

Commercial Extended Coverage Sprinkler Quick Reference Guide

Viking offers a full line of extended coverage sprinklers that combine large coverage areas with low flow and pressure characteristics. Complete technical data and product specifications can be found by visiting www.vikinggroupinc.com. The design data presented below is in accordance with each sprinkler's cULus listing. Listings for other approval agencies can be found on the products' technical data pages.

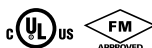
Pendent and Recessed Pendent Sprinklers

5.6 (81) K-factor



VK600, Part No. 06778B
Tech Data Page Sprinkler 81a

- Listed to 175 psi (12 bar)
- 1/2" (15mm) orifice
- Light Hazard
- Standard Response - 155°F (68°C), 175°F (79°C)
- Quick Response - 135°F (57°C), 155°F (68°C), 175°F (79°C)
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 07398W



Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 ¹ (4.9x4.9)	26 (98.4)	21.6 (1.49)
18 x 18 ¹ (5.5x5.5)	33 (124.9)	34.7 (2.39)
20 x 20 ² (6.1x6.1)	40 (151.4)	51 (3.52)

¹ cULus listed for quick response only. FM approved for both standard and quick response.

² cULus quick response listing available in 135°F (57°C) only. FM quick response listing includes 135°F (57°C) and 155°F (68°C).

* See data page for expanded FM approval criteria.

5.6 (81) K-factor



VK604, Part No. 10335
Tech Data Page Sprinkler 90e

- **Listed for high pressure; 250 psi (17.2 bar) as VK610 (p/n 12294).**
- 1/2" (15mm) orifice
- Light Hazard
- Standard Response - 155°F (68°C)
- Quick Response - 135°F (57°C), 155°F (68°C), 175°F (79°C)
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 07398W



16 x 16 ¹ (4.9x4.9)	26 (98.4)	21.6 (1.49)
18 x 18 (5.5x5.5)	33 (124.9)	34.7 (2.39)
20 x 20 ² (6.1x6.1)	40 (151.4)	51 (3.52)

¹ Available only for quick response.

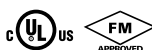
² Standard response listing also available in 175°F (79°C).

8.0 (115) K-factor



VK602, Part No. 07077
Tech Data Page Sprinkler 81a

- Listed to 175 psi (12 bar)
- 3/4" (20mm) orifice
- Light Hazard
- Standard Response - 155°F (68°C), 175°F (79°C)
- Quick Response - 135°F (57°C), 155°F (68°C), 175°F (79°C)
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 07398W



16 x 16 ¹ (4.9x4.9)	26 (98.4)	10.6 (0.73)
18 x 18 ¹ (5.5x5.5)	33 (124.9)	17 (1.17)
20 x 20 ² (6.1x6.1)	40 (151.4)	25 (1.72)

¹ cULus listed for quick response only. FM approved for both standard and quick response.

² cULus quick response listing available in 135°F (57°C) only. FM quick response listing includes 135°F (57°C) and 155°F (68°C).

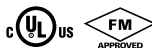
* See data page for expanded FM approval criteria.

11.2 (161) K-factor



VK608, Part No. 08339
Tech Data Page Sprinkler 85a

- Listed to 175 psi (12 bar)
- 3/4" (20mm) orifice
- Light Hazard
- Standard Response - 155°F (68°C)
- Quick Response - 135°F (57°C), 155°F (68°C), 175°F (79°C)
- Standard Wrench - 05118CW/B
- Coated/Recessed Wrench - 11663W/B
- Listed with concrete tees up to 30" (762mm) in depth



16 x 16 ¹ (4.9x4.9)	30 (113.6)	7.2 (0.50)
18 x 18 ¹ (5.5x5.5)	33 (124.9)	8.7 (0.60)
20 x 20 ² (6.1x6.1)	40 (151.4)	12.8 (0.88)

¹ Available only for quick response.

² cULus quick response listing in 135°F (57°C) and 175°F (79°C) only. FM quick response listing also includes 155°F (68°C).

* See data page for expanded FM approval criteria.

Pendent and Recessed Pendent Sprinklers continued on Page 2

11.2 (161) K-factor



VK534, Part No. 08340
Tech Data Page Sprinkler 83a

- **QR Listing for Ordinary Hazard may allow for design area reduction.**
- Listed to 175 psi (12 bar)
- 3/4" (20mm) orifice
- Light/Ordinary Hazard
- Standard/Quick Response - 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
- Standard Wrench - 05118CW/B
- Coated/Recessed Wrench - 11663W/B
- Listed with concrete tees up to 30" (762mm) in depth

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
LIGHT HAZARD		
16 x 16 ¹ (4.9x4.9)	30 (113.6)	7.2 (0.50)
18 x 18 ¹ (5.5x5.5)	33 (124.9)	8.7 (0.60)
20 x 20 ¹ (6.1x6.1)	40 (151.4)	12.8 (0.88)
ORDINARY HAZARD		
12 x 12 ¹ (3.7x3.7)	30 (113.6)	7.2 (0.50)
14 x 14 ¹ (4.3x4.3)	30 (113.6)	7.2 (0.50)
16 x 16 ² (4.9x4.9)	38 (143.9)	11.5 (0.79)
18 x 18 ² (5.5x5.5)	49 (185.5)	19.1 (1.32)
20 x 20 ² (6.1x6.1)	60 (227.1)	28.7 (1.98)

¹ Available only for quick response.

² Available only for standard response.

14.0 (202) K-factor



VK572, Part No. 13722
Tech Data Page Sprinkler 83h

- **QR Listing for Ordinary Hazard may allow for design area reduction.**
- Listed to 175 psi (12 bar)
- 3/4" (20mm) orifice
- Ordinary Hazard
- Standard Response - 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
- Standard Wrench - 07297W/B
- Coated/Recessed Wrench - 13032W/B
- Listed with concrete tees up to 30" (762mm) in depth

12 x 12 (3.7x3.7)	39 (147.6)	7.8 (0.54)
14 x 14 (4.3x4.3)	39 (147.6)	7.8 (0.54)
16 x 16 (4.9x4.9)	39 (147.6)	7.8 (0.54)
18 x 18 (5.5x5.5)	49 (185.5)	12.3 (0.85)
20 x 20 (6.1x6.1)	60 (227.1)	18.4 (1.27)

* See data page for expanded FM approval criteria.

** Design data presented above for OH Group I. See data page for OH Group II data.

Upright Sprinkler

11.2 (161) K-factor



VK532, Part No. 08687
Tech Data Page Sprinkler 83a

- **QR Listing for Ordinary Hazard may allow for design area reduction.**
- 3/4" (20mm) orifice
- Light/Ordinary Hazard
- Standard/Quick Response - 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
- Standard Wrench - 05118CW/B
- cULus listed and FM approved for LH/OH
- Listed with concrete tees up to 30" (762mm) in depth

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
LIGHT HAZARD		
16 x 16 ¹ (4.9x4.9)	30 (113.6)	7.2 (0.50)
18 x 18 ¹ (5.5x5.5)	33 (124.9)	8.7 (0.60)
20 x 20 ¹ (6.1x6.1)	40 (151.4)	12.8 (0.88)
ORDINARY HAZARD		
12 x 12 ¹ (3.7x3.7)	30 (113.6)	7.2 (0.50)
14 x 14 ¹ (4.3x4.3)	30 (113.6)	7.2 (0.50)
16 x 16 ² (4.9x4.9)	38 (143.9)	11.5 (0.79)
18 x 18 ² (5.5x5.5)	49 (185.5)	19.1 (1.32)
20 x 20 ² (6.1x6.1)	60 (227.1)	28.7 (1.98)

¹ Available only for quick response.

² Available only for standard response.

14.0 (202) K-factor



VK570, Part No. 13840
Tech Data Page Sprinkler 83h

- **QR Listing for Ordinary Hazard may allow for design area reduction.**
- 3/4" (20mm) orifice
- Ordinary Hazard
- Standard/Quick Response - 155°F (68°C), 175°F (79°C), 200°F (93°C), 286°F (141°C)
- Standard Wrench - 07297W/B
- Listed with concrete tees up to 30" (762mm) in depth

12 x 12 (3.7x3.7)	39 (147.6)	7.8 (0.54)
14 x 14 (4.3x4.3)	39 (147.6)	7.8 (0.54)
16 x 16 ¹ (4.9x4.9)	39 (147.6)	7.8 (0.54)
18 x 18 ¹ (5.5x5.5)	49 (185.5)	12.3 (0.85)
20 x 20 ¹ (6.1x6.1)	60 (227.1)	18.4 (1.27)

¹ Quick Response only approved in 12x12 and 14x14.

* Design data presented above for OH Group I. See data page for OH Group II data.

Additional Design and Application Information

For systems designed to NFPA 13, water supplies are determined by applying the requirements from Chapter 11, Design Approaches (2007 Edition). Refer to sprinkler data pages on Viking's web site at www.vikinggroupinc.com for current technical data, design criteria, and listing/approval information. In some cases, Sprinkler Identification Numbers (SIN) may apply to more than one sprinkler. Please use part numbers when placing orders. *NOTE: The $A_s = S \times L$ method must be used to determine the sprinkler protection area of coverage.*

Cover Plate Information

Flat covers are available in white, ivory, black, bright brass, brushed brass, antique brass, polished chrome, brushed chrome and brushed copper standard finishes. Domed covers are available in white, ivory, black and polished chrome. Flat covers measure 2-3/4" (69.8mm) in diameter and the domed covers are 3-1/8" (80mm) in diameter. Square cover plates measure (LxW) 3-5/16" (84mm).

Special Painted Cover Plates

In addition to standard finishes, cover plates can be special ordered in over 800 custom colors. Additional charges will apply. Orders covering special painted products are not subject to cancellation except by written permission and then only upon agreement to make payment for work already performed. Viking reserves the right to over ship special painted products produced in excess of order quantity at no charge. No return of these products is allowed.

Horizontal Sidewall and Recessed Horizontal Sidewall

Standard Response available in 155°F (68°C); Quick Response available in 135°F (57°C), 155°F (68°C) and 175°F (79°C)

5.6 (81) K-factor



VK605, Part No. 12120
Tech Data Page Sprinkler 91a

- 1/2" (15mm) orifice
- Light Hazard
- Standard/Quick Response
- 6-12" (152-305mm) deflector distance to ceiling for flat ceilings. 4-12" (102-305mm) for ceilings up to 4/12 (18.4°) pitch.
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 07398W
- **Listed for high pressure; 250 psi (17.2 bar) as VK612 (p/n 12295)**

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 ¹ (4.9x4.9)	26 (98.4)	21.6 (1.49)
16 x 18 ¹ (4.9x5.5)	29 (109.8)	26.8 (1.85)
16 x 20 ¹ (4.9x6.2)	32 (121.1)	32.7 (2.25)

¹ Also available for sloped ceilings up to 4/12 (18.4°) pitch with same flows and pressures.

8.0 (115) K-factor



VK606, Part No. 13005
Tech Data Page Sprinkler 82a

- 3/4" (20mm) orifice
- Light Hazard
- Standard/Quick Response (flows/pressures listed are for quick response listing)
- 4-12" (102-305mm) down from ceiling, unless otherwise specified.
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 07398W
- FM approved up to 16 x 24 (4.9 x 7.3)

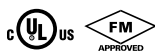
16 x 16 (4.9x4.9)	26 (98.4)	10.6 (0.73)
16 x 18 (4.9x5.5)	29 (109.8)	13.1 (0.91)
16 x 20 (4.9x6.2)	32 (121.1)	16 (1.10)
16 x 22 ¹ (4.9x6.7)	36 (136.3)	20.3 (1.40)
16 x 22 ² (4.9x6.7)	38 (143.8)	22.6 (1.56)

¹ 4-6" (102-152mm) down from ceiling

² 6-12" (152-305mm) down from ceiling

* See data page for expanded FM approval criteria.

8.0 (115) K-factor



VK630, Part No. 13500
Tech Data Page Sprinkler 80a

- 3/4" (20mm) orifice
- Light Hazard
- Quick Response
- 4-12" (102-305mm) down from ceiling, unless otherwise specified.
- Standard Wrench - 10896W/B
- Coated/Recessed Wrench - 13655W/B
- FM approved up to 16 x 24 (4.9 x 7.3)
- **Listed for high pressure, 300 psi (20.7 bar) as VK631 (p/n 16112)**

14 x 24 ¹ (4.3x7.3)	34 (128.7)	18.1 (1.25)
14 x 24 ² (4.3x7.3)	36 (136.3)	20.3 (1.40)
14 x 26 ¹ (4.3x7.9)	38 (144)	22.6 (1.56)
14 x 26 ² (4.3x7.9)	46 (174.1)	33.1 (2.28)
16 x 16 (4.9x4.9)	26 (98.4)	10.6 (0.73)
16 x 18 (4.9x5.5)	29 (109.8)	13.1 (0.91)
16 x 20 (4.9x6.2)	32 (121.1)	16 (1.10)
16 x 22 (4.9x6.7)	36 (136.3)	20.3 (1.40)
16 x 24 (4.9x7.3)	39 (147.6)	23.8 (1.64)
18 x 18 (5.5x5.5)	33 (124.9)	17 (1.17)
18 x 20 (5.5x6.2)	36 (136.3)	20.3 (1.40)
18 x 22 (5.5x6.7)	40 (151.4)	25 (1.72)

¹ 4-6" (102-152mm) down from ceiling

² 6-12" (152-305mm) down from ceiling

Domed Concealed HSW Sprinkler

Cover Plate 3-1/8" (80mm) diameter; Adjustment up to 1/2" (13mm)

8.0 (115) K-factor



VK630, Part No. 13500A-X
Tech Data Page Sprinkler 87e

- 3/4" (20mm) orifice
- Light Hazard
- Quick Response
- 4-12" (102-305mm) down from ceiling, unless otherwise specified.
- Standard Wrench - 13655W/B
- Sprinkler 135°F (57°C); Cover 135°F (57°C)
- **Listed for high pressure, 300 psi (20.7 bar) as VK631 (p/n 16112)**

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
14 x 24 ¹ (4.3x7.3)	34 (128.7)	18.1 (1.25)
14 x 24 ² (4.3x7.3)	36 (136.3)	20.3 (1.40)
14 x 26 ¹ (4.3x7.9)	39 (147.6)	23.8 (1.64)
14 x 26 ² (4.3x7.9)	46 (174.1)	33.1 (2.28)
16 x 16 ³ (4.9x4.9)	26 (98.4)	10.6 (0.73)
16 x 18 ³ (4.9x5.5)	29 (109.8)	13.1 (0.91)
16 x 20 ³ (4.9x6.2)	32 (121.1)	16 (1.10)
16 x 22 (4.9x6.7)	36 (136.3)	20.3 (1.40)
16 x 24 (4.9x7.3)	39 (147.6)	23.8 (1.64)
18 x 18 (5.5x5.5)	33 (124.9)	17 (1.17)
18 x 20 (5.5x6.2)	36 (136.3)	20.3 (1.40)
18 x 22 (5.5x6.7)	40 (151.4)	25 (1.72)

¹ 4-6" (102-152mm) down from ceiling

² 6-12" (152-305mm) down from ceiling

³ Also available sprinkler 175°F (79°C) with 165°F (74°C) cover.

Note: Base part number for the cover plate is 13501. (Sold Separately)

Flat Plate Concealed Pendent Sprinklers

Standard Diameter Cover Plate 2-3/4" (70mm); Adjustment up to 1/2" (13mm)

5.6 (81) K-factor



VK632, Part No. 14613A
Tech Data Page Sprinkler 92a

- 1/2" (15mm) orifice
- Light Hazard
- Quick Response - Sprinkler 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C); Cover 135°F (57°C), 165°F (74°C)
- Wrench: Heavy Duty (14047W/B); Light Duty (14031)
- Available with standard diameter, large diameter and square cover plate options

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 (4.9x4.9)	26 (98.4)	21.6 (1.49)
18 x 18 (5.5x5.5)	33 (124.9)	34.7 (2.39)
20 x 20 ¹ (6.1x6.1)	40 (151.4)	51 (3.52)

¹ Available only for 135°F (57°C) and 175°F (79°C).

8.0 (115) K-factor



VK634, Part No. 14535A
Tech Data Page Sprinkler 92a

- 3/4" (20mm) orifice
- Light Hazard
- Quick Response - Sprinkler 135°F (57°C), 155°F (68°C), 175°F (79°C), 200°F (93°C); Cover 135°F (57°C), 165°F (74°C)
- Wrench: Heavy Duty (14047W/B); Light Duty (14031)
- Available with standard diameter, large diameter and square cover plate options

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 (4.9x4.9)	26 (98.4)	10.6 (0.73)
18 x 18 (5.5x5.5)	33 (124.9)	17 (1.17)
20 x 20 ¹ (6.1x6.1)	40 (151.4)	25 (1.72)

¹ Available only for 135°F (57°C) and 175°F (79°C).

11.2 (161) K-factor



VK636, Part No. 16102A
Tech Data Page Sprinkler 89a

- 3/4" (20mm) orifice
- Light Hazard
- Quick Response - Sprinkler 165°F (74°C), 205°F (96°C); Cover 135°F (57°C), 165°F (74°C)
- Wrench: Heavy Duty (15467W/B); Light Duty (15466)
- Use ELO cover plate 15765_ (3-5/16" diameter)

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 (4.9x4.9)	30 (113.6)	7.2 (0.50)
18 x 18 (5.5x5.5)	33 (124.9)	8.7 (0.60)
20 x 20 (6.1x6.1)	40 (151.4)	12.8 (0.88)

Note: Base part numbers for cover plates are 13504 for standard diameter, 13642 for large diameter, 15394 for square, and 15765 for ELO. (Sold Separately)
When ordering, please add appropriate finish and temperature suffix (135°F (57°C) = "A"; 165°F (74°C) = "C") to base part number. Refer to Viking's list price book for ordering details.

Domed Concealed Pendent Sprinklers

Cover Plate 3-1/8" (80mm) diameter; Adjustment up to 1/2" (13mm)

5.6 (81) K-factor



VK614, Part No. 06778BA-X
Tech Data Page Sprinkler 88a

- 1/2" (15mm) orifice
- Light Hazard
- Standard Response - Sprinkler 155°F (68°C); Cover 135°F (57°C)
- Quick Response - Sprinkler 135°F (57°C), 175°F (79°C); Cover 135°F (57°C), 165°F (74°C)
- Standard Wrench - 07398W

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 ¹ (4.9x4.9)	26 (98.4)	21.6 (1.49)
18 x 18 (5.5x5.5)	33 (124.9)	34.7 (2.39)
20 x 20 (6.1x6.1)	40 (151.4)	51.0 (3.52)

¹ Available only for quick response.

8.0 (115) K-factor



VK616, Part No. 07077A-X
Tech Data Page Sprinkler 88a

- 3/4" (20mm) orifice
- Light Hazard
- Standard Response - Sprinkler 155°F (68°C); Cover 135°F (57°C)
- Quick Response - Sprinkler 135°F (57°C), 175°F (79°C); Cover 135°F (57°C), 165°F (74°C)
- Standard Wrench - 07398W

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 ¹ (4.9x4.9)	26 (98.4)	10.6 (0.73)
18 x 18 (5.5x5.5)	33 (124.9)	17 (1.17)
20 x 20 (6.1x6.1)	40 (151.4)	25 (1.72)

¹ Available only for quick response.

11.2 (161) K-factor



VK618, Part No. 08339A-X
Tech Data Page Sprinkler 86a

- 3/4" (20mm) orifice
- Light Hazard
- Standard Response - Sprinkler 155°F (68°C); Cover 135°F (57°C)
- Quick Response - Sprinkler 135°F (57°C), 155°F (68°C), 175°F (79°C); Cover 135°F (57°C), 165°F (74°C)
- Standard Wrench - 11663W/B

Room Size ft/m	Flow gpm/lpm	Pressure psi/bar
16 x 16 ¹ (4.9x4.9)	30 (113.6)	7.2 (0.50)
18 x 18 (5.5x5.5)	33 (124.9)	8.7 (0.60)
20 x 20 (6.1x6.1)	40 (151.4)	12.8 (0.88)

¹ Available only for quick response.

Note: Base part number for cover plates is 12381. (Sold Separately)
When ordering, please add appropriate finish and temperature suffix (135°F (57°C) = "A"; 165°F (74°C) = "C") to base part number. Refer to Viking's list price book for ordering details.