temperature allowed for the sprinkler temperature rating. Refer to Table 1 below.)
- Store containers of wax-coated sprinklers separate from other sprinklers.
- Protect the sprinklers during storage, transport, handling, and after installation.
- Use original shipping containers.
- Do not place sprinklers in loose boxes, bins, or buckets.

### Installation of Wax-Coated Sprinklers:

Use only the special sprinkler head wrench designed for installing wax-coated Viking sprinklers (any other wrench may damage the unit).

- Take care not to crack the wax coating on the units.
- For touching up the wax coating after installation, wax is available from Viking in bar form. Refer to Table 1 below. The coating MUST be repaired after sprinkler installation to protect the corrosion-resistant properties of the sprinkler.
- Use care when locating sprinklers near fixtures that can generate heat. Do not install sprinklers where they would be exposed to temperatures exceeding the maximum recommended ambient temperature for the temperature rating used.
- Inspect the coated sprinklers frequently soon after installation to verify the integrity of the corrosion resistant coating. Thereafter, inspect representative samples of the coated sprinklers in accordance with NFPA 25. Close up visual inspections are necessary to determine whether the sprinklers are being affected by corrosive conditions.

TABLE 1

Sprinkler Temperature Rating (Fusing Point)	Wax Part Number	Wax Melting Point	Maximum Ambient Ceiling Temperature <sup>1</sup>	Wax Color
155 °F (68 °C) / 165 °F (74 °C)	02568A	148 °F (64 °C)	100 °F (38 °C)	Light Brown
175 °F (79 °C)	04146A	161 °F (71 °C)	150 °F (65 °C)	Brown
200 °F (93 °C)	04146A	161 °F (71 °C)	150 °F (65 °C)	Brown
220 °F (104 °C)	02569A	170 °F (76 °C)	150 °F (65 °C)	Dark Brown
286 °F (141 °C)	02569A	170 °F (76 °C)	150 °F (65 °C)	Dark Brown

<sup>1</sup> 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.



Never install sprinklers that have been dropped, damaged, or exposed to temperatures in excess of the maximum ambient temperature allowed.

Refer to the appropriate current technical data pages for complete care, handling, and installation instructions. Data pages are included with each shipment from Viking or Viking distributors. They can also be found on the Web site at [www.vikinggroupinc.com](http://www.vikinggroupinc.com).



**BULLETIN****REGULATORY AND HEALTH  
WARNINGS**

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](mailto: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**

Regulatory and Health Warnings applying to materials used in the manufacture and construction of fire protection products are provided herein as they relate to legally mandated jurisdictional regions.

**⚠ WARNING****STATE OF CALIFORNIA, USA**

Installing or servicing fire protection products such as sprinklers, valves, piping etc. can expose you to chemicals including, but not limited to, lead, nickel, butadiene, titanium dioxide, chromium, carbon black, and acrylonitrile which are known to the State of California to cause cancer or birth defects or other reproductive harm.

For more information, go to [www.P65Warnings.ca.gov](http://www.P65Warnings.ca.gov)

**2. WARRANTY TERMS AND CONDITIONS**

For details of warranty, refer to Viking's current list price schedule at [www.vikinggroupinc.com](http://www.vikinggroupinc.com) or contact Viking directly.