



TECHNICAL DATA

MICROMATIC® AND MicromaticHP® STANDARD RESPONSE HORIZONTAL SIDEWALL SPRINKLERS

1. PRODUCT NAME

Viking Micromatic® and MicromaticHP® Standard Response Horizontal Sidewall Sprinklers

2. MANUFACTURER

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3. PRODUCT DESCRIPTION

Viking Micromatic® and MicromaticHP® Standard Response Horizontal Sidewall (HSW) Sprinklers are small thermosensitive spray sprinklers available with various finishes and temperature ratings to meet design requirements. The special Polyester and Teflon® coatings can be used in decorative applications where colors are desired. In addition, these finishes are corrosion resistant and provide protection against many corrosive environments.

During fire conditions, 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. Viking standard response sprinklers may be ordered and/or used as open sprinklers (glass bulb and pip cap assembly removed) on deluge systems.

4. TECHNICAL DATA

LISTINGS AND APPROVALS

Refer to the Approval Chart on pg 14 f.
Glass-bulb fluid temperature rated to -65° F (-55° C).

RATED WATER WORKING PRESSURE

Sprinklers 09849 and 09997 are rated for use with water working pressures ranging from the minimum 7 psi (48,3 kPa) up to 250 psi (1 724 kPa) for high-pressure systems. High-pressure (HP) sprinkler can be identified by locating the number "250" on the deflector.

All Other Part Nos: Maximum 175 psi (1 207 kPa) wwp.

Factory tested hydrostatically to 500 psi (3 448 kPa).

Minimum Operating Pressure: 7 psi (48,3 kPa)

Note: Units of measure in parentheses may be approximations.
Form No. F_123096



Sprinkler Base Part Number 09849



Sprinkler Base Part Number 10224

SPRINKLER MATERIALS

Frame: Brass UNS-C84400
Deflector: Copper UNS-C19500
Bushing (for High-Pressure Sprinkler 09997): Brass UNS-C36000
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: Copper UNS-C31600 or UNS-C31400 for Sprinklers 10171 and 10224. For all others: Copper UNS-C11000 and Stainless Steel UNS-S30400.

Pip Cap Attachment (for Sprinklers 09849 and 09997): Brass UNS-C36000

Teflon® Coated Sprinklers:

Belleville Spring: Nickel Alloy, exposed
Screw: Brass UNS-C36000, Nickel plated
Pip Cap: Teflon® Coated

Polyester Coated Sprinklers:

Belleville Spring: Nickel Alloy, exposed

AVAILABLE FINISHES

Brass, Chrome-Enloy®, White Polyester, Black Polyester, and Black Teflon® in all temperature ratings; Wax-Coated Brass or Wax Over Polyester for sprinklers with temperature ratings through 286 °F (141 °C).

ACCESSORIES (order separately)

Sprinkler Cabinets:

- A. Six-head capacity: Part No. 01724A Available since 1971.
- B. Twelve-head capacity: Part No. 01725A, Available since 1971.

Sprinkler Wrenches:

- A. Standard Wrench: Part No. 10896W/B (available since 2000) or Part No. 05000CW/B (no longer available). Standard wrench is also to be used for wax coated sprinklers.
- B. Wrench for Polyester and Teflon® coated and recessed sprinklers: Part No. 07398W* (available since 1990).

* A ½" ratchet is required (not available from Viking).

Sprinkler Temperature Classification	Nominal Sprinkler Temp. Rating (Fusing Point) ²	Maximum Ambient Ceiling Temp. ¹	Bulb Color ²
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
High	286 °F (141 °C)	225 °F (107 °C)	Blue
Extra High	360 °F (182 °C)	300 °F (149 °C)	Mauve

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

Corrosion-Resistant Coatings³: White Polyester, Black Polyester, and Black Teflon® in all temperature ratings. Wax-Coated Brass and Wax over Polyester for sprinklers with the following temperature ratings:

155 °F (68 °C) Light Brown Wax	200 °F (93 °C) Brown Wax
175 °F (79 °C) Brown Wax	286 °F (141 °C) Dark Brown Wax

Footnotes

¹ 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.

² The temperature rating is stamped on the deflector.

³ The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated in the Approval Chart on page 14 f. 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 Teflon® coatings. For Teflon® coated open sprinklers only, the waterway is coated.

Table 1

Replaces page 14 e-f, dated October 21, 2005 (added MED Approval). **Refer to technical data page SR1-2 for general care, installation, and maintenance information.**



TECHNICAL DATA



MICROMATIC® AND MicromaticHP® STANDARD RESPONSE HORIZONTAL SIDEWALL SPRINKLERS

Approval Chart

Micromatic® and MicromaticHP®
Standard Response HSW Sprinklers

Temperature	KEY
Finish	
A1X ← Escutcheon (if applicable)	

Maximum 175 psi wwp
(See Footnotes Below for Allowable Deflector Distance Below the Ceiling.)

Thread Size		Maximum Pressure	Sprinkler Description		Nominal K-factor		Overall Length		Listings and Approvals ²					
NPT	BSP		Base Part No. ¹	SIN	U.S.	metric ⁶	Inches	mm	cULus ^{3,4}	NYC ¹¹	FM ⁵	LPCB	CE ¹³	 ¹⁴
½"	15 mm	175 psi	10224	VK104	5.6	8.1	2-7/16	62.4	B5X, B1X	B5X, B1X	A3Y,	A3Z,	A2Z	
--	15 mm	175 psi	10171	VK104	—	8.1	2-7/16	62.4	A1Y, C6Y	A1Y, C6Y	B7Z,	B4Z,		

Small Orifice

--	10 mm	175 psi	09126	VK016	4.2	6.0	2-7/16	62.4	cULus	NYC	FM	LPCB	CE	⊙
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Maximum 250 psi wwp
Standard Orifice, for Installation 4" to 12" (102 mm to 305 mm) Below the Ceiling.

1/2"	15 mm	250 psi	09849	VK116	5.6	8.1	2-11/16	67.6	cULus ^{3,7}	NYC	FM	LPCB	CE	⊙
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Small Orifice⁹, for Installation 4" to 6" (102 mm to 152 mm) Below the Ceiling.

1/2"	15 mm	250 psi	09997 ¹⁰	VK015	2.8	4.0	2-3/4	69	cULus ^{3,9}	NYC	FM	LPCB	CE	⊙
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Approved Temperature Ratings

- A - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C)
 B - 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C)
 C - 286 °F (141 °C)
 D - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C)

Approved Finishes

- 1 - Brass, Chrome-Enloy®, White Polyester¹², Black Polyester¹², and Black Teflon¹²
- 2 - Brass, Chrome-Enloy®, White Polyester, and Black Polyester
- 3 - Brass and Chrome-Enloy®
- 4 - Wax-Coated Brass (corrosion resistant), White Polyester, and Black Polyester
- 5 - Wax-Coated Brass and Wax Over Polyester (corrosion resistant)
- 6 - 200 °F (93 °C) Wax Coating (corrosion resistant); maximum ambient temperature at ceiling = 150 °F (65 °C)
- 7 - Wax-Coated Brass (corrosion resistant)

Approved Escutcheons

- X - Installed with standard surface-mounted escutcheons, the Microfast® Model F-1 Adjustable Escutcheon⁸, or recessed with the Viking Micromatic® Model E-1 Recessed Escutcheon.
 Y - Installed with standard surface-mounted escutcheons or the Viking Microfast® Model F-1 Adjustable Escutcheon⁸.
 Z - Installed with standard surface-mounted escutcheons only.

Footnotes

- ¹ Base part number is shown. For complete part number, refer to Viking's current price schedule.
- ² This table shows the listings and approvals available at the time of printing. Check with the manufacturer for any additional approvals.
- ³ Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.
- ⁴ cULus Listings limited to Light Hazard Occupancies where allowed by the installation standards being applied, with the deflector 4" to 12" (102 mm to 305 mm) below the ceiling.
- ⁵ FM Approvals limited to Light Hazard Occupancies where allowed by the installation standards being applied, with the deflector 4" to 6" (102 mm to 152 mm) below the ceiling.
- ⁶ Metric K-Factor shown is for use when pressure is measured in kPa. When pressure is measured in BAR, multiply the metric K-Factor shown by 10.0.
- ⁷ cULus Listed for Light Hazard Occupancies where allowed by the installation standards being applied, and Ordinary Hazard Group I and II Occupancies.
- ⁸ 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.
- ⁹ cULus Listings limited to Light Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems.
- ¹⁰ The sprinkler orifice is bushed.
- ¹¹ Approved by the New York City Board of Standards and Appeals under Calendar Number 219-76-SA.
- ¹² cULus Listed and NYC Approved as corrosion-resistant.
- ¹³ CE Certified, Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001 and 0832-CPD-2003.
- ¹⁴ ⊙ MED Certified, Standard EN 12259-1, EC-certificate of conformity 0832-MED-1003 and 0832-MED-1008.

NOTE: Align horizontal sidewall sprinklers with top of the deflector parallel to the ceiling or roof.

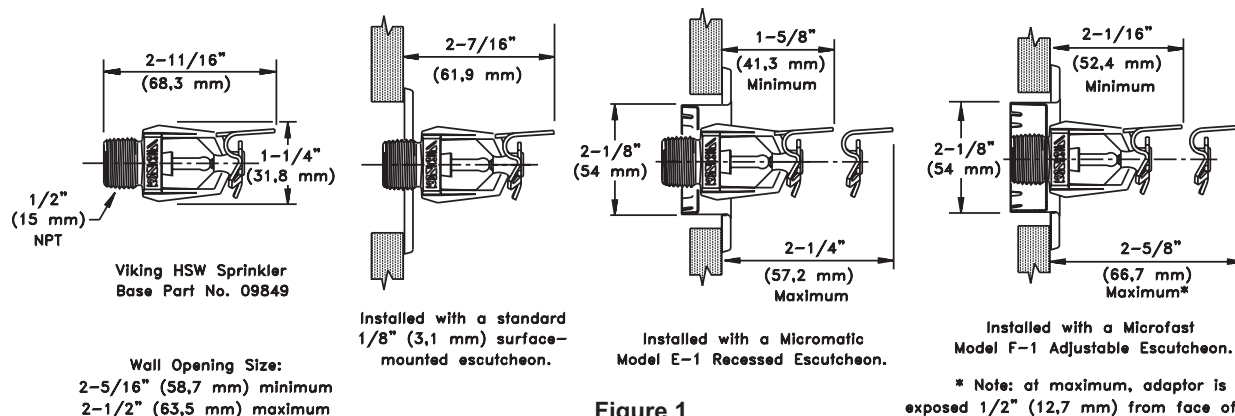


Figure 1