

## Report of Materials and **Equipment Acceptance Division**

NYC Department of Buildings 280 Broadway, New York, NY 10007 Patricia Lancaster, FAIA, Commissioner (212) 566-5000, TTY: (212) 566-4769

Pursuant to Administrative Code Section 27-131, the following equipment or material has been found acceptable for use in accordance with the Report of Materials and Equipment Acceptance (MEA) Division.

> Patricia J. Lancaster, A.I.A., Commissioner MEA 89-92-E Vol.30 Report of Material and Equipment Acceptance Division

Manufacturer – The Viking Corporation Trade Name(s) – Viking Automatic Sprinklers Product – Automatic fire sprinklers for fire protection service Pertinent Code Section(s) – Subchapter 17 and Reference Standard 17-2 Prescribed Tests – UL 199 and UL 1626 Laboratories – Underwriter's Laboratories, Inc. Test Report(s)

- - UL File Ex3836, Projects 03CA06609, 03NK33586 and 05NK05068 issued September 25, 2003, revised April 24, 2006.
  - UL File Ex3836, Projects 02NK26636, 03NK11223, 03NK08543 and 03NK17401, issued February 4, 2003, revised April 13, 2004.
  - 3) UL File Ex3836, Projects 03NK5637, 03NK17401, 03NK08543, issued June 12, 2003, revised April 13, 2004.
  - 4) UL File EX3836, Project 03NK23322, issued October 21, 2003.
  - 5) UL File Ex3836, Project 04NK21104, issued March 18, 2005.
  - 6) UL letter dated July 20, 2005.

Description – Residential Type Automatic fire sprinklers, of the following types and temperature ratings:

Model	Description
No.	
	ITEM 1: Freedom™ Residential Pendent and Recessed Pendent Sprinkler SIN VK435 (3.1K-Factor), nominal 3 mm glass bulb type, ½" NPT. For installation in residential occupancies with wet systems only. 175 psig max. Finishes: Brass, Chrome-Enloy®, or painted. Temperature ratings: 155 °F or 175 °F. UL File Ex3836, Projects 03CA06609, 03NK33586 and 05NK05068, Issued September 25, 2003, Revised April 24, 2006.

Confidential	Pa	Page 2 12/7/2006			
	Maximum Areas of Coverage	Minimum Water Supply Requirements	Temperature Ratings		
SIN VK435		flat, horizontal ceilings, including out	eilings with slopes		
	12' x 12'	9 gpm @ 8.4 psi	155 °F and 175 °F		
	14' x 14'	10 gpm @ 10.4 psi	155 °F and 175 °F		
	VK436 (5.2 K-Factor), nor in residential occupancie Brass, Chrome-Enloy®, c	dential Pendent and Recessed Penninal 3mm glass bulb type, ½" NP swith wet systems only. 175 psigor painted. Temperature ratings: 15 IK26636, 03NK11223, 03NK08543 a Revised April 13, 2004.	Γ. For installation max. Finishes: 5 °F or 175 °F. UL		
	Maximum Areas of Coverage	Minimum Water Supply Requirements	Temperature Ratings		
	Installed below smooth, flat, horizontal ceilings and horizontal ceilings with beams in accordance with the Manufacturer's installation instructions. Includes ceilings with slopes up to and including 2/12 (9.5°).				
	16' x 16'	14 gpm @ 7.2 psi	155 °F and 175 °F		
	18' x 18'	17 gpm @ 10.7 psi	155 °F and 175 °F		
	20' x 20'	20 gpm @ 14.8 psi	155 °F and 175 °F		
SIN VK436	Installed below ceilings with slopes up to and including 4/12 (18.4°) pitch.				
	18' x 18'	17 gpm @ 10.7 psi	155 °F and 175 °F		
	Installed below ceilings with slopes up to and including 8/12 (33.7°) pitch.				
	16' x 16'	14 gpm @ 7.2 psi	155 °F and 175 °F		
	16' x 16' 18' x 18'	14 gpm @ 7.2 psi 18 gpm @ 12 psi	155 °F and 175 °F 155 °F only		
	18' x 18'	18 gpm @ 12 psi	155 °F only		

Confidential Page 3 12/7/2006

Model No.	Description					
	Description  ITEM 3: Freedom™ Residential Concealed Pendent Sprinkler SIN VK436 (5.2 K-Factor), nominal 3mm glass bulb type, ½" NPT. Sprinkler temperature ratings: 135 °F or 155 °F with a 135 °F cover plate. For installation in residential occupancies with wet systems only. 175 psig max. The deflector must be located 3/8" to 7/8" below the ceiling. Finishes: Polished Chrome or painted UL File Ex3836, Projects 02NK26636, 03NK11223, 03NK08543 and 03NK17401, Issued February 4, 2003, Revised April 13, 2004.					
	Maximum	Minimum Water	Sprinkler	Cover Assembly		
	Areas	Supply	Temperature	Temperature		
	of Coverage	Requirements	Ratings	Ratings		
	Installed belo	w smooth, flat, horiz slopes up to and	ontal ceilings, including 2/12 (9.5°)			
	14' 14'	14 gpm @ 7.2 psi	155 °F	135 °F		
SIN VK436	16' x 16'	15 gpm @ 8.3 psi	155 °F	135 °F		
Concealed	18' x 18'	23 gpm @ 10.7 psi	155 °F	135 °F		
	20' x 20'	20 gpm @ 14.8 psi	155 °F	135 °F		
	Installed below ceilings with slopes up to and including 4/12 (18.4°) pitch.					
	20' x 20'	20 gpm @ 14.8 psi	155 °F	135 °F		
	Installed below ceilings with slopes up to and including 8/12 (33.7°) pitch.					
	16' x 16'	15 gpm @ 8.3 psi	155 °F	135 °F		
	8' x 18'	23 gpm @ 19.6 psi	135 °F	135 °F		
	20' x 20'	28 gpm @ 29 psi	135 °F	135 °F		
	ITEM 4: Freedom Residential Fusible Element Pendent and Recessed Pendent Sprinkler SIN VK437 (5.2 K-Factor), ½" NPT. For installation in residential occupancies with wet systems only. 175 psig max. Finishes: Brass, Chrome-Enloy®, or painted. Temperature ratings: 165 °F or 205 °F. UL File Ex3836, Project 03NK23322, Issued October 21, 2003.					
	Maximum Are	eas of Minimu	m Water Supply	Temperature		
	Coverage	e Re	quirements	Ratings		
	Installed below smooth, flat, horizontal ceilings, including ceilings and horizontal ceilings with beams in accordance					
	with the Manufacturer's installation instructions. Includes ceilings with slopes up to and including 2/12 (9.5°).					
	16' x 16'	<u> </u>	om @ 7.2 psi	165 °F and 205 °F		
	18' x 18'		m @ 10.7 psi	165 °F and 205 °F		
01111////	20' x 20'	20 gp	m @ 14.8 psi	165 °F and 205 °F		
SIN VK437	Installed below ceilings with slopes up to and including 4/12 (18.4°) pitch.					
	18' x 18'	JI-	m @ 10.7 psi	165 °F and 205 °F		
	16' x 16'	v ceilings with slopes	s up to and including om @ 7.2 psi	3 8/12 (33.7°) pitch. 165 °F and 205 °F		
	10 X 10	14 gp	лп <i>ш г.</i> ∠ ры	100 Failu 200 F		

Confidential		Page	4	12/	7/2006
	18' x 18'		18 gpm	@ 12.0 psi	165 °F
	18' x 18'		21 gpm	@ 16.3 psi	205 °F
	20' x 20'		20 gpm	@ 14.8 psi	165 °F
	20' x 20'		21 gpm	@ 16.3 psi	205 °F
	ITEM 5: Freedor	n™ Res	idential Pende	ent and Recessed	Pendent Sprinkler
	SIN VK438 (4.9 k	(-Factor	), nominal 3 m	ım glass bulb type	, ½" NPT. For
	installation in re	sidentia	l occupancies	with wet systems	only. 175 psig max.
	Finishes: Brass,	Chrom	e-Enloy®, or p	ainted. Temperatu	re ratings: 155 °F or
	175 °F. UL File I	Ex3836,	Projects 03Nk	(5637, 03NK08543	and 03NK17401,
	Issued June 12,	2003, R			
	Maximum Area	as of	Minimum	Water Supply	Temperature
	Coverage	!	Req	uirements	Ratings
	Installed belo	w smoo	th, flat, horizo	ntal ceilings, inclu	ding ceilings and
	h	orizont	al ceilings witl	h beams in accord	ance
	with the Manu	facturer	's installation	instructions. Inclu	udes ceilings with
		slope	es up to and ir	ncluding 2/12 (9.5°)	
	12' x 12'		13 gpi	m @ 7.0 psi	155 °F and 175 °F
	14' x 14'		13 gpi	m @ 7.0 psi	155 °F and 175 °F
SIN VK438	16' x 16'			m @ 7.0 psi	155 °F and 175 °F
	18' x 18'	<u> </u>		n @ 12.0 psi	155 °F and 175 °F
	Installed below ceilings with slopes up to and including 8/12 (33.7°) pitch.				
	16' x 16'		13 gpi	m @ 7.0 psi	155 °F
	16' x 16'	- Ui		m @ 8.2 psi	175 °F
	18' x 18'		17 gpn	n @ 12.0 psi	155 °F and 175 °F
Model No.				ription	
	ITEM 6: Freedom™ Residential Concealed Pendent Sprinkler SIN VK438 (4.9				
	K-Factor), nominal 3mm glass bulb type, ½" NPT. Sprinkler temperature				
	ratings: 155 °F with a 135 °F cover plate. For installation in residential				
	occupancies with wet systems only. 175 psig max. The deflector must be				
		7/8" below the ceiling. Finishes: Polished Chrome or painted			
	-	•	•	3NK08543 and 03N	K17401, Issued
	June 12, 2003, R	evisea	Aprii 13, 2004.		
	Maximum	Mini	num Water	Sprinkler	Cover Assembly
	Areas	;	Supply	Temperature	Temperature
	of Coverage	Req	uirements	Ratings	Ratings
	Installed below smooth, flat, horizontal ceilings, including ceilings with				
	slopes up to and including 2/12 (9.5°).				
	12' x 12'	13 gp	m @ 7.0 psi	155 °F	135 °F
SIN VK438	14' x 14'	13 gp	m @ 7.0 psi	155 °F	135 °F
Concealed	16' x 16'	14 gp	m @ 8.2 psi	155 °F	135 °F
	18' x 18'	17 gpı	m @ 12.0 psi	155 °F	135 °F
	Installed below ceilings with slopes up to and including a 4/12 (18.4°) pitch.				
	16' x 16'	16 gpi	m @ 10.7 psi	155 °F	135 °F
	ITEM 7: Freedor			le Element Penden	t and Recessed

Confidential Pendent Sprinkler SIN VK439 (4.9 K-Factor), 1/2" NPT. For installation in residential occupancies with wet systems only. 175 psig max. Finishes: Brass, Chrome-Enloy®, or painted. Temperature ratings: 165 °F or 205 °F. UL File Ex3836, Project 03NK23322, Issued October 21, 2003. Maximum Areas of **Minimum Water Supply Temperature** Coverage Requirements Ratings Installed below smooth, flat, horizontal ceilings, including ceilings and horizontal ceilings with beams in accordance with the Manufacturer's installation instructions. Includes ceilings with slopes up to and including 2/12 (9.5°). 12' x 12' 13 gpm @ 7.0 psi 165 °F and 205 °F 14' x 14' 13 gpm @ 7.0 psi 165 °F and 205 °F 16' x 16' 165 °F and 205 °F **SIN VK439** 13 gpm @ 7.0 psi 18' x 18' 17 gpm @ 12.0 psi 165 °F and 205 °F Installed below ceilings with slopes up to and including 8/12 (33.7°) pitch. 165 °F 16' x 16' 13 gpm @ 7.0 psi 16' x 16' 205 °F 14 gpm @ 8.2 psi 18' x 18' 165 °F and 205 °F 17 gpm @ 12.0 psi ITEM 8: Freedom™ Residential HSW and Recessed HSW Sprinkler SIN VK452 (4.0 K-Factor), nominal 3 mm glass bulb type, ½" NPT. For installation in residential occupancies with wet systems only. 175 psig max. Finishes: Brass, Chrome-Enloy®, or painted. Temperature ratings: 155 °F or 175 °F. UL File Ex3836, Project 04NK21104, Issued March 18, 2006. Minimum Water Supply **Maximum Areas of Temperature** Requirements Ratings Coverage Installed below smooth, flat, horizontal ceilings, including ceilings with slopes up to and including 2/12 (9.5°). Deflector must be located between 4" and 6" below the ceiling. 12' x 12' 11 gpm @ 7.6 psi 155 °F 12' x 12' 175 °F 12 gpm @ 9.0 psi **SIN VK452** 14' x 14' 12 gpm @ 9.0 psi 155 °F and 175 °F

16' x 16'	15 gpm @ 14.1 psi	155 °F and 175 °F		
Installed below smooth, flat, horizontal ceilings, including ceilings with				
slopes up to and including 2/12 (9.5°).				

Deflector must be located between 6" and 12" below the ceiling.

12' x 12'	12 gpm @ 9.0 psi	155 °F and 175 °F
14' x 14'	13 gpm @ 10.6 psi	155 °F and 175 °F
16' x 16'	15 gpm @ 14.1 psi	155 °F and 175 °F

Model No. **Description** ITEM 9: Freedom™ Residential HSW and Recessed HSW

Confidential	Page 6	12/7/2006
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Confidential	Page 0	12/7/200	,
SIN VK450	type, ½" NPT. For ins wet systems only. 17 Enloy®, or painted. T UL File Ex3836, Proje	(4.2 K-Factor), nominal 3 stallation in residential o 5 psig max. Finishes: Bu emperature ratings: 155 ects 03CA06609, 03NK33 eptember 25, 2003, Revi	ccupancies with rass, Chrome- o°F or 175 °F. 1586, and
Maximum Areas of Coverage	Deflector Location	Minimum Water Supply Requirements	Temperature Ratings
12' x 12'	4" to 6" below the ceiling	12 gpm @ 8.2 psi	155 °F and 175 °F
14' x 14'	4" to 6" below the ceiling	14 gpm @ 11.1 psi	155 °F and 175 °F
16' x 16'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F
16' x 18'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F
16' x 20'	4" to 6" below the ceiling	22 gpm @ 27.4 psi	155 °F and 175 °F
16' x 22' (with standard surface- mounted Escutcheons or Model F-1 Escutcheons only)	4" to 6" below the ceiling	26 gpm @ 38.3 psi	155 °F
Installed below smooth, fla	at, horizontal ceilings, i including 2/12		lopes up to and
16' x 16'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F
16' x 18'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F
16' x 20'	6" to 12" below the ceiling	25 gpm @ 35.4 psi	155 °F and 175 °F
• • • • • • • • • • • • • • • • • • •	stalled <u>at the side</u> with		he slope in
16' x 16'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F
16' x 18'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F
Installed below sloped	ceilings with slopes up	to and including a <u>4/12</u>	(18.4°) pitch.

Confidential	Page 7	12/7/2006

Confidential	Page 7	12/7/200			
Sprinklers <u>must</u> be installed at the side with spray directed <u>across</u> the slope in accordance with the manufacturer's instructions. The maximum number of sprinklers per					
	compartment is	three.			
16' x 16'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F		
16' x 18'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F		
•	stalled <u>at the side</u> with		he slope in		
16' x 16'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F		
Sprinklers <u>must</u> be installed					
12' x 12'	4" to 6" below the ceiling	12 gpm @ 8.2 psi	155 °F and 175 °F		
14' x 14'	4" to 6" below the ceiling	14 gpm @ 11.1 psi	155 °F and 175 °F		
16' x 16'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F		
16' x 18'	4" to 6" below the ceiling	18 gpm @ 18.4 psi	155 °F and 175 °F		
16' x 20'	4" to 6" below the ceiling	22 gpm @ 27.4 psi	155 °F and 175 °F		
Installed below sloped ceilings with slopes up to and including <u>8/12 (33.7°)</u> pitch.  Sprinklers <u>must</u> be installed <u>at the peak</u> with spray directed <u>down</u> the slope in accordance with the Manufacturer's instructions					
16' x 16'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F		
16' x 18'	6" to 12" below the ceiling	20 gpm @ 22.7 psi	155 °F and 175 °F		
16' x 20'	6" to 12" below the ceiling	25 gpm @ 35.4 psi	155 °F and 175 °F		

Pursuant to "Promulgation of the rules relating to Material and Equipment Application Procedures" dated November 5, 1992, The Bureau of Fire Prevention has no objection letter dated December 19, 2005, F.P. Index # 0508018D

Terms and Conditions- That the above units be accepted on condition that all uses:

- 1. Installation shall comply with all applicable New York City codes, regulations, and testing requirements in particular with the requirements of Subchapter 17 and RS 17-2, RS 17-2A and RS 17-2B of the administrative code, and the NFPA Code 13, 13R and 13D.
- 2. Underwriters Laboratories Inc.'s listing requirements (including the temperature rating of VK437 and VK439 for temperature of 165°F) and limitations shall be adhering to.
- **3.** Manufacturer's installations, maintenance procedures and limitations shall be complied with.
- **4.** All shipments and deliveries of such equipment shall be provided with a metal tag, certifying that the equipment shipped or delivered is equivalent to those tested and accepted for use, as provided for in Section 27-131 of the Building Code.

Final Acceptance\_

Examined By