

Extended Coverage Sprinkler Listings – Part 2

This issue of NFSA's TechNotes is a follow up to our December 23rd, 2014 issue #308 and updates the listings for NFSA member manufactures extended coverage (EC) sprinklers in the following categories:

FM Approvals:

- I. EC – Light Hazard – HSW
- II. QREC – Light Hazard – HSW
- III. EC – Light Hazard – Pendant and Upright
- IV. QREC – Light Hazard – Pendant and Upright
- V. EC- Ordinary Hazard – HSW
- VI. EC – Ordinary Hazard – Pendant and Upright
- VII. EC – Extra Hazard and High Piled Storage
- VIII. Hazard Class 1,2 &3*

*FM Approvals has implemented different hazard class designations which are Hazard Class 1 (HC1), Hazard Class 2 (HC2) and Hazard Class 3 (HC3). These are comparable to NFPA's Light Hazard (LH), Ordinary Hazard (OH) and Extra Hazard (EH) designation. One significant difference between difference between NFPA's LH, OH, and EH and FM's HC1, HC2, and HC3 is the design demand density required for the hazards. The design density for standard coverage sprinklers can be found in Table 2 of FM Datasheet 3-26. These hazard designations also vary based on height, which may increase the design density for ceiling heights over 30-feet, which is also displayed in that same table.

An engineering bulletin 04-12 was issued on March 2, 2012 as a memorandum to FM Datasheet 3-26 which includes design demands for extended coverage sprinklers. It is intended that during a review of DS 3-26 that the EB 04-12 memorandum will be formally included in the datasheet.

A designer should always refer to FM Loss Prevention Data Sheets for Design Criteria when selecting sprinklers.

The listings found herein are as of December 2014. Each Category is broken down by manufacturer and sprinklers are listed according to their Sprinkler Identification Number (SIN). All values in the tables are in English units (°F, ft and gpm)

I. FM Extended Coverage Sprinklers – Light Hazard – Horizontal Sidewall

NFPA 13 currently requires that all light hazard occupancies are protected with quick response sprinklers. There are extended coverage standard response sprinklers that maintain their listing for existing systems and replacement purposes. See the FM Approval Guide for sprinklers in this category.

II. FM Quick Response Extended Coverage Sprinklers – Light Hazard – Horizontal Sidewall

For the table in this section, “Max W” and “Max L” are presented in a range of feet, “Min Flow” is presented in GPM and the “minimum pressure” is presented in a range of psi

SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Reliable Automatic Sprinkler Company, Inc.								
RA2865	HSW	5.6	135,155,175	16	20	33	34.5	See FM Loss Prevention Data Sheets for Design Criteria
RA2865	Rec. HSW	5.6	135	16	20	33	34.5	See FM Loss Prevention Data Sheets for Design Criteria
RA4862	HSW	8.0	135, 155, 175	16	24	48	36	See FM Loss Prevention Data Sheets for Design Criteria
RA4862	Rec. HSW	8.0	135, 155	16	24	48	36	See FM Loss Prevention Data Sheets for Design Criteria
SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Tyco Fire Protection Products								
TY3302	Rec. HSW	5.6	155	16	20			See FM Loss Prevention Data Sheets for Design Criteria
TY3302	HSW	5.6	155	16	20			See FM Loss Prevention Data Sheets for Design Criteria
TY3332	Rec. HSW	5.6	135, 155, 175	16	20			See FM Loss Prevention Data Sheets for Design Criteria
TY3332	HSW	5.6	135, 155, 175	16	20			See FM Loss Prevention Data Sheets for Design Criteria
TY4322	HSW	8.0	165	16	24			See FM Loss Prevention Data Sheets for Design Criteria
TY4332	Rec. HSW	8.0	135, 155, 175	16	24			See FM Loss Prevention Data Sheets for Design Criteria
TY4332	HSW	8.0	135, 155, 175	16	24			See FM Loss Prevention Data Sheets for Design Criteria
SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
The Viking Corp.								
VK630	HSW, Rec. HSW	8.0	135, 155, 175	16	16	32	16	See FM Loss Prevention Data Sheets for Design Criteria
VK630	HSW, Rec. HSW	8.0	135, 155, 175	16	18	36	20	See FM Loss Prevention Data Sheets for Design Criteria
VK 630	HSW, Rec. HSW	8.0	135, 155, 175	16	20	40	25	See FM Loss Prevention Data Sheets for Design Criteria
VK630	HSW, Rec. HSW	8.0	135, 155, 175	16	22	44	30	See FM Loss Prevention Data Sheets for Design Criteria
VK630	HSW, Rec. HSW	8.0	135, 155, 175	16	24	48	36	See FM Loss Prevention Data Sheets for Design Criteria

III. FM Extended Coverage Sprinklers – Light Hazard – Pendent and Upright

NFPA 13 currently requires that all light hazard occupancies are protected with quick response sprinklers. There are extended coverage standard response sprinklers that maintain their listing for existing systems and replacement purposes. See the FM Approval Guide for sprinklers in this category.

IV. FM Quick Response Extended Coverage Sprinklers – Light Hazard – Pendent and Upright

SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Reliable Automatic Sprinkler Company, Inc.								
R4842	Pendent	8.0	135, 155	20	20	40	25	See FM Loss Prevention Data Sheets for Design Criteria
R4842	Rec. Pendent	8.0	135, 155	20	20	40	25	See FM Loss Prevention Data Sheets for Design Criteria
SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
The Viking Corp.								
VK600	Pendent, Rec. Pendent	5.6	135, 155, 175	16	16	26	22	See FM Loss Prevention Data Sheets for Design Criteria
VK600	Pendent, Rec. Pendent	5.6	135, 155, 175	18	18	33	35	See FM Loss Prevention Data Sheets for Design Criteria
VK600	Pendent, Rec. Pendent	5.6	135, 155, 175	20	20	40	51	See FM Loss Prevention Data Sheets for Design Criteria
VK601	Pendent, Rec. Pendent	5.6	165	16	16	26	22	See FM Loss Prevention Data Sheets for Design Criteria
VK601	Pendent, Rec. Pendent	5.6	165	18	18	33	35	See FM Loss Prevention Data Sheets for Design Criteria
VK602	Pendent, Rec. Pendent	8.0	135, 155, 175	16	16	26	11	See FM Loss Prevention Data Sheets for Design Criteria
SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
The Viking Corp.								
VK602	Pendent, Rec. Pendent	8.0	135, 155, 175	18	18	33	17	See FM Loss Prevention Data Sheets for Design Criteria
VK602	Pendent, Rec. Pendent	8.0	135, 155, 175	20	20	40	25	See FM Loss Prevention Data Sheets for Design Criteria
VK603	Pendent, Rec. Pendent	8.0	165	16	16	26	11	See FM Loss Prevention Data Sheets for Design Criteria
VK603	Pendent, Rec. Pendent	8.0	165	18	18	33	17	See FM Loss Prevention Data Sheets for Design Criteria
VK608	Pendent	11.2	135, 155, 175	16	16	30	7	See FM Loss Prevention Data Sheets for Design Criteria
VK608	Rec. Pendent	11.2	135, 155, 175	18	18	33	9	See FM Loss Prevention Data Sheets for Design Criteria
VK608	Rec. Pendent	11.2	135, 155, 175	20	20	40	13	See FM Loss Prevention Data Sheets for Design Criteria
VK617	Pendent, Rec. Pendent	11.2	165	16	16	30	7	See FM Loss Prevention Data Sheets for Design Criteria
VK 617	Pendent, Rec. Pendent	11.2	165	18	18	33	9	See FM Loss Prevention Data Sheets for Design Criteria

V. FM Extended Coverage Sprinklers – Ordinary Hazard – Horizontal Sidewall

There are currently no Extended Coverage Horizontal Sidewall sprinklers listed for Ordinary Hazard.

VI. FM Extended Coverage Sprinklers – Ordinary Hazard – Pendent and Upright

SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Tyco Fire Protection Products								
TY5137	Upright	11.2	135, 155, 175, 200, 286	16	16			See FM Loss Prevention Data Sheets for Design Criteria
TY5237	Pendent	11.2	135, 155, 175, 200, 286	16	16			See FM Loss Prevention Data Sheets for Design Criteria
TY5237	Rec. Pendent	11.2	135, 155	16	16			See FM Loss Prevention Data Sheets for Design Criteria
TY6137	Upright	14.0	135, 155, 175, 200, 286	20	20			See FM Loss Prevention Data Sheets for Design Criteria
TY6237	Pendent	14.0	135, 155, 175, 200, 286	20	20			See FM Loss Prevention Data Sheets for Design Criteria
TY6237	Rec. Pendent	14.0	135, 155	20	20			See FM Loss Prevention Data Sheets for Design Criteria
The Viking Corp.								
VK532	Upright	11.2	155, 175, 200, 286	16	16			See FM Loss Prevention Data Sheets for Design Criteria
VK532	Upright	11.2	155, 175, 200, 286	18	18			See FM Loss Prevention Data Sheets for Design Criteria
VK532	Upright	11.2	155, 175, 200, 286	20	20			See FM Loss Prevention Data Sheets for Design Criteria
VK535	Upright	11.2	165, 205, 280	12	12			See FM Loss Prevention Data Sheets for Design Criteria
VK535	Upright	11.2	165, 205, 280	14	14			See FM Loss Prevention Data Sheets for Design Criteria
VK535	Upright	11.2	165, 205, 280	16	16			See FM Loss Prevention Data Sheets for Design Criteria
VK572	Pendent	14.0	155, 175, 200, 286	12	12			See FM Loss Prevention Data Sheets for Design Criteria
VK572	Pendent	14.0	155, 175, 200, 286	14	14			See FM Loss Prevention Data Sheets for Design Criteria
VK572	Pendent	14.0	155, 175, 200, 286	16	16			See FM Loss Prevention Data Sheets for Design Criteria
VK572	Pendent	14.0	155, 175, 200, 286	18	18			See FM Loss Prevention Data Sheets for Design Criteria
VK572	Pendent	14.0	155, 175, 200, 286	20	20			See FM Loss Prevention Data Sheets for Design Criteria
VK595	Upright	25.2	165, 214	14	14			See FM Loss Prevention Data Sheets for Design Criteria

VII. FM Extended Coverage Sprinklers – Extra Hazard and High Piled Storage

SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Reliable Automatic Sprinkler Company, Inc.								
RA0842	Pendent	25.2	165, 212	14	14			See FM Loss Prevention Data Sheets for Design Criteria
SIN	Style	K-factor	Temp	Max W	Max L	Min Flow	Min. Pressure	Notes
Tyco Fire Protection Products								
TY9128	Upright	25.2	165, 214	14	14			See FM Loss Prevention Data Sheets for Design Criteria

VIII. FM Extended Coverage Sprinklers – Hazard Class 1, 2, & 3.

SIN	Style	K-factor	Temp	Max W	Max L	Response	Hazard Category	Notes
Victaulic Company								
V3415	HSW	8.0	135	16	24	SR	1	See FM Loss Prevention Data Sheets for Design Criteria
V3416	HSW, Rec. HSW	8.0	135, 155	16	24	QR	1	See FM Loss Prevention Data Sheets for Design Criteria
V3411	Pendent	11.2	135, 155, 176	20	20	SR	1,2	See FM Loss Prevention Data Sheets for Design Criteria
V3411	Pendent	11.2	135, 155	16	16	SR	3	See FM Loss Prevention Data Sheets for Design Criteria
V4311	Rec. Pendent	11.2	135, 155	20	20	SR	1,2	See FM Loss Prevention Data Sheets for Design Criteria
V4311	Rec. Pendent	11.2	135, 155	16	16	SR	3	See FM Loss Prevention Data Sheets for Design Criteria
V4312	Pendent	11.2	135, 155	20	20	QR	1,2,3	See FM Loss Prevention Data Sheets for Design Criteria
V4312	Rec. Pendent	11.2	135, 155	20	20	QR	1,2,3	See FM Loss Prevention Data Sheets for Design Criteria
V4313	Pendent	14.0	135, 155, 175	20	20	SR	1,2,3	See FM Loss Prevention Data Sheets for Design Criteria
V4313	Rec. Pendent	14.0	135, 155	20	20	SR	1,2,3	See FM Loss Prevention Data Sheets for Design Criteria