

TYPE ESS-50REM SMOKE VENTILATOR SPECIFICATION

I. PART ONE - GENERAL

1.01 SUMMARY

- A. Work included: Furnishing and installing factory fabricated smoke ventilator (vent)
- B. Related Work: [\[Insert applicable specifications sections\]](#)

1.02 REFERENCES

BS EN 12101-2

1.03 SUBMITTALS

- A. Product Data: Provide manufacturer's product data for all materials in this specification.
- B. Shop Drawings: Show profiles, accessories, location, and dimensions.
- C. Samples: Manufacturer to provide upon request; sized to represent material adequately.
- D. Contract Closeout: Smoke vent manufacturer shall provide the manufacturer's Warranty prior to the contract closeout [\[if applicable\]](#).

1.04 PRODUCT HANDLING

- A. All materials shall be delivered in manufacturer's original packaging.
- B. Store materials in a dry, protected, well-vented area. The contractor shall thoroughly inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.
- C. Remove protective wrapping immediately after installation [\[if applicable\]](#).

1.05 SUBSTITUTIONS

- A. Proposals for substitution products shall be accepted only from bidding contractors and not less than (10) working days before bid due date. Contractor guarantees that proposed substitution shall meet the performance and quality standards of this specification.

1.06 JOB CONDITIONS

- A. Verify that other trades with related work are complete before installing smoke vent(s).
- B. Mounting surfaces shall be straight and secure; substrates shall be of proper width.
- C. Refer to the construction documents, shop drawings, and manufacturer's installation instructions.
- D. Coordinate installation with roof membrane and roof insulation manufacturer's instructions before starting.
- E. Observe all appropriate OSHA safety guidelines for this work.

1.07 WARRANTY/GUARANTEEE

- A. Manufacturer's standard warranty: Materials shall be free of defects in material and workmanship for a period of ten years from the date of purchase. (electrical components 2 years) Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge. Special finishes, and other special equipment (if applicable) shall be warranted separately by the manufacturers of those products.

II. PART TWO - PRODUCTS

2.01 MANUFACTURER

- A. The BILCO Company, P.O. Box 1203, New Haven, CT 06505,
1-203-934-6363, Fax: 1-203-933-8478, Web: www.bilcouk.com

2.02 SMOKE VENT

- A. Furnish and install where indicated on plans metal smoke vent Type ESS-50REM, size width: _____mm x length: _____mm. Length denotes hinge side. The smoke vent shall be single leaf and provide _____m² clear vent area. (subtract 250mm from length when determining clear vent area) The smoke vent shall be pre-assembled from the manufacturer.
- B. Performance characteristics:
 - 1. Cover shall be reinforced to support a minimum live load of 195 kg/m² with a maximum deflection of 1/150th of the span or 97 kg/m² wind uplift.
 - 2. Operation of the cover shall be through a 24VDC battery backed control system that will open the cover to the fire open position within 60 seconds and be capable of closing the cover.
 - 3. Operation of the cover shall not be affected by temperature.
 - 4. Entire vent shall be weathertight with fully welded corner joints on cover and curb.
- C. Cover: Shall be 2.3mm aluminium with a 100mm beaded flange with formed reinforcing members. Cover shall have a heavy extruded EPDM rubber gasket that is bonded to the cover interior to ensure a continuous seal when compressed to the top surface of the curb.
- D. Cover insulation: Shall be polyisocyanurate of 50mm thickness with a U-value of 0.47 W/m²K. Insulation shall be fully covered and protected by an aluminium liner.
- E. Curb: Shall be 305mm in height and of 2.3mm aluminium. The curb shall be formed with a 114mm flange with 11mm holes provided for securing to the roof deck. The curb shall be equipped with an integral metal capflashing of the same gauge and material as the curb, fully welded at the corners, that features the Bil-Clip[®] flashing system, including stamped tabs, 153mm on center, to be bent inward to hold single ply roofing membrane securely in place.
- F. Curb insulation: Shall be polyisocyanurate of 50mm thickness with a U-value of 0.47 W/m²K.
- G. Operating mechanism - a single linear actuator mounted on a pivoting carriage capable of opening the cover to the fire open position of 140 degrees. (note – roof obstructions should be considered – alternative product USS-50REM opening to 90 degrees.)
- H. Hardware -
 - 1. Heavy pintle hinges shall be provided
 - 2. Curb mounted junction box with chock a terminal enclosed for power cable connection.
- I. Finishes: Factory finish shall be mill finish aluminium.

III. PART THREE - EXECUTION

3.01 INSPECTION

- A. Verify that smoke vent installation will not disrupt other trades. Verify that the substrate is dry, clean, and free of foreign matter. Report and correct defects prior to any installation.

3.02 INSTALLATION

- A. Submit product design drawings for review and approval to the architect or specifier before fabrication.
- B. The installer shall check as-built conditions and verify the manufacturer's roof hatch details for accuracy to fit the application prior to fabrication. The installer shall comply with the smoke vent Manufacturer's installation instructions.
- C. The installer shall furnish mechanical fasteners consistent with the roof requirements.

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