

VIKING PRODUCT SPECIFICATIONS

I. Standard Response Sprinklers

A. Standard Response Sprinklers

1. Micromatic Standard Response Sprinkler
2. Micromatic Standard Response Small Orifice Sprinkler
3. Micromatic Standard Response ELO (Storage-Density/Area) Sprinkler
4. Standard Response Upright (Storage-Density/Area) K16.8 Sprinkler
5. Micromatic Standard Response Vertical Sidewall Sprinkler
6. Micromatic Standard Response HSW Sprinkler
7. Micromatic Standard Response Stainless Steel Sprinkler
8. Standard Response Flush Pendent Sprinkler
9. Standard Response Fusible Link Sprinkler
10. Standard Response Fusible Link Small Orifice Sprinkler
11. Standard Response Fusible Link HSW Sprinkler

B. HP Standard Response Sprinklers

12. Micromatic HP Standard Response High Pressure Sprinkler
13. Micromatic HP Standard Response High Pressure Small Orifice Sprinkler
14. Micromatic HP Standard Response High Pressure HSW Sprinkler
15. Micromatic HP Standard Response High Pressure HSW Small Orifice Sprinkler

C. Standard Response Concealed Sprinklers

16. Domed Concealed Pendent Sprinkler
17. Concealed Pendent Sprinkler
18. Small Orifice (2.8K) Concealed Pendent Sprinkler

II. Quick Response Sprinklers

A. Quick Response Sprinklers

1. Microfast QR Sprinkler
 - 1A. Cocoon
2. QR Fusible Element Sprinkler
3. Microfast QR Small Orifice Sprinkler
4. QR Fusible Element Small Orifice Sprinkler
5. Microfast QR HSW Sprinkler
 - 5A. Cocoon
6. QR HSW Large Orifice Sprinkler
7. QR Fusible Element HSW Sprinkler
8. Microfast QR HSW Small Orifice Sprinkler
9. QR Fusible Element HSW Small Orifice Sprinkler
10. Microfast QR Vertical Sidewall Sprinkler
11. QR Fusible Element Vertical Sidewall Sprinkler
12. QR Flush Pendent Sprinkler
13. QR ELO Pendent (Storage-Density/Area) Sprinkler
14. QR ELO Upright (Storage-Density/Area) Sprinkler
15. QR Fusible Element ELO Upright (Storage-Density/Area) Sprinkler

B. HP Quick Response Sprinklers

16. Microfast HP QR High Pressure Sprinkler
 - 16A. Cocoon
17. HP QR Fusible Element High Pressure Sprinkler
18. Microfast HP QR High Pressure Small Orifice Sprinkler
19. HP QR Fusible Element High Pressure Small Orifice Sprinkler
20. Microfast HP QR High Pressure HSW Sprinkler
 - 20A. Cocoon
21. HP QR Fusible Element High Pressure HSW Sprinkler
22. Microfast HP QR High Pressure HSW Small Orifice Sprinkler
23. HP QR Fusible Element High Pressure HSW Small Orifice Sprinkler

C. Quick Response Concealed Sprinklers

24. QR Concealed Pendent Sprinkler
25. HP High Pressure Concealed Pendent Sprinkler
26. QR Domed Concealed Pendent Sprinkler
27. QR Concealed HSW Sprinkler
28. QR Small Orifice (2.8K) Concealed Pendent Sprinkler
29. QR Small Orifice (4.2K) Concealed Pendent Sprinkler
30. QR Large Orifice Concealed Pendent Sprinkler
31. QR Fusible Element ELO Concealed Pendent Sprinkler
32. MRI Room QR Concealed Pendent Sprinkler Cover
33. QR Cleanroom Sprinkler Concealed Pendent and Cover Assembly
34. QR Domed Concealed Pendent Fusible Element Sprinkler

III. Extended Coverage Sprinklers

A. Standard Response Extended Coverage Sprinklers

1. Microfast EC Pendent Sprinkler
2. EC Fusible Element Pendent Sprinkler
3. Microfast EC HSW Sprinkler
 - 3A. Cocoon
4. EC Fusible Element HSW Sprinkler
5. EC Light Hazard ELO Pendent Sprinkler
6. EC Light Hazard Fusible Element ELO Pendent Sprinkler
7. EC Ordinary Hazard ELO Sprinkler
8. EC Ordinary Hazard Fusible Element ELO Sprinkler
9. EC Ordinary Hazard 14.0 K ELO Sprinkler

B. Quick Response Extended Coverage Sprinklers

10. Microfast QREC Pendent Sprinkler
11. QREC Fusible Element Pendent Sprinkler
12. Microfast QREC HSW Sprinkler
 - 11A. Cocoon
13. QREC HSW Sprinkler
14. QREC Light Hazard ELO Sprinkler
15. QREC Light Hazard Fusible Element ELO Sprinkler
16. QREC Ordinary Hazard ELO Sprinkler
17. QREC Ordinary Hazard Fusible Element ELO Sprinkler
18. Microfast QREC HSW (Special Application) Sprinkler

C. HP Extended Coverage Sprinklers

19. Microfast HP EC High Pressure Pendent Sprinkler
20. HP EC High Pressure Fusible Element Pendent Sprinkler
21. Microfast HP EC High Pressure HSW Sprinkler
 - 20A. Cocoon
22. HP EC High Pressure Fusible Element HSW Sprinkler
23. Microfast HP QREC High Pressure Pendent Sprinkler
24. HP QREC High Pressure Fusible Element Pendent Sprinkler
25. Microfast HP QREC High Pressure HSW Sprinkler
 - 24A. Cocoon
26. HP QREC High Pressure Fusible Element HSW Sprinkler
27. HP QREC High Pressure (300 PSI Max.) HSW Sprinkler

D. Extended Coverage Concealed Sprinklers

28. EC Light Hazard ELO Concealed Pendent Sprinkler
29. EC Domed Concealed Pendent Sprinkler
30. QREC Concealed Pendent Sprinkler
31. QREC Domed Concealed Pendent Sprinkler
32. QREC Light Hazard Fusible Element ELO Concealed Pendent Sprinkler
33. QREC Light Hazard ELO Domed Concealed Pendent Sprinkler
34. QREC Concealed HSW Sprinkler
35. HP QREC Concealed High Pressure (300 PSI Max.) HSW Sprinkler

IV. Dry Sprinklers

A. Standard Response Dry Sprinklers

1. Standard Response Dry Pendent Sprinkler
2. Standard Response Large Orifice Dry Pendent Sprinkler
3. Standard Response Dry Upright Sprinkler
4. Standard Response Stainless Steel Dry Pendent Sprinkler
5. Standard Response Large Orifice Stainless Steel Dry Pendent Sprinkler
6. Standard Response Dry HSW Sprinkler
7. Standard Response Dry Vertical Sidewall Sprinkler
8. Standard Response Dry Pendent Concealed Sprinkler

B. Quick Response Dry Sprinklers

9. QR Dry Pendent Sprinkler
10. QR Large Orifice Dry Pendent Fusible Element Sprinkler
11. QR Dry HSW Sprinkler
12. QR Ordinary Hazard Dry HSW Fusible Link Sprinkler
13. QR Dry Upright Sprinkler
14. QR Dry Pendent Concealed Sprinkler

C. Extended Coverage Dry Sprinklers

15. QREC Dry Pendent Sprinkler
16. SREC Dry Pendent Sprinkler
17. QREC Dry HSW Sprinkler
18. SREC Dry HSW Sprinkler
19. EC Dry Pendent Concealed Sprinkler

V. Institutional Sprinklers

A. Institutional Sprinklers

1. QR Institutional Pendent Sprinkler
2. QREC Institutional Pendent Sprinkler
3. QR Institutional HSW Sprinkler

VI. Special and Storage 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

VII. Residential Sprinklers

A. Residential Pendent Sprinklers

1. Freedom Residential Pendent Sprinkler (3.1 K-Factor)
2. Freedom Residential Pendent Sprinkler (4.3 K-Factor)
 - 2A. Cocoon
3. Freedom Residential Pendent Sprinkler (4.9 K-Factor)
4. Freedom Residential Pendent Sprinkler (5.2 K-Factor)
5. Freedom Residential Pendent Sprinkler (5.5 K-Factor)
 - 5A. Cocoon
6. Freedom Residential Pendent Sprinkler (5.8 K-Factor)
7. Freedom Residential Pendent Sprinkler (7.4 K-Factor)

B. Residential Flush and Concealed Pendent Sprinklers

8. Freedom Residential Flush Pendent Sprinkler (4.9 K-Factor)
9. Freedom Residential Concealed Pendent Sprinkler (4.9 K-Factor)
10. Freedom Residential Concealed Pendent Sprinkler (4.9 K-Factor)
11. Freedom Residential Concealed Pendent Sprinkler (5.8 K-Factor)
12. Freedom Residential Domed Concealed Pendent Sprinkler (4.9 K-Factor)
13. Freedom Residential Domed Concealed Pendent Sprinkler (7.4 K-Factor)
14. Freedom Residential Domed Concealed Pendent Sprinkler (5.2 K-Factor)
15. Freedom Residential Concealed HSW Sprinkler (4.0 K-Factor)

C. Residential Horizontal Sidewall Sprinklers

16. Freedom Residential HSW Sprinkler (4.0 K-Factor)
17. Freedom Residential HSW Sprinkler (4.0 K-Factor)
18. Freedom Residential HSW Sprinkler (4.2 K-Factor)
19. Freedom Residential HSW Sprinkler (4.3 K-Factor)
 - 18A. Cocoon
20. Freedom Residential HSW Sprinkler (5.5 K-Factor)
 - 20A. Cocoon
21. Freedom Residential HSW Sprinkler (5.8 K-Factor)

D. Residential Sprinkler Extensions

22. Residential Sprinkler Extensions

VIII. Spray Nozzles

A. Window Sprinklers

1. Window Sprinkler

B. Spray Nozzles

2. Solid Cone Spray Nozzle
3. Model M Frame Style Spray Nozzle
4. Model E Spray Nozzle

IX. Sprinkler Guards and Accessories

A. Sprinkler guards

1. Model D-1 Sprinkler Head Guard (Factory Installed)
2. Model D-1 Sprinkler Head Guard (Field Installed)
3. Model B-1 and C-1 Sprinkler Water Shields and Guards
4. Model E-1 and F-1 Intermediate / In-Rack

B. Escutcheons

5. Model E-1 / F-1 Adjustable Escutcheon

C. Wrenches and Cabinets

6. Sprinkler Wrenches and Cabinets

D. Cleanroom Sprinkler Cover Assemblies

7. Concealed Sprinkler Cleanroom Covers

E. Residential Sprinkler Extensions

8. Residential Sprinkler Extensions

VIKING PRODUCT SPECIFICATIONS

Standard Response Sprinklers

A. Standard Response Sprinklers

1. Micromatic Standard Response Sprinkler
2. Micromatic Standard Response Small Orifice Sprinkler
3. Micromatic Standard Response ELO (Storage-Density/Area) Sprinkler
4. Standard Response Upright (Storage-Density/Area) K16.8 Sprinkler
5. Micromatic Standard Response Vertical Sidewall Sprinkler
6. Micromatic Standard Response HSW Sprinkler
7. Micromatic Standard Response Stainless Steel Sprinkler
8. Standard Response Flush Pendent Sprinkler
9. Standard Response Fusible Link Sprinkler
10. Standard Response Fusible Link Small Orifice Sprinkler
11. Standard Response Fusible Link HSW Sprinkler

B. HP Standard Response Sprinklers

12. Micromatic HP Standard Response High Pressure Sprinkler
13. Micromatic HP Standard Response High Pressure Small Orifice Sprinkler
14. Micromatic HP Standard Response High Pressure HSW Sprinkler
15. Micromatic HP Standard Response High Pressure HSW Small Orifice Sprinkler

C. Standard Response Concealed Sprinklers

16. Domed Concealed Pendent Sprinkler
17. Concealed Pendent Sprinkler
18. Small Orifice (2.8K) Concealed Pendent Sprinkler

A. Standard Response Sprinklers

1. MICROMATIC STANDARD RESPONSE SPRINKLER

SPRINKLER 11A & 11Q

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. Sprinklers shall have a standard or large orifice, with a nominal K Factor of 5.6 or 8.0, respectively. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall be cULus Listed and/or FM Approved. Sprinklers (formerly Model M) shall be Viking SIN VK100 (5.6K Upright), SIN VK102 (5.6K Pendent), SIN VK200 (8.0K Upright), SIN VK202 (8.0K Pendent), SIN VK118 (5.6K Conventional), or SIN VK120 (8.0K Conventional).

2. MICROMATIC STANDARD RESPONSE SMALL ORIFICE SPRINKLER

SPRINKLER 11A

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. Sprinklers shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8 or 4.2. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall be cULus Listed and/or FM Approved for use in Light Hazard occupancies. Sprinklers (formerly Model M) shall be Viking SIN VK001 (2.8K Upright), SIN VK002 (4.2K Upright), SIN VK003 (2.8K Pendent), or SIN VK004 (4.2K Pendent).

3. MICROMATIC STANDARD RESPONSE ELO (STORAGE-DENSITY/AREA)

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 upright 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.

4. 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.

5. MICROMATIC STANDARD RESPONSE VERTICAL SIDEWALL SPRINKLER

SPRINKLER 14A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. 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. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling or wall shall be chrome finish vertical sidewall sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Vertical Sidewall sprinklers shall be FM Approved for installation in Light Hazard occupancies. Vertical sidewall sprinklers (formerly Model M) shall be Viking SIN VK106.

6. MICROMATIC STANDARD RESPONSE HORIZONTAL SIDEWALL SPRINKLER **SPRINKLER 14E**

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. Horizontal sidewall sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sprinklers shall have a frangible bulb type fusible element. Exposed sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Horizontal sidewall sprinklers installed below finished ceilings shall be chrome finish sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers (formerly Model M/M-5) shall be Viking SIN VK104 or SIN VK116 (175 PSI & 250 PSI Listed) Horizontal Sidewall.

7. MICROMATIC STANDARD RESPONSE STAINLESS STEEL SPRINKLER **SPRINKLER 15A**

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinkler shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sprinklers subject to corrosive atmospheres shall be manufactured with a stainless steel frame and stainless steel deflector. Sprinklers shall be standard frame style with a frangible bulb type fusible element and a gold plated metal Belleville spring seal, coated on both sides with Teflon film. Sprinklers to be installed through a ceiling shall be the standard stainless steel finish with a flat plate escutcheon. Sprinklers shall be cULus Listed and FM Approved. Sprinklers (formerly Model N-2) shall be Viking Upright SIN VK130 (Base Part Number 05012B) or Pendent SIN VK132 (Base Part Number 06483B).

8. STANDARD RESPONSE FLUSH PENDENT SPRINKLER **SPRINKLER 16A**

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. Flush pendent sprinkler shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. The flush pendent sprinklers and escutcheons shall have a chrome finish (or finish as specified elsewhere). Flush pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Flush pendent sprinklers shall be cULus Listed and FM Approved. Flush Pendent Sprinklers (formerly Model H) shall be Viking Horizon SIN VK400 (Base Part Number 06697B).

9. STANDARD RESPONSE FUSIBLE LINK SPRINKLER **SPRINKLER 18A**

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. Sprinkler shall have a 1/2" or 3/4" NPT with a nominal K Factor of 5.6 or 8.0. Sprinklers shall have a solder link type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Fusible link sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers shall be cULus Listed and FM Approved. Fusible Link Sprinklers (formerly Model M) shall be Viking SIN VK108 (5.6K Upright, Standard Orifice), SIN VK110 (5.6K Pendent, Standard Orifice), SIN VK204 (8.0K Upright, Large Orifice), or SIN VK206 (8.0K Pendent, Large Orifice).

10. STANDARD RESPONSE FUSIBLE LINK SMALL ORIFICE SPRINKLER**SPRINKLER 18A**

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. Sprinkler shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 4.2. Sprinklers shall have a solder link type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall be cULus Listed and FM Approved for Light Hazard occupancies. Fusible Link Sprinklers (formerly Model M) shall be Viking SIN VK006 (Upright) or SIN VK008 (Pendent).

11. FUSIBLE LINK HORIZONTAL SIDEWALL SPRINKLER**SPRINKLER 19A**

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. Sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sprinklers shall have a solder link type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling or wall shall be chrome finish sidewall sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Sidewall sprinklers shall be cULus Listed or FM Approved for installation in Light Hazard occupancies. Fusible Link Sprinklers (formerly Model M) shall be Viking Horizontal Sidewall SIN VK112 (Base Part Number 05559).

B. HP Standard Response Sprinklers**12. MICROMATICHP STANDARD RESPONSE HIGH PRESSURE SPRINKLER****SPRINKLER 11A**

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. Sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR). Sprinklers (formerly Model M) shall be Viking Pendent SIN VK122 (Base Part Number 09992) or Upright VK124 (Base Part Number 09993).

13. MICROMATICHP HIGH PRESSURE STD RESPONSE SMALL ORIFICE SPRINKLER**SPRINKLER 11A**

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. Sprinklers shall have a 1/2" NPT, a small orifice, and a K Factor of 2.8. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall be cULus Listed for use in Light Hazard occupancies. Standard Response High Pressure Small Orifice Sprinklers (formerly Model M) shall be Viking Upright SIN VK021 (Base Part Number 09993) or Pendent SIN VK023 (Base Part Number 09994).

14. MICROMATICHP HIGH PRESSURE HORIZONTAL SIDEWALL SPRINKLER SPRINKLER 14E

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. Horizontal sidewall sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Horizontal sidewall sprinklers installed below finished ceilings shall be chrome finish sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Sprinklers shall be cULus Listed for working pressures up to 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Standard Response High Pressure Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK116 (Base Part Number 09849).

15. MICROMATICHP HIGH PRESSURE HSW SMALL ORIFICE SPRINKLER SPRINKLER 14E

Horizontal sidewall 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. Horizontal sidewall sprinkler shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Horizontal sidewall sprinklers installed below finished ceilings shall be chrome finish sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of the same specified finish. Horizontal sidewall sprinklers shall be cULus Listed for use in Light Hazard occupancies with working pressures up to 250 PSI (17 BAR). Standard Response High Pressure Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK015 (Base Part Number 09997).

C. Standard Response Concealed Sprinklers

16. DOMED CONCEALED PENDENT SPRINKLER SPRINKLER 11H & 41H

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 frangible bulb type fusible element and 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 pendent sprinklers shall be cULus Listed or FM Approved with a 1/2" NPT and standard orifice with a nominal K Factor of 5.6, or a 3/4" NPT and large orifice with a nominal K Factor of 8.0. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Cover plates shall be chrome finish (or finish as specified elsewhere). Standard Response Concealed Sprinklers shall be Viking 5.6K Standard Orifice SIN VK102 (cULus Listed, Base Part Number 10139A-X), SIN VK302 (FM Approved, Base Part Number 06662BA-X), or 8.0K Large Orifice SIN VK202 (cULus Listed, Base Part Number 10142A-X), or SIN VK352 (FM Approved, Base Part Number 06666BA-X).

17. CONCEALED PENDENT SPRINKLER SPRINKLER 54A

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 sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be FM Approved Viking Mirage Sprinkler SIN VK462 (Base Part Number 13503A). (No Substitutions Allowed).

18. SMALL ORIFICE CONCEALED PENDENT SPRINKLER SPRINKLER 54H

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass 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. Concealed pendent sprinklers shall be listed for installation in a Light Hazard occupancy. Concealed sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a nominal K Factor of 2.8 and a small orifice. Concealed Pendent Sprinkler shall be FM Approved Viking Mirage SIN VK461 (Base Part Number 13831A). (No Substitutions Allowed).

VIKING PRODUCT SPECIFICATIONS

Quick Response Sprinklers

A. Quick Response Sprinklers

1. Microfast QR Sprinkler
 - 1A. Cocoon
2. QR Fusible Element Sprinkler
3. Microfast QR Small Orifice Sprinkler
4. QR Fusible Element Small Orifice Sprinkler
5. Microfast QR HSW Sprinkler
 - 5A. Cocoon
6. QR HSW Large Orifice Sprinkler
7. QR Fusible Element HSW Sprinkler
8. Microfast QR HSW Small Orifice Sprinkler
9. QR Fusible Element HSW Small Orifice Sprinkler
10. Microfast QR Vertical SW Sprinkler
11. QR Fusible Element Vertical SW Sprinkler
12. QR Flush Pendent Sprinkler
13. QR ELO Pendent (Storage-Density/Area) Sprinkler
14. QR ELO Upright (Storage-Density/Area) Sprinkler
15. QR Fusible Element ELO Upright (Storage-Density/Area) Sprinkler

B. HP Quick Response Sprinklers

16. Microfast HP QR High Pressure Sprinkler
 - 16A. Cocoon
17. HP QR Fusible Element High Pressure Sprinkler
18. Microfast HP QR High Pressure Small Orifice Sprinkler
19. HP QR Fusible Element High Pressure Small Orifice Sprinkler
20. Microfast HP QR High Pressure HSW Sprinkler
 - 20A. Cocoon
21. HP QR Fusible Element High Pressure HSW Sprinkler
22. Microfast HP QR High Pressure HSW Small Orifice Sprinkler
23. HP QR Fusible Element High Pressure HSW Small Orifice Sprinkler

C. Quick Response Concealed Sprinklers

24. QR Concealed Pendent Sprinkler
25. HP High Pressure Concealed Pendent Sprinkler
26. QR Domed Concealed Pendent Sprinkler
27. QR Concealed HSW Sprinkler
28. QR Small Orifice (2.8K) Concealed Pendent Sprinkler
29. QR Small Orifice (4.2K) Concealed Pendent Sprinkler
30. QR Large Orifice Concealed Pendent Sprinkler
31. QR Fusible Element ELO Concealed Pendent Sprinkler
32. MRI Room QR Concealed Pendent Sprinkler Cover
33. QR Cleanroom Sprinkler Concealed Pendent and Cover Assembly
34. QR Domed Concealed Pendent Fusible Element Sprinkler

A. Quick Response Sprinklers

1. MICROFAST QUICK RESPONSE SPRINKLER

SPRINKLER 41A & 51A

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. Sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a standard or large orifice and a 5.6 or 8.0 nominal K Factor. Sprinklers shall be cULus Listed and/or FM Approved. Quick response sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Sprinklers (formerly Model M) shall be Viking SIN VK302 (5.6K Standard Orifice Pendent) or SIN VK352 (8.0K Large Orifice Pendent) Data Page 41a. Or, SIN VK300 (5.6K Standard Orifice Upright), SIN VK310 (5.6K Standard Orifice Conventional), SIN VK350 (8.0K Large Orifice Upright), or SIN VK354 (8.0K Large Orifice Conventional) Data Page 51a.

1A. COCOON

SPRINKLER 41A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response Sprinklers (formerly Model M) shall be Viking 5.6K Standard Orifice SIN VK302 (Base Part No. 06662B—K), or 8.0K Large Orifice SIN VK352 (Base Part No. 06666B--K).

2. QUICK RESPONSE FUSIBLE ELEMENT SPRINKLER

SPRINKLER 40A, 47A, & 51H

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. Sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a standard orifice with a 5.6 nominal K Factor, or a large orifice with an 8.0 nominal K Factor. Sprinklers shall be cULus Listed and/or FM Approved. Quick response sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Sprinklers shall be Viking SIN VK303 (5.6K Standard Orifice Pendent, Data Page 47a), SIN VK301 (5.6K Standard Orifice Upright, Data Page 47a), SIN VK353 (8.0K Large Orifice Pendent, Data Page 40a), SIN VK351 (8.0K Large Orifice Upright, Data Page 51h), SIN VK311 (5.6K Standard Orifice Conventional, Data Page 51h), or SIN VK355 (8.0K Large Orifice Conventional, Data Page 51h).

3. MICROFAST QUICK RESPONSE SMALL ORIFICE SPRINKLER

SPRINKLER 41A & 51A

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. Sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8 or 4.2. Sprinklers shall be cULus Listed or FM Approved for use in Light Hazard occupancies. Quick Response Small Orifice Sprinklers (formerly Model M) shall be Viking SIN VK329 (2.8K Pendent) or SIN VK331 (4.2K Pendent) Data Page 41a. Or, SIN VK325 (2.8K Upright) or SIN VK327 (4.2K Upright) Data Page 51a.

4. QUICK RESPONSE FUSIBLE ELEMENT SMALL ORIFICE SPRINKLER SPRINKLER 40A & 51H

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. Sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8 or 4.2. Sprinklers shall be cULus Listed and/or FM Approved for use in Light Hazard occupancies. Quick Response Sprinklers shall be Viking SIN VK330 (2.8K Pendent, Data Page 40a), VK332 (4.2K Pendent, Data Page 40a), SIN VK326 (2.8K Upright, Data Page 51h), or SIN VK328 (4.2K Upright, Data Page 51h).

5. MICROFAST QUICK RESPONSE HORIZONTAL SIDEWALL SPRINKLER SPRINKLER 43A & 52A

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. Sidewall sprinklers shall have a quick response frangible bulb or metal type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sprinklers shall be 1/2" NPT with a standard orifice, a stepped orifice (VK305), and a nominal K Factor of 5.6. Sidewall sprinklers shall be cULus Listed and/or FM Approved. Quick Response Horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Sidewall Sprinklers (formerly Model M/M-5) shall be Viking SIN VK304 (Base Part Number 06725B, Data Page 52a) or SIN VK305 (Base Part Number 12121, Data Page 43a).

5A. MICROFAST QUICK RESPONSE HSW SPRINKLER COCOON SPRINKLER 43A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response Commercial Cocoon Horizontal Sidewall Sprinkler (formerly Model M-5) shall be Viking SIN VK305 (Base Part Number 12121--K).

6. QUICK RESPONSE HORIZONTAL SIDEWALL LARGE ORIFICE SPRINKLER SPRINKLER 43O

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. Sidewall sprinklers shall have a quick response frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sprinklers shall be 3/4" NPT with a large orifice, and a nominal K Factor of 8.0. Sidewall sprinklers shall be cULus Listed. Quick Response Horizontal Sidewall Sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Sidewall Large Orifice Sprinklers shall be Viking SIN VK360 (Base Part Number 15591).

7. QUICK RESPONSE FUSIBLE ELEMENT HORIZONTAL SIDEWALL SPRINKLER SPRINKLER 43H & 52U

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. Sidewall sprinklers shall have a quick response metal type fusible element. Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sprinklers shall be 1/2" NPT with a standard orifice, and a nominal K Factor of 5.6. Sidewall sprinklers shall be cULus Listed and/or FM Approved. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response flush pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Fusible Element Sidewall Sprinklers shall be Viking SIN VK307 (Light Hazard only, Base Part Number 13948, Data Page 52U) or SIN VK308 (Base Part Number 13950, Data Page 43H).

8. MICROFAST QUICK RESPONSE HSW SMALL ORIFICE SPRINKLER **SPRINKLER 52A**

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 quick response frangible bulb type fusible element and 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. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. QR Horizontal Sidewall Small Orifice Sprinklers (formerly Model M) shall be Viking 2.8K SIN VK333 (Base Part Number 10035).

9. QUICK RESPONSE FUSIBLE ELEMENT HSW SMALL ORIFICE SPRINKLER **SPRINKLER 52U**

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 quick response metal type fusible element and 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. Sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. QR Fusible Element Horizontal Sidewall Small Orifice Sprinklers shall be Viking 2.8K SIN VK334 (Base Part Number 13962).

10. MICROFAST QUICK RESPONSE VERTICAL SIDEWALL SPRINKLER **SPRINKLER 52E**

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. Sidewall sprinklers shall have a quick response frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) vertical sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Vertical sidewall sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sidewall sprinklers shall be FM Approved for use in Light Hazard occupancies. Quick Response Vertical Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK306.

11. QUICK RESPONSE FUSIBLE ELEMENT VERTICAL SIDEWALL SPRINKLER **SPRINKLER 50A**

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. Sidewall sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) vertical sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Vertical sidewall sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Sidewall sprinklers shall be FM Approved for use in Light Hazard occupancies. Quick Response Fusible Element Vertical Sidewall Sprinklers shall be Viking SIN VK309.

12. QUICK RESPONSE FLUSH PENDENT SPRINKLER **SPRINKLER 53A**

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. Quick response flush pendent sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Quick response flush pendent sprinklers shall be chrome finish (or finish as specified elsewhere) with a listed escutcheon of the same specified finish. Quick response flush pendent sprinklers shall be cULus Listed and FM Approved. Quick response flush pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Flush Pendent Sprinklers (formerly Model H) shall be Viking Horizon SIN VK402 or SIN VK413 (LPCB Approved).

13. 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 be of all brass frame construction with a quick response frangible bulb type fusible element and 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 commodity storage is anticipated, extra-large orifice quick response sprinklers specifically listed and tested for commodity storage applications shall be installed. Quick response sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. 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).

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

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 quick response frangible bulb type fusible element and 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 commodity storage is anticipated, extra-large orifice quick response sprinklers specifically listed and tested for commodity storage applications shall be installed. Quick response sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extra-large orifice quick response sprinklers shall be cULus Listed and FM Approved for the application in which they are installed. Quick Response Extra-Large Orifice Upright Sprinklers (formerly Model M) shall be Viking SIN VK531 (Base Part Number 10633).

15. 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 be of all brass frame construction with a quick response metal type fusible element and 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 commodity storage is anticipated, extra-large orifice quick response sprinklers specifically listed and tested for commodity storage applications shall be installed. Quick response sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extra-large orifice quick response 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).

B. HP Quick Response Sprinklers

16. MICROFAST HP QUICK RESPONSE HIGH PRESSURE SPRINKLER SPRINKLER 41A & 51A

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. Sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a standard orifice, and a 5.6 nominal K Factor. Quick response high-pressure sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR). Quick Response High Pressure Sprinklers (formerly Model M) shall be Viking SIN VK317 (Pendent, Data Page 41a) or SIN VK315 (Upright, Data Page 51a).

16A. MICROFAST HP QR HIGH PRESSURE PENDENT SPRINKLER COCOON SPRINKLER 41A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon[®] tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response High Pressure Sprinklers (formerly Model M) shall be Viking Cocoon Sprinkler Base Part Number 12282—K (SIN VK317).

17. HP QR HIGH PRESSURE FUSIBLE ELEMENT SPRINKLER SPRINKLER 40A & 51H

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. Sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a standard orifice, and a 5.6 nominal K Factor. Quick response high-pressure fusible element sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR). Quick Response High Pressure Fusible Element Sprinklers shall be Viking SIN VK318 (Pendent, Data Page 40a) or SIN VK316 (Upright, Data Page 51h).

18. MICROFAST HP QR HIGH PRESSURE SMALL ORIFICE SPRINKLER SPRINKLER 41A & 51A

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. Sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Exposed sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR) in Light Hazard occupancies. Quick Response High Pressure Small Orifice Sprinklers (formerly Model M) shall be Viking Pendent SIN VK342 (Base Part Number 12290, Data Page 41a) or Upright SIN VK340 (Base Part Number 12286, Data Page 51a).

19. HP QR HIGH PRESSURE FUSIBLE ELEMENT SMALL ORIFICE SPRINKLER SPRINKLER 40A & 51H

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. Sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed in areas with no ceilings shall be of a brass finish and shall be of adequate temperature for the hazard. Sprinklers to be installed through a ceiling shall be chrome finish pendent sprinklers (or finish as specified elsewhere) with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a 1/2" NPT, a small orifice, and a nominal K Factor of 2.8. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR) in Light Hazard occupancies. Quick Response High Pressure Fusible Element Small Orifice Sprinklers shall be Viking SIN VK343 (Pendent, Data Page 40a) or SIN VK341 (Upright, Data Page 51h).

20. MICROFAST HP QUICK RESPONSE HIGH PRESSURE HSW SPRINKLER SPRINKLER 43A

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. Sprinklers shall have a quick response frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Sidewall sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Quick Response High Pressure Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking SIN VK319 (Base Part Number 12285).

20A. MICROFAST HP QR HIGH PRESSURE HSW SPRINKLER COCOON SPRINKLER 43A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response High Pressure (HP) Commercial Cocoon Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking SIN VK319 (Base Part Number 12285--K).

21. HP QUICK RESPONSE HIGH PRESSURE FUSIBLE ELEMENT HSW SPRINKLER SPRINKLER 43H

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. Sprinklers shall have a quick response metal type fusible element. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall be cULus Listed for working water pressures up to 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Sidewall sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Quick Response High Pressure Fusible Element Horizontal Sidewall Sprinklers shall be Viking SIN VK320 (Base Part Number 13955).

22. MICROFASTHP QR HIGH PRESSURE HSW SMALL ORIFICE SPRINKLER SPRINKLER 52A

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 quick response frangible bulb type fusible element and 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. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sidewall sprinklers shall be listed for working water pressures up to 250 PSI (17 BAR). Sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. Quick Response Horizontal Sidewall Small Orifice Sprinkler (formerly Model M) shall be Viking 2.8K SIN VK344 (Base Part Number 12287).

23. HP QR HIGH PRESSURE FUSIBLE ELEMENT HSW SMALL ORIFICE SPRINKLER SPRINKLER 52U

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 quick response metal type fusible element and 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. Sprinklers installed under finished ceilings shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Sidewall sprinklers shall be listed for working water pressures up to 250 PSI (17 BAR). Sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. Quick Response Fusible Element Horizontal Sidewall Small Orifice Sprinkler shall be Viking 2.8K SIN VK346 (Base Part Number 13965).

C. Quick Response Concealed Sprinklers

24. CONCEALED PENDENT SPRINKLER SPRINKLER 54A

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 sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be FM Approved Viking Mirage Sprinkler SIN VK462 (Base Part Number 13503A). (No Substitutions Allowed).

25. HIGH PRESSURE (HP) CONCEALED PENDENT SPRINKLER SPRINKLER 54A

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. Concealed sprinklers shall be listed for working pressures up to 250 PSI (17 BAR). Concealed sprinkler shall have a cover plate that is a push-on, thread-off assembly with a cover diameter no greater than 2-3/4". Concealed sprinklers shall be cULus Listed with a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Standard Response High Pressure Concealed Sprinklers shall be Viking Mirage SIN VK463 (Base Part Number 13667A). (No Substitutions Allowed).

26. QUICK RESPONSE DOMED CONCEALED PENDENT SPRINKLER **SPRINKLER 41H**

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 quick response frangible bulb type fusible element and 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. Quick response concealed pendent sprinklers shall have a 1/2" NPT and standard orifice with a nominal K Factor of 5.6, or a 3/4" NPT and large orifice with a nominal K Factor of 8.0. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The concealed pendent sprinklers shall have a chrome finish cover plate (or finish as specified elsewhere). Quick response concealed pendent sprinklers shall be cULus Listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Concealed Sprinklers shall be Viking 5.6K Standard Orifice SIN VK302 (Base Part Number 06662BA-X), or 8.0K Large Orifice SIN VK352 (Base Part Number 06666BA-X).

27. QUICK RESPONSE CONCEALED HORIZONTAL SIDEWALL SPRINKLER **SPRINKLER 63A**

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. Quick response concealed horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed horizontal sidewall sprinklers shall have a chrome finish (or finish as specified elsewhere) cover plate that is a push-on, pull-off assembly with a cover diameter no greater than 2-3/4". Concealed sprinklers shall have a 1/2" NPT, a standard orifice, and a nominal K Factor of 5.6. Quick response horizontal sidewall sprinklers shall be cULus Listed for Light Hazard and Ordinary Hazard occupancies. Concealed Horizontal Sidewall Sprinklers shall be Viking SIN VK408 (Base Part Number 11451).

28. QUICK RESPONSE SMALL ORIFICE CONCEALED PENDENT SPRINKLER **SPRINKLER 54H**

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass 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. Concealed sprinklers shall be cULus Listed as quick response for working pressures up to 175 PSI. Quick response concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a nominal K Factor of 2.8 and a small orifice. Quick Response Concealed Sprinklers shall be Viking Mirage SIN VK461 (Base Part Number 13831A). (No Substitutions Allowed).

29. QUICK RESPONSE SMALL ORIFICE CONCEALED PENDENT SPRINKLER **SPRINKLER 64A**

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass 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. Concealed sprinklers shall be cULus Listed as quick response for working pressures up to 175 PSI. Quick response concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a nominal K Factor of 4.2 and a small orifice. Quick Response Concealed Sprinklers shall be Viking Mirage SIN VK465 (Base Part Number 14262A). (No Substitutions Allowed).

30. QUICK RESPONSE LARGE ORIFICE CONCEALED PENDENT SPRINKLER **SPRINKLER 55A**

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass 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. Concealed sprinklers shall be cULus Listed as quick response for working pressures up to 175 PSI. Quick response concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 2-3/4" or 3-5/16" diameter. Concealed sprinklers shall have a nominal K Factor of 8.0 and a large orifice. Quick Response Concealed Sprinklers shall be Viking Mirage SIN VK464 (Base Part Number 13614A). (No Substitutions Allowed).

31. QUICK RESPONSE FUSIBLE ELEMENT ELO CONCEALED PENDENT SPRINKLER SPRINKLER 550

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass construction with a quick response metal type fusible element and 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 ELO sprinklers shall be cULus Listed as quick response for working pressures up to 175 PSI. Quick response ELO concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Concealed sprinklers shall have a cover plate that is a push-on, thread-off assembly with a 3-5/16" diameter. Concealed sprinklers shall have a nominal K Factor of 11.2 and an extra large orifice. Quick Response Fusible Element ELO Concealed Sprinklers shall be Viking Mirage SIN VK469 (Base Part Number 15764A). (No Substitutions Allowed).

32. 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 cULus 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 cULus 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).

33. 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 13642-/CR) 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 cULus listed quick response sprinkler as required per NFPA13 for installation in Light Hazard occupancy. Concealed pendent sprinklers shall be cULus listed for installation in Ordinary Hazard occupancy if installed in Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be cULus Listed Viking Mirage Sprinkler SIN VK462 (Base Part Number 13503A) with Cleanroom concealed cover plate with silicone cover Gasket (Base Part Number 13642-/CR). (No Substitutions Allowed).

34. QUICK RESPONSE DOMED CONCEALED PENDENT FUSIBLE ELEMENT SPRINKLER 420

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 quick response solider link type fusible element and 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. Quick response concealed pendent sprinklers shall have a 3/4" NPT and large orifice with a nominal K Factor of 8.0. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The concealed pendent sprinklers shall have a chrome finish cover plate (or finish as specified elsewhere). Quick response concealed pendent sprinklers shall be cULus Listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Concealed Sprinklers shall be Viking 8.0K Large Orifice SIN VK353 (Base Part Number 13975A-X). (No Substitutions Allowed).

VIKING PRODUCT SPECIFICATIONS

Extended Coverage Sprinklers

A. Standard Response Extended Coverage Sprinklers

1. Microfast EC Pendent Sprinkler
2. EC Fusible Element Pendent Sprinkler
3. Microfast EC HSW Sprinkler
 - 3A. Cocoon
4. EC Fusible Element HSW Sprinkler
5. EC Light Hazard ELO Pendent Sprinkler
6. EC Light Hazard Fusible Element ELO Pendent Sprinkler
7. EC Ordinary Hazard ELO Sprinkler
8. EC Ordinary Hazard Fusible Element ELO Sprinkler
9. EC Ordinary Hazard 14.0K ELO Sprinkler

B. Quick Response Extended Coverage Sprinklers

10. Microfast QREC Pendent Sprinkler
11. QREC Fusible Element Pendent Sprinkler
12. Microfast QREC HSW Sprinkler
 - 12A. Cocoon
13. QREC HSW Sprinkler
14. QREC Light Hazard ELO Sprinkler
15. QREC Light Hazard Fusible Element ELO Sprinkler
16. QREC Ordinary Hazard ELO Sprinkler
17. QREC Ordinary Hazard Fusible Element ELO Sprinkler
18. Microfast QREC HSW (Special Application) Sprinkler

C. HP Extended Coverage Sprinklers

19. Microfast HP EC High Pressure Pendent Sprinkler
20. HP EC High Pressure Fusible Element Pendent Sprinkler
21. Microfast HP EC High Pressure HSW Sprinkler
 - 21A. Cocoon
22. HP EC High Pressure Fusible Element HSW Sprinkler
23. Microfast HP QREC High Pressure Pendent Sprinkler
24. HP QREC High Pressure Fusible Element Pendent Sprinkler
25. Microfast HP QREC High Pressure HSW Sprinkler
 - 25A. Cocoon
26. HP QREC High Pressure Fusible Element HSW Sprinkler
27. HP QREC High Pressure (300 PSI Max.) HSW Sprinkler

D. Extended Coverage Concealed Sprinklers

28. EC Light Hazard ELO Concealed Pendent Sprinkler
29. EC Domed Concealed Pendent Sprinkler
30. QREC Concealed Pendent Sprinkler
31. QREC Domed Concealed Pendent Sprinkler
32. QREC Light Hazard Fusible Element ELO Concealed Pendent Sprinkler
33. QREC Light Hazard ELO Domed Concealed Pendent Sprinkler
34. QREC Concealed HSW Sprinkler
35. HP QREC Concealed High Pressure (300 PSI Max.) HSW Sprinkler

A. Standard Response Extended Coverage Sprinklers

1. MICROFAST EC PENDENT SPRINKLER

SPRINKLER 81A & 90E

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. Extended coverage pendent sprinklers shall have a frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Pendent sprinklers shall be cULus Listed or FM Approved for extended coverage application in Light Hazard occupancies. Extended coverage sprinklers installed below finished ceilings will be chrome finish (or finish as specified elsewhere). Extended coverage pendent sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Extended Coverage Pendent Sprinklers (formerly Model M) shall be Viking 5.6K Standard Orifice SIN VK600 (Data Page 81a), SIN VK604 (Data Page 90e), SIN VK607 (fusible element, Data Page 90v), or 8.0K Large Orifice SIN VK602 (Data Page 81a).

2. EC FUSIBLE ELEMENT PENDENT SPRINKLER

SPRINKLER 90V

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. Extended coverage pendent sprinklers shall have a metal type fusible element. Extended coverage pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended coverage sprinklers installed below finished ceilings will be chrome finish (or finish as specified elsewhere). Extended coverage pendent sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice. Extended Coverage Fusible Element Pendent Sprinklers shall be Viking SIN VK607.

3. MICROFAST EC HORIZONTAL SIDEWALL SPRINKLER

SPRINKLER 82A & 91A

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. Extended coverage horizontal sidewall sprinklers shall have a frangible bulb element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Horizontal sidewall sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage Horizontal Sidewall Sprinklers (formerly Model M/M-5) shall be Viking 5.6K Standard Orifice SIN VK605 (Base Part Number 12120, Data Page 91a), or 8.0K Large Orifice SIN VK606 (Base Part Number 09758, Data Page 82a).

3A. COCOON

SPRINKLER 82A & 91A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Extended Coverage Commercial Cocoon Horizontal Sidewall Sprinklers (formerly Model M/M-5) shall be Viking 5.6K Standard Orifice SIN VK605 (Base Part Number 12120--K, Data Page 91a) or 8.0K Large Orifice SIN VK606 (Base Part Number 09758--K, Data Page 82a).

4. EC FUSIBLE ELEMENT HORIZONTAL SIDEWALL SPRINKLER

SPRINKLER 91H

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. Extended coverage horizontal sidewall sprinklers shall have a metal type fusible element. Extended coverage horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice. Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Horizontal sidewall sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage Fusible Element Horizontal Sidewall Sprinklers shall be Viking SIN VK609 (Base Part Number 13971).

5. EC LIGHT HAZARD ELO PENDENT SPRINKLER**SPRINKLER 85A**

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. Extended coverage extra-large orifice pendent sprinklers shall have a frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. ECLH ELO sprinklers installed below a ceiling shall have a chrome finish (or finish as specified elsewhere). Extra-large orifice pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended coverage extra-large orifice pendent sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extended Coverage Light Hazard Extra-Large Orifice (ECLH-ELO) Sprinklers (formerly Model M) shall be SIN VK608 (Base Part Number 08339).

6. EC LIGHT HAZARD ELO FUSIBLE ELEMENT PENDENT SPRINKLER**SPRINKLER 85H**

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. Extended coverage extra-large orifice pendent sprinklers shall have a metal type fusible element. Extended coverage pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. ECLH ELO sprinklers installed below a ceiling shall have a chrome finish (or finish as specified elsewhere). Extra-large orifice pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended coverage extra-large orifice pendent sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extended Coverage Light Hazard Extra-Large Orifice (ECLH-ELO) Fusible Element Sprinklers shall be SIN VK617 (Base Part Number 14141).

7. EC ORDINARY HAZARD ELO SPRINKLER**SPRINKLER 83A**

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. Extended coverage extra-large orifice sprinklers shall have a frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Pendent ECOH ELO sprinklers installed below ceilings shall have a chrome finish (or finish as specified elsewhere). Extended coverage Ordinary Hazard sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extra-large orifice sprinklers shall be cULus Listed and/or FM Approved for extended coverage application in Ordinary Hazard occupancies. Extended coverage Ordinary Hazard sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extended Coverage Ordinary Hazard Extra-Large Orifice (ECOH-ELO) Sprinklers (formerly Model M) shall be Viking Upright SIN VK532 (Base Part Number 08687) or Pendent SIN VK534 (Base Part Number 08340).

8. EC ORDINARY HAZARD FUSIBLE ELEMENT ELO SPRINKLER**SPRINKLER 83O**

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. Extended coverage extra-large orifice sprinklers shall have a metal type fusible element. Extended coverage sprinklers shall be installed in conformance with the manufacturer's installation guidelines. ECOH ELO sprinklers installed below a ceiling shall have a chrome finish (or finish as specified elsewhere). Extra-large orifice sprinklers shall be cULus Listed or FM Approved for extended coverage application in Ordinary Hazard occupancies. Extended coverage extra-large orifice sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. Extended Coverage Ordinary Hazard Fusible Element Extra-Large Orifice (ECOH-ELO) Sprinklers shall be SIN VK535 (Upright, Base Part Number 14139) or SIN VK537 (Pendent, Base Part Number 14611).

9. EC ORDINARY HAZARD 14.0 K ELO SPRINKLER**SPRINKLER 83H**

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. Extended coverage extra-large orifice sprinklers shall have a frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Pendent ECOH ELO sprinklers installed below ceilings shall have a chrome finish (or finish as specified elsewhere). Extended coverage Ordinary Hazard sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extra-large orifice sprinklers shall be cULus Listed or FM Approved for extended coverage application in Ordinary Hazard occupancies. Extended coverage Ordinary Hazard sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 14.0 Extended Coverage Ordinary Hazard Extra-Large Orifice (ECOH-ELO) Sprinklers shall be Viking Upright SIN VK570 (Base Part Number 13840) or Pendent SIN VK572 (Base Part Number 13722). (No Substitutions Allowed).

B. Quick Response Extended Coverage Sprinklers**10. MICROFAST QR EC PENDENT SPRINKLER****SPRINKLER 81A & 90E**

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. Extended coverage pendent sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Extended coverage quick response pendent sprinklers shall be installed in conformance with the manufacturer's listing and installation guidelines. Quick response pendent sprinklers shall be cULus Listed or FM Approved for extended coverage application in Light Hazard occupancies. Extended coverage quick response pendent sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Extended Coverage Quick Response Pendent Sprinklers (formerly Model M/M-5) shall be Viking 5.6K Standard Orifice SIN VK600 (Data Page 81a), SIN VK604 (Data Page 90e), or 8.0K Large Orifice SIN VK602 (Data Page 81a).

11. QR EC FUSIBLE ELEMENT PENDENT SPRINKLER**SPRINKLER 81H & 90V**

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. Extended coverage pendent sprinklers shall have a quick response metal type fusible element. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Extended coverage quick response pendent sprinklers shall be installed in conformance with the manufacturer's listing and installation guidelines. Quick response pendent sprinklers shall be cULus Listed or FM Approved for extended coverage application in Light Hazard occupancies. Extended coverage quick response pendent sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Extended Coverage Quick Response Fusible Element Pendent Sprinklers shall be Viking 5.6K Standard Orifice SIN VK607 (Data Page 90v) or SIN VK601 (Data Page 81h), or 8.0K Large Orifice SIN VK603 (Data Page 81h).

12. MICROFAST QREC HSW SPRINKLER**SPRINKLER 82A, 91A, & 91H**

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. Sidewall sprinklers shall have a quick response frangible bulb or metal type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response horizontal sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. Sprinkler shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Horizontal sidewall standard orifice sprinklers shall be listed for coverage of 16' x 16', 16' x 18', 16' x 20', while horizontal sidewall large orifice sprinklers shall be listed for coverage of 14' x 16', 16' x 16', 16' x 18', 16' x 20', 16' x 22' (width by length).

Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of the same specified finish. Quick Response Extended Coverage Horizontal Sidewall Sprinklers (formerly Model M/M-5) shall be Viking 5.6K Standard Orifice SIN VK605 (Base Part Number 12120, Data Page 91a), SIN VK609 (fusible element Base Part Number 13971, Data Page 91h), or 8.0K Large Orifice SIN VK606 (Base Part Number 09758, Data Page 82a).

12A COCOON

SPRINKLER 82A & 91A

Sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response Extended Coverage Horizontal Sidewall Cocoon Sprinklers (formerly Model M/M-5) shall be Viking 5.6K Standard Orifice SIN VK605 (Base Part Number 12120--K, Data Page 91a) or 8.0K Large Orifice SIN VK606 (Base Part Number 09758—K, Data Page 82a).

13. QREC HSW SPRINKLER

SPRINKLER 80A

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. Sidewall sprinklers shall have a quick response frangible bulb type fusible element. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response horizontal sidewall sprinklers shall be cULus Listed and FM Approved for Light Hazard occupancies. Sprinkler shall have a 3/4" NPT with a nominal K Factor of 8.0 (sprinkler VK630). Horizontal sidewall large orifice sprinklers shall be listed for coverage of 14 x 24, 14 x 26, 16' x 16', 16' x 18', 16' x 20', 16 x 22, 16 x 24, 18 x 18, 18 x 20 and 18 x 22 (width by length). Sprinklers to be installed through a wall shall be chrome finish sidewall sprinklers (or finish as specified elsewhere) with an E-1 adjustable semi-recessed escutcheon of same specified finish (or finish as specified elsewhere). Quick Response Extended Coverage Horizontal Sidewall Sprinklers shall be Viking 8.0K Large Orifice SIN VK630 (Base Part Number 13500, Data Page 80a). (No Substitutions Allowed.)

14. QREC LIGHT HAZARD ELO SPRINKLER

SPRINKLER 85A

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. Extended coverage pendent sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage quick response pendent sprinklers will have a chrome finish (or finish as specified elsewhere) and shall be installed in conformance with the manufacturer's installation guidelines. Quick response pendent sprinklers shall be cULus Listed and FM Approved for extended coverage application in Light Hazard occupancies. Extended coverage quick response pendent sprinklers shall have an extra-large orifice and an 11.2 nominal K Factor. Quick Response Extended Coverage Light Hazard (ECLH) Extra-Large Orifice Sprinklers (formerly Model M) shall be Viking SIN VK608 (Base Part Number 08339).

15. QREC LIGHT HAZARD ELO FUSIBLE ELEMENT SPRINKLER

SPRINKLER 85H

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. Extended coverage pendent sprinklers shall have a quick response metal type fusible element. Extended coverage quick response pendent sprinklers will have a chrome finish (or finish as specified elsewhere) and shall be installed in conformance with the manufacturer's installation guidelines. Quick response pendent sprinklers shall be cULus Listed and FM Approved for extended coverage application in Light Hazard occupancies. Extended coverage quick response pendent sprinklers shall have an extra-large orifice and an 11.2 nominal K Factor. Quick Response Extended Coverage Light Hazard (ECLH) Extra-Large Orifice Fusible Element Sprinklers shall be Viking SIN VK617 (Base Part Number 14141).

16. QREC ORDINARY HAZARD ELO PENDENT SPRINKLER**SPRINKLER 83A**

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. Extended coverage pendent sprinklers shall have a quick response frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage quick response pendent sprinklers will have a chrome finish (or finish as specified elsewhere) and shall be installed in conformance with the manufacturer's installation guidelines. Quick response pendent sprinklers shall be cULus Listed for extended coverage application in Ordinary Hazard occupancies. Extended coverage quick response pendent sprinklers shall have an extra-large orifice and an 11.2 nominal K Factor. Quick Response Extended Coverage Ordinary Hazard (ECOH) Extra-Large Orifice Sprinklers (formerly Model M) shall be Viking SIN VK534 (Base Part Number 08340).

17. QREC ORDINARY HAZARD FUSIBLE ELEMENT ELO PENDENT SPRINKLER**SPRINKLER****830**

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. Extended coverage pendent sprinklers shall have a quick response metal type fusible element. Extended coverage quick response pendent sprinklers will have a chrome finish (or finish as specified elsewhere) and shall be installed in conformance with the manufacturer's installation guidelines. Quick response pendent sprinklers shall be cULus Listed for extended coverage application in Ordinary Hazard occupancies. Extended coverage quick response pendent sprinklers shall have an extra-large orifice and an 11.2 nominal K Factor. Quick Response Extended Coverage Ordinary Hazard (ECOH) Extra-Large Orifice Sprinklers shall be Viking SIN VK537 (Base Part Number 14611).

18. MICROFAST QREC HSW (SPECIAL APPLICATION) SPRINKLER**SPRINKLER 82A & 91A**

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. Sidewall sprinklers shall have a quick response frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sidewall sprinklers installed below a ceiling shall have a chrome finish (or finish as specified elsewhere). Quick response horizontal sidewall sprinklers shall be listed for installation at peak throwing down sloped ceilings up to and including 4/12 pitch or 18.4 degrees. Horizontal sidewall sprinklers shall be cULus Listed for coverage of 16' x 16', 16' x 18', 16' x 20' (width by length) in Light Hazard occupancies. Sidewall sprinklers shall have a 1/2" NPT with a nominal K Factor of 5.6 and a stepped orifice, or a 3/4" NPT with a nominal K Factor of 8.0. Quick Response Extended Coverage Horizontal Sidewall (Specific Application) Sprinklers (formerly Model M/M-5) shall be Viking 5.6 K Standard Orifice SIN VK605 (Base Part Number 12120, Data Page 91a), SIN VK609 (fusible element Base Part Number 13971, Data Page 91h), or 8.0K Large Orifice SIN VK606 (Base Part Number 09758, Data Page 82a).

C. HP Extended Coverage Sprinklers**19. MICROFAST HP EC HIGH PRESSURE PENDENT SPRINKLER****SPRINKLER 90E**

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. Sprinklers shall have a frangible bulb type fusible element. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage HP sprinklers shall have a chrome finish (or finish as specified elsewhere). Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extended coverage high-pressure pendent sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. High-pressure pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage High Pressure Pendent Sprinklers (formerly Model M-5) shall be Viking SIN VK610 (Base Part Number 12294).

20. HP EC HIGH PRESSURE FUSIBLE ELEMENT PENDENT SPRINKLER**SPRINKLER 90V**

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. Sprinklers shall have a metal type fusible element. Extended coverage HP sprinklers shall have a chrome finish (or finish as specified elsewhere). Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extended coverage high-pressure pendent sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. High-pressure pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage High Pressure Pendent Sprinklers shall be Viking SIN VK611 (Base Part Number 13972).

21. MICROFAST HP EC HIGH PRESSURE HSW SPRINKLER**SPRINKLER 91A**

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 frangible bulb fusible element and 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. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Extended coverage HP horizontal sidewall sprinklers shall have a chrome finish (or finish as specified elsewhere). Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, a nominal K Factor of 5.6, and a working pressure of not less than 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be cULus Listed for coverage of 16' x 16', 16' x 18', 16' x 20' (width by length) in Light Hazard occupancies. Horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extended Coverage High Pressure Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking SIN VK612 (Base Part Number 12295).

21A. COCOON**SPRINKLER 91A**

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Extended Coverage High Pressure (HP) Commercial Cocoon Horizontal Sidewall Sprinkler (formerly Model M-5) shall be Viking Base Part Number 12295--K (SIN VK612).

22. HP EC HIGH PRESSURE FUSIBLE ELEMENT HSW SPRINKLER**SPRINKLER 91H**

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 type fusible element and 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. Extended coverage HP horizontal sidewall sprinklers shall have a chrome finish (or finish as specified elsewhere). Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, a nominal K Factor of 5.6, and a working pressure of not less than 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be cULus Listed for coverage of 16' x 16', 16' x 18', 16' x 20' (width by length) in Light Hazard occupancies. Horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extended Coverage High Pressure Fusible Element Horizontal Sidewall Sprinklers SIN VK612 (Base Part Number 13973).

23. MICROFAST HP QREC HIGH PRESSURE PENDENT SPRINKLER**SPRINKLER 90E**

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. Sprinklers shall have a frangible bulb type fusible element. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Quick response pendent sprinklers shall be cULus Listed for coverage of 16' x 16', 18' x 18', 20' x 20' (width by length) in Light Hazard occupancies. Quick response extended coverage high-pressure pendent sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Quick Response Extended Coverage High Pressure Pendent Sprinklers (formerly Model M-5) shall be Viking SIN VK610 (Base Part Number 12294).

24. HP QREC HIGH PRESSURE FUSIBLE ELEMENT PENDENT SPRINKLER SPRINKLER 90V

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. Sprinklers shall have a metal type fusible element. Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Quick response pendent sprinklers shall be cULus Listed for coverage of 16' x 16', 18' x 18', 20' x 20' (width by length) in Light Hazard occupancies. Quick response extended coverage high-pressure pendent sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Quick Response Extended Coverage High Pressure Fusible Element Pendent Sprinklers shall be Viking SIN VK611 (Base Part Number 13972).

25. MICROFAST HP QREC HIGH PRESSURE HSW SPRINKLER SPRINKLER 91A

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 shall have a frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Microfast QREC HP HSW sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be listed for coverage of 16' x 16', 16' x 18', 16' x 20' (width by length) in Light Hazard occupancies. Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Sprinklers shall be finished horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Quick Response Extended Coverage High Pressure Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking SIN VK612 (Base Part Number 12295).

25A. COCOON SPRINKLER 91A

The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Quick Response Extended Coverage High Pressure (HP) Commercial Cocoon Horizontal Sidewall Sprinkler (formerly Model M-5) shall be Viking Base Part Number 12295--K (SIN VK612).

26. HP QREC HIGH PRESSURE FUSIBLE ELEMENT HSW SPRINKLER SPRINKLER 91H

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 shall have a metal type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. Microfast QREC HP HSW sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a working pressure of not less than 250 PSI (17 BAR). Horizontal sidewall sprinklers shall be listed for coverage of 16' x 16', 16' x 18', 16' x 20' (width by length) in Light Hazard occupancies. Sprinklers shall have a 1/2" NPT, a standard orifice, a stepped orifice, and a nominal K Factor of 5.6. Sprinklers shall be finished horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Quick Response Extended Coverage High Pressure Fusible Element Horizontal Sidewall Sprinklers shall be Viking SIN VK613 (Base Part Number 13973).

27. HP QREC 300 PSI HIGH PRESSURE HSW SPRINKLER SPRINKLER 84A

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 shall have a frangible bulb type fusible element. Sidewall sprinklers subject to corrosive atmospheres shall have a factory applied corrosion resistant coating. QREC HP HSW sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a working pressure of not less than 300 PSI (20.7 BAR). Horizontal sidewall sprinklers shall be listed for coverage of **16' x 16', 16' x 18', 16' x 20'** (width by length) in Light Hazard occupancies. Sprinklers shall have a 3/4" NPT, a large orifice, and a nominal K Factor of 8.0. Sprinklers shall be finished horizontal sidewall sprinklers with an adjustable semi-recessed escutcheon of same specified finish. Quick Response Extended Coverage 300 PSI High Pressure Horizontal Sidewall Sprinklers shall be Viking SIN VK631 (Base Part Number 16112).

D. Extended Coverage Concealed Sprinklers

28. EC LIGHT HAZARD ELO CONCEALED PENDENT SPRINKLER

SPRINKLER 86A

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 frangible bulb type fusible element and 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. Extended coverage concealed pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Extra-large orifice pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended coverage extra-large orifice concealed pendent sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". ECLH ELO concealed sprinklers shall have a chrome finish cover plate (or finish as specified elsewhere). Extended Coverage Light Hazard Extra-Large Orifice (ECLH-ELO) Concealed Pendent Sprinklers shall be Viking SIN VK618 (Base Part Number 08339A-X).

29. EC DOMED CONCEALED PENDENT SPRINKLER

SPRINKLER 88A

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 frangible bulb type fusible element and 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. Extended coverage concealed pendent sprinklers shall have a 1/2" NPT and standard orifice with a nominal K Factor of 5.6, or a 3/4" NPT and large orifice with a nominal K Factor of 8.0. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Extended coverage domed concealed pendent sprinklers shall have a chrome finish cover plate (or finish as specified elsewhere). Concealed pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage Sprinklers shall be Viking SIN VK614 5.6K Standard Orifice (Base Part Number 06778BA-X), or SIN VK616 8.0K Large Orifice (Base Part Number 07077A-X).

30. QREC CONCEALED PENDENT SPRINKLER

SPRINKLER 92A

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. Concealed sprinklers shall have a cover that is a push-on, thread-off assembly, with a 2-3/4" or 3-5/16" diameter. Concealed pendent sprinklers shall have a 1/2" or 3/4" NPT with a nominal K Factor of 5.6 or 8.0. Extended coverage quick response concealed pendent sprinklers shall be cULus Listed for Light Hazard occupancies. Quick response concealed pendent sprinklers shall be listed for extended coverage application. Quick Response Extended Coverage Concealed Sprinklers shall be Viking Mirage SIN VK632 5.6K Standard Orifice Base Part Number 14613A, or SIN VK634 8.0K Large Orifice Base Part Number 14535A. (No Substitutions Allowed).

31. QREC DOMED CONCEALED PENDENT SPRINKLER

SPRINKLER 88A

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 frangible bulb type fusible element and 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. Quick Response Extended coverage concealed pendent sprinklers shall have a 1/2" NPT and standard orifice with a nominal K Factor of 5.6, or a 3/4" NPT and large orifice with a nominal K Factor of 8.0. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The cover plate will have a chrome finish (or finish as specified elsewhere). Quick Response concealed pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Quick Response Extended Coverage Sprinklers shall be Viking SIN VK614 5.6K Standard Orifice Base Part Number 06778BA-X, or SIN VK616 8.0K Large Orifice Base Part Number 07077A-X.

32. QREC LIGHT HAZARD ELO CONCEALED SPRINKLER**SPRINKLER 89A**

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 type fusible element and 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. Quick response extended coverage concealed pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response extra-large orifice pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Quick response extended coverage extra-large orifice concealed pendent sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. The concealed pendent sprinkler shall be installed with a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-5/16". The cover plate for the sprinkler will have a chrome finish (or finish as specified elsewhere). Quick Response Extended Coverage Light Hazard Extra-Large Orifice (ECLH-ELO) Concealed Pendent Sprinklers shall be Viking SIN VK636 (Base Part Number 16102A).

33. QREC LIGHT HAZARD ELO DOMED CONCEALED SPRINKLER**SPRINKLER 86A**

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 frangible bulb type fusible element and 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. Quick Response Extended coverage concealed pendent sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response extra-large orifice pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Quick Response extended coverage extra-large orifice concealed pendent sprinklers shall have a 3/4" NPT, an extra-large orifice, and a nominal K Factor of 11.2. The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The cover plate for the sprinkler will have a chrome finish (or finish as specified elsewhere). Quick Response Extended Coverage Light Hazard Extra-Large Orifice (ECLH-ELO) Concealed Pendent Sprinklers shall be Viking SIN VK618 (Base Part Number 08339A-X).

34. QREC CONCEALED HSW SPRINKLER**SPRINKLER 87H**

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. Concealed sidewall sprinklers shall have a quick response frangible bulb type fusible element. Quick response concealed horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Quick response concealed horizontal sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. Sprinkler shall have a 3/4" NPT with a nominal K Factor of 8.0 (sprinkler VK630). Concealed cover plate shall be a push-on, thread-off style. (Concealed Cover Plate shall be part number 13051.) Concealed horizontal sidewall large orifice sprinklers shall be listed for coverage of 14 x 24, 14 x 26, 16' x 16', 16' x 18', 16' x 20', 16 x 22, 16 x 24, 18 x 18, 18 x 20 and 18 x 22 (width by length). Sprinklers shall be brass finish with an adjustable push-on, thread-off style concealed cover plate with white finish (or finish as specified elsewhere). Quick Response Extended Coverage Concealed Horizontal Sidewall Sprinklers shall be Viking 8.0K Large Orifice SIN VK630 (Base Part Number 13500A-X, Data Page 87e). (No Substitutions Allowed.)

35. HP QREC 300 PSI HIGH PRESSURE CONCEALED HSW SPRINKLER**SPRINKLER 84H**

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 shall have a frangible bulb type fusible element. QREC HP HSW sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response horizontal sidewall sprinklers shall be installed in conformance with the manufacturer's installation guidelines. Sprinklers shall have a working pressure of not less than 300 PSI (20.7 BAR). Horizontal sidewall sprinklers shall be listed for coverage of 14 x 24, 14 x 26, 16' x 16', 16' x 18', 16' x 20', 16 x 22, 16 x 24, 18 x 18, 18 x 20 and 18 x 22 (width by length) in Light Hazard occupancies. Sprinklers shall have a 3/4" NPT, a large orifice, and a nominal K Factor of 8.0. The concealed sidewall sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Sprinklers shall have a chrome finish cover plate (or finish as specified elsewhere). Quick Response Extended Coverage 300 PSI High Pressure Concealed Horizontal Sidewall Sprinklers shall be Viking SIN VK631 (Base Part Number 16112A-X).

VIKING PRODUCT SPECIFICATIONS

Dry Sprinklers

A. Standard Response Dry Sprinklers

1. Standard Response Dry Pendent Sprinkler
2. Standard Response Large Orifice Dry Pendent Sprinkler
3. Standard Response Dry Upright Sprinkler
4. Standard Response Stainless Steel Dry Pendent Sprinkler
5. Standard Response Large Orifice Stainless Steel Dry Pendent Sprinkler
6. Standard Response Dry HSW Sprinkler
7. Standard Response Dry Vertical Sidewall Sprinkler
8. Standard Response Dry Pendent Concealed Sprinkler

B. Quick Response Dry Sprinklers

9. QR Dry Pendent Sprinkler
10. QR Large Orifice Dry Pendent Fusible Element Sprinkler
11. QR Dry HSW Sprinkler
12. QR Ordinary Hazard Dry HSW Fusible Link Sprinkler
13. QR Dry Upright Sprinkler
14. QR Dry Pendent Concealed Sprinkler

C. Extended Coverage Dry Sprinklers

15. QREC Dry Pendent Sprinkler
16. SREC Dry Pendent Sprinkler
17. QREC Dry HSW Sprinkler
18. SREC Dry HSW Sprinkler
19. EC Dry Pendent Concealed Sprinkler

A. Standard Response Dry Sprinklers

1. STANDARD RESPONSE DRY PENDENT SPRINKLER

SPRINKLER 101A

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. 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. Standard response dry pendent sprinklers shall have a 5 mm frangible bulb type fusible element. Dry pendent sprinklers shall have a 1" NPT and a standard orifice with a nominal K Factor of 5.6. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. The dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). Dry pendent sprinklers shall be cULus Listed or FM Approved. Dry pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Dry Pendent Sprinklers (formerly Model M) are to be Viking Dry Pendent SIN VK150 (Plain Barrel), SIN VK154 (Adjustable Standard), or SIN VK158 (Adjustable Recessed).

2. STANDARD RESPONSE LARGE ORIFICE DRY PENDENT SPRINKLER

SPRINKLER 101A

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. 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. The standard response dry pendent sprinklers shall have a 5 mm frangible bulb type fusible element. Dry pendent sprinklers shall have a 1" NPT, a large orifice, and a nominal K Factor that varies with length. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. The standard response large orifice dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). Dry pendent sprinklers shall be cULus Listed. Large orifice dry pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Large Orifice Dry Pendent Sprinklers (formerly Model M) shall be Viking SIN VK163 (Adjustable Standard), SIN VK164 (Adjustable Recessed), or SIN VK166 (Plain Barrel).

3. STANDARD RESPONSE DRY UPRIGHT SPRINKLER

SPRINKLER 101E

Fire sprinklers required to be of the dry upright type shall be of the same manufacturer throughout the building. 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 upright barrel shall be of steel construction with an electro-deposited epoxy base coating. The standard response dry upright sprinklers shall have a standard brass finish (or finish as specified elsewhere). Dry upright sprinklers shall have a 5 mm frangible bulb type fusible element. Dry uprights shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of dry upright sprinklers shall be in conformance with the manufacturer's installation guidelines. Dry upright sprinklers shall be cULus Listed or FM Approved. Dry upright sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Dry Upright Sprinklers (formerly Model M) shall be Viking Dry Upright SIN VK160 (Plain Barrel).

4. STAINLESS STEEL DRY PENDENT SPRINKLER

SPRINKLER 101W

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. Sprinklers shall be of all stainless steel 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. Dry pendent stainless steel sprinklers shall have a 5 mm frangible bulb type fusible element and a natural stainless steel finish. Dry pendent sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Use of dry pendent stainless steel sprinklers shall be based on approval by the local authority having jurisdiction (Viking stainless steel dry pendent sprinklers carry no cULus Listing or FM Approval). Large Orifice Stainless Steel Dry Pendent Sprinklers (formerly Model M) shall be Viking SIN VK168 (Plain Barrel) or SIN VK169 (Adjustable Recessed).

5. LARGE ORIFICE STAINLESS STEEL DRY PENDENT SPRINKLER**SPRINKLER 101w**

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. Sprinklers shall be of all stainless steel 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. Dry pendent stainless steel sprinklers shall have a 5 mm frangible bulb type fusible element and a natural stainless steel finish. Dry pendent sprinklers shall have a 1" NPT, a large orifice, and a nominal K Factor that varies with length. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Use of dry pendent stainless steel sprinklers shall be based on approval by the local authority having jurisdiction (Viking Stainless Steel Dry Pendent Sprinklers carry no cULus Listing or FM Approval). Large Orifice Stainless Steel Dry Pendent Sprinklers (formerly Model M) shall be Viking SIN VK170 (Adjustable Recessed).

6. STANDARD RESPONSE DRY HORIZONTAL SIDEWALL SPRINKLER**SPRINKLER 102A**

Fire sprinklers required to be of the dry horizontal sidewall type shall be of the same manufacturer throughout the building. 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 horizontal sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Dry horizontal sidewall sprinklers shall have a 5 mm frangible bulb type fusible element. Dry horizontal sidewall sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. Standard response dry horizontal sprinklers shall have a chrome finish (or finish as specified elsewhere). The installation of dry horizontal sidewall sprinklers shall be in conformance with the manufacturer's installation guidelines. Dry horizontal sidewall sprinklers shall be cULus Listed or FM Approved for Light Hazard occupancies. Dry Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK152 (Plain Barrel), SIN VK156 (Adjustable Standard), or SIN VK162 (Adjustable Recessed).

7. STANDARD RESPONSE DRY VERTICAL SIDEWALL SPRINKLER**SPRINKLER 103A**

Fire sprinklers required to be of the dry vertical sidewall type shall be of the same manufacturer throughout the building. 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 vertical sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Dry vertical sidewall shall have a 5 mm frangible bulb type fusible element. Dry vertical sidewall shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of dry vertical sidewall sprinklers shall be in conformance with the manufacturer's installation guidelines. Standard response dry vertical sidewall sprinklers installed below a ceiling shall have a chrome finish (or finish as specified elsewhere). Use of dry vertical sidewall sprinklers shall be based on approval by the local authority having jurisdiction (Viking Dry Vertical Sidewall Sprinklers carry no cULus Listing or FM Approval). Dry Vertical Sidewall Sprinklers (formerly Model M) shall be Viking Dry Vertical Sidewall (Plain Barrel SIN VK153, Adjustable Standard SIN VK157, or Adjustable Recessed SIN VK161).

8. STANDARD RESPONSE DRY PENDENT CONCEALED SPRINKLER**SPRINKLER 104A**

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. 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. Standard response dry pendent sprinklers shall have a 5 mm frangible bulb type fusible element. Dry pendent sprinklers shall have a 1" NPT and a standard orifice with a nominal K Factor of 5.6 or large orifice with a nominal K Factor between 6.8 and 8.0, depending on the length. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. The dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Cover plates shall be chrome finish (or finish as specified elsewhere). Dry pendent sprinklers shall be cULus Listed or FM Approved. Dry Pendent Sprinklers (formerly Model M) are to be Viking Dry Pendent SIN VK190 (Standard Orifice) or SIN VK192 (Large Orifice).

B. Quick Response Dry Sprinklers

9. QUICK RESPONSE DRY PENDENT SPRINKLER

SPRINKLER 105A

Fire sprinklers required to be of the quick response dry pendent type shall be of the same manufacturer throughout the building. 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. Quick response dry pendent barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response dry pendent sprinklers shall have a 3 mm frangible bulb type fusible element. Quick response dry pendent sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of quick response dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Quick response dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response dry pendent sprinklers shall be cULus Listed. Quick response dry pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Dry Pendent Sprinklers (formerly Model M) shall be Viking SIN VK172 (Plain Barrel), SIN VK176 (Adjustable Standard), or SIN VK180 (Adjustable Recessed).

10. QR LARGE ORIFICE DRY PENDENT FUSIBLE ELEMENT SPRINKLER

SPRINKLER 105P

Fire sprinklers required to be of the quick response dry pendent type shall be of the same manufacturer throughout the building. 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. Quick response dry pendent barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response dry pendent sprinklers shall have a metal type fusible element. Quick response dry pendent sprinklers shall have a 1" NPT, a large orifice, and a nominal K Factor that varies with length. The installation of quick response large orifice dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Quick response dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). Quick response dry pendent sprinklers shall be cULus Listed. Large orifice dry pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Large Orifice Dry Pendent Fusible Link Sprinklers shall be Viking SIN VK282 (Plain Barrel), SIN VK286 (Adjustable Standard), or SIN VK290 (Adjustable Recessed).

11. QUICK RESPONSE DRY HORIZONTAL SIDEWALL SPRINKLER

SPRINKLER 106A

Fire sprinklers required to be of the quick response dry horizontal sidewall type shall be of the same manufacturer throughout the building. 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. Quick response dry horizontal sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response dry horizontal sidewall sprinklers shall have a 3 mm frangible bulb type fusible element. Quick response dry horizontal sidewall sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of quick response dry horizontal sidewall sprinklers shall be in conformance with manufacturer's installation guidelines. Quick response dry horizontal sidewall sprinklers installed below a ceiling shall have a chrome finish and matching finish escutcheon plate (or finish as specified elsewhere). Quick response dry horizontal sidewall sprinklers shall be cULus Listed for Light Hazard occupancies. Quick Response Dry Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK174 (Plain Barrel), SIN VK178 (Adjustable Standard), or SIN VK182 (Adjustable Recessed).

12. QR ORDINARY HAZARD DRY HSW FUSIBLE LINK SPRINKLER

SPRINKLER 107H

Fire sprinklers required to be of the quick response dry horizontal sidewall type shall be of the same manufacturer throughout the building. 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. Quick response dry horizontal sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response dry horizontal sidewall sprinklers shall have a metal type fusible element. Quick response dry horizontal sidewall sprinklers shall have a 1" NPT, a large orifice, and a nominal K Factor that varies with length. The installation of quick response ordinary hazard dry horizontal sidewall sprinklers shall be in conformance with manufacturer's installation guidelines. Quick response dry horizontal sidewall sprinklers installed below a ceiling shall have a chrome finish and matching finish escutcheon plate (or finish as specified elsewhere). Quick response ordinary hazard dry horizontal sidewall sprinklers shall be cULus Listed. Quick response dry horizontal sidewall sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Ordinary Hazard Dry HSW Fusible Link Sprinklers shall be Viking SIN VK284 (Plain Barrel), SIN VK288 (Adjustable Standard), or SIN VK292 (Adjustable Recessed).

13. QUICK RESPONSE DRY UPRIGHT SPRINKLER**SPRINKLER 107A**

Fire sprinklers required to be of the quick response dry upright type shall be of the same manufacturer throughout the building. 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. Quick response dry upright barrel shall be of steel construction with an electro-deposited epoxy base coating with a chrome plated escutcheon and a natural brass finish sprinkler. Quick response dry upright sprinklers shall have a 3 mm frangible bulb type fusible element. Quick response dry uprights shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The installation of quick response dry upright sprinklers shall be in conformance with the manufacturer's installation guidelines. Quick response dry upright sprinklers shall be cULus Listed. Quick response dry upright sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Quick Response Dry Upright Sprinklers (formerly Model M) shall be Viking SIN VK184.

14. QR DRY PENDENT CONCEALED SPRINKLER**SPRINKLER 104J**

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. 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. Quick response dry pendent sprinklers shall have a 3 mm frangible bulb type fusible element. Dry pendent sprinklers shall have a 1" NPT and a standard orifice with a nominal K Factor of 5.6. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. The dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Concealed pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy if installed in an Ordinary Hazard occupancy. Cover plates shall be chrome finish (or finish as specified elsewhere). Dry pendent sprinklers shall be cULus Listed or FM Approved. QR Dry Pendent Concealed Sprinklers (formerly Model M) are to be Viking Dry Pendent SIN VK194.

C. Extended Coverage Dry Sprinklers**15. QUICK RESPONSE EXTENDED COVERAGE DRY PENDENT SPRINKLER
108A****SPRINKLER**

Fire sprinklers of the quick response extended coverage dry pendent type shall be of the same manufacturer throughout the building. 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. Quick response extended coverage dry pendent barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response extended coverage dry pendent sprinklers shall have a 3 mm frangible bulb type fusible element. Quick response extended coverage dry pendent sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The quick response extended coverage dry pendent sprinklers shall have a chrome finish with matching finish recessed escutcheon (or finish as specified elsewhere). The installation of quick response extended coverage dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Extended coverage dry pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Quick Response Extended Coverage Dry Pendent Sprinklers (formerly Model M) shall be Viking SIN VK186, Base Part Number 10541 (Adjustable Recessed).

16. STANDARD RESPONSE EXTENDED COVERAGE DRY PENDENT SPRINKLER SPRINKLER 108A

Fire sprinklers of the extended coverage dry pendent type shall be of the same manufacturer throughout the building. 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. Extended coverage dry pendent barrel shall be of steel construction with an electro-deposited epoxy base coating. Extended coverage dry pendent sprinklers shall have a 3 mm frangible bulb type fusible element. Extended coverage dry pendent sprinklers shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The standard response extended coverage dry pendent sprinklers shall have a chrome finish with matching finish recessed escutcheon (or finish as specified elsewhere). The installation of extended coverage dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. Extended coverage dry pendent sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage Dry Pendent Standard Response Sprinklers (formerly Model M) shall be Viking SIN VK186, Base Part Number 10541 (Adjustable Recessed).

17. QUICK RESPONSE EXTENDED COVERAGE DRY HSW SPRINKLER**SPRINKLER 109A**

Fire sprinklers of the quick response extended coverage dry horizontal sidewall type shall be of the same manufacturer throughout the building. 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. Quick response extended coverage dry horizontal sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Quick response extended coverage dry horizontal sidewall shall have a 3 mm frangible bulb type fusible element. Quick response extended coverage dry horizontal sidewall shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The quick response extended coverage dry horizontal sprinklers shall have a chrome finish with matching finish recessed escutcheon (or finish as specified elsewhere). The installation of quick response extended coverage dry horizontal sidewall sprinklers shall be in conformance with manufacturer's installation guidelines. Extended coverage dry horizontal sidewall sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Quick Response Extended Coverage Dry Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK188, Base Part Number 10542 (Adjustable Recessed).

18. STANDARD RESPONSE EXTENDED COVERAGE DRY HSW SPRINKLER**SPRINKLER 109A**

Fire sprinklers of the extended coverage dry horizontal sidewall type shall be of the same manufacturer throughout the building. 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. Extended coverage dry horizontal sidewall barrel shall be of steel construction with an electro-deposited epoxy base coating. Extended coverage dry horizontal sidewall shall have a 3 mm frangible bulb type fusible element. Extended coverage dry horizontal sidewall shall have a 1" NPT, a standard orifice, and a nominal K Factor of 5.6. The standard response extended coverage dry pendent sprinklers shall have a chrome finish with matching finish recessed escutcheon (or finish as specified elsewhere). The installation of extended coverage dry horizontal sidewall sprinklers shall be in conformance with manufacturer's installation guidelines. Extended coverage dry horizontal sidewall sprinklers shall be cULus Listed for extended coverage application in Light Hazard occupancies. Extended Coverage Dry Horizontal Sidewall Sprinklers (formerly Model M) shall be Viking SIN VK188, Base Part Number 10542 (Adjustable Recessed).

19. EC DRY PENDENT CONCEALED SPRINKLER**SPRINKLER 108J**

Fire sprinklers required to be of the dry pendent type shall be of the same manufacturer throughout the building. 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. Dry pendent sprinklers shall have a 3 mm frangible bulb type fusible element. Dry pendent sprinklers shall have a 1" NPT and a standard orifice with a nominal K Factor of 5.6. The installation of dry pendent sprinklers shall be in conformance with the manufacturer's installation guidelines. The dry pendent sprinklers shall have a chrome finish (or finish as specified elsewhere). The concealed pendent sprinkler shall be installed with an adapter and a push-on, pull-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". Cover plates shall be chrome finish (or finish as specified elsewhere). Dry pendent sprinklers shall be cULus Listed. EC Dry Pendent Concealed Sprinklers (formerly Model M) are to be Viking Dry Pendent SIN VK196.

VIKING PRODUCT SPECIFICATIONS

Institutional Sprinklers

A. Institutional Sprinklers

1. QR Institutional Pendent Sprinkler
2. QREC Institutional Pendent Sprinkler
3. QR Institutional HSW Sprinkler

A. Institutional Sprinklers

1. QR INSTITUTIONAL STYLE FLUSH PENDENT SPRINKLER

SPRINKLER 126A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass body 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. Quick response institutional pendent sprinklers shall have a standard orifice with a nominal K Factor of 5.6. Quick response institutional pendent sprinklers shall incorporate a lock ring and chrome finish escutcheon that mount to the threaded sprinkler body at the finished ceiling. Quick response institutional pendent sprinklers shall have a maximum adjustment of 1/4". Quick response institutional pendent sprinklers shall be cULus Listed. Quick response institutional flush pendent sprinklers shall be listed for installation in an Ordinary Hazard occupancy, if installed in an Ordinary Hazard occupancy. Quick Response Institutional Flush Pendent Sprinklers (formerly Model HQR-2) shall be Viking SIN VK410 (Base Part Number 10554).

2. QR EC INSTITUTIONAL STYLE FLUSH PENDENT SPRINKLER

SPRINKLER 126A

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass body 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. Quick response institutional extended coverage pendent sprinklers shall have a standard orifice with a nominal K Factor of 5.6. Quick response institutional extended coverage pendent sprinklers shall incorporate a lock ring and chrome finish escutcheon that mount to the threaded body at the finished ceiling. Quick response institutional extended coverage pendent sprinklers shall have a maximum adjustment of 1/4". Quick response institutional extended coverage pendent sprinklers shall be cULus Listed for coverage of 16' x 16' in Light Hazard occupancies. Quick Response Institutional Extended Coverage Flush Pendent Sprinklers (formerly Model HQR-2) shall be Viking SIN VK410 (Base Part Number 10554).

3. QR INSTITUTIONAL STYLE FLUSH SIDEWALL SPRINKLER

SPRINKLER 126K

Fire sprinklers shall be of one manufacturer throughout the building. No mixing of sprinkler brands shall be permitted. Sprinklers shall be of all brass body 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. Quick response institutional sidewall sprinklers shall have a standard orifice with a nominal K Factor of 5.6. Quick response institutional sidewall sprinklers shall incorporate a lock ring and chrome finish escutcheon that mount to the threaded sprinkler body at the finished wall. Sidewall institutional sprinklers shall be equipped with a brass retaining flange that is to be installed on the sprinkler head supply pipe to prevent forward movement of sprinkler head. Quick response institutional sidewall sprinklers shall be installed so that the body of the sprinkler does not protrude past the sprinkler escutcheon. Quick response institutional sidewall sprinklers shall be cULus Listed for use in Light Hazard occupancies. Quick Response Institutional Flush Sidewall Sprinklers (formerly Model HQR-2) shall be Viking SIN VK412 (Base Part Number 10579).

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 cULus 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 cULus 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 cULus listed quick response sprinkler as required per NFPA13 for installation in Light Hazard occupancy. Concealed pendent sprinklers shall be cULus listed for installation in Ordinary Hazard occupancy if installed in Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be cULus 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).

VIKING PRODUCT SPECIFICATIONS

Residential Sprinklers

A. Residential Pendent Sprinklers

1. Freedom Residential Pendent Sprinkler (3.1 K-Factor)
 - 1A. Cocoon
2. Freedom Residential Pendent Sprinkler (4.3 K-Factor)
 - 2A. Cocoon
3. Freedom Residential Pendent Sprinkler (4.9 K-Factor)
4. Freedom Residential Pendent Sprinkler (5.2 K-Factor)
5. Freedom Residential Pendent Sprinkler (5.5 K-Factor)
 - 5A. Cocoon
6. Freedom Residential Pendent Sprinkler (5.8 K-Factor)
7. Freedom Residential Pendent Sprinkler (7.4 K-Factor)

B. Residential Concealed Pendent Sprinklers

8. Freedom Residential Flush Pendent Sprinkler (4.9 K-Factor)
9. Freedom Residential Concealed Pendent Sprinkler (4.9 K-Factor)
10. Freedom Residential Concealed Pendent Sprinkler (4.9 K-Factor)
11. Freedom Residential Concealed Pendent Sprinkler (5.8 K-Factor)
12. Freedom Residential Domed Concealed Pendent Sprinkler (4.9 K-Factor)
13. Freedom Residential Domed Concealed Pendent Sprinkler (7.4 K-Factor)
14. Freedom Residential Domed Concealed Pendent Sprinkler (5.2 K-Factor)
15. Freedom Residential Concealed HSW Sprinkler (4.0 K-Factor)

C. Residential Horizontal Sidewall Sprinklers

16. Freedom Residential HSW Sprinkler (4.0 K-Factor)
17. Freedom Residential HSW Sprinkler (4.0 K-Factor)
18. Freedom Residential HSW Sprinkler (4.2 K-Factor)
19. Freedom Residential HSW Sprinkler (4.3 K-Factor)
 - 19A. Cocoon
20. Freedom Residential HSW Sprinkler (5.5 K-Factor)
 - 20A. Cocoon
21. Freedom Residential HSW Sprinkler (5.8 K-Factor)

D. Residential Sprinkler Extensions

22. Residential Sprinkler Extensions

A. Residential Pendent Sprinklers

1. FREEDOM™ RESIDENTIAL PENDENT SPRINKLER (3.1 K-FACTOR)

SPRINKLER 141H

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 3.1 a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 °F. Residential Pendent Sprinklers shall be Viking SIN VK435 (Base Part Number 13203). (No Substitutions Allowed).

2. FREEDOM™ RESIDENTIAL PENDENT SPRINKLER (4.3 K-FACTOR)

SPRINKLER 140A

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 4.3, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Where residential sprinklers are installed under sloped ceilings up to and including an 8/12 pitch (post July 12, 2002), they shall be listed for such use. Residential Pendent Sprinklers (formerly Model M-4) shall be Viking SIN VK430 (Base Part Number 09530). (No Substitutions Allowed).

2A. COCOON

SPRINKLER 140A

Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an E-1 adjustable semi-recessed escutcheon of the same specified finish. Sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Residential Pendent Sprinklers (formerly Model M-4) shall be Viking Cocoon Sprinkler Part Number 09530--K (SIN VK430). (No Substitutions Allowed).

3. FREEDOM RESIDENTIAL PENDENT SPRINKLER (4.9 K-FACTOR)

SPRINKLER 149M

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Residential sprinklers shall have a ½ " NPT, a nominal K Factor of 4.9, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 °F or 175°F. Where residential sprinklers are installed under sloped ceilings up to and including a 8/12 pitch, they must be listed for such use. Residential Pendent Sprinklers shall be Viking SIN VK468 (Base Part Number 13637). (No Substitutions Allowed).

4. FREEDOM RESIDENTIAL PENDENT SPRINKLER (5.2 K-FACTOR)

SPRINKLER 141J

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Residential sprinklers shall have a ½ " NPT, a nominal K Factor of 5.2, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 °F or 175°F. Where residential sprinklers are installed under sloped ceilings up to and including an 8/12 pitch, they must be listed for such use. Residential Pendent Sprinklers shall be Viking SIN VK466 (Base Part Number 13781). (No Substitutions Allowed).

5. FREEDOM™ RESIDENTIAL PENDENT SPRINKLER (5.5 K-FACTOR)

SPRINKLER 141A

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a 1/2" NPT, a nominal K Factor of 5.5, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Where residential sprinklers are installed under sloped ceilings up to and including an 8/12 pitch (post July 12, 2002), they shall be listed for such use. Residential Pendent Sprinklers (formerly Model M-5) shall be Viking SIN VK432 (Base Part Number 10050). (No Substitutions Allowed).

5A. COCOON**SPRINKLER 141A**

Sprinklers to be installed through a ceiling shall be chrome finish (or finish as specified elsewhere) pendent sprinklers with an E-1 adjustable semi-recessed escutcheon of same specified finish. Sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Residential Pendent Sprinklers (formerly Model M-5) shall be Viking Cocoon Sprinkler Part Number 10050--K (SIN VK432). (No Substitutions Allowed).

6. FREEDOM™ RESIDENTIAL PENDENT SPRINKLER (5.8 K-FACTOR)**SPRINKLER 148O**

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a 1/2" NPT, a nominal K Factor of 5.8, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Residential Pendent Sprinklers shall be Viking SIN VK472 (Base Part Number 16130). (No Substitutions Allowed).

7. FREEDOM™ RESIDENTIAL PENDENT SPRINKLER (7.4 K-FACTOR)**SPRINKLER 140U**

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a 3/4" NPT, a nominal K Factor of 7.4, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with an operating temperature of 155 or 175°F. Where residential sprinklers are installed under sloped ceilings up to and including an 8/12 pitch or horizontal ceilings with beams, they shall be listed for such use. Residential Pendent Sprinklers shall be Viking SIN VK458 (Base Part Number 13230). (No Substitutions Allowed).

B. Residential Flush and Concealed Pendent Sprinklers**8. FREEDOM RESIDENTIAL CONCEALED PENDENT SPRINKLER (5.8 K-FACTOR) SPRINKLER 148H**

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a fusible link type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 5.8, and shall be cULus Listed with an operating temperature of 165°F. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a 2-3/4" or 3-5/16" diameter. The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK474 (Base Part Number 15790AC). (No Substitutions Allowed).

9. FREEDOM RESIDENTIAL CONCEALED PENDENT SPRINKLER (4.9 K-FACTOR) SPRINKLER 147E

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a fusible link type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.9, and shall be cULus Listed with an operating temperature of 140°F. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a 2-3/4" or 3-5/16" diameter. The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK456 (Base Part Number 13620A-X). (No Substitutions Allowed).

10. FREEDOM RESIDENTIAL CONCEALED PENDENT SPRINKLER (4.9 K-FACTOR) SPRINKLER 147U

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a fusible link type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.9, and shall be cULus Listed with an operating temperature of 165°F.

The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a 2-3/4" or 3-5/16" diameter. The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK457 (Base Part Number 14694A-X). (No Substitutions Allowed).

11. FREEDOM RESIDENTIAL FLUSH PENDENT SPRINKLER (4.9 K-FACTOR) SPRINKLER 145H

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a fusible link type operating element and 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. Residential flush sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.9, and shall be cULus Listed with an operating temperature of 165°F. The flush pendent sprinkler shall be installed with a push-on ceiling ring with 5/8" of adjustment and a 3" diameter. The residential flush sprinkler will have a chrome finish ceiling ring (or finish as specified elsewhere). Residential Flush Pendent Sprinklers shall be Viking SIN VK476 (Base Part Number 15630-C). (No Substitutions Allowed).

12. FREEDOM RESIDENTIAL DOMED CONCEALED PENDENT SPRINKLER (4.9 K-FACTOR) 150U

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a frangible bulb type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.9, and shall be cULus Listed with an operating temperature of 155°F or 175°F. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK468 (Base Part Number 13637A). (No Substitutions Allowed).

13. FREEDOM™ RESIDENTIAL DOMED CONCEALED PENDENT SPRINKLER (7.4 K-FACTOR) 142U

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a frangible bulb type operating element and 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. Residential concealed sprinklers shall have a 3/4" NPT, a nominal K Factor of 7.4, and shall be cULus Listed with an operating temperature of 155°F. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK458 (Base Part Number 13230A). (No Substitutions Allowed).

14. FREEDOM RESIDENTIAL DOMED CONCEALED PENDENT SPRINKLER (5.2 K-FACTOR) 141R

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a frangible bulb type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 5.2, and shall be cULus Listed with an operating temperature of 155 °F or 175°F. The concealed pendent sprinkler shall be installed with an adapter and a push-on, thread-off cover assembly, with 1/2" of adjustment, and a cover diameter no greater than 3-1/8". The residential concealed sprinkler will have a chrome finish cover plate (or finish as specified elsewhere). Residential Concealed Pendent Sprinklers shall be Viking SIN VK466 (Base Part Number 13781A). (No Substitutions Allowed).

15. FREEDOM RESIDENTIAL CONCEALED HORIZONTAL SIDEWALL SPRINKLER (4.0 K-FACTOR) 153A

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction with a fusible link type operating element and 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. Residential concealed sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.0,

and shall be cULus Listed with an operating temperature of 165°F. The concealed sidewall sprinkler shall be installed with a push-on, thread-off cover assembly, with 1/4" of adjustment, and a 3-5/16" diameter. The residential concealed sprinkler will have a white painted cover plate (or finish as specified elsewhere). Residential Concealed Horizontal Sidewall Sprinklers shall be Viking SIN VK480 (Base Part Number 16116AC). (No Substitutions Allowed).

C. Residential Horizontal Sidewall Sprinklers

16. FREEDOM RESIDENTIAL HSW SPRINKLER (4.0 K-FACTOR)

SPRINKLER 143G

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 4.0, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Residential Horizontal Sidewall Sprinklers shall be Viking SIN VK452 (Base Part Number 13140). (No Substitutions Allowed).

17. FREEDOM RESIDENTIAL HSW SPRINKLER (4.0 K-FACTOR)

SPRINKLER 143V

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 4.0, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Residential Horizontal Sidewall Sprinklers shall be Viking SIN VK453 (Base Part Number 13389). (No Substitutions Allowed).

18. FREEDOM™ RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER (4.2 K-FACTOR)

143J

Fire sprinklers installed in the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a 1/2" NPT, a nominal K Factor of 4.2, chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Where residential sprinklers are installed in the horizontal sidewall position under sloped ceilings up to and including an 8/12 pitch, they shall be listed for such use. Residential Horizontal Sidewall Sprinklers shall be Viking SIN VK450 (Base Part Number 12357). (No Substitutions Allowed).

19. FREEDOM™ RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER (4.3 K-FACTOR)

142D

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 4.3, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Where residential sprinklers are installed in the horizontal sidewall position under sloped ceilings up to and including an 8/12 pitch (post July 12, 2002), they shall be listed for such use. Residential Horizontal Sidewall Sprinklers (formerly Model M-4) shall be Viking SIN VK440 (Base Part Number 09787). (No Substitutions Allowed).

19A. COCOON

SPRINKLER 142D

Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable E-1 semi-recessed escutcheon of same specified finish. Sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Residential Horizontal Sidewall Sprinklers (formerly Model M-4) shall be Viking Cocoon Sprinkler Part Number 09787--K (SIN VK440). (No Substitutions Allowed).

20. FREEDOM™ RESIDENTIAL HORIZONTAL SIDEWALL SPRINKLER (5.5 K-FACTOR)

146A

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Sprinklers shall be of all brass frame construction utilizing a frangible bulb heat element and 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. Residential horizontal sidewall sprinklers shall have a ½" NPT with a nominal K Factor of 5.5, chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Where residential sprinklers are installed in the horizontal sidewall position under sloped ceilings up to and including an 8/12 pitch (post July 12, 2002), they shall be listed for such use. Residential Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking SIN VK442 (Base Part Number 12119). (No Substitutions Allowed).

20A. COCOON

SPRINKLER 146A

Sprinklers shall be chrome finish (or finish as specified elsewhere) horizontal sidewall sprinklers with an adjustable E-1 semi-recessed escutcheon of same specified finish. The sprinkler shall be installed with the escutcheon adapter threaded onto the sprinkler, with three wraps of Teflon® tape, all protected during shipping, installation, dry-walling and painting with a plastic cap. Residential Horizontal Sidewall Sprinklers (formerly Model M-5) shall be Viking Cocoon Sprinkler Part Number 12119--K (SIN VK442). (No Substitutions Allowed).

21. FREEDOM RESIDENTIAL HSW SPRINKLER (5.8 K-FACTOR)

SPRINKLER 152A

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. Residential sprinklers shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. 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. Residential sprinklers shall have a ½" NPT, a nominal K Factor of 5.8, a chrome finish (or finish as specified elsewhere) and shall be cULus Listed with a temperature rating of 155 or 175°F. Residential Horizontal Sidewall Sprinklers shall be Viking SIN VK460 (Base Part Number 13933). (No Substitutions Allowed).

D. Residential Sprinkler Extensions

22. RESIDENTIAL SPRINKLER EXTENSIONS

SPRINKLER 137H

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinkler extensions shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard.

Residential sprinkler extensions shall have a ½" NPT inlet and outlet, for use with listed Viking residential sprinklers having a nominal K Factor of 5.5 or less. Residential Sprinkler Extension shall be Viking Part Number 14959 (1" length), 14960 (1-1/8" length), or 14961 (1-1/4" length). (No Substitutions Allowed).

VIKING PRODUCT SPECIFICATIONS

Spray Nozzles

A. Window Sprinklers

1. Window Sprinkler

B. Spray Nozzles

2. Solid Cone Spray Nozzle
3. Frame Style Spray Nozzle
4. Model E Spray Nozzle

A. Window Sprinklers

1. WINDOW SPRINKLER

SPRAY NOZZLE 11

Exposure protection of windows, walls, and roofs shall be accomplished by utilizing an automatic deluge system with automatic detection and an open window sprinklers. The sprinklers installed shall be listed and approved for such use. Sprinklers with a nominal orifice smaller than 3/8" will only be installed on systems equipped with an approved strainer. The window sprinklers will have a brass finish (or a finish as specified elsewhere). Window Sprinklers (formerly Model C-1) shall be the following Viking models:

SIN VK790 = 1/4" Orifice, 1.5 K, 1/2" NPT
SIN VK791 = 5/16" Orifice, 2.1K, 1/2" NPT
SIN VK792 = 3/8" Orifice, 3.0K, 1/2" NPT
SIN VK793 = 7/16" Orifice, 4.3K, 1/2" NPT
SIN VK794 = 1/2" Orifice, 5.8K, 1/2" NPT
SIN VK795 = 5/8" Orifice, 6.9K, 3/4" NPT
SIN VK796 = 3/4" Orifice, 7.7K, 3/4" NPT

B. Spray Nozzles

2. SOLID CONE SPRAY NOZZLE

SPRAY NOZZLE 21

Exposure protection of hazard shall be accomplished by utilizing an automatic deluge system with electric detection and open directional nozzles of all brass construction. The nozzles installed shall be cULus Listed and FM Approved for such use. Nozzles with a nominal orifice smaller than 3/8" will only be installed on systems equipped with an approved strainer. For corrosive environments, the spray nozzles shall be electroless nickel coated. Solid Cone Spray Nozzles shall be the following Viking Models:

Model A2

K=1.2 (1,7)	30°	VK740
K=1.2 (1,7)	60°	VK741
K=1.2 (1,7)	90°	VK742
K=1.4 (2,0)	120°	VK743
K=1.4 (2,0)	140°	VK744

Model A2X

K=2.0 (2,9)	30°	VK750
K=2.0 (2,9)	60°	VK751
K=2.0 (2,9)	90°	VK752
K=2.2 (3,2)	120°	VK753
K=2.2 (3,2)	140°	VK754

Model B2

K=2.8 (4,0)	30°	VK760
K=2.8 (4,0)	60°	VK761
K=2.8 (4,0)	90°	VK762
K=3.3 (4,8)	120°	VK763
K=3.3 (4,8)	140°	VK764

Model C2

K=3.4 (4,9)	30°	VK770
K=3.4 (4,9)	60°	VK771
K=3.8 (5,5)	90°	VK772
K=3.9 (5,6)	120°	VK773
K=3.9 (5,6)	140°	VK774

Model D2

K=4.7 (6,8)	30°	VK780
K=4.7 (6,8)	60°	VK781
K=5.0 (7,2)	90°	VK782
K=5.2 (7,5)	120°	VK783
K=5.2 (7,5)	140°	VK784

3. FRAME STYLE SPRAY NOZZLE

Spray Nozzle 31a

Exposure hazard shall be protected by an open or closed head directional nozzle. The nozzle installed shall be cULus Listed for such use. Spray nozzles that are of the closed type shall be of all brass frame construction with a metal Belleville spring seal, coated on both sides with Teflon film. Spray nozzles with non-metallic materials shall be strictly prohibited. Nozzles with a nominal orifice smaller than 3/8" will only be installed on systems equipped with an approved strainer. For corrosive environments, the spray nozzles shall be Teflon® coated. The directional nozzles (formerly Model M) shall be the following Viking models:

1/2" Orifice, 5.6 K-Factor

SIN VK700 = 60 Degrees Pattern
SIN VK701 = 90 Degrees Pattern,
SIN VK702 = 120 Degrees Pattern
SIN VK703 = 150 Degrees Pattern

7/16" Orifice, 4.2 K-Factor

SIN VK705 = 60 Degrees Pattern
SIN VK706 = 90 Degrees Pattern,
SIN VK707 = 120 Degrees Pattern
SIN VK708 = 150 Degrees Pattern

3/8" Orifice, 2.8 K-Factor

SIN VK710 = 60 Degrees Pattern
SIN VK711 = 90 Degrees Pattern,
SIN VK712 = 120 Degrees Pattern
SIN VK713 = 150 Degrees Pattern

5/16" Orifice, 1.9 K-Factor

SIN VK715 = 60 Degrees Pattern
SIN VK716 = 90 Degrees Pattern
SIN VK717 = 120 Degrees Pattern
SIN VK718 = 150 Degrees Pattern

1/4" Orifice, 1.4 K-Factor

SIN VK720 = 60 Degrees Pattern
SIN VK721 = 90 Degrees Pattern
SIN VK722 = 120 Degrees Pattern
SIN VK723 = 150 Degrees Pattern

4. MODEL E SPRAY NOZZLE

SPRAY NOZZLE 32A

Exposure hazard shall be protected by an open directional nozzle. The nozzle installed shall be cULus Listed and FM Approved for such use. Spray nozzles shall be of all brass frame construction. Spray nozzles with nonmetallic materials shall be strictly prohibited. Spray Nozzles shall have a nominal K Factor of 1.2, 1.8, 2.3, 3.2, 4.1, 5.6, or 7.2. Nozzles with a nominal orifice smaller than 3/8" will only be installed on systems equipped with an approved strainer. The directional nozzles shall be the following Viking models:

SIN VK810 = 65 Degrees Pattern
SIN VK811 = 80 Degrees Pattern
SIN VK812 = 95 Degrees Pattern
SIN VK813 = 110 Degrees Pattern
SIN VK814 = 125 Degrees Pattern
SIN VK815 = 140 Degrees Pattern
SIN VK816 = 160 Degrees Pattern
SIN VK817 = 180 Degrees Pattern

VIKING PRODUCT SPECIFICATIONS

Sprinkler Guards and Accessories

A. Sprinkler Guards

1. Model D-1 Sprinkler Head Guard (Factory Installed)
2. Model D-1 Sprinkler Head Guard (Field Installed)
3. Model B-1 and C-1 Sprinkler Water Shields and Guards
4. Model E-1 and F-1 Intermediate / In-Rack

B. Escutcheons

5. Model E-1 / F-1 Adjustable Escutcheon

C. Wrenches and Cabinets

6. Sprinkler Wrenches and Cabinets

D. Cleanroom Sprinkler Cover Assemblies

7. Concealed Sprinkler Cleanroom Covers

A. Sprinkler Guards

1. MODEL D-1 SPRINKLER HEAD GUARD (FACTORY INSTALLED)

SPRINKLER 130A

Sprinklers installed at 7'-6" or less above finished floor or are subject to mechanical damage shall be equipped with a cULus Listed and FM Approved head guard. Sprinkler head guard shall mount to the sprinkler head frame. Sprinkler head guard shall be of one single piece that does not require removal from sprinkler when changing of sprinkler is required. Sprinkler head guard shall be mounted on sprinkler by factory and arrive to job site installed onto the sprinkler. Sprinkler head guard to have a clear Chromate over Zinc Plating finish. Sprinkler guard shall be a Viking Model D-1 Sprinkler Head Guard.

2. MODEL D-1 SPRINKLER HEAD GUARD (FIELD INSTALLED)

SPRINKLER 130A

Sprinklers installed at 7'-6" or less above finished floor or are subject to mechanical damage shall be equipped with a cULus Listed and FM Approved head guard. Sprinkler head guard shall mount to the sprinkler head frame. Sprinkler head guard shall be of one single piece that does not require removal from sprinkler when changing of sprinkler is required. Sprinkler head guard shall be mounted on sprinkler in the field. Sprinkler head guard to have a clear Chromate over Zinc Plating finish. Sprinkler Guard shall be a Viking Model D-1 Sprinkler Head Guard.

3. MODEL B-1 AND C-1 SPRINKLER WATER SHIELDS AND GUARDS

SPRINKLER 130C

Fire sprinklers installed in storage racks shall be equipped with a listed sprinkler head guard with an integral water shield to protect the in-rack sprinkler fusible element from water spray by a sprinkler above it. Roof sprinklers subject to mechanical damage shall be equipped with a listed sprinkler head guard. 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. Sprinkler head guards shall be of the low-profile type and be of a chrome finish. Head guards shall be Viking Model B-1 when installed onto upright sprinklers and Viking Model C-1 when installed onto pendent sprinklers.

4. 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.

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

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

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

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

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

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

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

B. Escutcheons

5. MODEL E-1 / F-1 ADJUSTABLE ESCUTCHEON

SPRINKLER 135A

Pendent sprinklers installed through ceilings shall be equipped with two-piece adjustable escutcheons. Adjustable escutcheons shall be cULus Listed and FM Approved for use with the sprinkler head in which they are installed. Escutcheon finish to be chrome (finish as specified elsewhere). Adjustable escutcheons shall be installed in conformance with the manufacturer's installation guidelines. Adjustable escutcheons shall be Viking Model E-1, E-2, and Viking Model F-1 as they apply.

C. Wrenches and Cabinets

6. SPRINKLER WRENCHES AND CABINETS

SPRINKLER 133A

A sprinkler head wrench of each style and model installed shall be provided to the owner at the completion of the project. A representative sampling of each sprinkler head style and model shall be provided to the owner and housed in a sprinkler head cabinet at or near the sprinkler riser. The number of sprinkler heads provided to the owner shall be in accordance with NFPA 13. Sprinkler head wrenches and cabinets shall be manufactured by The Viking Corporation.

D. Cleanroom Sprinkler Cover Assemblies

7. 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 13642-/CR) 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 cULus listed quick response sprinkler as required per NFPA13 for installation in Light Hazard occupancy. Concealed pendent sprinklers shall be cULus listed for installation in Ordinary Hazard occupancy if installed in Ordinary Hazard occupancy. Concealed Pendent Sprinkler shall be cULus Listed Viking Mirage Sprinkler SIN VK462 (Base Part Number 13503A) with Cleanroom concealed cover plate with silicone cover Gasket (Base Part Number 13642-/CR). (No Substitutions Allowed).

E. Residential Sprinkler Extensions

8. RESIDENTIAL SPRINKLER EXTENSIONS

SPRINKLER 137H

Fire sprinklers installed within the residential occupancy shall be of a listed residential type. 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. Residential sprinkler extensions shall be installed in conformance with the manufacturer's installation guidelines and the applicable installation standard. Residential sprinkler extensions shall have a 1/2" NPT inlet and outlet, for use with listed Viking residential sprinklers having a nominal K Factor of 5.5 or less, for retrofit only. Residential Sprinkler Extension shall be Viking Part Number 14959 (1" length), 14960 (1-1/8" length), or 14961 (1-1/4" length). (No Substitutions Allowed).