**3-Part CSI MasterFormat Specification**

**SECTION 07 7200**

**Roof Accessories: roof hatch and smoke vent**

GENERAL

1.1 SUMMARY

1. Section includes:
2. Hatch type Heat and Smoke Vents
	1. LightMAX Eco Skylight smoke vent equipped with automatic self-lifting mechanisms

1.2 REFERENCES

1. Division 05 for ladders and stairs
2. Division 07 for roofing and sealants.

1.3 COORDINATION

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

1.4 SUBMITTALS

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

1.5 QUALITY ASSURANCE

1. Regulatory Requirements:
2. OSHA 29 CFR 1910.23 Guarding floor and wall openings and holes
3. OSHA 29 CFR 1926.502 Fall protection systems criteria
4. International Building Code for venting requirements
5. Underwriters Laboratories Inc, UL 793 Listed for Heat and Smoke Vents
6. FM Global, Factory Mutual, FM 4430 Heat and Smoke Vents for Roofs
7. Reference NFPA 204 for general maintenance of Heat and Smoke vents.
8. Qualifications:
9. 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

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

1.7 WARRANTY

1. Provide manufacturer's standard 5 year warranty. All roof hatches and smoke vents shall be free from manufacturing defects in materials and workmanship for a period of five (5) 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

1. Babcock-Davis

9300 73rd Ave N.

Brooklyn Park, MN 55428

PH: 888-412-3726

www.BabcockDavis.com

2.2 HEAT AND SMOKE VENTS

1. Hatch-Type Heat and Smoke Vents: For emergency heat and smoke removal
2. Type and Size: LightMAX eco Skylight smoke, BSVE: vent equipped with automatic self-lifting mechanisms and UL-listed fusible links.
3. Certification: Smoke vent to have official UL label for testing to UL 793 Smoke and Heat Vents.**[, and FM 4430 Approved]**
4. Performance:
5. Loads: Minimum 40-lbf/sq. ft. (1.9-kPa) <Insert value> external live load and 40-lbf/sq. ft. (1.9-kPa) internal uplift load
6. When release is actuated, lid shall open against 10-lbf/sq. ft. (0.5-kPa) snow or wind load and lock in position.
7. Door Options: Double-leaf lid, **[BSVEA48X96 48 by 96 inches (2440 by 2440 mm)]** [**BSVEA48X48 - 48 by 48 inches (1220 by 1220 mm)**] [**As selected by Architect from manufacturer’s full range**]. <**Insert dimensions**>.
8. Door Options: Quad-leaf lid, **[BSVEA48X96 48 by 192 inches (2440 by 4880 mm)]** [**BSVEA48X48 - 48 by 96 inches (1220 by 2440 mm)**] [**As selected by Architect from manufacturer’s full range**]. <**Insert dimensions**>.
9. Hatch Material

Retain one of two “Cover” Subparagraphs below.

1. Cover: 0.0808-inch (2.05-mm) extruded aluminum with 0.1285-inch (3.26-mm) cross member for additional strength. Extruded EPDM adhesive-backed gasket seal continuous around perimeter of cover with polycarbonate [**single**] [**double**] dome.
	1. Color [**Standard white**] [**Clear**].
2. Cover: 0.0808-inch (2.05-mm) extruded aluminum with 0.1285-inch (3.26-mm) cross member for additional strength. Extruded EPDM adhesive-backed gasket seal continuous around perimeter of cover with 5/8-inch (16-mm) structural 3-wall multiwall polycarbonate cover
	1. Color: **[White] [Clear] [Green] [Blue] [Bronze].**
3. Curb: **[Single wall apron mount] [Single wall curb mount] [Double wall curb mount] [12-inch- (305-mm-) high** 0.0907 **inch (2.05 mm) aluminum with integral counterflashing][height as indicated on drawings]**. Continuous 3.5-inch (89-mm) mounting flange with 5/8-inch (16-mm) mounting holes 1 inch (25 mm).

Delete curb insulation paragraph for single wall apron mount curb

1. Curb Insulation: **[1-inch (25-mm)] [2-inch (50-mm)]** polyisocyanurate insulation around curb perimeter.
2. Finish: Mill-finished aluminum
3. Latch: Positive hold zinc plated steel rotary latch assembly. Upon latch releases, vent covers are closed manually at rooftop level
4. Latch released manually via internal and external pull handles with cables.
5. Latch released automatically by UL 33 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)**] [**386 deg F (197 deg C)**] [**450 deg F (232 deg C)**].
6. Springs: Gas spring with integrated damper and integrated damper
7. Hinge: fully integrated extruded and secured into the exterior curb.

PART 3 - EXECUTION

3.1 EXAMINATION

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

3.2 INSTALLATION

1. Comply with manufacturer's recommendations.
2. Coordinate installation of components of this Section with installation of roof deck, roof structure, roofing membrane, and base flashing.
3. Coordinate installation of sealant and roofing cement with Work of this Section to ensure water tightness.
4. Securely anchor roof accessories in compliance with manufacturer's instructions.
5. 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.
6. 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

1. Smoke Vent Testing: Test for proper operation after installation by one or all of the operational methods:
2. 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.
3. Pull internal and/or external manual pull handles and then close vents from the exterior at the roof top level.
4. 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.
5. 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

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

3.5 CLEANING

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

END OF SECTION

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