



TECHNICAL DATA

**QUICK RESPONSE
EXTRA-LARGE ORIFICE
UPRIGHT SPRINKLER
VK5311
(STORAGE-DENSITY/AREA)**

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 Quick Response Extra-Large Orifice Upright Sprinkler VK5311 is a thermosensitive glass bulb spray sprinkler available in several different finishes and temperature ratings to meet design requirements. The special Polyester, Electroless Nickel PTFE (ENT), and PTFE coatings can be used in decorative applications where colors are desired. In addition, these coatings have been investigated for installation in corrosive environments and are listed/approved as indicated in the Approval Charts.

The extra-large orifice provides greater flows at lower pressures than standard orifice or large orifice sprinklers. This feature allows reduced pipe sizing for hydraulically calculated sprinkler systems, which require high densities of water. On existing systems, replacing large orifice sprinklers with extra-large orifice sprinklers may provide the higher densities required to allow an increase in the hazard classification of an occupancy.

Viking Quick Response Extra-Large Orifice Upright Sprinkler VK5311 may be ordered and/or used as an open sprinkler (glass bulb and pip cap assembly removed) on deluge systems. Refer to Ordering Instructions below.



NOTE: As of May 2018 all logos have been removed from the wrench boss.

2. LISTINGS AND APPROVALS



VdS Approved: Certificate G413059, G413060



LPCB Approved: Certificate 096e/14



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

3. TECHNICAL DATA

Specifications:

Available since 2000.

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

Thread size: See Approval Charts

Nominal K-Factor: 11.2 U.S. (161.3 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: 2-5/16" (58.7 mm)

Material Standards:

Sprinkler Frame: Brass UNS-C84400

Deflector: Brass UNS-C51000

Bulb: Glass, nominal 3 mm diameter

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

Compression Screw: Brass UNS-C36000

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

For Polyester Coated Sprinklers: Belleville Spring-Exposed

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4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

5. OPERATION

During fire conditions, when the temperature around the sprinkler reaches its operating temperature, the heat-sensitive liquid in the glass bulb expands, causing the bulb 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 Quick Response Extra-Large Orifice Upright 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.



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Ordering Instructions

Choose a sprinkler base part number with the required thread size and listing or approval (refer to the approval chart).

Add the suffix for the desired finish.

Add the suffix for the desired temperature rating.

EXAMPLE: 19304AD = VK5311 with brass finish and 175 °F (79 °C) nominal temperature rating. This sprinkler is to be installed into an area with a maximum ambient temperature of 150 °F (66 °C).

Sprinkler Base Part Number	
Part Number	Thread Size
19304	20 mm
19305	15 mm

Finish	
Description	Suffix
Brass	A
Chrome	F
White poly-ester	M-W
Black poly-ester	M-B

Temperature Ratings				
Temperature Classification	Temperature Rating	Bulb color	Maximum Ambient Ceiling Temperature	Suffix
Ordinary	155 °F (68 °C)	Red	100 °F (38 °C)	B
Intermediate	175 °F (79 °C)	Yellow	150 °F (66 °C)	D
Intermediate	200 °F (93 °C)	Green	150 °F (66 °C)	E
High	286 °F (141 °C)	Blue	225 °F (107 °C)	G
Open (PTFE only)				Z

Accessories

Sprinkler wrench: 05118CW/B (standard) & 11663W/B (coated sprinklers)

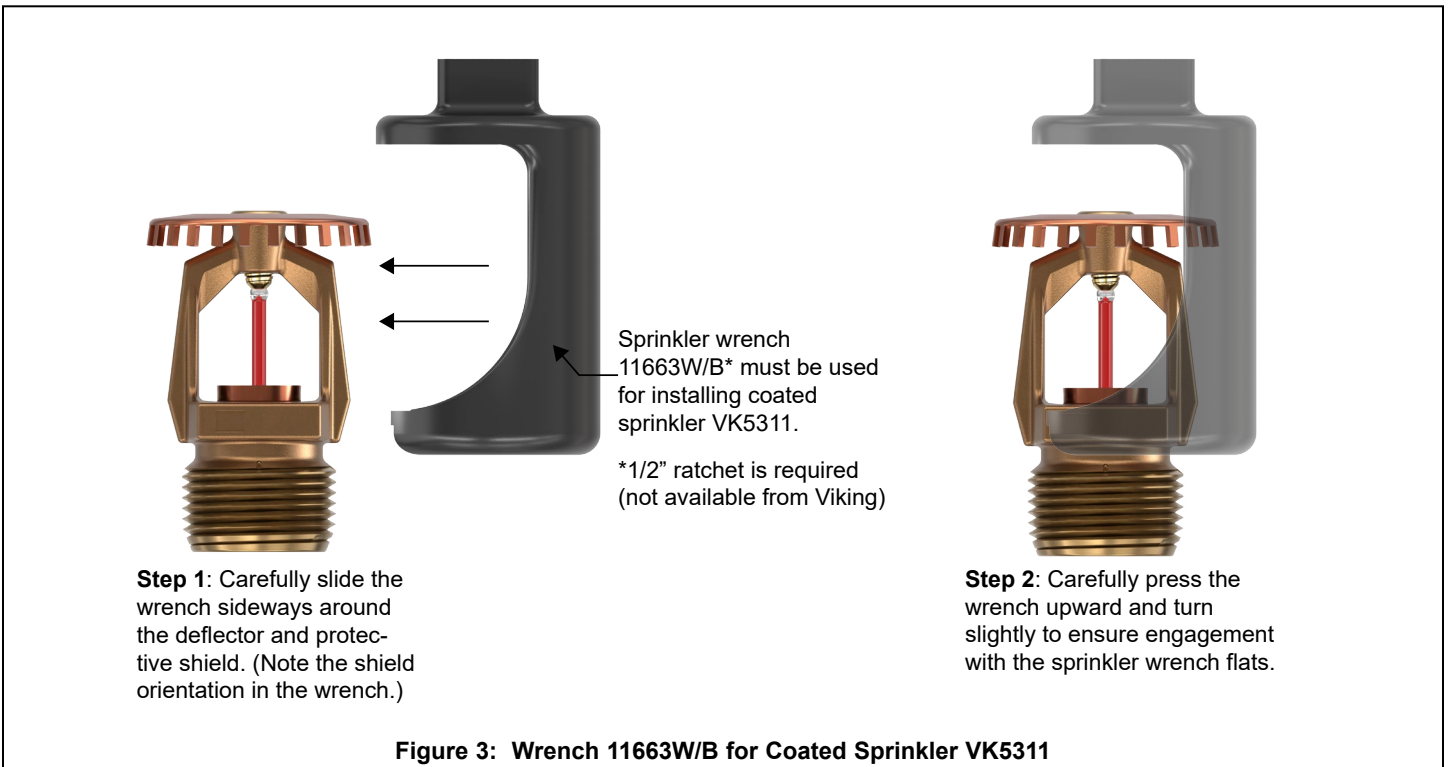
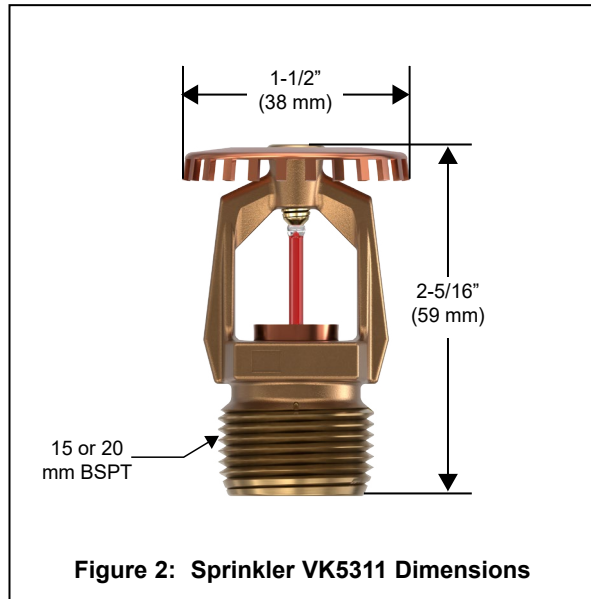
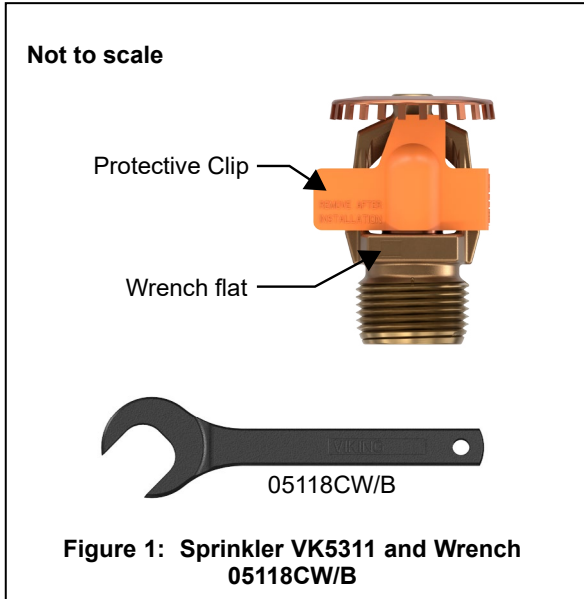
Sprinkler cabinet: 01724A (six sprinklers) or 01725A (six to twelve sprinklers)



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Approval Chart 1 Quick Response Extra-Large Orifice Upright Sprinkler VK5311 Maximum 175 PSI (12 Bar) WWP																
										<table border="1" style="font-size: small;"> <tr> <td style="text-align: center;">Temperature</td> <td style="text-align: center;">KEY</td> </tr> <tr> <td style="text-align: center;">Finish</td> <td></td> </tr> <tr> <td style="text-align: center;">A1X ← Escutcheon (if applicable)</td> <td></td> </tr> </table>	Temperature	KEY	Finish		A1X ← Escutcheon (if applicable)	
Temperature	KEY															
Finish																
A1X ← Escutcheon (if applicable)																
Base Part Number ¹	SIN	Sprinkler Style	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals ³ (Refer also to Design Criteria below.)							
			NPT	BSPT	U.S.	metric ²	Inches	mm	VdS	LPCB						
19304	VK5311	Upright	--	20 mm	11.2	161.3	2-5/16	58.7	A1	A1						
19305	VK5311	Upright	--	15 mm	11.2	161.3	2-5/16	58.7	A1	A1						
Approved Temperature Ratings A - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)						Approved Finishes 1 - Brass, chrome, white polyester ⁴ , and black polyester ⁴										
Footnotes																
¹ Base part number 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. Other approvals may be in process.																
⁴ cULus Listed as corrosion-resistant. The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Charts. 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, and ENT.																