

VIKING PRODUCT SPECIFICATIONS

Extended Coverage Sprinklers

A. Standard Response Extended Coverage Sprinklers

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7. EC Ordinary Hazard ELO Sprinkler
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30. QREC Concealed Pendent Sprinkler
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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 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 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 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. 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. 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).