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BILCO Type SV automatic smoke vents aid Firefighters in bringing a fire under control by removing smoke, heat and gasses from a burning building. Type SV single leaf smoke vents are ideal for applications requiring smaller vent areas, such as elevator shafts or stair wells. Available in galvanized steel or aluminum construction and in a number of standard sizes. Polycarbonate domes covers are also available for natural day lighting. For more information, please visit our website www.bilco.com or call 1-800-366-6530.

SECTION 077236

AUTOMATIC SMOKE VENTS

(BILCO TYPE SV)

PART 1 - GENERAL

1.1 SUMMARY

- A. Work Included: Provide factory-fabricated single-leaf automatic smoke vents.

1.2 SUBMITTALS

- A. Product Data: Submit manufacturer's product data.
- B. Shop Drawings: Submit shop drawings including profiles, accessories, location, fusible links, adjacent construction interface, and dimensions.
- C. Warranty: Submit executed copy of manufacturer's standard warranty.

1.3 QUALITY ASSURANCE

- A. Manufacturer: A minimum of 5 years experience manufacturing similar products.
- B. Installer: A minimum of 2 years experience installing similar products.
- C. Manufacturer's Quality System: Registered to ISO 9001:2008 Quality Standards including in-house engineering for product design activities.

1.4 DELIVERY, STORAGE AND HANDLING

- A. Deliver products in manufacturer's original packaging. Store materials in a dry, protected, well-vented area. Inspect product upon receipt and report damaged material immediately to delivering carrier and note such damage on the carrier's freight bill of lading.

1.5 WARRANTY

- A. Manufacturer's Warranty: Provide manufacturer's standard warranty. Materials shall be free of defects in material and workmanship for a period of five years from the date of purchase. Should a part fail to function in normal use within this period, manufacturer shall furnish a new part at no charge.

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PART 2 - PRODUCTS

2.1 MANUFACTURER

- A. Basis-of-Design Manufacturer: Type SV Automatic Roof Smoke Vent by The BILCO Company, P.O. Box 1203, New Haven, CT 06505, 1-800-366-6530, Fax: 1-203-933-8478, Web: www.bilco.com.

2.2 AUTOMATIC ROOF FIRE VENT

- A. Furnish and install where indicated on plans metal fire vent Type [insert Type SV for metal cover or Type GSV for dome cover], size [insert: width (_____) x length (_____)]. Length denotes hinge side. The roof fire vent shall be single leaf and preassembled from the manufacturer.
- B. Performance characteristics:
1. Vent(s) shall be UL listed. [In Canada only: Specify frame opening of 48" x 48" (195mm x 195mm) or greater for UL listing].
 2. Cover shall be reinforced to support a minimum live load of 40 psf (195kg/m²) with a maximum deflection of 1/150th of the span or 20 psf (97 kg/m²) wind uplift.
 3. Lifting mechanism assemblies shall open the vent covers simultaneously when latch is manually released or when heat breaks the UL listed fusible link. Opening shall be in a controlled manner to avoid damage to surrounding roof surfaces.
 4. Entire roof fire vent shall be weather tight with fully welded corner joints on cover and curb.
 5. Latch mechanisms shall hold the covers in the closed position without overstressing the fusible link and withstand 30 psf (146 kg/m²) wind uplift forces acting on the cover.
 6. Latch operation: When heat parts the UL listed fusible link, the latch shall release instantaneously, allowing vent cover to open. The latch shall be designed for easy resetting, after a fire or test, so that the cover cannot be latched closed unless the mechanism has been reset properly. Manufacturer shall provide instructions for resetting the latch with each unit.
- C. Cover: Shall be [select: 14 gauge (1.9mm) paint bond G-90 galvanized steel or 11 gauge (2.3mm) aluminum] with a 3" (76mm) beaded flange with formed reinforcing members. [For Type GSV substitute: Covers shall have a polycarbonate dome framed with rigid extruded aluminum and coated for UV resistance].
- D. Cover insulation: Shall be fiberglass of 1" (25mm) thickness, fully covered and protected by a metal liner [select: 22 gauge (.8mm) paint bond G-90 galvanized steel or 18 gauge (1mm) aluminum]. [Note: Omit cover insulation for Type GSV].
- E. Curb: Shall be 12" (305mm) in height and of [select: 14 gauge (1.9mm) paint bond G-90 galvanized steel or 11 gauge (2.3mm) aluminum]. Curb shall be formed with a 3-1/2" (89mm) flange with 7/16" (11mm) holes provided for securing to roof deck. Curb shall be equipped with integral metal capflashing of the same gauge and material as the curb and feature the Bil-Clip® flashing system, including stamped tabs, 6" (153mm) on center, to be bent inward to hold single-ply roofing membrane securely in place. Curb shall have a heavy extruded EPDM rubber gasket that is mechanically fastened to the top of the curb to assure a continuous seal when compressed by the cover.

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- F. Curb insulation: Shall be rigid, high-density fiberboard of 1" (25mm) thickness on the outside of curb.
- G. Lifting mechanisms: Manufacturer shall provide compression spring operators enclosed in telescopic tubes to open the covers against a snow/wind load. Upper tube shall be the outer tube to prevent accumulation of moisture, grit, and debris inside lower tube assembly. Lower tube shall interlock with a flanged support shoe.
- H. Latch mechanism: Shall be the BILCO Thermolatch® positive hold/release mechanism controlled by a single UL listed 165°F (74°C) fusible link. Fusible link shall be curb mounted on a non-hinged end to allow the latching mechanism to be easily reset from the roof level.
- I. Hardware
 - 1. Heavy pintle hinges shall be provided.
 - 2. Cover shall automatically lock in the open position with a rigid hold open arm equipped with a 1" (25mm) diameter red vinyl grip handle to permit easy release for closing.
 - 3. Compression spring tubes shall be an anti-corrosive composite material and all other hardware shall be zinc plated and chromate sealed.
 - 4. Cover hardware shall be bolted into heavy gauge channel reinforcing welded to the underside of the cover and concealed within the insulation space.
 - 5. Heavy duty shock absorbers: Shall be provided to assure controlled opening of the covers.
- J. Manual pull release cables: Interior and exterior cables with red vinyl grips shall be provided and allow the unit to be opened without disturbing the fusible link.
- K. Finishes: Factory finish shall be [select: alkyd based red oxide primed steel or mill finish aluminum].

PART 3 - EXECUTION

3.1 EXAMINATION

- A. Examine substrates and openings for compliance with requirements for installation tolerances and other conditions affecting performance. Proceed with installation only after unsatisfactory conditions have been corrected.

3.2 INSTALLATION

- A. Install products in strict accordance with manufacturer's instructions and approved submittals. Locate units level, plumb, and in proper alignment with adjacent work.
 - 1. Test units for proper function and adjust until proper operation is achieved.
 - 2. Test fusible link and install replacement fusible link after testing.
 - 3. Repair finishes damaged during installation.
 - 4. Restore finishes so no evidence remains of corrective work.

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3.3 ADJUSTING AND CLEANING

- A. Clean exposed surfaces using methods acceptable to the manufacturer which will not damage finish.

END OF SECTION