



TECHNICAL DATA

STANDARD RESPONSE FUSIBLE LINK SIDEWALL SPRINKLER VK112 (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

1. DESCRIPTION

Viking Standard Response Fusible Link Sidewall Sprinkler VK112 is a small thermosensitive solder link spray sprinkler. The horizontal sidewall sprinkler VK112 is available with finishes and temperature ratings to meet design requirements.

2. LISTINGS AND APPROVALS



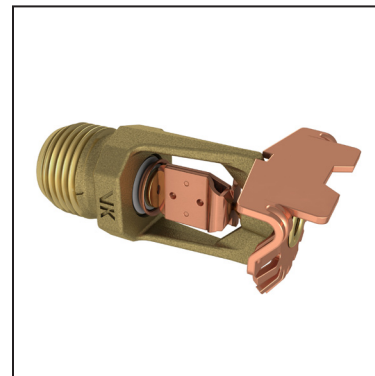
cULus Listed: Category VNIV



FM Approved: Class 2012

Refer to Approval Chart 1 and Design Criteria for cULus

Listing requirements, and refer to Approval Chart 2 and Design Criteria for FM Approval requirements that must be followed.



**For Light Hazard
Occupancies Only**

3. TECHNICAL DATA

Specifications:

Minimum Operating Pressure: 7 psi (0.5 bar)
Rated to 175 psi (12 bar) water working pressure
Factory tested hydrostatically to 500 psi (34.5 bar)
Nominal K-Factor: 5.6 U.S. (80.6 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: Refer to the Approval Charts

Material Standards:

Frame Casting: Brass UNS-C84400
HSW Deflector: Copper UNS-C19500
Fusible Link Assembly: Brass UNS- C40500 and UNS-C51000
For chrome sprinklers, the fusible link assembly is painted silver for decorative purposes only.
Bushing: Brass UNS-C36000
Belleville Spring Sealing Assembly: Nickel Alloy, coated on both sides with PTFE Tape
Screw: Stainless Steel UNS-S30300
Pip Cap: Copper UNS-C11000
Pip Cap Attachment: Brass UNS-C36000
Button: Copper UNS-C19400

Ordering Information:

(Also refer to the current Viking price list.)
Order Viking Standard Response Fusible Link Sidewall Sprinkler VK112 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

Temperature Suffix: 165 °F (74 °C) = C, 220 °F (104 °C) = F, and 286 °F (141 °C) = G

For example, sprinkler VK112 with a Brass finish and a 165 °F (74 °C) temperature rating = Part No. 12974AC

Available Finishes And Temperature Ratings: Refer to Table 1.

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 recessed and/or wax coated sprinklers: Part No. 13577W/B** (available since 2006)
- **A ½" 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.

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.



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5. OPERATION

During fire conditions, the heat-sensitive fusible link disengages, the pip cap and spring are released, and the waterway is opened. 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

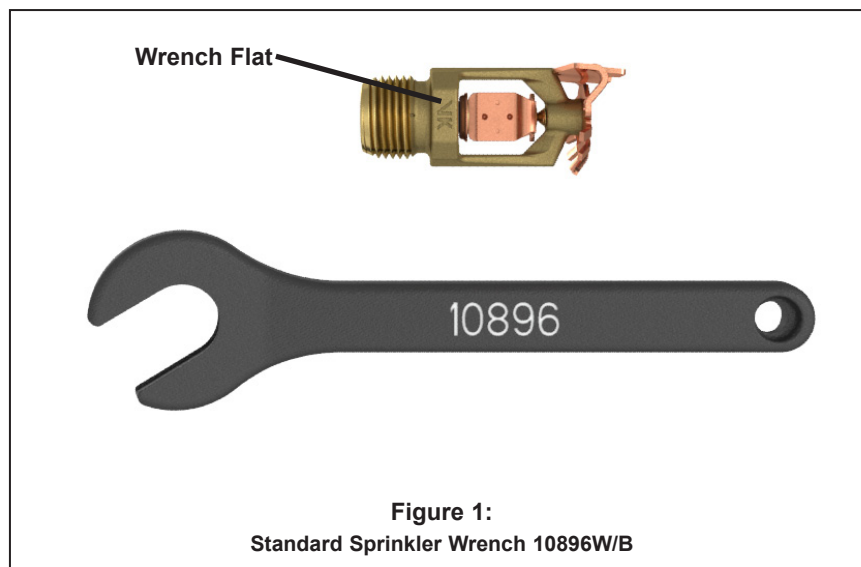
Refer to NFPA 25 for Inspection, Testing and Maintenance requirements.

7. AVAILABILITY

Viking Standard Response Fusible Link Sidewall Sprinkler VK112 are 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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FUSIBLE LINK SIDEWALL
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TABLE 1: AVAILABLE SPRINKLER TEMPERATURE RATINGS AND FINISHES

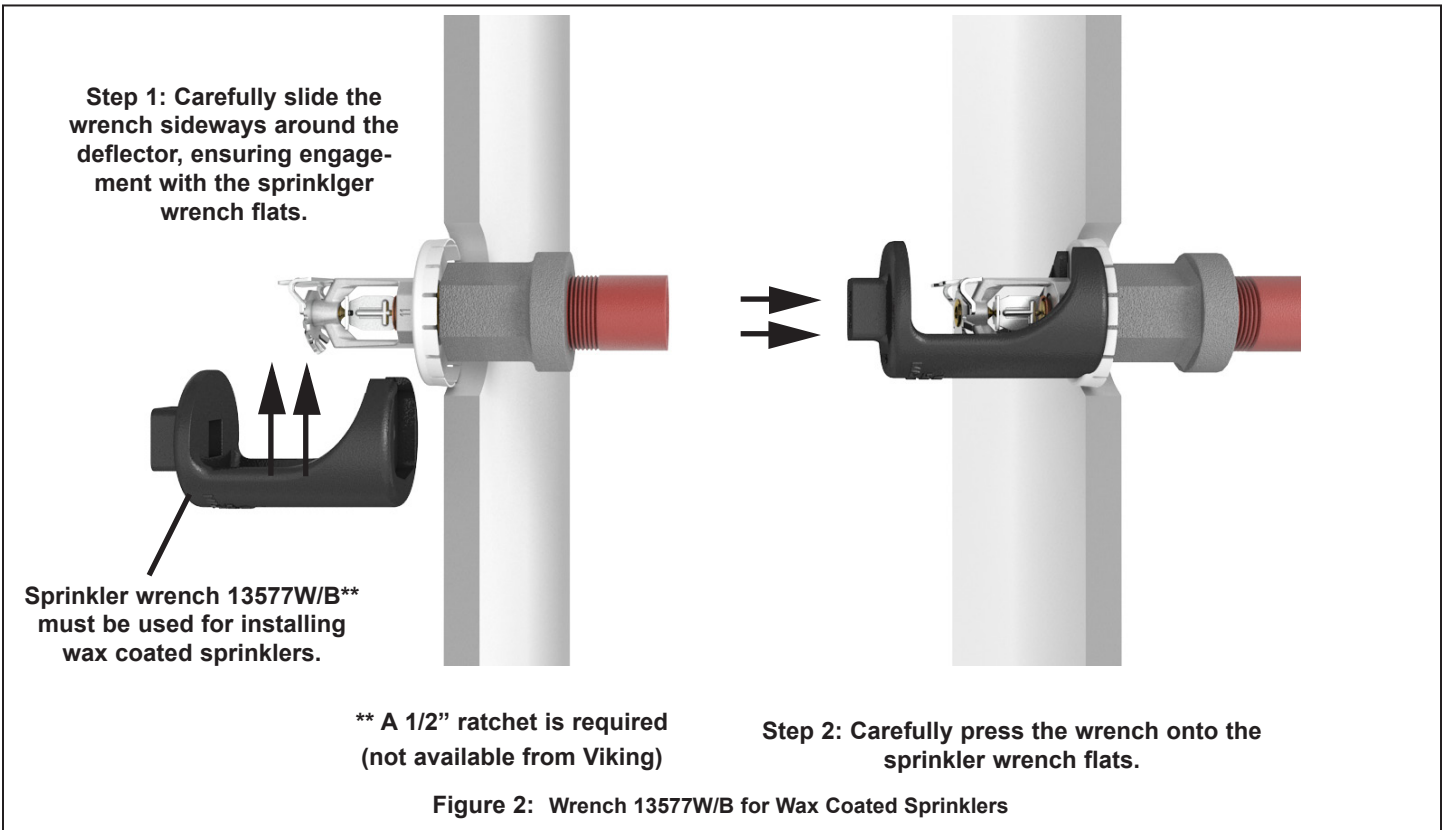
Sprinkler Temperature Classification	Sprinkler Nominal Temperature Rating ¹	Maximum Ambient Ceiling Temperature ²	Frame Paint Color
Ordinary	165 °F (74 °C)	100 °F (38 °C)	None
Intermediate	220 °F (104 °C)	150 °F (65 °C)	White
High	286 °F (141 °C)	225 °F (107 °C)	Blue

Sprinkler Finishes: Brass and Chrome

Footnotes

¹ Decorative sprinklers may not be color coded. 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.





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Approval Chart 1 (UL)

Standard Response Fusible Link Sidewall Sprinkler VK112
For Light Hazard Occupancies Only
Maximum 175 PSI (12 Bar) WWP

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

Base Part Number ¹	SIN	Sprinkler Style	Thread Size		Nominal K-Factor		Overall Length		cULus Listings ^{3,4} (Refer also to Design Criteria below.)					
			NPT	BSP	U.S.	metric ²	Inches	mm	cULus ⁵	NYC	VdS	LPCB	CE	⚙️
12974	VK112	HSW	1/2"	15 mm	5.6	80.6	2-9/16	64	B1X ⁶ , A1Y ⁷	--	--	--	--	--

NOTICE - Product Below - Limited Availability (Contact Local Viking Office)

05559	VK112	HSW	1/2"	15 mm	5.6	80.6	2-1/2	64	B1X ⁶ , A1Y ⁷	--	--	--	--	--
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Approved Temperature Ratings

A - 165 °F (74 °C), 220 °F (104 °C), and 286 °F (141 °C)
B - 165 °F (74 °C) and 220 °F (104 °C)

Approved Finishes

1 - Brass and Chrome

Approved Escutcheons

X - Installed with standard surface-mounted escutcheons, the Viking Microfast[®] Model F-1 Adjustable Escutcheon, or recessed with the Viking Micromatic[®] Model E-1 or E-2 Recessed Escutcheon
Y - Installed with standard surface-mounted escutcheons or the Viking Microfast[®] Model F-1 Adjustable Escutcheon

Footnotes

- Base part number shown. For complete part number, refer to Viking's current price schedule.
- 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.
- This table shows the listings and approvals available at the time of printing. Other approvals may be in process.
- Listings are limited to Light Hazard Occupancies where allowed by the installation standards being applied.
- Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.
- cULus Listed with the deflector located 4" to 6" (102 mm to 152 mm) below the ceiling.
- cULus Listed with the deflector located 4" to 12" (102 mm to 304 mm) below the ceiling.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

cULus Listing Requirements:

Viking Standard Response Fusible Link Sidewall Sprinkler VK112 are cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for sidewall standard spray sprinklers.

- For use in Light Hazard occupancies only where allowed by the installation standards being applied.
- Refer to the Approval Chart for allowable deflector distance below the ceiling.
- Protection areas and maximum spacing shall be in accordance with the tables provided in NFPA 13.
- Minimum spacing allowed is 6 ft. (1.8 m).
- Align the top of the deflector parallel with the ceiling.
- Locate no less than 4" (102 mm) from end walls.
- Maximum distance from end walls 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 sidewall standard spray sprinklers must be followed.

IMPORTANT: Always refer to Bulletin Form No. F_091699 - Care and Handling of Sprinklers. Also refer to page SR1-3 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.



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Approval Chart 2 (FM)

Standard Response Fusible Link Sidewall Sprinkler VK112
 Maximum 175 PSI (12 Bar) WWP

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

Base Part Number ¹	SIN	Sprinkler Style	Thread Size		Nominal K-Factor		Overall Length		FM Approvals ³ (Refer also to Design Criteria below.)
			NPT	BSP	U.S.	metric ²	Inches	mm	
12974	VK112	HSW	1/2"	15 mm	5.6	80.6	2-9/16	64	A1X, B1Y

NOTICE - Product Below - Limited Availability (Contact Local Viking Office)

05559	VK112	HSW	1/2"	15 mm	5.6	80.6	2-1/2	64	A1X, B1Y
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Approved Temperature Ratings	Approved Finish	Approved Escutcheons
A - 165 °F (74 °C), 220 °F (104 °C), and 286 °F (141 °C) B - 165 °F (74 °C) and 220 °F (104 °C)	1 - Brass	X - Installed with standard surface-mounted escutcheons or the Viking Microfast® Model F-1 Adjustable Escutcheon Y - Installed with the Viking Model G-1 Recessed Escutcheon

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 FM 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 VK112 is FM Approved as a standard response **Non-Storage** horizontal sidewall sprinkler as indicated in the FM Approval Guide. For specific application and installation requirements, reference the latest applicable FM Loss Prevention Data Sheets (including Data Sheet 2-0). FM Global Loss Prevention Data Sheets 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.

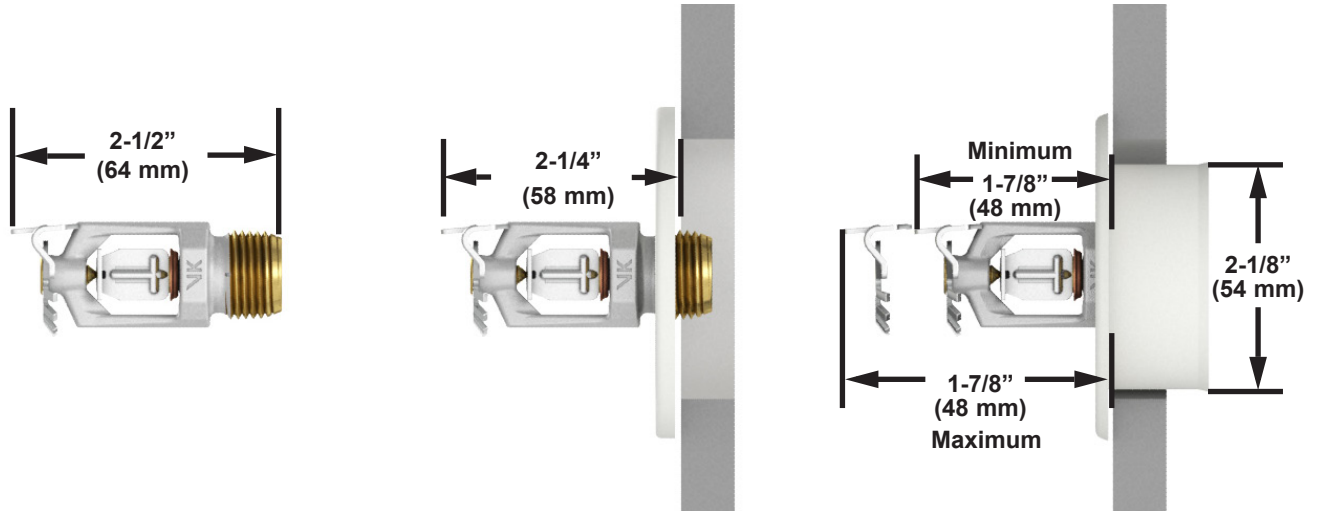
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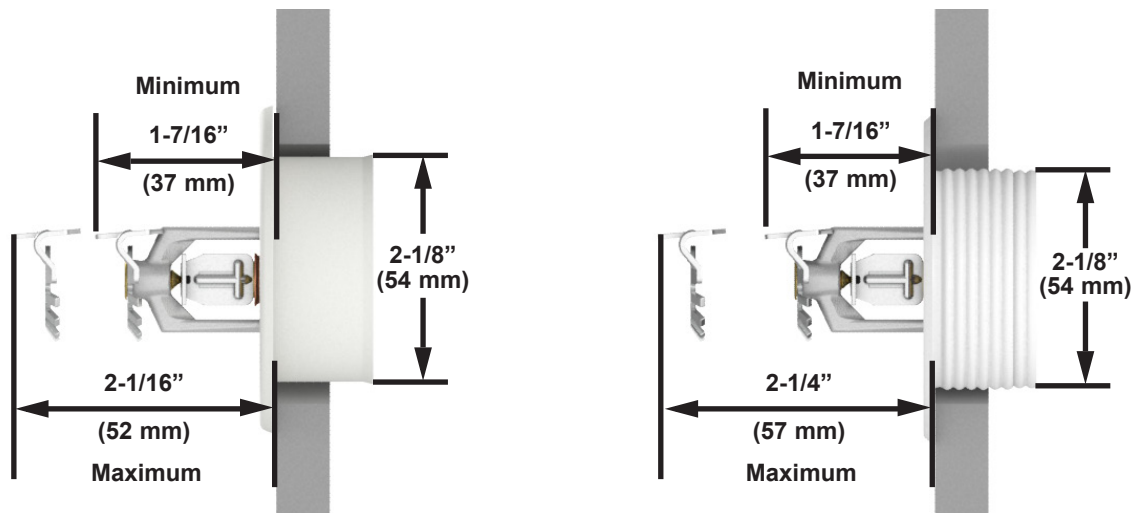


Wall Opening Size:
 2-5/16" (58.7 mm) minimum
 2-1/2" (63.5 mm) maximum

**Installed with a standard
 1/8" surface-mounted
 escutcheon**

**Installed with a Microfast
 Model F-1 Adjustable
 Escutcheon**

Figure 3: Sidewall Sprinkler Dimensions with a Standard Escutcheon and the Model F-1 Adjustable Escutcheon



Wall Opening Size:
 2-5/16" (58.7 mm) minimum
 2-1/2" (63.5 mm) maximum

**Installed with the
 Micromatic Model E-1
 Recessed Escutcheon**

**Installed with the
 Threaded Model E-2
 Recessed Escutcheon**

Figure 4: Sidewall Sprinkler VK112 Dimensions with the Model E-1 and E-2 Recessed Escutcheons