November 18, 2005 Sprinkler 11 a



### **TECHNICAL DATA**

# MICROMATIC® AND MicromaticHP® STANDARD RESPONSE SPRINKLERS

#### 1. PRODUCT NAME

Viking Micromatic<sup>®</sup> and MicromaticHP<sup>®</sup> Standard Response Sprinklers

 Available Styles: Upright, Pendent, and Conventional

#### 2. MANUFACTURER

THE VIKING CORPORATION 210 N. Industrial Park Road Hastings, Michigan 49058, U.S.A. Telephone: (269) 945-9501

(877) 384-5464 Fax: (269) 945-9599 e-mail: techsvcs@vikingcorp.com

#### 3. PRODUCT DESCRIPTION

Viking Micromatic® and MicromaticHP® Standard Response Sprinklers are small thermosensitive spray sprinklers available in various finishes, temperature ratings, and orifice sizes to meet design requirements. The special Poly finishes and Teflon® coatings can be used in decorative applications where colors are desired. In addition, these two 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 charts on pages 11 b-d. Spacing Requirements: Max. spacing 15 ft. (4,6 m), min. spacing 6 ft. (1,8 m). Glass bulb fluid temperature rated to -65 °F (-55 °C).

Spring: U.S.A. Patent No. 4,167,974 Min. Operating Pressure: 7 psi (48,3 kPa).

RATED WATER WORKING PRESSURE Sprinklers 09992, 09993, 09994, and 09995 are rated for use with water working pressures ranging from the minimum 7 psi (48,3 kPa) up to 250 psi (1724 kPa) for high-pressure systems. High-pressure (HP) sprinklers can be identified by locating "250" stamped on the deflector.

All other Part Nos. not mentioned above are rated to a maximum 175 psi (1 207 kPa) wwp.

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

#### **SPRINKLER MATERIALS**

Frame: Brass Castings UNS-C84400 Deflector: Brass UNS-C51000 or Copper UNS-C19500 for Sprinklers 10139, 10142, 10170, 10173, 10223, and









Upright

Pendent

Conventional

1 .	Nominal Sprinkler Temperature		Bulb	
Classification	Rating (Fusing Point) <sup>2</sup>	Ceiling Temperature <sup>1</sup>	Color <sup>2</sup>	
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	
Ultra High <sup>4</sup>	500 °F (260 °C)	465 °F (240 °C)	Black	

Sprinkler Finishes: Brass, Chrome-Enloy®, White Polyester (White Poly finish for Sprinkler Base Part Nos. 10138, 10139, 10141, 10173, and 10220), Black Polyester (Black Poly finish for Sprinkler Base Part Nos. 10138, 10139, and 10173), and Black Teflon®

Corrosion-Resistant Coatings<sup>3</sup>: White Polyester (White Poly finish for Sprinkler Base Part Nos. 10138, 10139, 10141, 10173, and 10220 only), Black Polyester (Black Poly finish for Sprinkler Base Part Nos. 10138, 10139, and 10173), and Black Teflon® in all temperature ratings. Wax-Coated Brass and Wax over Polyester finish<sup>5</sup> for sprinklers with the following temperature ratings:

155 °F (68 °C) Lt. Brown Wax 200 °F (93 °C) Brown Wax 286 °F (141 °C) Dk. Brown Wax 175 °F (79 °C) Brown Wax 212 °F (100 °C) Brown Wax

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.
 The temperature rating is stamped on the deflector.

<sup>3</sup> The corrosion-resistant coatings have passed the standard corrosion test required by the approving agencies indicated on pages 11 b-d. 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 Poly finishes and Teflon<sup>®</sup> coatings. For Teflon<sup>®</sup> coated open sprinklers only, the waterway is coated.

<sup>4</sup> Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F (149 °C). Temporate time may be severely retarded.

below 300 °F (149 °C), response time may be severely retarded.

<sup>5</sup> Wax Over Polyester is unavailable for Sprinkler Base P/Ns 09992, 09993, 09994, and 09995.

12105. Copper UNS-C19500 for Sprinkler Base Part Nos. 10138, 10141, 10169, 10174, 10187, 10190, 10193, 10220, 10233, and 12106. Brass UNS-C26000 for all other Part Nos.

Bushing (for Sprinkler Base Part Nos. 09994, 09995, 10188, 10189, 10191, 10192, 10218, 10219, 10221, and 10222): 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 for Sprinklers 09992, 09993, 09994, 09995, and 10221: Bronze UNS-C31400 or UNS-C31600

Pip Cap and Insert Assembly for all other Sprinkler Part Nos: Copper UNS-C11000 and Stainless Steel UNS-S30400

Pip Cap Attachment: Brass UNS-C36000

Ejector Spring (Part Nos. 12105 and 12106): Stainless Steel

#### Sprinklers with Teflon® Coating:

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

Sprinklers with Poly Finishes:

Belleville Spring: Nickel Alloy, exposed **AVAILABLE FINISHES** 

Brass, Chrome-Enloy® (patents pending), White Polyester (White Poly finish for Sprinkler Base Part Nos. 10138, 10139, 10141, 10173, and 10220), Black Polyester (Black Poly finish for Sprinkler Base Part Nos. 10138, 10139, and 10173), and Black Teflon® in all temperature ratings; Wax-Coated Brass or Wax over Polyester\* for sprinklers with temperature ratings through 286 °F (141 °C).

\* Wax Over Polyester unavailable for Sprinkler Base Part Nos. 09992, 09993, 09994, and 09995.

Note: Units of measure in parentheses may be approximations.

Form No. F\_100397

Replaces page 11 a-d, dated Oct. 21, 2005 (added MED Approval). Refer to technical data page SR1-2 for general care, installation, and maintenance information.

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## **TECHNICAL DATA**

# MICROMATIC® AND MicromaticHP® STANDARD RESPONSE SPRINKLERS

# **Approval Chart**

Micromatic® Standard Response Pendent Sprinklers Maximum 175 PSI WWP

Temperature Finish A1	KEY
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Standard Orifice															
Thread Sprinkler Description			ption	Nominal K-Factor		Overall Length		Listings and Approvals <sup>2</sup>							
NPT	BSP	Style	Base Part Number <sup>1</sup>	SIN	U.S.	metric <sup>6</sup>	Inch	mm	cULus <sup>4</sup>	FM	NYC <sup>3</sup>		LPCB	C€	0
1/2"	15 mm	Pendent	10139	VK102	5.6	8,1	2-3/16	56	B2, D9, E11, F7	D9, E11, F7 A5, C10, F5 I		B5	B2, D9	B5 <sup>13</sup>	B5 <sup>15</sup>
	15 mm	Pendent	10173 <sup>12</sup>	VK102	5.6	8,1	2-3/16	56	B2, D9, E11, F7	A5, C10, F5	B2, D9, E11	B5	B2, D9	_	
Large Orifice															
1/2"		Pendent	10223	VK202	8.0	11,5	2-3/8	60	B1, D8, E11, F7	B7, D10, F7	B1, D8, E11	_	_	_	
3/4"	-	Pendent	10142	VK202	8.0	11,5	2-5/16	59	B1, D8, E11, F7		B1, D8, E11	_	B4, D8	B7 <sup>13</sup>	B7 <sup>15</sup>
_		Pendent	10187	VK202	8.0	11,5	2-3/8	60	B1, D8, E11, F7	C10	_	_	_	-	
	_	Pendent	10170	VK202		11,5	2-3/8	60	B1, D8, E11	C10, A7	_	_	B7, D3		B7 <sup>15</sup>
3/4"	20 mm	Pendent	12105	VK202	8.0	11,5	2-3/16		_	_	- A4		_	B7 <sup>14</sup>	
Small Orifice <sup>9</sup>															
1/2"		Pendent	10221 <sup>10</sup>	VK003		4,0	2-3/16	56	B1, D8, E11	B7, D10	_	_	_	_	
1/2"		Pendent	10222 <sup>10</sup>	VK004	4.2	6,0	2-1/4	58	B1, D8, E11	_	_		_	_	
		Pendent	10175	VK004		6,0	2-1/4	58	_	_	_	B4	B7, D3	B4 <sup>13</sup>	B4 <sup>15</sup>
	15 mm	Pendent	10188 <sup>10,12</sup>	VK004		6,0	2-1/4	58	B1, D8, E11	_	_	_	_	_	
	15 mm	Pendent	10189 <sup>10,12</sup>			4,0	2-3/16		B1, D8, E11	B7, D10	_	_	_	_	_
									Model E-1 or E-2						
1/2"		Pendent	10139	VK102		8,1	2-3/16		D2	C5 <sup>8</sup>	D2	D5	D2	_	
1/2"		Pendent	10223	VK202		11,5	2-3/8	60	D1	D7 <sup>8</sup>	D1	_	_	_	_
1/2"		Pendent		VK003		4,0	2-3/16		D1	C7 <sup>8</sup>	D1	_	D1	_	
1/2"			102229,10	VK004	4.2	6,0	2-1/4	58	D1	_	D1	_	D1	_	_
3/4"		Pendent	10142	VK202		11,5	2-5/16	59	D1	D7 <sup>8</sup>	D1	_	D4	_	_
_		Pendent	10173 <sup>12</sup>	VK102	5.6	8,1	2-3/16	56	D1	C7 <sup>8</sup>	_	_	D1	_	
	t	Pendent	10170	VK202	8.0	11,5	2-3/8	60	D1	D7 <sup>8</sup>	_	_	D1	_	
3/4"	20 mm	Pendent	12105	VK202	8.0	11,5	2-3/16		_	_		D4	_	_	_
Installed with the Viking Microfast® Model F-1 Adjustable Escutcheon <sup>11</sup>															
1/2"	<del> </del>	Pendent	10139	VK102		8,1	2-3/16		D2	_	D2	E5	D2	_	
1/2"		Pendent	10223	VK202		11,5	2-3/8	60	D1	_	D1	_	_	_	_
1/2"	15 mm	Pendent	10221 <sup>9,10</sup>	VK003	2.8	4,0	2-3/16	56	D1	_	D1	_	D1	_	_

#### **Approved Temperature Ratings**

- A 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 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C) C 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 212 °F (100 °C) D 155 °F (68 °C), 175 °F (79 °C), and 200 °F

- (93 °C) E 286 °F (141 °C) F 500 °F (260 °C)<sup>7</sup>

- Approved Finishes

  1 Brass, Chrome-Enloy®, White Polyester<sup>5</sup>, Black Polyester<sup>5</sup>, and Black Teflon®<sup>5</sup>

  2 Brass, Chrome-Enloy®, White Poly Finish<sup>5</sup>, Black Poly Finish<sup>5</sup>, and Black Teflon®<sup>5</sup>

  3 White Polyester, Black Polyester, Black Teflon®, Wax-Coated Brass, and Wax over Polyester

  4 Brass, Chrome-Enloy®, White Polyester, and Black Polyester

  5 Brass, Chrome-Enloy®, White Poly Finish, and Black Poly Finish

  6 White Poly Finish, Black Poly Finish, and Wax-Coated Brass (corrosion resistant)

  7 Brass and Chrome-Enloy®

  8 Wax-Coated Brass and Wax Over Polyester<sup>5</sup>

  9 Wax-Coated Brass and Wax Over Poly Finish<sup>5</sup>

- 9 Wax-Coated Brass and Wax Over Poly Finish<sup>5</sup>
- 10 Wax-Coated Brass (corrosion resistant)
- 11 High Temperature 200 °F (93 °C) Wax Coating (corrosion resistant); maximum ambient temperature allowed at ceiling = 150 °F (65 °C)
- <sup>1</sup> Base part number shown. For complete part number, refer to Viking's current price schedule.
- <sup>2</sup> This table shows the listings and approvals available at the time of printing. Other approvals may be in process.

  <sup>3</sup> Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. XII.
- <sup>4</sup> Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.
- <sup>5</sup> cULus Listed as corrosion-resistant.
- 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. <sup>7</sup> Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F
- (149 °C), the response time of the Ultra-High temperature rated sprinkler may be severely retarded.

  8 FM Approval of Viking Micromatic® Standard Response Recessed Pendent Sprinklers installed with the Viking Micromatic® Model E-1 or E-2 Recessed Escutcheon is limited to wet systems and preaction systems qualifying as wet systems, for hazard occupancies up to and including
- Ordinary Hazard, Group II. <sup>9</sup> Listings and Approvals limited to Light-Hazard Occupancies where allowed by the installation standards being applied, with hydraulically cal-
- culated wet systems only.

  10 The sprinkler orifice is bushed.
- <sup>11</sup>Escutcheons must be ordered separately from sprinklers. Refer to Viking's current price schedule.
- <sup>12</sup>Sprinklers 10173, 10189, and 10188 are available on special order.

- 13 (Certified, Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001 and 0832-CPD-2003.

  14 (Certified, Standard EN 12259-1, EC-certificate of conformity 0786-CPD-40141.

  15 MED Certified, Standard EN 12259-1, EC-certificate of conformity 0832-MED-1003 and 0832-MED-1008.

Spacing Requirements: Maximum spacing 15 ft. (4,6 m), minimum spacing 6 ft. (1,8 m).

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## TECHNICAL DATA

# MICROMATIC® AND MicromaticHP® STANDARD RESPONSE SPRINKLERS

#### **Approval Chart**

MicromaticHP® Standard Response Pendent Sprinklers Maximum 250 PSI WWP

	— Temperature	KEY
│ <del>↓</del> ⋤	— Finish	
A1		

					Standa	ard Orif	ice						
Thread Size		Max. Pressure	Sprinkler Description				al K-Factor	Overall Length		Listings and Approvals <sup>2</sup>			
NPT	BSP	PSIG	Style	Base Part Number <sup>1</sup>	SIN	U.S.	metric <sup>5</sup>	Inch	mm	cULus <sup>3</sup>	FM	NYC	VdS
1/2"	15 mm	250	Pendent	09992	VK122	5.6	8,1	2-1/4	58	A1	_	_	_
	Small Orifice <sup>6</sup>												
1/2"	15 mm	250	Pendent	09994 <sup>7</sup>	VK023	2.8	4,0	2-1/4	58	A1	_	_	_
			Installed	with the Viking Mic	romatic®	Model	E-1 or E-2 R	ecessed l	Escutch	neon <sup>9</sup>		_	
1/2"	15 mm	250	Pendent	09992	VK122	5.6	8,1	2-1/4	58	B1	_	_	_
1/2"	15 mm	250	Pendent	09994 <sup>6,7</sup>	VK023	2.8	4,0	2-1/4	58	B1	_	_	_
	Installed with the Viking Microfast <sup>®</sup> Model F-1 Adjustable Escutcheon <sup>8,9</sup>												
1/2"	15 mm	250	Pendent	09992	VK122	5.6	8,1	2-1/4	58	A1	_	_	_
1/2"	15 mm	250	Pendent	09994 <sup>6,7</sup>	VK023	2.8	4,0	2-1/4	58	A1	_	_	_
	Approved Temperature Ratings								Approv	ed Finishe	s		

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

1 - Brass, Chrome-Enloy®, White Polyester<sup>4</sup>, Black Polyester<sup>4</sup>, and Black Teflon®<sup>4</sup>

#### **Footnotes**

- Base part number shown. For complete part number, refer to Viking's current price schedule.
- <sup>2</sup> This table shows the listings and approvals available at the time of printing. Other approvals may be in process.

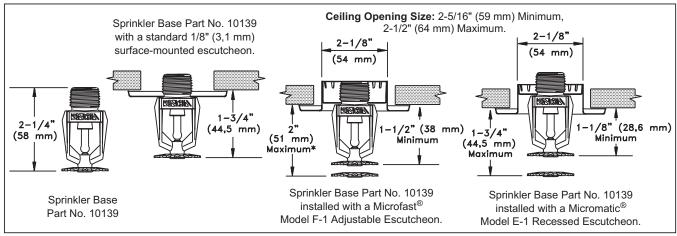
<sup>3</sup> Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.

cULus Listed as corrosion-resistant.

- <sup>5</sup> 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
- <sup>6</sup> Listings and Approvals limited to Light-Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems only.

- <sup>7</sup> The sprinkler orifice is bushed.
  <sup>8</sup> The Microfast<sup>®</sup> 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 Refer to the "Sprinkler Accessories" section for technical data on approved escutcheons and other accessories. Escutcheons must be ordered separately from sprinklers. Refer to Viking's current price schedule.

Spacing Requirements: Maximum spacing 15 ft. (4,6 m), minimum spacing 6 ft. (1,8 m).



**ACCESSORIES** (order separately)

Sprinkler Cabinets: (available since 1971) A. Six-head capacity: Part No. 01724A

B. Twelve-head capacity: Part No. 01725A **Sprinkler Wrenches:** 

A. Standard wrench: Part No. 10896W/B (available since 2000) or 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: Part No. 07398W\*\* (available since 1990), or Part No. 12144W/B\*\* (available since 2003).
- \*\*A 1/2" ratchet is required (not available from Viking).

NOTE: Recessed pendent sprinklers with protective caps must use wrench 12144W/B.

Refer to the "Sprinkler Accessories" section of the Viking data book.

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### **TECHNICAL DATA**

# MICROMATIC® AND MicromaticHP® STANDARD RESPONSE SPRINKLERS

#### Temperature **KEY Approval Chart** Finish Micromatic® and MicromaticHP® Standard Response Αİ **Upright and Conventional Sprinklers** Maximum 175 PSI WWP **Standard Orifice** Nominal Overall Thread Size **Sprinkler Description** Listings and Approvals<sup>2</sup> K-Factor Lenath **Base Part** $\epsilon$ 0 U.S. metric<sup>5</sup> VdS LPCB NPT **BSP** Style SIN Inch mm cULus4 FΜ NYC Number<sup>1</sup> 56 B14, E11, F13, G9 A15, D12, G15 B14, E11, F13<sup>3</sup> 2-3/16 15 mm Upright 10138 VK100 5.6 8,1 B6 B9, E3 B6<sup>12</sup> B6<sup>14</sup> 15 mm Upright VK145 5.6 8,1 2-3/16 56 10233 A8, D7, G8 2-3/16 56 2-3/16 56 B9, E3 15 mm Upright 10174 VK145 5.6 8,1 A8, D7, G8 VK100 5.6 56 B1, E10, F13, G9 B1, E10, F13<sup>3</sup> 10193 8.1 A8, D7, G8 15 mm Upright Large Orifice B9<sup>12</sup> B9<sup>14</sup> B2, E11<sup>3</sup> 15 mm Upright 10220 VK200 8.0 11,5 2-3/8 60 B2, E11, F13, G9 B8, E12, G8 B5 B9<sup>12</sup> B9<sup>14</sup> 3/4" 20 mm Upright 10141 VK200 8.0 11,5 2-5/16 59 B2, E11, F13, G9 B8, E12, G8 B2, E11, F13<sup>3</sup> B6 E11 B9<sup>12</sup> B9<sup>14</sup> B8, E12, G8 B8, E12, G8 15 mm Upright 10190 VK200 8.0 11,5 2-3/8 60 B1, E10, F13, G9 B9, E3 B9<sup>12</sup> B9<sup>14</sup> 9 B1, E10, F13 Small Orifice<sup>8</sup> 20 mm Upright 10169 VK200 8.0 11,5 2-5/16 59 10218<sup>9</sup> VK001 2.8 2-3/16 B1, E10, F13 E9, E12 ½" 15 mm Upright 56 102199 15 mm Upright 10219<sup>9</sup> 15 mm Upright 10191<sup>9</sup> 1/2" VK002 4.2 6,0 2-3/16 56 B1, E10, F13 VK002 4.2 2-3/16 56 B1, E10, F13 6,0 10192<sup>9</sup> VK001 2.8 B1, E10, F13 E9, E12 15 mm Upright 4,0 2-3/16 56 B5 B9, E3 B5<sup>12</sup> B5<sup>14</sup> VK002 4.2 10176 6.0 2-3/16 56 10 mm Upright Conventional B5<sup>14</sup> B5<sup>12</sup> 1/2" 15 mm Conv. 10227 VK118 5.6 8,1 2-3/16 56 B1, E10, F13 B1, E10, F13<sup>11</sup> B5 B5, B9<sup>14</sup> B1, E10, F13 B9<sup>12</sup> 3/4" 20 mm Conv. 10228 VK120 8.0 11,5 2-5/16 59 B1, E10, F13<sup>11</sup> E10 B5, 15 mm Conv. 10172<sup>10</sup> VK118 5.6 8.1 2-3/16 56 B1, E10, F13 E10 B5, B9<sup>12</sup> B9<sup>14</sup> 20 mm Conv. 10168<sup>10</sup> VK120 8.0 11,5 2-5/16 59 B1. E10. F13 E10 B5<sup>13</sup> 20 mm Conv. 12106 VK120 8.0 11,5 2-5/16 59 B5 Maximum 250 PSI WWP Standard Orifice ½" 15 mm Upright 09993 VK124 5.6 8,1 2-1/4 58 Small Orifice<sup>8</sup> ½" 15 mm Upright 099959 VK021 2.8 4,0 2-1/4 | 58 Approved Finishes 1 - Brass, Chrome-Enloy®, White Polyester<sup>5</sup>, Black Polyester<sup>5</sup>, and Black Teflon®5 2 - Brass, Chrome-Enloy®, White Poly Finish<sup>5</sup>, Black Polyester<sup>5</sup>, and Black Teflon®5 3 - White Polyester, Black Polyester, Black Teflon®, Wax-Coated Brass, and Wax over Approved Temperature Ratings A - 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) White Poly Finish, Black Polyester, Black Teflon®, Wax-Coated Brass, and Wax over °C) B - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), 286 °F (141 °C), and 360 °F (182 °C) C - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 286 °F (141 °C) D - 155 °F (68 °C), 175 °F (79 °C), 200 °F (93 °C), and 212 °F (100 °C) E - 155 °F (68 °C), 175 °F (79 °C), and 200 °F (93 °C) F - 286 °F (141 °C) G - 500 °F (260 °C)<sup>7</sup> Folyester 5 - Brass, Chrome-Enloy®, White Polyester, and Black Polyester 6 - Brass, Chrome-Enloy®, White Poly Finish, and Black Polyester 7 - White Poly Finish and Wax-Coated Brass (corrosion resistant) 8 - Brass, Chrome-Enloy® and White Poly Finish 9 - Brass and Chrome-Enloy® 10 - Wax-Coated Brass and Wax over Polyester<sup>5</sup> 11 - Wax-Coated Brass and Wax over Poly Finish<sup>5</sup> 12 - Wax-Coated Brass (corrosion resistant) 13 - 200 °F (93 °C) High-Temperature Wax Coating (corrosion resistant); maximum ambient temperature allowed at ceiling = 150 °F (65 °C) 14 - Brass, Chrome-Enloy®, White Poly Finish<sup>5</sup>, Black Poly Finish<sup>5</sup>, and Black Teflon®5 15 - Brass, Chrome-Enloy®, White Poly Finish, and Black Poly Finish

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

This table shows the listings and approvals available at the time of printing. Other approvals may be in process.

Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. XII.

Listed by Underwriters Laboratories Inc. for use in the U.S. and Canada.

<sup>5</sup> cULus Listed as corrosion-resistant.

- 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. <sup>7</sup> Sprinklers of Ultra-High temperature rating are intended for use inside ovens, dryers, or similar enclosures with normal operating temperatures above 300 °F (149 °C). Where the ambient temperature around the Ultra-High temperature rated sprinkler is significantly reduced below 300 °F (149 °C), the response time of the Ultra-High temperature rated sprinkler may be severely retarded.
- <sup>8</sup> Listings and Approvals limited to Light-Hazard Occupancies where allowed by the installation standards being applied, with hydraulically calculated wet systems only.
- The sprinkler orifice is bushed.

<sup>10</sup>Sprinklers 10168 and 10172 are available on special order.

- <sup>11</sup>Accepted for use, City of New York Department of Buildings, MEA Number 89-92-E, Vol. III.
- Certified, Standard EN 12259-1, EC-certificate of conformity 0832-CPD-2001 and 0832-CPD-2003.

  Certified, Standard EN 12259-1, EC-certificate of conformity 0786-CPD-40142.

  MED Certified, Standard EN 12259-1, EC-certificate of conformity 0832-MED-1003 and 0832-MED-1008.

Spacing Requirements: Maximum spacing 15 ft. (4,6 m), minimum spacing 6 ft. (1,8 m) for upright sprinklers. Conventional (old-style) sprinklers must be spaced in accordance with the latest standards of NFPA, LPCB, and VdS, and any other applicable standards.