



TECHNICAL DATA

MICROMATIC® STANDARD RESPONSE PENDENT SPRINKLER VK910 FOR USE IN FOAM/WATER SYSTEMS

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 Micromatic® Standard Response Pendent Sprinkler VK910 is a small, thermosensitive, glass-bulb spray sprinkler for use in foam/water systems. The sprinkler is available in Brass with temperature ratings from 135 °F to 360 °F (57 °C to 182 °C). VK910 is based on pendent sprinkler VK102, however sprinkler VK910 utilizes a larger deflector and is listed and approved for use in Foam/Water Systems.

2. LISTINGS AND APPROVALS



cULus Listed: Category GFGV



FM Approved: Classes 2015 and 2017

NYC Approved: MEA Number 89-92-E, Vol. 12

Refer to Approval Chart 1 and Design Criteria on page 130j for cULus Listing requirements, and refer to Approval Chart 2 and Design Criteria on page 130k for FM Approval requirements that must be followed. **Also refer to Foam data page 130a-e "Approved Sprinklers for use with Foam Concentrates".**



3. TECHNICAL DATA

Specifications:

Available since 2008.

Minimum Operating Pressure: 7 psi (0.5 bar)

Maximum Working Pressure: 175 psi (12 bar)

Factory tested hydrostatically to 500 psi (34.5 bar)

Thread size: 1/2" (15 mm) NPT

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.

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

Overall Length: 2-3/16" (56 mm)

Material Standards:

Frame Casting: Brass UNS-C84400

Deflector: Phosphor Bronze UNS-C51000 or Copper UNS-C19500

Bulb: Glass, nominal 5 mm diameter

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

Screw: Brass UNS-C36000

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

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

Order Micromatic® Standard Response Pendent Sprinkler VK910 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

Temperature Suffix: 135 °F (57 °C) = A, 155 °F (68 °C) = B, 175 °F (79 °C) = D, 200 °F (93 °C) = E, 212 °F (100 °C) = M, 286 °F (141 °C) = G, 360 °F (182 °C) = H

For example, sprinkler VK910 with a Brass finish and a 155 °F (68 °C) temperature rating = Part No. 14754AB

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 Pendent Sprinklers: Part No. 16036W/B** (available since 2011)

C. Optional Protective Sprinkler Cap Remover/Escutcheon Installer Tool*** Part No. 15915 (available since 2010.)

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

***Allows use from the floor by attaching a length of 1" diameter CPVC tubing to the tool. Ideal for sprinkler cabinets. Refer to Bulletin F_051808.

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.



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4. INSTALLATION

Refer to appropriate NFPA Installation Standards.

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. Foam/water solution flowing through the sprinkler orifice strikes the sprinkler deflector, forming a uniform spray pattern to extinguish the fire.

6. INSPECTIONS, TESTS AND MAINTENANCE

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

7. AVAILABILITY

The Viking Micromatic® Standard Response Pendent Sprinklers 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.

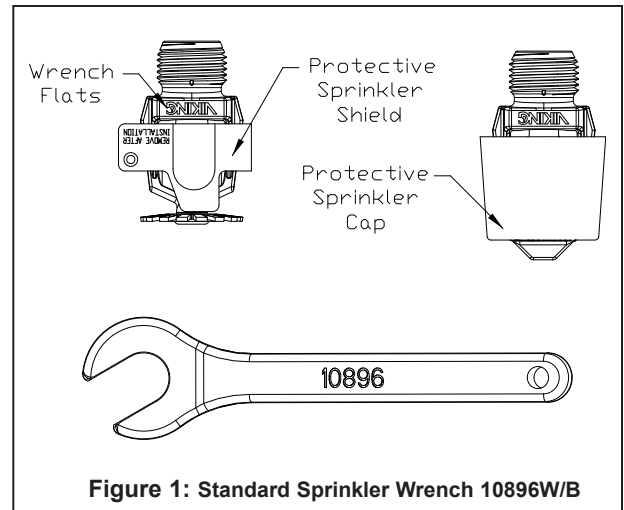


Figure 1: Standard Sprinkler Wrench 10896W/B

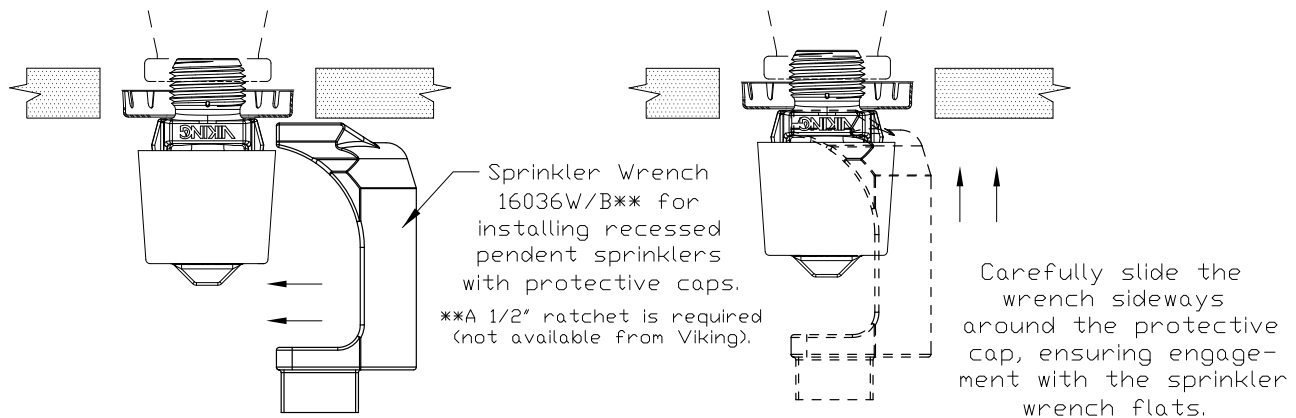


Figure 2: Wrench 16036W/B for Recessed Pendent Sprinklers

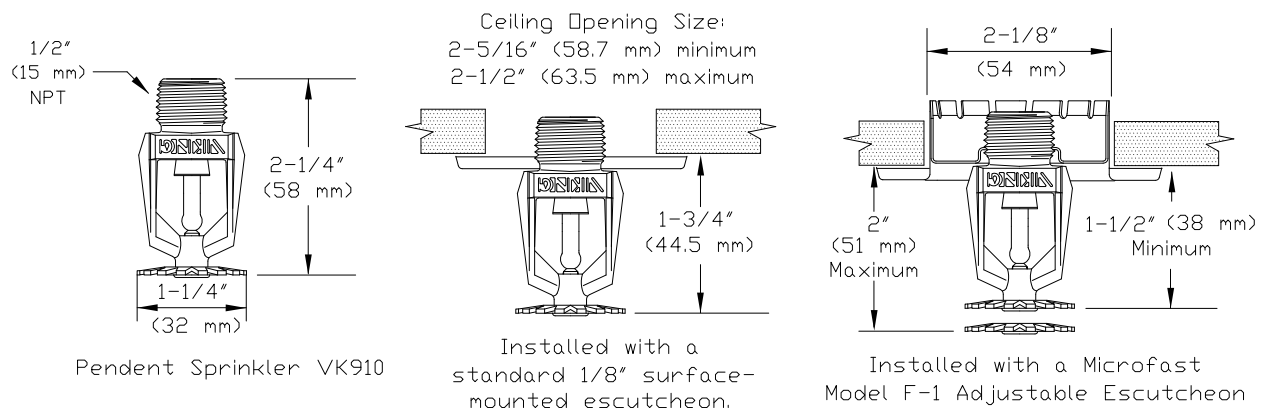


Figure 3: Sprinkler Dimensions with a Standard Escutcheon and the Model F-1 Adjustable Escutcheon



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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	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
Intermediate	212 °F (100 °C)	150 °F (65 °C)	Green
High	286 °F (141 °C)	225 °F (107 °C)	Blue
Extra High	360 °F (182 °C)	300 °F (149 °C)	Mauve

Sprinkler Finish: Brass

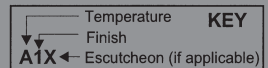
Footnotes

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.

Approval Chart 1 (UL)

Micromatic® Standard Response Pendent Sprinkler VK910
Maximum 175 PSI (12 bar) WWP



Sprinkler Base Part Number ¹	SIN	Thread Size		Nominal K-Factor		Overall Length		Listings and Approvals ³	
		NPT	BSP	U.S.	metric ²	Inches	mm	cULus ⁴	NYC ⁵
14754	VK910	1/2"	15 mm	5.6	80.6	2-3/16"	56	A1, B1Y	A1, B1Y
Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C) B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)					Approved Finish 1 - Brass	Approved Escutcheons Y - Installed with the Viking Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Viking Micromatic® Model E-1 or E-2 Recessed Escutcheon.			

Footnotes

¹ Base part number is shown. For complete part number, refer to Viking's current price schedule.

² Metric K-factor shown is for use 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 Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. 12.

DESIGN CRITERIA - UL

(Also refer to Approval Chart 1 above.)

Refer to Foam technical data page 130a-e "Approved Sprinklers for use with Foam Concentrates" for additional design guidelines, including minimum application density.

cULus Listing Requirements:

Micromatic® Standard Pendent Sprinkler VK910 is cULus Listed as indicated in Approval Chart 1 for installation in accordance with the latest edition of NFPA 13 for standard spray sprinklers as well as any applicable NFPA standards for foam-water sprinkler systems.

- Designed for use in foam-water extinguishing systems for Class B fires.
- The sprinkler installation rules contained in NFPA 13 for standard spray pendent sprinklers and NFPA 16 for foam-water sprinkler systems 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)

Micromatic® Standard Response Pendent Sprinkler VK910
Maximum 175 PSI (12 bar) WWP

Temperature	KEY
Finish	
A1X ← Escutcheon (if applicable)	

Sprinkler Base Part Number ¹	SIN	Thread Size		Nominal K-Factor		Overall Length		FM Approvals ³ (Refer also to Design Criteria below and Foam technical data page 130a-e "Approved Sprinklers for use with Foam Concentrates".)
		NPT	BSP	U.S.	metric ²	Inches	mm	
14754	VK910	1/2"	15 mm	5.6	80.6	2-3/16"	56	A1, B1Y
Approved Temperature Ratings A - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 212 °F (100 °C), 286 °F (141 °C), and 360 °F (182 °C) B - 135 °F (57 °C), 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 212 °F (100 °C)						Approved Finish 1 - Brass		Approved Escutcheons Y - Installed with the Viking Microfast® Model F-1 Adjustable Escutcheon, or recessed with the Viking Micromatic® Model E-1 or E-2 Recessed Escutcheon.

Footnotes

¹ Base part number is shown. For complete part number, refer to Viking's current price schedule.

² Metric K-factor shown is for use 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. Check with the manufacturer for any additional approvals.

DESIGN CRITERIA - FM

(Also refer to Approval Chart 2 above.)

Refer to Foam technical data page 130a-e "Approved Sprinklers for use with Foam Concentrates" for additional design guidelines, including minimum application density.

FM Approval Requirements:

Sprinkler VK910 is FM Approved as a standard response **Non-Storage** pendent 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 as well as 7-14, 7-29, 7-32, 7-93N, and/or 7-101 for foam-water sprinkler systems) 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 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, FM Global, LPCB, APSAD, VdS or other similar organizations, and also with the provisions of governmental codes, ordinances, and standards, whenever applicable.

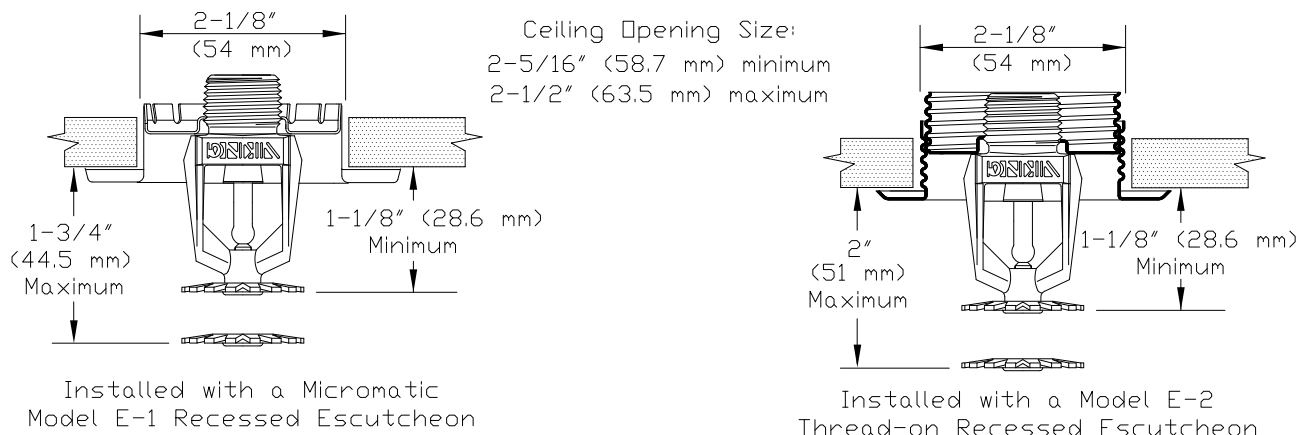


Figure 4: Sprinkler Dimensions with the Model E-1 and E-2 Recessed Escutcheons