

Residential Sprinkler Quick Reference Guide

Viking offers the most complete line of residential sprinklers that have received UL and c-UL listings to UL 1626 Third Edition (including minimum .05 density). Check specific product data sheets on our web site at www.vikinggroupinc.com for the most current information.

Pendent and Recessed Pendent Sprinklers

Available in 155°F and 175°F; Recessed Adjustment up to 5/8"

3.1 (45) K-factor



VK435, Part No. 13203
[Tech Data Page Sprinkler 140e](#)

- Enables two-head design with flows less than 20 gpm (75,7 lpm)
- Can optimize NFPA 13 residential designs when combined with larger K factor residential sprinklers.

Room Size ft/m	Horizontal Ceiling		Sloped Ceiling 8/12	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	9 (34)	8.4 (58)	N/A	N/A
14 x 14 (4,3x4,3)	10 (38)	10.4 (72)	N/A	N/A

4.3 (62) K-factor



VK430, Part No. 09530
[Tech Data Page Sprinkler 140a](#)

- Continually listed by UL since 1995

12 x 12 (3,7x3,7)	12 (45)	7.8 (54)	18 (68)	17.5 (121)
14 x 14 (4,3x4,3)	13 (49)	9.1 (63)	18 (68)	17.5 (121)
16 x 16 (4,9x4,9)	13 (49)	9.1 (63)	18 (68)	17.5 (121)
18 x 18 (5,5x5,5)	17 (64)	15.6 (108)	N/A	N/A
20 x 20 (6,1x6,1)	21 (80)	23.9 (164)	N/A	N/A

4.9 (71) K-factor



VK468, Part No. 13637
[Tech Data Page Sprinkler 149m](#)

- Listed with beam ceilings up to 14"

12 x 12 (3,7x3,7)	13 (49)	7.0 (48)	21 (80)	18.4 (127)
14 x 14 (4,3x4,3)	13 (49)	7.0 (48)	21 (80)	18.4 (127)
16 x 16 (4,9x4,9)	13 (49)	7.0 (48)	21 (80)	18.4 (127)
18 x 18 (5,5x5,5)	17 (64)	12.0 (83)	21 (80)	18.4 (127)
20 x 20 (6,1x6,1)	20 (76)	16.7 (115)	21 (80)	18.4 (127)

5.2 (75) K-factor



VK466, Part No. 13781
[Tech Data Page Sprinkler 141j](#)

- Listed with beam ceilings up to 14"

12 x 12 (3,7x3,7)	14 (53)	7.2 (50)	20 (76)	14.8 (102)
14 x 14 (4,3x4,3)	14 (53)	7.2 (50)	20 (76)	14.8 (102)
16 x 16 (4,9x4,9)	14 (53)	7.2 (50)	20 (76)	14.8 (102)
18 x 18 (5,5x5,5)	17 (64)	10.7 (74)	20' (76)	14.8 (102)
20 x 20 (6,1x6,1)	21 (76)	16.3 (112)	20' (76)	14.8 (102)

¹ Flows shown for 155°F/68°C; 175°F/79°C.

5.8 (84) K-factor



VK472, Part No. 16130
[Tech Data Page Sprinkler 148o](#)

- VK432 5.5K also available. See data page for flows and pressures
- Larger K-Factor provides lower starting pressure in NFPA 13 applications (0.1 density)

12 x 12 (3,7x3,7)	16 (61)	7.6 (52)	Coming Soon	
14 x 14 (4,3x4,3)	16 (61)	7.6 (52)	Coming Soon	
16 x 16 (4,9x4,9)	16 (61)	7.6 (52)	Coming Soon	
18 x 18 (5,5x5,5)	17 (64)	8.6 (59)	Coming Soon	
20 x 20 (6,1x6,1)	21 (80)	13.1 (90)	Coming Soon	

7.4 (107) K-factor



VK458, Part No. 13230
[Tech Data Page Sprinkler 140w](#)

- Larger K-Factor provides lower starting pressure in NFPA 13 applications (0.1 density)

12 x 12 (3,7x3,7)	20 (76)	7.3 (50)	20' (76)	7.3 (50)
14 x 14 (4,3x4,3)	20 (76)	7.3 (50)	20' (76)	7.3 (50)
16 x 16 (4,9x4,9)	20 (76)	7.3 (50)	20' (76)	7.3 (50)
18 x 18 (5,5x5,5)	22 (83)	8.8 (61)	23' (87)	9.7 (67)
20 x 20 (6,1x6,1)	24 (91)	10.5 (73)	24' (91)	10.5 (73)

¹ Flows shown for 155°F/68°C; see data page for flows at 175°F/79°C.

Flush Pendent Sprinklers

Adjustment up to 5/8" with ceiling ring (bpn 15618)

4.9 (71) K-factor



VK476, Part No. 15630A
Tech Data Page Sprinkler 145h

- Sprinkler Temp = 165°F/74°C
- Listed for ceilings with beams up to 14" in depth. See data sheet for complete design and installation guidelines
- Sprinkler and outer ring sold together

Room Size ft/m	Horizontal Ceiling		Sloped Ceiling 4/12	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	13 (49)	7.0 (48)	24 (91)	24.0 (165)
14 x 14 (4,3x4,3)	13 (49)	7.0 (48)	24 (91)	24.0 (165)
16 x 16 (4,9x4,9)	13 (49)	7.0 (48)	24 (91)	24.0 (165)
18 x 18 (5,5x5,5)	17 (64)	12.0 (83)	24 (91)	24.0 (165)
20 x 20 (6,1x6,1)	21 (80)	18.4 (127)	24 (91)	24.0 (165)

Flat Plate Concealed Pendent Sprinklers

Cover Plate Temp = 135°F; Adjustment up to 1/2"

4.9 (71) K-factor



VK456, Part No. 13620A, 13750
Tech Data Page Sprinkler 147e

- Sprinkler Temp = 140°F/60°C
- Available with either standard, large, or square cover plate

Room Size ft/m	Horizontal Ceiling		Sloped Ceiling 8/12	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	13 (49)	7.0 (48)	17 (64)	12.0 (83)
14 x 14 (4,3x4,3)	13 (49)	7.0 (48)	17 (64)	12.0 (83)
16 x 16 (4,9x4,9)	14 (53)	8.2 (56)	17 (64)	12.0 (83)
18 x 18 (5,5x5,5)	17 (64)	12.0 (83)	26 (98)	28.2 (194)
20 x 20 (6,1x6,1)	23 (87)	22.0 (152)	26 (98)	28.2 (194)

4.9 (71) K-factor



VK457, Part No. 14694A
Tech Data Page Sprinkler 147u

- Sprinkler Temp = 165°F/74°C
- Available with either standard, large, or square cover plate

12 x 12 (3,7x3,7)	13 (49)	7.0 (48)	26 (98)	28.2 (194)
14 x 14 (4,3x4,3)	13 (49)	7.0 (48)	26 (98)	28.2 (194)
16 x 16 (4,9x4,9)	13 (49)	7.0 (48)	26 (98)	28.2 (194)
18 x 18 (5,5x5,5)	17 (64)	12.0 (83)	31 (117)	40.0 (276)
20 x 20 (6,1x6,1)	20 (76)	16.7 (115)	31 (117)	40.0 (276)

5.8 (84) K-factor



VK474, Part No. 15790A
Tech Data Page Sprinkler 148h

- Sprinkler Temp = 165°F/74°C
- Available with either standard, large, or square cover plate
- Larger K-Factor provides lower starting pressure in NFPA 13 applications (0.1 density)

12 x 12 (3,7x3,7)	16 (61)	7.6 (52)	Coming Soon	
14 x 14 (4,3x4,3)	16 (61)	7.6 (52)	Coming Soon	
16 x 16 (4,9x4,9)	16 (61)	7.6 (52)	Coming Soon	
18 x 18 (5,5x5,5)	19 (72)	10.7 (74)	Coming Soon	
20 x 20 (6,1x6,1)	23 (87)	15.7 (110)	Coming Soon	

Domed Concealed Pendent Sprinklers

Cover Plate Temp = 135°F; Adjustment up to 1/2"

4.9 (71) K-factor



VK468, Part No. 13637A-X, 12207
Tech Data Page Sprinkler 149q

- Sprinkler Temp = 155°F/68°C and 175°F/79°C

Room Size ft/m	Horizontal Ceiling		Sloped Ceiling 8/12	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	13 (49)	7.0 (48)	26 (98) ¹	28.2 (194)
14 x 14 (4,3x4,3)	13 (49)	7.0 (48)	26 (98) ¹	28.2 (194)
16 x 16 (4,9x4,9)	13 (49)	7.0 (48)	26 (98) ¹	28.2 (194)
18 x 18 (5,5x5,5)	17 (64)	12.0 (83)	26 (98) ¹	28.2 (194)
20 x 20 (6,1x6,1)	20 (77)	16.7 (115)	26 (98) ¹	28.2 (194)

¹ Sloped ceiling listing for 155°F/68°C only.

5.2 (75) K-factor



VK466, Part No. 13781A-X
Tech Data Page Sprinkler 141r-w

- Sprinkler Temp = 155°F/68°C and 175°F/79°C

12 x 12 (3,7x3,7)	14 (53)	7.2 (50)	23 (87)	19.6 (135)
14 x 14 (4,3x4,3)	14 (53)	7.2 (50)	23 (87)	19.6 (135)
16 x 16 (4,9x4,9)	14 (53)	7.2 (50)	23 (87)	19.6 (135)
18 x 18 (5,5x5,5)	17 (64)	10.7 (74)	23 (87)	19.6 (135)
20 x 20 (6,1x6,1)	20 (76)	14.8 (102)	23 (87)	19.6 (135)

7.4 (107) K-factor



VK458, Part No. 13230ABX, 12207
Tech Data Page Sprinkler 140q

- Sprinkler Temp = 155°F/68°C
- Larger K-Factor provides lower starting pressure in NFPA 13 applications (0.1 density)

12 x 12 (3,7x3,7)	20 (77)	7.3 (50)	22 (83)	8.8 (61)
14 x 14 (4,3x4,3)	20 (76)	7.3 (50)	22 (83)	8.8 (61)
16 x 16 (4,9x4,9)	20 (76)	7.3 (50)	22 (83)	8.8 (61)
18 x 18 (5,5x5,5)	23 (87)	9.7 (67)	28 (106)	14.3 (99)
20 x 20 (6,1x6,1)	28 (106)	14.3 (99)	28 (106)	14.3 (99)

Horizontal Sidewall Sprinklers

Available in 155°F and 175°F; Recessed Adjustment up to 5/8"

4.0 (58) K-factor



VK453, Part No. 13389
Tech Data Page Sprinkler 143w

- Patent-pending "flow shaper" design provides the ultimate combination of low flows and starting pressures
- VK452 version also available for 16 x 16 ft (4,9 x 4,9 m) room size at 15 gpm (57 lpm) flow rate

Room Size ft/m	4-6" down from ceiling		6-12" down from ceiling	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	11 (42)	7.6 (52)	12 (46)	9 (62)
14 x 14 (4,3x4,3)	12 (46)	9.0 (62)	13 (49)	10.6 (73)
16 x 16 (4,9x4,9)	16 (61)	16.0 (110)	16 (61)	16 (110)
16 x 18 (4,9x5,5)	16 (61)	16.0 (110)	17 ¹ (64)	18.1 (125)
16 x 20 (4,9x6,1)	23 (87)	33.1 (228)	24 (91)	36 (248)
18 x 18 (5,5x5,5)	19 (72)	22.6 (156)	19 (72)	22.6 (156)
18 x 20 (5,5x6,1)	24 (91)	36.0 (248)	24 (91)	36 (248)
20 x 20 (6,1x6,1)	25 (95)	39 (269)	N/A	N/A

¹ Flows shown for 155°F/68°C; 175°F/79°C available at 18 (68,1) / 20.3 (139,6).

4.2 (60) K-factor



VK450, Part No. 12357
Tech Data Page Sprinkler 143j

- Unique offset orifice design (patent pending)

12 x 12 (3,7x3,7)	12 ² (45)	8.2 (56)	20 ² (76)	22.7 (156)
14 x 14 (4,3x4,3)	14 ² (53)	11.1 (76)	20 ² (76)	22.7 (156)
16 x 16 (4,9x4,9)	18 ² (68)	18.4 (126)	20 ² (76)	22.7 (156)
16 x 18 (4,9x5,5)	18 ² (68)	18.4 (126)	20 ² (76)	22.7 (156)
16 x 20 (4,9x6,1)	22 ² (83)	27.4 (189)	25 ² (95)	35.4 (244)
16 x 22 ¹ (4,9x6,7)	26 (98)	38.3 (264)	N/A	N/A

¹ Sprinkler available in 155°F/68°C only and is surface mounted only.

² Also listed for 8/12 slopes at same flows/pressures.

Across the slope 4/12 (18.4°)

12 x 12 (3,7x3,7)	18 ³ (68)	18.4 (127)	20 (76)	22.7 (156)
14 x 14 (4,3x4,3)	18 ³ (68)	18.4 (127)	20 (76)	22.7 (156)
16 x 16 (4,9x4,9)	18 ³ (68)	18.4 (127)	20 (76)	22.7 (156)
16 x 18 (4,9x5,5)	18 (68)	18.4 (127)	20 (76)	22.7 (156)

³ Also listed for 8/12 slopes at same flows/pressures.

5.5 (79) K-factor



VK442, Part No. 12119
Tech Data Page Sprinkler 146a

Sloped Ceiling 8/12

12 x 12 (3,7x3,7)	21 ¹ (80)	14.6 (101)	21 ² (80)	14.6 (101)
14 x 14 (4,3x4,3)	22 ¹ (83)	16.0 (110)	22 ² (83)	16.0 (110)
16 x 16 (4,9x4,9)	24 ² (91)	19.0 (131)	24 ² (91)	19.0 (131)
16 x 18 (4,9x5,5)	27 ² (102)	24.1 (166)	28 ² (106)	25.9 (179)

¹ Deflector located 4"-12" below the ceiling.

² Deflector located 4"-6" below the ceiling.

5.8 (84) K-factor



VK460, Part No. 13933
Tech Data Page Sprinkler 152d

- Patent-pending "flow shaper" design provides the ultimate combination of low flows and starting pressures
- Larger K-Factor provides lower starting pressure in NFPA 13 applications (0.1 density)

12 x 12 (3,7x3,7)	16 (61)	7.6 (52)	16 (61)	7.6 (52)
14 x 14 (4,3x4,3)	16 (61)	7.6 (52)	18 (68)	9.7 (67)
14 x 26 (4,3x7,9)	42 (159)	52.4 (362)	46 (174)	62.9 (434)
16 x 16 (4,9x4,9)	20 (76)	11.9 (82)	24 (91)	17.1 (120)
16 x 18 (4,9x5,5)	22 (83)	14.4 (99)	27 (102)	21.7 (149)
16 x 20 (4,9x6,1)	26 (98)	20.1 (139)	32 (121)	30.4 (210)
16 x 22 (4,9x6,7)	31 (117)	28.6 (197)	37 (140)	40.7 (281)
16 x 24 (4,9x7,3)	38 (144)	42.9 (296)	42 (159)	52.4 (362)
18 x 18 (5,5x5,5)	23 (87)	15.7 (110)	29 (110)	25 (170)
18 x 20 (5,5x6,1)	29 (110)	25.0 (170)	35 (133)	36.4 (251)
20 x 20 (6,1x6,1)	30 (114)	26.8 (180)	36 (136)	38.5 (266)

* Flows shown for 155°F/68°C; 175°F/79°C.

Flat Plate Concealed HSW Sprinklers

Cover Plate Temp = 135°F

4.0 (58) K-factor



VK480, Part No. 16116AC
Tech Data Page Sprinkler 153a

- Sprinkler Temp = 165°F/74°C
- Uses large cover plate (3-5/16" diameter), p/n 16207

Room Size ft/m	4-6" down from ceiling		6-12" down from ceiling	
	Flow gpm/lpm	Pressure psi/kPa	Flow gpm/lpm	Pressure psi/kPa
12 x 12 (3,7x3,7)	11 ¹ (42)	7.6 (52)	12 ² (46)	9 (62)
14 x 14 (4,3x4,3)	13 ¹ (49)	10.6 (73)	14 ² (53)	12.3 (84)
16 x 16 (4,9x4,9)	16 ¹ (61)	16 (110)	16 ² (61)	16 (110)
16 x 18 (4,9x5,5)	17 ¹ (64)	18.1 (125)	18 ² (68)	20.3 (140)

¹ Centerline of the sprinkler located 4-3/8" to 6-3/8" below the ceiling.

² Centerline of the sprinkler located 6-3/8" to 12-3/8" below the ceiling.

Sloped listings are for down the slope only, unless otherwise noted.

Flat Cover Plate Finishes

Residential flat cover plates are available in nine standard finishes and a nearly unlimited variety of custom color finishes. Prices and lead times may vary. Flat cover plates shown not actual size (2-3/4 in (70 mm) diameter).



Antique Brass



Brushed Copper



Brushed Chrome



Bright Brass



Polished Chrome



Brushed Brass



White



Ivory



Black



Custom colors available for cover plates and frame style sprinklers.*

Cover Plates

Tech Data Page
Sprinkler 136a



- Standard (*shown left*)
2-3/4" (70mm) diameter
(p/n 13750)
- Large
3-5/16" (84mm) diameter
(p/n 14934)
(p/n 16207 for VK480)



- Square
3-5/16" (84mm) LxW
(p/n 15394)



- Domed
3-1/8" (80mm) diameter
(p/n 12207)

Recessed and Sloped Ceiling Escutcheons

Tech Data Page Sprinkler 135a



- E-1 - slip-on
(p/n 11123, 06419A, 06420A)
- E-2 - threaded
(p/n 11038, 11625)
- F-1 - adjustable
(p/n 06911A, 06912A)



- G-1 - sloped
(p/n 14315)
- Slip-on

Tools



- Cabinet Wrench & Sprinkler Cap Removal Tool
(p/n 13619)



- Mirage Concealed Cover Installer Tool
- Standard Diameter
(p/n 14412)
- Large Diameter
(p/n 14867)



- Escutcheon Installer Tool
(p/n 15166)

Special Painted Cover Plates and Frame Style Sprinklers

*Special order only. 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. Changes to products may result in the loss of listings or approvals.

For systems designed to NFPA 13D and 13R, or designed to NFPA 13 prior to 1999 Edition: Apply the listed areas of coverage and minimum water supply requirements shown in the most recent data sheet.

For systems designed to the 1999 and 2002 editions of NFPA 13: The minimum required discharge from each of the design sprinklers is to be the **greater** of the following:

- The flow rates given in the appropriate data page for NFPA 13D and 13R applications for each listed maximum area of coverage; or
- A minimum discharge of 0.1 gpm/sq. ft. over the "design area" for each of the design sprinklers.

NOTE: The $A_s = S \times L$ method must be used to determine the sprinkler protection area of coverage. See 2002 NFPA 13 paragraphs 8.5.2.1 and 11.2.3.5 (2).

All data pages showing complete details of listings are available on the Viking web site at www.vikinggroupinc.com.

In some cases, Sprinkler Identification Numbers may apply to more than one sprinkler. Please use part numbers when placing orders.