

**3-PART CSI MASTERFORMAT SPECIFICATION**  
**SECTION 07 72 00**  
**ROOF ACCESSORIES: SMOKE VENT**

GENERAL

1.1 SUMMARY

- A. Section includes:
  - 1. Hatch type Heat and Smoke Vents
    - a. Model [ULSVDCM Single Dome] [ULSV2DCM Double Dome] Skylight smoke vent equipped with automatic self-lifting mechanisms

1.2 REFERENCES

- A. Division 05 for ladders and stairs
- B. Division 07 for roofing and sealants.

1.3 COORDINATION

- A. Coordinate layout and installation of roof accessories with roofing membrane and base flashing and interfacing and adjoining construction to provide a watertight installation.
- B. Coordinate dimensions with rough-in information or Shop Drawings of equipment to be supported.

1.4 SUBMITTALS

- A. Shop Drawings: Indicate configuration and dimension of components, adjacent construction, required clearances and tolerances, and other affected Work.
  - 1. Hatch Units: Show types, elevations, thickness of metals, and full size profiles.
  - 2. Hardware: Show materials, finishes, locations of fasteners, types of fasteners, locations and types of operating hardware, and details of installation.
  - 3. General: Show connections of units and hardware to other Work. Include schedules showing location of each type and size of unit.
- B. Product Data: Manufacturer's technical data for each type of hatch assembly, including setting drawings, templates, finish requirements, and details of anchorage devices.
  - 1. Include complete schedule, types, locations, construction details, finishes, latching or locking provisions, and other pertinent data.
- C. Contract Closeout Submittals
  - 1. Installation, Operating & Maintenance manuals

1.5 QUALITY ASSURANCE

- A. Regulatory Requirements:
  - 1. OSHA 29 CFR 1910.28 Duty to have fall protection and falling object protection
  - 2. International Building Code for venting requirements
  - 3. Underwriters Laboratories Inc, UL 793 Listed for Heat and Smoke Vents
  - 4. Reference NFPA 204 for general maintenance of Heat and Smoke vents.
- B. Qualifications:
  - 1. Manufacturer/Installer: Company specializing in manufacturing and installation of components specified in this Section with minimum of 5 years documented experience.

1.6 DELIVERY, STORAGE, AND HANDLING

- A. Deliver materials to Project site ready use.
- B. Exercise proper care in handling of Work so as not to disrupt finished surfaces.
- C. Store materials under cover in a dry and clean location off the ground.

## 1.7 WARRANTY

- A. Provide manufacturer's standard ten (10) year warranty. All roof hatches and smoke vents shall be free from manufacturing defects in materials and workmanship for a period of ten (10) years from the date of shipment. Should a product fail to function in normal use within this period, manufacturer shall furnish a replacement or new part at manufacturers' discretion.

## PART 2 - PRODUCTS

### 2.1 MANUFACTURER

- A. Acralight Solar  
17752 Mitchell N.  
Irvine, CA 92614, 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

### 2.2 HEAT AND SMOKE VENTS

- A. Hatch-Type Heat and Smoke Vents: For emergency heat and smoke removal
1. Models and Sizes: Model [ULSV2D-ST-SA Single Dome] [ULSV2D-ST-SA-AC Double Dome]: vent equipped with automatic self-lifting mechanisms and UL-listed fusible links.
    - a. Certification: Smoke vent to have official UL label for testing to UL 793 Smoke and Heat Vents.
    - b. Performance:
      - 1) Loads: Minimum 30-lbf/sq. ft. (1.4-kPa) internal uplift load for five cycles without opening.
      - 2) Dome shall remain intact when subjected to the force of:
        - a) A bag filled with 45.4 kg (100 lb) of sand being dropped from a height of 1.2 m (4 ft), or
        - b) A bag filled with 90.8 kg (200 lb) of sand being dropped from a height of 0.61 m (2 ft) onto the top of the cover.The bag is to be dropped at three locations as follows: in the center of the cover, in the center along the longer edge and in a corner of the cover. The diameter of the bag at its bottom is to be approximately 0.46 m (1.5 ft).
    - 3) When release is actuated, lid shall open against 10-lbf/sq. ft. (0.5-kPa) snow or wind load and lock in position.

Retain one of two "Door Options" Subparagraphs below. Smoke vent is provided with a Sky-Arc dome for the ULSVDCM single dome and ULSV2DCM double dome smoke vents.

- c. Door Options: Double-leaf lid, single dome [**ULSVDCM 4848**, 48 by 48 inches (1220 by 1220 mm)] [**ULSVDCM 4896**, 48 by 96 inches (1220 by 2440 mm)] [**ULSVDCM 6072**, 60 by 72 inches (1524 by 1830 mm)] [**ULSVDCM 6467**, 64 by 67 inches (1625 by 1702 mm)].

or

Door Options: Double-leaf lid, double dome [**ULSV2DCM 4848**, 48 by 48 inches (1220 by 1220 mm)] [**ULSV2DCM 4896**, 48 by 96 inches (1220 by 2440 mm)] [**ULSV2DCM 6072**, 60 by 72 inches (1524 by 1830 mm)] [**ULSV2DCM 6467**, 64 by 67 inches (1625 by 1702 mm)].

d. Hatch Material

Retain one of two "Cover" Subparagraphs below. ULSVDCM and ULSV2DCM smoke vents are provided with a Sky-Arc domes.

Single Dome Cover: 0.0625-inch (1.59-mm) galvanized steel with 0.078-inch (1.98-mm) cross member for additional strength.

or

Double Dome Cover: 0.0625-inch (1.59-mm) galvanized steel with 0.1285-inch (1.98-mm) cross member for additional strength.

- 1) Finish: Galvanized steel
- 2) Latch: Positive hold zinc plated steel rotary latch assembly. Upon latch releases, vent covers are closed manually at rooftop level
  - a) Latch released manually via internal and external pull handles with cables.
  - b) Latch released automatically by UL 793 listed fusible melt-out link at temperature of [165 deg F (74 deg C)] [212 deg F (100 deg C)] [280 deg F (138 deg C)] [350 deg F (177 deg C)] [360 deg F (182 deg C)] [370 deg F (188 deg C)].

or

Latch released automatically by non-listed fusible melt-out link at temperature 450 deg F (232 deg C).

- 3) Springs: Door springs with integrated dampers
- 4) Hinge: fully integrated extruded and secured into the exterior curb.

### PART 3 - EXECUTION

#### 3.1 EXAMINATION

- A. Verification of Conditions: Examine areas and conditions under which Work is to be performed and identify conditions detrimental to proper or timely completion
- B. Verify that deck, curbs, roof membrane, base flashing, and other items affecting Work of this Section are in place and positioned correctly.
- C. Verify tolerances and correct improper condition
- D. Identify conditions detrimental to providing proper quality and timely completions of work.
- E. Do not proceed with installation until detrimental conditions have been corrected.

#### 3.2 INSTALLATION

- A. Comply with manufacturer's recommendations.
- B. Coordinate installation of components of this Section with installation of roof deck, roof structure, roofing membrane, and base flashing.
- C. Coordinate installation of sealant and roofing cement with Work of this Section to ensure water tightness.
- D. Securely anchor roof accessories in compliance with manufacturer's instructions.
- E. Set units plumb, level, and true to line without warp or rack. Separate metal from incompatible metal or corrosive substrates, including wood, by coating concealed surfaces, at locations of contact, with bituminous coating or providing other permanent separation.
- F. Flange Seals: Unless otherwise indicated, set flanges of accessory units in a thick bed of roofing cement to form a seal

### 3.3 FIELD QUALITY CONTROL

- A. Smoke Vent Testing: Test for proper operation after installation by one or all of the operational methods:
- B. Melting fusible link for inside at smoke vent level recommend using hand held propane tank torch. Replace fusible link, then close vents from the exterior at the roof top level.
- C. Pull internal and/or external manual pull handles and then close vents from the exterior at the roof top level.
- D. If applicable; open the vents using an electrical signal for fire alarm, push button or other, then close vent from the exterior at the roof top level.
- E. Do not paint the internal mechanisms, especially moving parts such as spring/dampers, rotary latches and especially the fusible links. Painting any of these components may damage the vents and will void the warranty.

### 3.4 ADJUSTING

- A. Adjust movable parts for smooth operation.
- B. Operational Units: Test-operate units with operable components. Clean and lubricate joints and hardware. Adjust for proper operation.

### 3.5 CLEANING

- A. Clean exposed surfaces per manufacturer's written instructions. Touch up damaged metal coatings.

END OF SECTION