



Member of the FM Global Group

Not to be distributed outside of FM Approvals and its affiliates except by Customer

APPROVAL REPORT

MODEL RA1314 AND RA1414 BULB TYPE CONTROL-MODE PENDENT AUTOMATIC SPRINKLERS WITH A NOMINAL DISCHARGE COEFFICIENT OF 5.6 GAL/MIN/(PSI)^{1/2} WITH ALTERNATE CUP DESIGN

Prepared for:

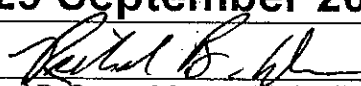
**The Reliable Automatic Sprinkler Co., Inc.
1470 Smith Grove Road
Liberty, SC 29657**

Project ID: 3031450

Class: 2017

Date of Approval: 29 September 2008

Authorized by:


Richard B. Dunne, Manager-Hydraulics Group

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

**MODEL RA1314 AND RA1414 BULB TYPE CONTROL-MODE
PENDENT AUTOMATIC SPRINKLERS WITH A NOMINAL
DISCHARGE COEFFICIENT OF 5.6 GAL/MIN/(PSI)^{1/2}
WITH ALTERNATE CUP DESIGN**

from

**THE RELIABLE AUTOMATIC SPRINKLER CO., INC.
1470 SMITH GROVE ROAD
LIBERTY, SC 29657**

I INTRODUCTION

- 1.1 The Reliable Sprinkler Company requested an Approval examination of their Model RA1314 and RA1414 bulb type control-mode pendent automatic sprinklers with a nominal discharge coefficient of 5.6 gal/min/(psi)^{1/2} with an alternate cup design.
- 1.2 This Report is limited to the examination of the sprinklers in accordance with the standards listed below as described in Section II of this Report.
- 1.3 This Report may be freely reproduced only in its entirety and without modification.

1.4 Standards

Title	Class Number	Date
Automatic Control Mode Sprinklers for Fire Protection	Class Series 2000	March 2006

- 1.5 **Listing:** The Approval Guide listing was unaffected by the results of this examination.

II DESCRIPTION

- 2.1 The Reliable Model RA1314 and RA1414 automatic sprinklers utilize a bulb type heat responsive element which operates within a predetermined temperature range, allowing water to flow at a specified rate and in a particular distribution pattern for a given supplied water pressure. The sprinklers are designed for use in automatic sprinkler fire protection systems as a means of fire control and are rated for 175 psi (12.1 bar) maximum system pressure. These models are further described in the attached manufacturer's drawings.
- 2.2 The sprinklers were evaluated for Approval under this examination in accordance with the following list only:

Model	K	Type	Resp.	Element	NPT (in.)	Finishes	Temp. Ratings °F (°C)
RA1314	5.6	Pendent	SR	5 mm	1/2	Black Plated, Brass, Bright Brass, Chrome, Polyester, Zinc Plated	135, 155, 175, 200, 286 (57, 68, 79, 93, 141)
RA1414	5.6	Pendent	QR	3 mm	1/2	Black Plated, Brass, Bright Brass, Chrome, Polyester, Zinc Plated	135, 155, 175, 200, 286 (57, 68, 79, 93, 141)

FM APPROVALS
Project ID: 3031450

- 2.3 The scope of this examination is limited to the Model RA1314 and RA1414 sprinklers with an alternate cup design. These sprinklers are otherwise identical to the currently Approved Model RA1314 and RA1414 automatic sprinklers which are further described in the following Approval Report:

Project ID	Date	Description
3021627	02-10-2006	Models RA1314 and RA1414 Bulb Type, Control Mode, pendent and recessed pendent, standard and quick response automatic sprinklers, with a nominal discharge coefficient of $5.6 \text{ gal/min}/(\text{psi})^{1/2}$, in brass, bright brass plated, chrome, black plated, and polyester coated finishes, in nominal temperature ratings of 135, 155, 175, 200, and 286 F (57, 68, 79, 93, and 141 C).

IX CONCLUSION

The sprinklers described in Section II meet FM Approvals requirements. Since a duly signed Master Agreement is on file for this manufacturer, Approval is effective the date of this Report.

FM APPROVALS
Project ID: 3031450

EXAMINATION AND TESTING BY: Hydraulics Laboratory personnel

PROJECT DATA RECORD: P.I. 3031450

ORIGINAL TEST DATA: P.I. 3031450

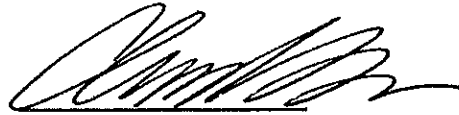
ATTACHMENTS: Appendix Tables (1 pages), Manufacturer's Drawings (5 pages)

REPORT BY:

REPORT REVIEWED BY:



William Meyring
Engineer
Hydraulics



Claude Bosio
Technical Team Manager
Hydraulics