## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Certified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered Certified.

## Ventilation Duct Assemblies

See **General Information for Ventilation Duct Assemblies**

### Assembly No. V-32

**October 29, 2013**

<table>
<thead>
<tr>
<th>Duct A</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Fire Resistance Rating</td>
<td>1 Hr</td>
</tr>
</tbody>
</table>
1. **Floor-Ceiling Assembly** — The 1 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

   **A. Flooring System** — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max area of floor opening is 150 in.\(^2\) (0.098 m\(^2\)) with a max 1.5 in. (38 mm) annular space between wrapped duct and framing members.

   **B. Wood Joists** — Nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. Additional framing members installed to form a square enclosure around the perimeter of the opening in the floor and ceiling.

   **C. Furring Channels** — (Where required - not shown) - Resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists as specified in the individual Floor-Ceiling Design. Furring channels spaced max 24 in. (610 mm) OC. If furring channels are used within the assembly, additional furring channels to be installed around the periphery of the opening.

   **D. Gypsum Board*** — Nom 4 ft (1.2 m) wide by 5/8 in. (15.9 mm) thick as specified in the individual Floor-Ceiling Design. Gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max area of ceiling opening is 150 in.\(^2\) (0.098 m\(^2\)) with a max 1.5 in. (38 mm) annular space between duct and framing members.

2. **Steel Air Duct** — Max 7 in. (178 mm) diam by min 0.0157 in. (No. 30 gauge or 0.40 mm) thick galv steel air duct to be centered within the firestop system. Max one steel air duct to be installed within opening. Steel duct to be rigidly supported on top side of floor-ceiling assembly.

   2A. **Steel Air Duct** — Max 10 x 4 in. (254 x 102 mm) rectangular by min 0.022 in (No. 26 gauge or 0.56 mm) thick galv steel air duct to be centered within the firestop system. Max one steel air duct to be installed within opening. Steel duct to be rigidly supported on top side of floor-ceiling assembly.

3. **Fire-resistive System** — The fire resistive system shall consist of the following:

   **A. Firestop System** — When the ventilation duct passes through a fire rated floor assembly, the through openings shall be firestopped in accordance with System No. F-C-7057.

   **B. Batts and Blankets*** — 1/2 in. (13 mm) thick, 8 pcf (128 kg/m\(^3\)) or nom 1-1/2 in.
(38 mm) thick, 6 pcf (96 kg/m³) with foil-scrim facers. The steel duct shall be wrapped with one layer of duct wrap installed with 1 in. (25 mm) transverse and longitudinal overlaps or tightly butted compression joints in accordance with the manufacturer's installation instructions. A min 12 in. high collar consisting of an additional layer of 1/2 in. (13 mm) thick, 8 pcf (128 kg/m³) or nom 1-1/2 in. (38 mm) thick, 6 pcf (96 kg/m³) duct wrap, installed over the duct wrap flush with the top surface of the floor and extending upward. All seams and edges shall be sealed with min 3 in. (76 mm) wide pressure sensitive aluminum foil tape.

UNIFRAX I LLC — FyreWrap® DPS or FyreWrap® Elite 1.5

C. **Steel Tie Wire** — Min No. 18 Gauge (0.040 in. or 1 mm) galvanized steel wire formed into a loop on one end, with the other end passed through the loop, pulled hand tight and bent over. Tie wires spaced a max 12 in. (305 mm) OC.

*Bearing the UL Classification Mark*

© 2013 UL LLC

When the UL Leaf Mark is on the product, or when the word "Environment" is included in the UL Mark, please search the UL Environment database for additional information regarding this product's certification.

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2013 UL LLC".