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REPORT

on

Automatic Sprinklers

The Viking Corporation
Hastings, MI

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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 Sprinklers 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 incorporating frangible 3 mm glass bulbs manufactured by Norbulb Sprinkler Elemente, GmbH, of the following models, types and temperature ratings.

	<u>Model</u>	<u>Description</u>	<u>Remarks</u>
USL, CNL,	VK630	Horizontal Sidewall, Recessed Horizontal Sidewall, and Concealed Horizontal Sidewall Quick Response Extended Coverage Light Hazard 8.0 K-factor Sprinklers	Sprinklers Rated 135, 155, and 175°F with 135 and 165°F cover plates
USL, CNL,	VK360	Horizontal and Recessed Horizontal Sidewall, Quick Response 8.0 K- factor Sprinklers	Sprinklers Rated 135, 155, 175 and 200°F

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 sprinklers, recessed escutcheon assembly and cover plates may have finishes of plain brass, white, or enloy.

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	Paint Color
Acrylic Latex	1.5	Any
Lacquer	2.0	Any
Enamel	2.0	Any
Alkyd Enamel	3.0	Any
Latex	4.0	Any
Urethane	4.0	Any
Catalyzed Epoxy	5.0	Any
Acrylic	5.0	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.

FOR ENGINEERING CONSIDERATIONS ONLY (NOT FOR FIELD REPRESENTATIVE'S USE):

Extended Coverage Light Hazard sprinklers for area coverages shown below:

<u>SIN</u>	<u>Maximum Width (ft)</u>	<u>Maximum Length (ft)</u>	<u>Minimum Flow (gal/min)</u>	<u>K-Factor Size</u>	<u>Distance Below Ceiling in.</u>	<u>Temperature Rating, °F</u>
Horizontal Sidewall and Recessed Horizontal Sidewall						
VK630	14	24	34	8.0	4-6	135,155,175
VK630	14	24	36	8.0	6-12	135,155,175
VK630	14	26	38	8.0	4-6	135,175
VK630	14	26	46	8.0	6-12	135,175
VK630	16	16	26	8.0	4-12	135,155,175
VK630	16	18	29	8.0	4-12	135,155,175
VK630	16	20	32	8.0	4-12	135,155,175
VK630	16	22	36	8.0	4-12	135,175
VK630	16	24	39	8.0	4-12	135,175
VK630	18	18	33	8.0	4-12	135,175
VK630	18	20	36	8.0	4-12	135,175
VK630	18	22	40	8.0	4-12	135,175

Concealed Horizontal Sidewall

VK630	14	24	34	8.0	4-6	135
VK630	14	24	36	8.0	6-12	135
VK630	14	26	39	8.0	4-6	135
VK630	14	26	46	8.0	6-12	135
VK630	16	16	26	8.0	4-12	135,175
VK630	16	18	29	8.0	4-12	135,175
VK630	16	20	32	8.0	4-12	135,175
VK630	16	22	36	8.0	4-12	135
VK630	16	24	39	8.0	4-12	135
VK630	18	18	33	8.0	4-12	135
VK630	18	20	36	8.0	4-12	135
VK630	18	22	40	8.0	4-12	135

The 135°F sprinklers utilize a 135°F cover plate and the 175°F sprinklers utilize a 165°F cover plate.

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.

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