

SPECIFICATIONS SECTION 07 72 00

UL LISTED HEAT AND SMOKE VENTS

PART 1 – GENERAL

1.01 SUMMARY

A. Section includes:

1. Prefabricated UL Listed heat and smoke vents, with UL 972 Impact resistant diamond series polycarbonate domed lids, curbs, hardware and counter flashing.
2. Prefabricated UL Listed aluminum heat and smoke vents with polycarbonate dome lids, curbs, hardware and counter flashing.

B. Related Sections:

1. Section 07510 – Built-up Bituminous Roofing
2. Section 07525 – Modified Sheet Roofing.
3. Section 07360 – Single Ply Membrane Roofing
4. Section 07600 – Flashing and Sheet Metal Trim
5. Section 07610 – Sheet Metal Roofing
6. Section 077200 – Roof Accessories for pre-manufactured metal curbs

1.02 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 D4802 Specification for Poly (Methyl Methacrylate) Acrylic Plastic Sheet
2. ASTM E331 Test Method for Water Penetration of Exterior Windows, Curtain Walls and doors by Static Air Pressure Difference.
3. ASTM A-463 Specification for Steel Sheet, Cold Rolled, Aluminum Coated, Type 1 or Type 2.
4. ASTM A-653 Specification for Steel Sheet, Zinc Coated (Galvanized) or Zinc Alloy Coated by the Hot Dip process.
5. ASTM A 792 Specification for Steel Sheet, Fifty-Five Percent Aluminum-Zinc Alloy coated by the Hot Dip Process.

D. International Building Code (2021) and International Fire Code (2021)

E. National Roofing Contractors Association (NRCA)

1. Roofing and Waterproofing Manual.

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- F. Underwriters Laboratories (UL)
 - 1. UL 972 – 2020, Standard for Burglar and Impact Resistant Glazing.
 - 2. UL 793 – 2020, Standard for Heat and Smoke Vents
- G. National Fire Protection Association (NFPA)
 - 1. 2024 - NFPA 204 Standard for Heat and Smoke Vents
- H. American Welding Society (AWS)
 - 1. AWS D1.1 Structural Welding Code

1.03 PERFORMANCE REQUIREMENTS

- A. Polycarbonate glazed smoke vents shall conform to the recommendations of AAMA 1600/IS7
- B. Smoke Vents (Polycarbonate glazed or Metal Lids) shall operate automatically, in accordance with the operating requirements of the 2020 UL 793,
- C. Glazing material shall be UL 972 – 2020 Revision Listed for Impact resistance
- D. Plastic domed units shall be tested to an 800 lb/sq.ft impact load and certified by a third-party UL approved testing agency. Manufacturer's products supplied as an alternative to the specifications must provide a copy of the 800 lb/sq.ft impact test for approval.
- E. Smoke Vents shall operate automatically by activation of a UL Listed or FM Approved fusible link. Link temperature as required by AHJ.
- F. UL Smoke Vents shall be UL Listed to the current UL 2020 793 Standard. UL Smoke Vents which are listed to previous versions of UL 793 will not be accepted.
- G. Smoke Vents shall comply with the specific requirements of the Authority Having Jurisdiction (AHJ) and may include any of the following:
 - 1. Exterior and/or interior manual release.
 - 2. Activation by smoke detector through an electronic relay system
 - 3. Activation by a remote manual control system utilizing electro-thermal links (ETL)
 - 4. Activation by a re-settable Electro-thermal link (ETL or McCabe ETL Link)

1.04 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.
- C. Check for damage to manual release

1.05 WARRANTY

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

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PART 2 – PRODUCTS

2.01 PLASTIC DOMED LID UL LISTED HEAT AND SMOKE VENTS

- A. Manufacturers: Subject to compliance with requirements. Approved manufacturers are:
 - 1. Taylon Skylights, 2111 S. Anne St, Santa Ana, CA 92704, available exclusively through Logistics Lighting with an extended warranty and National Account pricing. Contact for quotes or product questions: Sales@LogisticsLighting.com or 307-633-9696 or Toll-Free at 844-455-7283 website: www.LogisticsLighting.com
 - 2. Or approved equal. (Prior approval shall be obtained 10 days prior to bid date)
- B. Manufactured units: UL 793 Listed smoke and heat vent, Dual-Lid, with UL or FM approved fusible link, link temperature as required.
 - 1. Taylon Skylights Model 4896-A-ULSV (for aluminum)
 - 2. UL Listing Number E533253
 - 3. Finish: Manufacturer's standard mill finish aluminum.
 - 4. Inside curb dimension to be 48" x 96" or as shown on drawings.
- C. Domed Lids: Polycarbonate white diamond series, UL 972 Listed white outer dome, (optional clear polycarbonate inner dome) in aluminum frame. Designed to withstand a 90 psf uplift load in the closed position. Units shall be tested to meet an 800 lb impact load with no penetration. Units shall be furnished with an exterior and/or interior manual release handle. When released, lids shall open against a 10 psf positive external load and lock in a 90-degree open position.
- D. Curbs: Curb Mounted unit (CM) or self-flashing (SF) curbs or Metal Building Curbs (MB) to be manufacturer's standard aluminum, 12" high (or as noted on drawings) with optional 1" thick rigid insulation and/or a 1" x 4" wood nailer.
- E. Aluminum Security/Fall-protection Bars: Optional aluminum bars by Taylon Skylights shall be ½" aluminum bars welded and assembled into a 1 ½" x 1 ½" x 1/8" aluminum angle frame, mill finish, and third-party tested to meet an 800 lb Impact load. The maximum weight of the 4' x 8' bar assembly to be 20 lbs for ease of handling. Note Bar spacing may vary in some jurisdictions and it is recommended to check local code requirements for bar spacing. Bars as manufactured by: Taylon Skylights, 2111 S Anne Street, Santa Ana, CA 92704, available exclusively through Logistics Lighting with an extended warranty and National Account pricing. Contact for quotes or product questions: Sales@LogisticsLighting.com or 307-633-9696 or Toll-Free at 844-455-7283 website: www.LogisticsLighting.com

2.02 FABRICATION

- A. Fabricate free of visual distortions and defects. Weld corners and joints.
- B. All fasteners and hardware shall be corrosion resistant.
- C. Provide for removal of condensation.
- 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 for traceability.
 - 5. The Class of roof deck construction that the vent is intended for shall be 30 psf.

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PART 3 EXECUTION

3.01 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 utilizing the exterior manual release handles.

3.02 INSPECTION AND MAINTENANCE

- A. Inspect and maintain smoke vents in accordance with the requirements of the NFPA 204, Standard for Heat and Smoke Vents, 2024 Edition.
- B. Maintain heat and smoke vents in accordance with the NFPA 204, 2024, Chapter 12.

END OF SECTION