



the standard in safety

Underwriters
Laboratories

File Ex643
Project 05NK21413
Project 06NK07102
Project 05NK31378
Project 06NK21906
Project 07NK02539
Project 06NK25809
Project 06NK27869
Project 07NK05434
Project 07NK05431
Project 07NK05106
Project 07NK15244
Project 07CA49282
Project 08CA02352
Project 08CA08185
Project 07NK19913
Project 08CA15793
Project 09CA09543

Issued: January 13, 2006
Revised: April 21, 2009

REPORT

on

Automatic Sprinklers

The Viking Corporation
Hastings, MI

Copyright © 2006 Underwriters Laboratories Inc.

Underwriters Laboratories Inc. authorizes the above named company to reproduce this Report provided it is reproduced in its entirety.

GENERAL

INTRODUCTION:

This Report describes the investigation of automatic sprinklers intended to be installed in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13.

OBJECT:

The object of this investigation was to determine compliance of the automatic sprinklers with the Standard For Automatic Sprinklers For Fire Protection Service, UL 199 **and the Standard for Automatic Sprinkler for Fire Protection Service, ULC/ORD C199-03.**

PLAN:

The investigation of the automatic sprinklers consisted of conducting a product conformance evaluation and performance testing as described in UL 199, 11th Edition **and C199-03, 2nd Edition.**

DESCRIPTION

PRODUCT COVERED:

Automatic Sprinklers of the glass bulb type of the following types and temperature ratings.

	<u>Model</u>	<u>Description</u>	<u>Remarks</u>
USL, CNL,	VK461+	Concealed Pendent 2.8 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK462+#	Concealed Pendent 5.6 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK463	Concealed Pendent 5.6 K-factor, quick response high pressure sprinkler for a maximum pressure of 250 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK464	Concealed Pendent 8.0 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL,	VK465+	Concealed Pendent 4.2 K-factor, quick response sprinkler for a maximum pressure of 175 psig.	Sprinklers Rated 155, 175 and 200°F with 135 and 165°F cover plates
USL, CNL	VK632	Standard orifice, 5.6K, extended coverage light hazard concealed pendent for a maximum pressure of 175 psig.	Rated 135,155,175, 200°F with 135 and 165°F coverplates
USL, CNL	VK634	Large orifice, 8.0K, extended coverage light hazard concealed pendent for a maximum pressure of 175 psig.	Rated 135,155,175, 200°F with 135 and 165°F coverplates

+ - May utilize a 1 in. adjustable feature with 1 in. male or female threads.

- May utilize a gasket/seal ring on the coverplate.

CONSTRUCTION DETAILS:

The devices have been examined and found to comply with the Standard For Automatic Sprinklers in effect as of the date of this Report.

The devices forming the subject of this Procedure are automatic sprinklers of the quick response glass bulb type consisting of a brass frame, deflector, deflector button, pin arms, pip cap assembly, Teflon coated Belleville spring water seal, yoke, component recognized glass bulb, stainless steel compression screws, and a cover plate assembly.

*

The chart below illustrates the decorative type of paints/finishes to be utilized on the coverplates. The application process for these paint types is to be performed by the Viking Corp.

Paint Type	Maximum Thickness, Mils (in.)	Paint Color
Acrylic Latex	1.5 (0.0015)	Any
Lacquer	2.0 (0.002)	Any
Enamel	2.0 (0.002)	Any
Alkyd Enamel	3.0 (0.003)	Any
Latex	4.0 (0.004)	Any
Urethane	4.0 (0.004)	Any
Catalyzed Epoxy	5.0 (0.005)	Any
Acrylic	5.0 (0.005)	Any

USE:

The products covered by this Report are for use in accordance with the National Fire Protection Association Standard For The Installation of Sprinkler Systems, NFPA 13, and the manufacturer's installation instructions.

TEST RECORD INDEX

DESCRIPTION	TEST RECORD NO.
Model VK462, 5.6 K Concealed Pendent Sprinkler	1
Model VK463, 5.6 K Concealed Pendent High Pressure Sprinkler	2
Model VK464, 8.0 K Concealed Pendent Sprinkler	3
Model VK461, 2.8 K Concealed Pendent Sprinkler	4
Model VK461, 2.8 K Concealed Pendent Sprinkler Utilizing A Modified Deflector and Button	5
Model VKxxx concealed sprinklers utilizing various decorative coverplate paints	6
Model VK462,5.6K Concealed Pendent Sprinkler Utilizing a Modified Deflector	7
Model VK632, 5.6K, Extended Coverage Light Hazard Concealed Pendent Sprinklers	8
Model VK634, 8.0K, Extended Coverage Light Hazard Concealed Pendent Sprinklers	9
Model VK465, 4.2 K Concealed Pendent Sprinkler	10
Model VK462, 5.6 K Adjustable Drop Concealed Pendent Sprinkler	11
Models VK461, 2.8 K and VK465, 4.2 K Adjustable Drop Concealed Pendent Sprinklers	12
Model VK464, 8.0 K Concealed Pendent Sprinkler Utilizing An Alternate Housing and Pin Arms	13
Model VK634, 8.0K, Extended Coverage Light Hazard Concealed Pendent Sprinkler Utilizing a Modified Deflector	14
Model VK462, VK632, VK634 Concealed Pendent Sprinklers Utilizing UNS-S43000 Stainless Steel Deflector Pins	15
Model VK463, 5.6 K Concealed Pendent Sprinkler Utilizing An Alternate Housing and Pin Arms	16
Model VK462,5.6K Concealed Pendent Sprinkler Utilizing A Gasket/Seal Ring on the Coverplate	17

CONCLUSION

Samples of the product covered by this Report have been found to comply with the requirements covering the class and the products are judged to be eligible for Listing and Follow-Up Service. The manufacturer is authorized to use the Laboratories' Mark on such products which comply with the Follow-Up Service Procedure and any other applicable requirements of Underwriters Laboratories Inc. Only those products which properly bear the Laboratories' Mark are considered as Listed by Underwriters Laboratories Inc.

Report by:

Reviewed by:

Steven J. Wisniewski
Engineering Associate Lead

Michael G. McCormick
Engineering Associate Lead