



Viking's Lithium-Ion Protection Line-Up

The fire hazard presented by Lithium-ion batteries depends where in the production process the batteries are located. Tests have been conducted at the module level to evaluate the performance of different fire suppressants such as water, wet chemical and dry chemical. The tests concluded that water was the most effective fire suppressant.

Factory Mutual does not have any special approvals for sprinklers protecting Lithium-ion cells or modules but does contain specific guidance on how systems are designed and supplied. However, a new Factory Mutual Data Sheet - FMDS 7-112 Lithium-ion Battery Manufacturing & Storage differentiates the fire hazard for manufacturing areas, formation and aging areas, battery storage areas and finished product storage areas. Viking has FM Approved sprinklers that can meet all design requirements in FMDS 7-112 and FMDS 8-9.

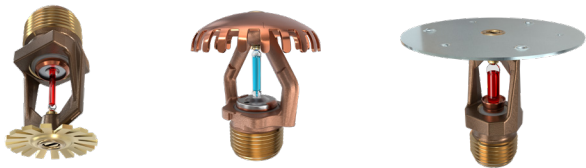
Manufacturing Areas

Sprinkler selection for these areas consists of any Viking commercial sprinkler capable of delivering the density at a reasonable pressure. Use the Viking Sprinkler Selector to find the best solution for these areas.

Other areas include formation and aging areas, incidental storage, finished product storage and new and refurbished battery storage areas.

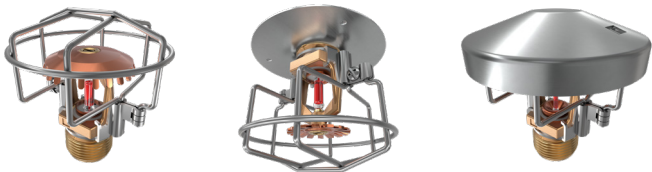
FM Approved Viking Storage Sprinkler Line-Up – Ceiling Sprinklers

K11.2	VK377, VK530, VK531, VK540, VK536
K14.0	VK500
K16.8	VK503, VK580
K19.6	VK592
K22.4	VK506
K25.2	VK510, VK595(EC), VK598
K28.0	VK514



FM Approved Viking Storage Sprinkler Line-Up – In-Rack Sprinklers

K5.6	VK1021, VK3021, VK550, VK556
K8.0	VK2021, VK3521, VK560, VK566
K11.2	VK377, VK536, VK553, VK554
K14.0	VK500
K16.8	VK503



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