



## Section 07 72 00 Roof Accessories – Series 3000 Smoke Ventilators

This document is meant as a spec guide for the discernment of technical specifications that may apply to our products and that may be chosen to apply per a customer requirement. It is not meant as a claim to all the standards listed as applicable to every Series 3000 product sold.

### PART 1 GENERAL

#### 1.1 SUMMARY

- A. Section includes:
  - 1. Automatic Smoke Ventilation Devices and Accessories
  
- B. Related Sections:
  - 1. Section 06100 (06 10 00) - Wood Framing. Site built wood curbs and nailers.
  - 2. Section 07310 (07 31 00) - Roof Shingles and Shakes. Flashing of skylight base.
  - 3. Section 07320 (07 32 00) - Roof Tiles. Flashing of skylight base.
  - 4. Section 07360 (07 3600) – Single Ply Membrane Roofing.
  - 5. Section 07510 (07 51 00) - Built-Up Bituminous Roofing. Flashing of skylight base.
  - 6. Section 07520 (07 52 00) - Modified Bituminous Membrane Roofing. Flashing of skylight base.
  - 7. Section 07525 (07 5250) – Modified Sheet Roofing.
  - 8. Section 07530 (07 53 00) - Electrometric Membrane Roofing. Flashing of skylight base.
  - 9. Section 07540 (07 54 00) - Thermoplastic Membrane Roofing. Flashing of skylight base.
  - 10. Section 07600 (07 60 00) - Flashing and Sheet Metal. Metal curb flashings.
  - 11. Section 07610 (07 6100) – Sheet Metal Roofing
  - 12. Section 08620 (08 60 00) - Unit Skylights. Skylights without reflective tube.

#### 1.2 REFERENCES

- A. Aluminum Association (AA)
  - 1. Specifications for Aluminum Structures.
  
- B. American Architectural Manufacturers Association (AAMA)
  - 1. AAMA 1600/IS7, Skylight Standard
  - 2. AAMA Skylight Installation Manual
  - 3. AAMA 1505.1-87, Voluntary Standard Uniform Load Test Procedure for Plastic Glazing Skylights by Uniform Static Air Pressure Difference.
  
- C. American Society for Testing and Materials (ASTM)
  - 1. ASTM A463/A463M - Standard Specification for Steel Sheet, Aluminum Coated, by the Hot Dip Process.
  - 2. ASTM A653/A653M - Standard Specification for Steel Sheet, Zinc Coated (Galvanized), by the Hot Dip Process.
  - 3. ASTM A792/A792M - Standard Specification for Steel Sheet, 55% Aluminum-Zinc Alloy-Coated by the Hot-Dip Process.



- 4. ASTM B209 - Standard Specification for Aluminum and Aluminum-Alloy Sheet and Plate.
- 5. ASTM D635 - Test Method for Rate of Burning and/or Extent of Time of Burning of Self-Supporting Plastics in a Horizontal Position.
- 6. ASTM D1929 - Test Method for Ignition Properties of Plastics.
- 7. ASTM D2843 - Standard Test Method for Density of Smoke from the Burning or Decomposition of Plastics.
- 8. ASTM D4802 Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet
- 9. ASTM E84 - Standard Test Method for Surface Burning Characteristics of Building Materials.
- 10. ASTM E108 - Standard Test Methods for Fire Tests of Roof Coverings.
- 11. ASTM E283 - Test Method for Rate of Air Leakage Through Exterior Windows, Curtain Walls, and Doors Under Specified Pressure Differences Across the Specimen.
- 12. ASTM E330 - Structural Performance of Exterior Windows, Curtain Walls, and Doors.
- 13. ASTM E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and doors by Static Air Pressure Difference.
- 14. ASTM E1886 - Standard Test Method for Performance of Exterior Windows, Curtain Walls, Doors, and Impact Protective Systems Impacted by Missiles and Exposed to Cyclic Pressure Differentials.

D. International Building Code (2024) and International Fire Code (2024)

E. National Roofing Contractors Association (NRCA)

- 1. Roofing and Waterproofing Manual.

F. Underwriters Laboratory (UL)

- 1. UL 793 Standard for Heat and Smoke Vents

G. Factory Mutual (FM)

- 1. FM 4430 Standard for Heat and Smoke Vents

H. National Fire Protection Association (NFPA)

- 1. NFPA 204 Standard for Heat and Smoke Vents

I. American Welding Society (AWS)

- 1. AWS D1.1 Structural Welding Code

### 1.3 PERFORMANCE REQUIREMENTS

Remove all performance options that are not required.

A. Smoke Vents shall operate automatically, in accordance with the operating requirements of UL 973. Smoke Vents shall operate automatically by activation of a UL Listed fusible link.

- 1. Wind uplift: Class [30] [60] [90].
- 2. Snow loading: [10] [30] lbs./ft<sup>2</sup>.
- 3. Fusible Link: [165] [212] [286] [370] [520] °F

B. Smoke Vents shall operate automatically, in accordance with the operating requirements of FM 4430.



1. Wind Uplift: [30] [60] [90] [120] lbs./ft<sup>2</sup>
2. Snow Load/Live load: [10] [30] lbs./ft<sup>2</sup>
3. Fusible Link: [370] [520] °F
4. Hail Resistance: Severe Hail Rating

C. Light-Transmitting Plastics

1. KILON Monolithic or Prismatic polycarbonate
  - a. Combustion Rating:
    - (i) CC1 for Polycarbonate
    - (ii) CC2 for Acrylic
  - b. Flame Spread Index: < 25
  - c. Smoke-development Index: < 450

- D. Smoke Vents shall operate automatically by activation of a UL Listed fusible link. Link temperature as required by AHJ.

#### 1.4 SUBMITTALS

- A. Submit under provisions of Section 01300.
- B. Product Data: Manufacturer's data sheets on each product to be used, including:
  1. Product Data Sheet
  2. Installation & Maintenance Manual
  3. Installation instructions
- C. Sales Drawing showing smoke vent assembly, base, and accessories
- D. Certificate of Compliance
- E. Warranty Documents

#### 1.5 DELIVERY, STORAGE AND HANDLING

- A. Handle, deliver and store in manufacturer's original packaging, following the manufacturer's recommendations. Store in a dry area and in a manner to prevent damage.
- B. Exercise caution when hoisting unit to the roof so as not to damage the release mechanism.

#### 1.6 WARRANTY

- A. Smoke Vent Warranty: Provide written warranty by the manufacturer, agreeing to provide replacement components that exhibits defects in materials or workmanship.
- B. Warranty period to be 10 years from date of installation.



PART 2 PRODUCTS

2.1 MANUFACTURERS

- A. Acceptable Manufacturer: Kingspan Light + Air, 28662 N. Ballard Drive, Lake Forest, IL 60045, available exclusively through Logistics Lighting with an extended warranty and National Account pricing. Contact for quotes or product questions: Sales@LogisticsLighting.com or 307-963-9696 or Toll-Free at 844-455-7283 website: www.LogisticsLighting.com
- B. Substitutions: Not permitted
- C. Requests for substitutions will be considered in accordance with provisions of Section 01600.

2.2 SMOKE VENTILATORS

- A. SERIES 3100 SMOKE VENTS
  - 1. UL 793 Listed smoke ventilator, Polycarbonate Double-Lid, with UL listed fusible link, link temperature as required by AHJ. Class 90 wind uplift, 10 lbs./ft<sup>2</sup> snow loading.
    - a. Kingspan Light + Air Model Number S-ULSV (for galvanized steel) or A-ULSV (for aluminum)
    - b. Finish: Manufacturer's standard mill finish aluminum or galvanized steel.

\*\*\* OR \*\*\*

  - 2. FM 4430 Approved smoke ventilator, Polycarbonate Double-Lid, with UL listed fusible link, link temperature as required by AHJ. 120 lbs./ft<sup>2</sup> wind uplift, 10 lbs./ft<sup>2</sup> snow loading, Severe Hail Rated.
    - a. Kingspan Light + Air Model Number S-ULSV(F) (for galvanized steel) or A-ULSV(F) (for aluminum)
    - b. Finish: Manufacturer's standard mill finish aluminum or galvanized steel.

Select one standard size below and delete the other options

- 3. Inside curb dimension to be
  - a. [4848: 48"x 48"]
  - b. [4872: 48" x 72"]
  - c. [4896: 48" x 96"]
  - d. [6072: 60" x 72"]

Select one of the dome geometries and one glazing configuration. Delete the other options.

- 4. Glazing
  - a. [Skywave] [KAT] dome
    - (i) [Clear Monolithic Polycarbonate]
    - (ii) [White monolithic Polycarbonate]
    - (iii) [Clear monolithic polycarbonate over White prismatic polycarbonate]

- B. SERIES 3200 SMOKE VENTS
  - 1. UL 793 Listed smoke ventilator, Acrylic Double-Lid, with UL listed fusible link, link temperature as required by AHJ. Class 30 wind uplift, 30 lbs./ft<sup>2</sup> snow loading.



- a. Kingspan Light + Air Model Number SVSA (for galvanized steel) or SVAA (for aluminum)
- b. Finish: Manufacturer's standard mill finish aluminum or galvanized steel.

Select one standard size below and delete the other options

- 2. Inside curb dimension to be
  - a. [4848: 48"x 48"]
  - b. [4872: 48" x 72"]
  - c. [4896: 48" x 96"]
  - d. [6060: 60" x 60"]
  - e. [6072: 60" x 72"]
  - f. [6096: 60" x 96"]

Select one of the dome geometries and one glazing configuration. Delete the other options.

- 3. Glazing
  - a. Bubble dome
    - (i) [Clear monolithic Acrylic]
    - (ii) [White monolithic Acrylic]
    - (iii) [White monolithic Acrylic over Clear monolithic Acrylic]
    - (iv) [White monolithic Acrylic over White monolithic Acrylic]

C. SERIES 3300 SMOKE VENTS

- 1. FM approved smoke ventilator, Metal Double-Lid, with UL listed fusible link, link temperature as required by AHJ. Class 30 wind uplift, 10 lbs./ft<sup>2</sup> snow loading.
  - a. Kingspan Light + Air Model Number SVSM (for galvanized steel) or SVAM (for aluminum)
  - b. Finish: Manufacturer's standard mill finish aluminum or galvanized steel.

Select one standard size below and delete the other options

- 2. Inside curb dimension to be
  - a. [4848: 48"x 48"]
  - b. [4872: 48" x 72"]
  - c. [4896: 48" x 96"]
  - d. [6060: 60" x 60"]
  - e. [6072: 60" x 72"]
  - f. [6096: 60" x 96"]

D. SERIES 3400 SMOKE VENTS

- 1. UL 793 Listed smoke ventilator, Polycarbonate Double-Lid, with UL listed fusible link, link temperature as required by AHJ. Class 30 wind uplift.
  - a. Kingspan Light + Air Model Number
    - (i) KSV10: 10 lbs./ft<sup>2</sup> snow loading
    - (ii) KSV30: 30 lbs./ft<sup>2</sup> snow loading
    - (iii) KSVi10: Insulated unit and 10 lbs./ft<sup>2</sup> snow loading
    - (iv) KSVi30: Insulated unit and 30 lbs./ft<sup>2</sup> snow loading
  - b. Finish: Manufacturer's standard mill finish aluminum.



Select one standard size below and delete the other options

- 2. Inside curb dimension to be
  - a. [4896: 48" x 96"]

Select one of the dome geometries and one glazing configuration. Delete the other options.

- 3. Glazing
  - a. [Skywave] [KAT] dome
    - (i) [Clear Monolithic Polycarbonate]
    - (ii) [White monolithic Polycarbonate]
    - (iii) [Clear monolithic polycarbonate over White prismatic polycarbonate]

E. SERIES 3500 SMOKE VENTS

- 1. UL 793 Listed DROP OUT smoke ventilator, Cast acrylic domes, inner dome heat activated, with or without UL listed fusible link, link temperature as required by AHJ. Class 30 wind uplift.
  - a. Kingspan Light + Air Model Number SLDOULTO (Drop out), SLDOUL (for Drop out with SF base, ESSLDOUT (Drop out with SF base and Fusible link), or ASLDOUT (Drop out with Retrofit Base)
  - b. Finish: Manufacturer's standard mill finish aluminum.

Select one standard size below and delete the other options

- 2. Inside curb dimension to be
  - a. [5555: 48" x 48"]
  - b. [5566: 48" x 60"]
  - c. [5578: 48" x 72"]
  - d. [5596: 48" x 90"]
  - e. [55102: 48" x 96"]
- 3. Glazing
  - a. Bubble dome: Clear monolithic Acrylic over White monolithic Acrylic

F. Mounting:

- 1. Curb Mounted (CM)

Select, modify or delete following options as needed for self-flashing base options.

- 2. Self-flashing (SF)
  - a. To be manufacturer's standard aluminum or galvanized steel,
    - (i) [9"] [12"] [\_\_\_\_] high (not to exceed 18")
    - (ii) 1" thick Polyiso insulation
    - (iii) 1" x 4" wood nailer

Louvered bases, Steel Security Bars, and Safety Screens are not available for Series 3500 Smoke vents. Safety Cages can be requested but will ship separately from the Smoke vent.

- G. Optional Louvered Base: (If required) UL Approved ventilated louvered base with built-in birdscreens and Vortex Rain Shield (VRS) mounted inside the inner and outer face of the louvered curb.

H. Accessories



Optional to select one of the below options. Delete all if not required.

1. Steel Security Bars: Optional steel security/burglar bars by Kingspan Light + Air shall be ½" steel bars welded and assembled into a 1 ½" x 1 ½" x 1/8" steel angle frame and provided with a white powder coated paint finish or approved equal.
2. Steel mesh Safety Screen: Optional steel 0.167" diameter resistance welded wire mesh screen. Galvanized steel with stainless steel straps to secure to SF base or existing curb.

## 2.3 FABRICATION

- A. Fabricated by an ISO 9001:2015 Certified Manufacturer.
- B. Fabricate free of visual distortions and defects. Weld corners and joints.
- C. All fasteners and hardware shall be corrosion resistant.
- D. Provide a weather tight assembly.
- E. Provide a UL Label in accordance with UL 793. UL Label to include:
  1. Manufacturer's name or identifying symbol.
  2. Catalog or Model number.
  3. The word "Caution" and the following:
    - a. Automatically operated Vent
    - b. Risk of Injury
    - c. Do not place anything on top of this device
  4. The date or other dating period of manufacture,
  5. The Class of roof deck construction.

## PART 3 EXECUTION

### 3.1 INSTALLATION

- A. Install completely assembled smoke vents with curbs in accordance with manufacturer's instructions. Coordinate roof membrane installation requirements specified in other Sections.
- B. Smoke Vent curbs bearing on roof deck:
  1. Set units in place and secure curb flange to steel roof deck by self-tapping non-corrosive screw fasteners, spaced at a maximum of 12" on center, staggered.
- C. Apply bituminous paint on metal surfaces of units in contact with cementitious material and dissimilar metals.
- D. After installation, remove shipping screws and test vents to ensure that vents operate as intended.



### 3.2 INSPECTION AND MAINTENANCE

- A. Inspect and maintain smoke vents in accordance with the requirements of the NFPA 204, Standard for Heat and Smoke Vents, 2007 Edition.

**END OF SECTION**