



## System No. F-C-2153 XHEZ.F-C-2153 Through-penetration Firestop Systems

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### 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.

### XHEZ - Through-penetration Firestop Systems

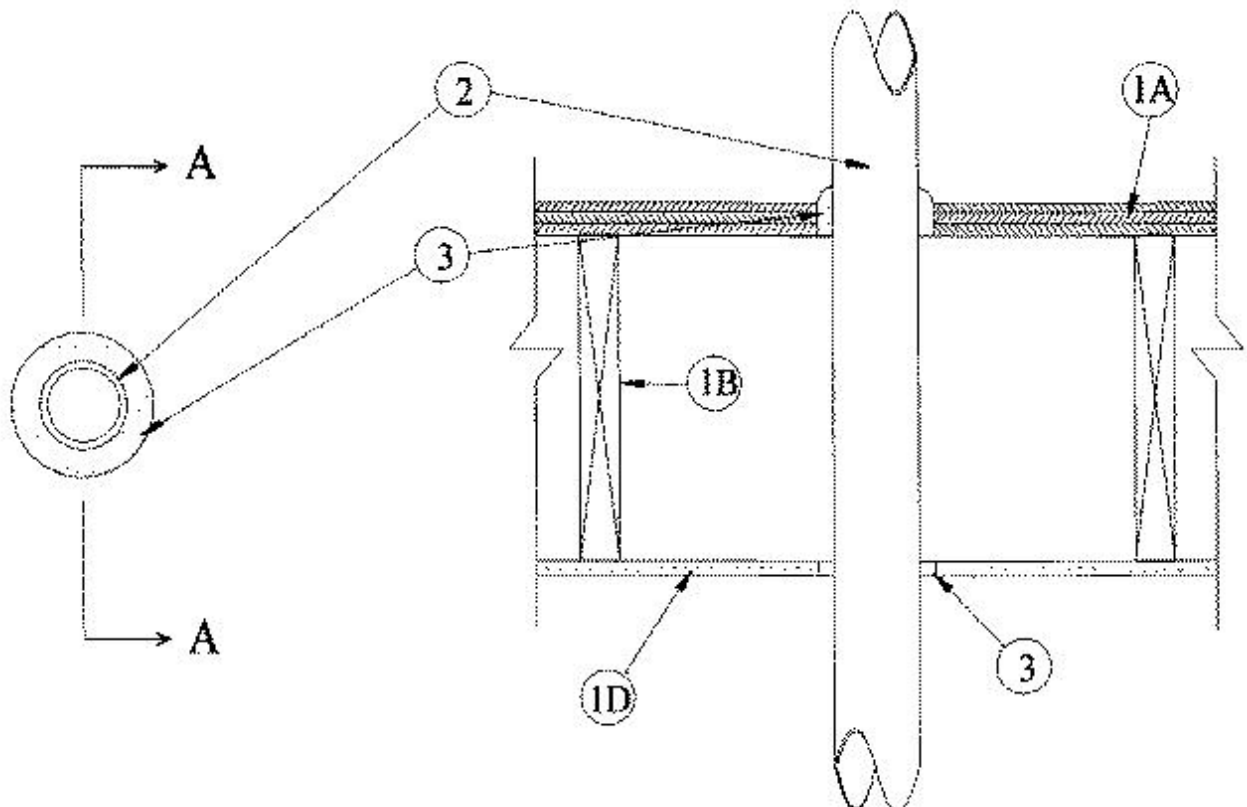
[See General Information for Through-penetration Firestop Systems](#)

#### System No. F-C-2153

November 19, 1999

**F Rating — 1 Hr**

**T Rating — 1 Hr**



1. **Floor-Ceiling Assembly** — The fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in 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 diam of floor opening is 2-7/8 in.

B. **Wood Joists** — Nom 2 by 10 in. lumber joists spaced 16 in. OC with nom 1 by 3 in. lumber bridging and with ends firestopped. As an alternate to lumber joists, nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or **Structural Wood Members\*** with bridging as required with ends firestopped.

C. **Furring Channels** — (Not Shown) — Resilient galv steel furring installed perpendicular to wood joists (Item 1B) between wallboard (Item 1D) and wood joists as required in the individual Floor-Ceiling Design.

D. **Gypsum Board\*** — Nom 4 ft wide by 5/8 in. thick as specified in the individual Floor-Ceiling Design. Wallboard secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 2-7/8 in.

1.1 **Chase Wall** — (Not Shown, Optional) The through penetrant (Item 2) shall be routed through a fire-rated single, double, or staggered wood stud/gypsum wallboard chase wall constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Nom 2 by 6 in. or double nom 2 by 4 in. lumber studs.

B. **Sole Plate** — Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.

C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of opening is 2-7/8 in.

D. **Gypsum Board\*** — Thickness, type, number of layers and fasteners shall be as specified in individual Wall and Partition Design.

2. **Through Penetrants** — One nonmetallic pipe or conduit to be installed approximately midway between wood joists and centered within the firestop system. Diam of openings hole-sawed through flooring system and through gypsum wallboard ceiling, or through top plates of chase wall assembly to be nom 1/2 in. larger than the outside diam of through-penetrant. Pipe or conduit to be rigidly supported on both sides of the floor-ceiling assembly. The following types and sizes of nonmetallic pipes or conduits may be used:

A. **Polyvinyl Chloride (PVC) Pipe** — Nom 2 in. diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.

B. **Rigid Nonmetallic Conduit+** — Nom 2 in. diam (or smaller) Schedule 40 PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA No. 70).

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 2 in. diam (or smaller) SDR 17 CPVC pipe for use in closed (process or supply) or vented (drain, waste, or vent) piping systems.

3. **Fill, Void or Cavity Material\* — Sealant** — Min 1-1/4 in. thickness of fill material applied within annulus on top surface of floor. Additional fill material to be installed such that a min 1/4 in. crown is formed around the through penetrant on top surface of floor. Min 5/8 in. thickness of fill material applied within annulus, flush with bottom surface of ceiling, or lower top plate of chase wall assembly.

**A/D FIRE PROTECTION SYSTEMS INC** — A/D FireBarrier Silicone

\*Bearing the UL Classification Marking

+Bearing the UL Listing Mark

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