

SPECIFICATIONS SECTION 07720

MODEL DLSH HI R AUTOMATIC FIRE VENT SPECIFICATION

I. PART ONE - GENERAL

1.1 SUMMARY

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

1.2 REFERENCES

- A. American Society for Testing and Materials (ASTM), 100 Bar Harbor Drive, West Conshocken, PA 19428; (610) 832-9585, fax (610) 832-9555
- B. National Fire Protection Association (NFPA), 1 Batterymarch Park, Quincy, Massachusetts 02169, (617) 770-3000, FAX (617) 770-0700

1.3 SUBMITTALS

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

1.4 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 [\[if applicable\]](#).

1.5 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.

1.6 JOB CONDITIONS

- A. Verify that other trades with related work are complete before installing roof fire 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.

1.7 WARRANTY/GUARANTEES

- A. 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. Electrical motors, special finishes, and other special equipment (if applicable) shall be warranted separately by the manufacturers of those products.

II. PART TWO - PRODUCTS

2.1 MANUFACTURER

- A. R & S Manufacturing and Sales Company, Inc., 3575 Old Conejo Rd., Newbury Park, CA 91320
1-805-375-3980, Fax: 1-805-375-3981, Web: www.rmssales.com

2.2 AUTOMATIC ROOF FIRE VENT

- A. Furnish and install where indicated on plans metal fire vent Type DLSH Hi R, size: [\[insert: width \(\) x length \(\)\]](#). Length denotes hinge side. The roof fire vent shall be double leaf. The roof fire vent shall be preassembled from the manufacturer.
- B. Performance characteristics:
 - 1. Cover reinforcements shall support a minimum live load of 40 psf (195 kg/m²) with a maximum deflection of 1/150th of the span.

2. 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.
 3. Entire roof fire vent shall be weathertight with fully welded corner joints on cover and curb.
 4. Latch mechanisms shall hold the covers in the closed position without overstressing the fusible link and withstand 30 psf (146 kg/m²) (90 psf or 438 kg/ m² for Model –HU) wind uplift forces acting on the cover.
 5. Latch operation: When heat melts the UL listed fusible link or enables the resettable UL listed McCabe link, the latch shall release, allowing vent covers to open. The latch shall be designed for easy resetting, after a fire or test, so that the covers cannot be latched closed unless the mechanism has been reset properly. Manufacturer shall provide instructions for resetting the latch with each unit.
 6. Releases: Inside and Outside manual releases shall be provided.
- C. Covers: Shall be [select: 16 gauge G-90 galvanized steel or 0.063" aluminum] with a 7-3/8" (187mm) high flange with formed reinforcing members.
1. Vent with metal lids:
 - a. Model DLSH-[insert: width (_____) length (_____)]-SLD-Hi R solid lid shall be [select: 16 gauge G-90 galvanized steel or 0.063" aluminum]
 - b. Cover Insulation: Shall be 6" thick polyisocyanurate with an R insulating value of 43 and shall be provided with a 22 GA galvanized steel liner.
- D. Curb: Shall be 12" (305mm) in height and of [select: 14 gauge G-90 galvanized steel or 0.080" aluminum] with a fixed center channel. Curb shall be formed with a 4" (102mm) flange with 1/4" (6mm) holes provided for securing to roof deck. Curb, when made for a self flashing condition, shall be equipped with integral metal capflashing of the same gauge and material as the curb. Curb shall have a heavy duty extruded EPDM rubber gasket that is fitted to the curb to assure a continuous seal when compressed to the bottom surface of the cover.
- E. Curb insulation: Shall be polyisocyanurate rigid insulation of 6" (152 mm) thickness. When placed on the outside of curb, it shall be provided with a 22 GA G90 galvanized steel liner. Inner and outer assemblies shall be thermally broken.
- F. Lifting mechanisms: Manufacturer shall provide high performance gas springs which apply forces to the cover and open the covers in a controlled manner against a minimum 10 lb/ft² (49 Kg/m²). Gas springs shall have a Multi-Lobe seal, a corrosion resistant outer tube and hard chrome plated inner rod.
- G. Latch mechanism: Shall be the a positive hold/release mechanism with a separate latching point for each cover controlled by a single UL listed 165°, 212°, 286°, 360°, or 520° 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.
- H. Hardware
1. Heavy duty pintle hinges shall be provided.
 2. Covers shall automatically lock in the open position.
 3. Cover hardware shall be bolted into heavy gauge reinforcing channel welded to the underside of the cover.
- I. Finishes: Factory finish shall be mill finish.

III. PART THREE - EXECUTION

3.1 INSPECTION

- A. Verify that roof fire 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.

3.2 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 fire vent details for accuracy to fit the application prior to fabrication. The installer shall comply with the roof fire vent manufacturer's installation instructions.
- C. The installer shall furnish mechanical fasteners and sealants consistent with the roof requirements.
- D. The manufacturer shall provide instructions for resetting the latching device with each unit.
- E. The installer shall test the vent(s) for proper operation after installation fusing the link. A replacement fusible link shall be supplied with vent by the manufacturer.

3.3 MAINTENANCE

- A. Maintain vent(s) in accordance with NFPA 204, Standard for Smoke and Heat Venting
- B. Test each door at least annually. Replace gas springs when necessary. Lubricate latches and hinges annually.
- C. Inspect metal surfaces for dirt and corrosion every six (6) months or more often as conditions warrant. Clean and touch up painted or coated surfaces as required.

END OF SECTION 07720