

VIKING PRODUCT SPECIFICATIONS

Storage and Special Sprinklers

A. Storage Sprinklers

1. Micromatic SR ELO (Storage-Density/Area)
2. SR Upright Fusible Element K16.8 (Storage-Density/Area)
3. Quick Response ELO Pendent (Storage-Density/Area)
4. Micromatic QR ELO Upright (Storage-Density/Area)
5. QR Fusible Element ELO Upright (Storage-Density/Area)
6. SR Pendent Control Mode Specific Application (CMSA)
7. Model E-1 and F-1 Intermediate Level / In-Rack

B Large Drop Sprinklers

8. High Challenge SR Upright Large Drop
9. High Challenge QR ELO Large Drop

C. ESFR Sprinklers

10. ESFR Pendent K14.0 Sprinkler
11. ESFR Upright K14.0 Sprinkler
12. ESFR Pendent K 16.8 Sprinkler
13. ESFR Pendent K25.2 Sprinkler
14. ESFR Dry Pendent K14.0 Sprinkler

D. Special Sprinklers

15. COIN QR Upright Sprinklers
16. COIN QR Fusible Element Upright Sprinklers
17. MRI Room QR Concealed Pendent Sprinklers
18. Cleanroom Concealed Sprinkler Cover Assemblies

A. Storage Sprinklers

1. MICROMATIC STANDARD RESPONSE ELO (STORAGE-DENSITY/AREA) SPRINKLER SPRINKLER 13E

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, extra-large orifice sprinklers specifically listed and tested for storage applications shall be installed. Extra-large orifice sprinklers shall have a 3/4" NPT with a nominal K Factor of 11.2. Sprinklers shall have a frangible bulb type fusible element. Extra-large orifice sprinklers shall be cULus Listed and/or FM Approved for the application in which they are installed. Extra-large orifice sprinklers (formerly Model M) shall be Viking Upright SIN VK530 or Pendent SIN VK536. (No Substitutions Allowed).

2. STANDARD RESPONSE UPRIGHT (STORAGE-DENSITY/AREA) K16.8 SPRINKLER SPRINKLER 13A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, sprinklers specifically listed and tested for storage applications shall be installed. Sprinklers shall have a 3/4" NPT with a nominal K Factor of 16.8. Sprinklers shall have a frangible bulb type fusible element. Sprinklers shall be cULus Listed and FM Approved for the application in which they are installed. Sprinklers shall be Viking Upright SIN VK580. (No Substitutions Allowed).

3. QUICK RESPONSE ELO PENDENT (STORAGE-DENSITY/AREA) SPRINKLER SPRINKLER 70A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, extra-large orifice quick response sprinklers specifically listed and tested for storage applications shall be installed. Quick response extra-large orifice sprinklers shall have a 3/4" NPT with a nominal K Factor of 11.2. Sprinklers shall have a quick response frangible bulb type fusible element. Extra-large orifice quick response sprinklers shall be cULus Listed for the application in which they are installed. Quick Response Extra-Large Orifice Pendent Sprinklers (formerly Model M) shall be Viking SIN VK377 (Base Part Number 08337). (No Substitutions Allowed).

4. MICROMATIC QUICK RESPONSE ELO UPRIGHT (STORAGE-DENSITY/AREA) SPRINKLER 70H

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, extra-large orifice sprinklers specifically listed and tested for storage applications shall be installed. Extra-large orifice sprinklers shall have a 3/4" NPT with a nominal K Factor of 11.2. Sprinklers shall have a 3 mm frangible bulb type fusible element. Extra-large orifice sprinklers shall be cULus Listed and FM Approved for the application in which they are installed. Extra-large orifice sprinklers shall be Viking Upright SIN VK531 (Base Part Number 10633). (No Substitutions Allowed).

5. QR FUSIBLE ELEMENT ELO UPRIGHT (STORAGE-DENSITY/AREA) SPRINKLER 70W

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, extra-large orifice sprinklers specifically listed and tested for storage applications shall be installed. Extra-large orifice sprinklers shall have a 3/4" NPT with a nominal K Factor of 11.2. Sprinklers shall have quick response metal type fusible element. Extra-large orifice sprinklers shall be cULus Listed for the application in which they are installed. Quick Response Fusible Element Extra-Large Orifice Upright Sprinklers shall be Viking SIN VK533 (Base Part Number 13978). (No Substitutions Allowed).

6. STANDARD RESPONSE PENDENT CMSA STORAGE SPRINKLER

SPRINKLER 114L

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. For areas of the building in which storage is anticipated, control mode specific application (CMSA) sprinklers specifically listed and tested for storage applications shall be installed. CMSA storage sprinklers shall have a 1" NPT with a nominal K Factor of 19.6. CMSA storage sprinklers shall have a metal type fusible element. Sprinklers shall be cULus Listed or FM Approved for the application in which they are installed. CMSA pendent storage sprinklers shall be installed in accordance with manufacturer's installation design guidelines. Standard Response Pendent CMSA Storage Sprinklers shall be Viking SIN VK592.

7. MODEL E-1 AND F-1 INTERMEDIATE LEVEL / IN-RACK SPRINKLER

SPRINKLER 131A

Sprinklers installed with sprinkler head guards at intermediate levels shall be equipped with cULus Listed and FM Approved water shields. Sprinkler water shields shall be listed with the sprinkler head guard that they are to be installed with. Upright sprinkler heads shall utilize a Viking Model E-1 Water Shield for installation onto a Viking Model D-1 Sprinkler Head Guard. Pendent sprinklers shall utilize a Viking Model F-1 Water Shield for installation onto a Viking D-1 Sprinkler Head Guard.

SIN VK550 = 5.6K 1/2" NPT with a Viking upright intermediate level sprinkler equipped with a 5 mm glass bulb

SIN VK560 = 8.0K 1/2" or 3/4" NPT with a Viking upright intermediate level sprinkler equipped with a 5 mm glass bulb

SIN VK552 = 5.6K 1/2" NPT with a Viking upright intermediate level sprinkler equipped with a fusible link

SIN VK562 = 8.0K 3/4" NPT with a Viking upright intermediate level sprinkler equipped with a fusible link

SIN VK556 = 5.6K 1/2" NPT with a Viking upright intermediate level sprinkler equipped with a quick response 3 mm glass bulb

SIN VK558 = 5.6K 1/2" NPT with a Viking high pressure upright intermediate level sprinkler equipped with a quick response 3 mm glass bulb.

SIN VK566 = 8.0K 3/4" NPT with a Viking upright intermediate level sprinkler equipped with a quick response 3 mm glass bulb.

(No Substitutions Allowed).

B. Large Drop Sprinklers

8. HIGH CHALLENGE SR UPRIGHT LARGE DROP SPRINKLER

SPRINKLER 113A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Areas of the building in which storage is anticipated, a large drop sprinkler specifically listed and tested for storage applications shall be installed. Large drop sprinklers shall have an extra-large orifice with a nominal K Factor of 11.2. Sprinklers shall have a frangible bulb type fusible element. Large drop sprinklers shall be cULus Listed and FM Approved for the application in which they are installed. Standard Response High Challenge Large Drop Sprinklers (formerly Model A-2) shall be Viking SIN VK540.

9. HIGH CHALLENGE QR ELO UPRIGHT SPRINKLER

SPRINKLER 115A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Use of high challenge quick response ELO upright sprinklers shall be based on approval by the local authority having jurisdiction (Viking High Challenge Quick Response ELO Upright Sprinklers carry no cULus Listing or FM Approval). Extra-large orifice quick response sprinklers shall have a nominal K Factor of 11.2 and an extra-large orifice. Sprinklers shall have a quick response frangible bulb type fusible element. High Challenge Quick Response Extra-Large Orifice Sprinklers (formerly Model A-2) shall be Viking SIN VK542.

C. ESFR Sprinklers

10. ESFR PENDENT K14.0 SPRINKLER

SPRINKLER 120A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Areas of the building in which commodity storage is anticipated, an early suppression fast response (ESFR) pendent sprinkler specifically listed and tested for commodity storage applications shall be installed. ESFR sprinklers shall have a nominal K Factor of 14.0. Sprinklers shall have a fast response metal type fusible element. ESFR pendent sprinklers shall be FM Approved and cULus Listed for the application in which they are installed. ESFR Pendent Sprinklers (formerly Model S-1) shall be Viking SIN VK500.

11. ESFR UPRIGHT K14.0 SPRINKLER

SPRINKLER 121A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Areas of the building in which commodity storage is anticipated, an early suppression fast response (ESFR) upright sprinkler specifically listed and tested for commodity storage applications shall be installed. ESFR sprinklers shall have a nominal K Factor of 14.0. Sprinklers shall have a fast response metal type fusible element. ESFR upright sprinkler shall be approved for installation on 3" piping without a vertical supply pipe. ESFR upright sprinklers shall be FM Approved for the application in which they are installed. ESFR upright sprinklers shall be installed in accordance with manufacturer's installation design guidelines. ESFR Upright Sprinklers (formerly Model A-4) shall be Viking SIN VK520.

12. ESFR PENDENT K16.8 SPRINKLER

SPRINKLER 123A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Areas of the building in which commodity storage is anticipated, an early suppression fast response (ESFR) pendent sprinkler specifically listed and tested for commodity storage applications shall be installed. ESFR sprinklers shall have a nominal K Factor of 16.8. Sprinklers shall have a fast response metal type fusible element. ESFR pendent sprinklers shall be cULus Listed and FM Approved for the application in which they are installed. ESFR pendent sprinklers shall be installed in accordance with manufacturer's installation design guidelines. ESFR pendent Sprinklers shall be Viking SIN VK503 (Base Part No. 14073). (No Substitutions Allowed).

13. ESFR PENDENT K25.2 SPRINKLER

SPRINKLER 124A

Fire sprinklers shall be of one manufacturer throughout building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Areas of the building in which commodity storage is anticipated, an early suppression fast response (ESFR) pendent sprinkler specifically listed and tested for commodity storage applications shall be installed. ESFR sprinklers shall have a nominal K Factor of 25.2. Sprinklers shall have a fast response metal type fusible element. ESFR pendent sprinklers shall be cULus Listed and/or FM Approved for the application in which they are installed. ESFR Pendent Sprinklers shall be Viking SIN VK510.

14. ESFR DRY PENDENT K14.0 SPRINKLER

SPRINKLER 122A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Dry pendent barrel shall be of steel construction with an electro-deposited epoxy base coating. Areas of the building in which commodity storage in areas subject to freezing is anticipated, an early suppression fast response (ESFR) pendent sprinkler specifically listed and tested for commodity storage in freezers shall be installed. ESFR dry pendent sprinklers shall have a nominal K Factor of 14.0. Clearance openings shall be sealed with ESFR dry sprinkler boot assemblies provided by the manufacturer. Installation shall be in conformance with the manufacturer's installation guidelines. Sprinklers shall have a fast response metal type fusible element. ESFR pendent sprinklers shall be cULus Listed for the application in which they are installed. ESFR Dry Pendent Sprinklers shall be Viking SIN VK501 (Base Part No. 14909 with a 2" grooved inlet, Base Part No. 14910 with a 1-

1/2" NPT threaded inlet, or Base Part No. 14911 with a 1-1/2" BSP threaded inlet.

D. Special Sprinklers

15. COIN QR UPRIGHT SPRINKLERS

SPRINKLER 112A

Fire sprinklers shall be of one manufacturer throughout the building. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal manufactured by Viking and coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Sprinklers shall have a quick response frangible bulb type operating element, a 1/2" NPT, a stepped orifice, and a nominal K Factor of 4.2. Sprinklers shall be tested and cULus Listed specifically for use in Light Hazard combustible and non-combustible concealed spaces with extended coverage listings for spacing up to 12' x 12'. Sprinklers shall be listed for use with wet pipe systems using steel or any listed CPVC pipe; or dry pipe systems using galvanized steel pipe. QR Combustible Concealed Space Specific Application Sprinklers shall be installed in accordance with the manufacturer's installation guidelines. QR Combustible Concealed Space Sprinklers shall be Viking Upright SIN VK900.

16. COIN QR UPRIGHT FUSIBLE ELEMENT SPRINKLERS

SPRINKLER 112R

Fire sprinklers shall be of one manufacturer throughout the building. Sprinklers shall be of all brass frame construction with a metal Belleville spring seal manufactured by Viking and coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Sprinklers shall have a quick response metal type fusible element, a 1/2" NPT, a stepped orifice, and a nominal K Factor of 4.2. Sprinklers shall be tested and cULus Listed specifically for use in Light Hazard combustible and non-combustible concealed spaces with extended coverage listings for spacing up to 12' x 12'. Sprinklers shall be listed for use with wet pipe systems using steel or any listed CPVC pipe; or dry pipe systems using galvanized steel pipe. QR Combustible Concealed Space Specific Application Sprinklers shall be installed in accordance with the manufacturer's installation guidelines. QR Combustible Concealed Space Sprinklers shall be Viking Upright SIN VK901.

17. MRI ROOM QUICK RESPONSE CONCEALED PENDENT SPRINKLER

SPRINKLER 54P

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction utilizing a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Concealed MRI Room sprinklers shall be cULus Listed as a quick response sprinkler for use in Light Hazard occupancies. Concealed pendent sprinklers shall be U.L. listed for installation in Ordinary Hazard occupancy if installed in Ordinary Hazard occupancy. Concealed sprinklers shall have a white finish cover plate that is a push-on, thread-off assembly with a 2-3/4" diameter. Concealed MRI room sprinkler shall be made from non-magnetic Material's that are acceptable for use in a high magnetic field environment like those associated with a magnetic resonance system. Concealed MRI room sprinkler shall be U.L. listed and tested for use with a 3-Tesla MR system in accordance with ASTM F2503-05 criteria. Concealed MRI room sprinkler shall be acceptable for use in an environment with a static magnetic field of 3-Tesla or less and the highest spatial gradient magnetic field of 720-Gauss/cm or less. Concealed sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Or a 3/4" NPT, a large orifice, and a nominal K Factor of 8.0 K. Concealed sprinkler shall have a brass cover adapter made of non ferrous materials. Quick Response Concealed Pendent Sprinklers shall be made of non ferrous materials and shall be a Viking SIN VK462 or a Viking SIN VK464 MRI Room Sprinkler with brass cover adapter and white copper cover (UNS-C11000 copper rating). All sprinklers used in pendent position in MRI room shall be Viking MRI Room concealed pendent sprinkler SIN VK462 (Part Number 15480A) (5.6K Standard Orifice) or SIN VK464 (Part Number 15481A), (8.0K Large Orifice). (No Substitutions Allowed).

18. CLEANROOM SPRINKLER CONCEALED PENDENT & COVER ASSEMBLY**SPRINKLER 136G**

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass frame construction utilizing a metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers utilizing non-metal parts in the sealing portion of the sprinkler are strictly prohibited. Cleanroom concealed sprinklers shall have a Cleanroom Cover Assembly consisting of a low-profile cover intended for use in Cleanroom environments with Viking Mirage® Quick Response Concealed Pendent Sprinkler VK462. The cover plate shall be a 3-5/16" diameter push-on, thread-off assembly (Base Part Number 15861) with the silicone cover gasket that is an acceptable sprinkler seal for use in a Cleanroom or clean zone. Concealed sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Concealed Cleanroom pendent sprinklers shall be a U.L. listed quick response sprinkler as required per NFPA13 for installation in Light Hazard occupancy. Concealed pendent sprinklers shall be U.L. listed for installation in Ordinary Hazard occupancy if installed in Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be U.L. Listed Viking Mirage Sprinkler SIN VK462 (Base Part Number 13503A) with Cleanroom concealed cover plate with silicone cover Gasket (Base Part Number 15861). (No Substitutions Allowed).