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APPROVAL REPORT

**MODEL VK150, VK154, VK158 AND VK160
BULB TYPE CONTROL-MODE (DENSITY/AREA) DRY
PENDENT AND UPRIGHT STANDARD RESPONSE
AUTOMATIC SPRINKLERS WITH A NOMINAL
DISCHARGE COEFFICIENT OF 5.6 GAL/MIN/(PSI)^{1/2}
WITH MODIFICATION**

Prepared for:

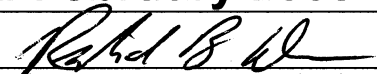
**The Viking Corporation
210 North Industrial Park Road
Hastings, MI 49058**

Project ID: 3027148

Class: 2013

Date of Approval: 2 February 2009

Authorized by:


Richard B. Dunne, Manager-Hydraulics Group



NOT to be distributed outside of FMGlobal except by CUSTOMER.

APPROVAL REPORT

**MODEL VK150, VK152, VK154, VK156, VK158, VK160
AND VK162 BULB TYPE CONTROL-MODE
(DENSITY/AREA) DRY PENDENT, UPRIGHT AND
HORIZONTAL SIDEWALL STANDARD RESPONSE
AUTOMATIC SPRINKLERS WITH A NOMINAL
DISCHARGE COEFFICIENT OF 5.6 GAL/MIN/(PSI)^{1/2}
WITH MODIFICATIONS**

Prepared for:

**The Viking Corporation
210 North Industrial Park Road
Hastings, MI 49058**

Project ID: 3014551

Class: 2013

Date of Approval: 1 July 2003

Authorized by:


George A. Smith, Group Manager - Materials

FM Approvals
1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, MA 02062

Factory Mutual Research

1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, MA 02062 USA
T: (781) 762-4300 F: (781) 762-9375

APPROVAL AGREEMENT

The Agreement is made by and between Factory Mutual Research Corporation (herein called Factory Mutual Research)

and **The Viking Corporation, Hastings, Michigan 49058**

(herein called the Client). The Client is making a product or providing a service known and described as:

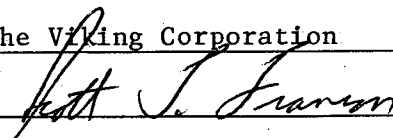
**MODELS VK150, VK152, VK154, VK156, VK158 AND
VK160, 5 MM BULB TYPE, CONTROL-MODE
(DENSITY/AREA), STANDARD RESPONSE, DRY
AUTOMATIC SPRINKLERS WITH A NOMINAL
DISCHARGE COEFFICIENT OF 5.6 GAL/MIN/(PSI)^{1/2}
(MODIFICATION)**


This product or service has been examined by Factory Mutual Research as described in a report bearing

Job Identification **3011390**, dated **22 April 2002**.

In consideration of Factory Mutual Research Approval of the product or service, the Client is authorized to indicate such Approval, as stated by the above report, and agrees to the following and terms stated on the reverse side of this Agreement:

1. The Client shall place a unique identification mark (i.e. model or type number) on the product as stated in the above report and shall not place this mark on any other product unless covered by a separate Agreement with Factory Mutual Research.
2. The Client shall use the Factory Mutual Research Approval Mark on the product, but shall not use this mark on any other product unless such other product is covered by separate Agreement with Factory Mutual Research.
3. The Client shall not use, reproduce or distribute the above referenced report by Factory Mutual Research except in its entirety without any change, deletion or addition thereto. The Client agrees that Factory Mutual Research may distribute the referenced report and related information within FM Global. (*See Over*)

The Viking Corporation
 Client
Signature
Scott T. Franson Name
Director, Sprinkler Division
210 N Industrial Park Rd Title
Hastings MI 49058 Address
May 17, 2002 Date

FACTORY MUTUAL RESEARCH CORPORATION
 Signature
Roger L. Allard Name
Group Manager - Hydraulics Title
May 3, 2002 Date

An  Affiliate

1151 Boston-Providence Turnpike
P.O. Box 9102
Norwood, MA 02062 USA
T: (781) 762-4300 F: (781) 762-9375

APPROVAL AGREEMENT

The Agreement is made by and between Factory Mutual Research Corporation (herein called Factory Mutual Research) and **Viking Corporation, Hastings, MI 49058**

(herein called the Client). The Client is making a product or providing a service known and described as:

**MODEL VK154
BULB TYPE
CONTROL MODE (DENSITY/AREA)
DRY ADJUSTABLE PENDENT
AUTOMATIC SPRINKLER**

**MODEL VK156
BULB TYPE
CONTROL MODE (DENSITY/AREA)
DRY ADJUSTABLE HORIZONTAL SIDEWALL
AUTOMATIC SPRINKLER**

This product or service has been examined by Factory Mutual Research as described in a report bearing

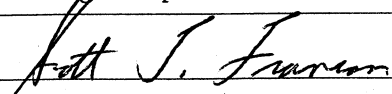
Job Identification **3011975**

dated **August 3, 2001.**

In consideration of Factory Mutual Research Approval of the product or service, the Client is authorized to indicate such Approval, as stated by the above report, and agrees to the following and terms stated on the reverse side of this Agreement:

1. The Client shall place a unique identification mark (i.e. model or type number) on the product as stated in the above report and shall not place this mark on any other product unless covered by a separate Agreement with Factory Mutual Research.
2. The Client shall use the Factory Mutual Research Approval Mark on the product, but shall not use this mark on any other product unless such other product is covered by separate Agreement with Factory Mutual Research.
3. The Client shall not use, reproduce or distribute the above referenced report by Factory Mutual Research except in its entirety without any change, deletion or addition thereto. The Client agrees that Factory Mutual Research may distribute the referenced report and related information within FM Global.

The Viking Corporation



Client
Signature

Scott T. Franson

Name

Director, Sprinkler Division
210 N. Industrial Park Rd
Hastings MI 49058

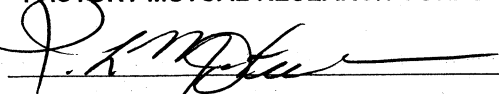
Title

Address

August 20, 2001

Date

FACTORY MUTUAL RESEARCH CORPORATION



Signature

R.L. Martell

Name

Asst. V.P. - Approvals Division

Title

8/13/01

Date



Factory Mutual Research

Hydraulics Laboratory
743A Reynolds Road
West Glocester, Rhode Island 02814
Telephone (401) 567-0590
Fax (401) 567-0599

APPROVAL AGREEMENT

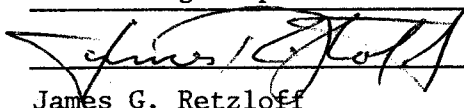
The Agreement is made by and between Factory Mutual Research Corporation, (herein called FMRC), and **The Viking Corporation, Hastings, Michigan 49058** (herein called the Client). The Client is making a product or providing a service known and described as:

MODEL M
BULB TYPE, STANDARD DRY PENDENT AUTOMATIC SPRINKLERS
WITH THREADED CONNECTION OF 1 IN. NPT. AND IN FINISHES OF
PLAIN BRASS AND CHROMIUM PLATED
TEMPERATURE RATINGS OF 135, 155, 175, 200, AND 286°F
(57, 68, 79, 93, AND 141 °C)

This product or service has been examined by FMRC as described in the report bearing Job Identification **1T3A3.AH** dated, **March 29, 1994**
In consideration of FMRC Approval of the product or service the Client authorized to indicate such approval, as stated by the above report, and agrees to the following and terms stated on the reverse side of this Agreement:

1. The Client shall place a unique identification mark (i.e. model or type number) on the product as stated in the above report and shall not place this mark on any other product unless covered by separate agreement with FMRC.
2. The Client shall use the FMRC Approval mark on the product, but shall not use this mark on any other product unless such other product is covered by separate agreement with FMRC.
3. The Client shall not use, reproduce or distribute the above referenced report by FMRC except in its entirety without any change, deletion or addition thereto. The Client agrees that FMRC may distribute the referenced report and related information within the Factory Mutual System. (SEE OVER)

The Viking Corporation

 Client
Signature

James G. Retzloff

Name

Vice President, Design & Development

210 N. IndustrailPark Rd. Title

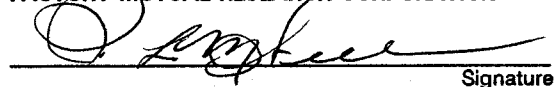
Hastings, MI 49058

Address

May 4, 1994

Date

FACTORY MUTUAL RESEARCH CORPORATION

 Signature

R. L. Martell

Name

Asst. V.P. - Approvals Division

Title

April 18, 1994

Date



Certificate of Compliance

Automatic Control Mode Sprinklers for Fire Protection

This certificate is issued for the following equipment:

Model	K	Type	Resp.	Element	NPT (in.)	Finishes	Temperature Ratings °F (°C)
VK150	5.6	Dry Pendent	SR	5 mm	1	Brass, Chrome	135°, 155°, 175°, 200°, 286°F (57°, 68°, 79°, 93°, 141°C)
VK152	5.6	Dry Horizontal Sidewall	SR	5 mm	1	Brass, Chrome, Bright Brass	135°, 155°, 175°, 200°, 286°F (57°, 68°, 79°, 93°, 141°C)
VK156	5.6	Dry Adj. Horizontal Sidewall	SR	5 mm	1	Brass, Chrome, Bright Brass	135°, 155°, 175°, 200°, 286°F (57°, 68°, 79°, 93°, 141°C)

Manufactured by: The Viking Corp, 210 N Industrial Park Rd, Hastings, Michigan 49058

Manufacturing Location: The Viking Corp, 210 N Industrial Park Rd, Hastings, Michigan 49058

FM Approvals confirms that the items have been found to comply with the following standard:


FM Approvals Standard 2000 (March 2006)

Project Identifier: 3026351

Date of Approval: May 5, 2009



Member of the FM Global Group


Richard B. Dunne
Group Manager - Hydraulics

May 8, 2009
Date