



System No. F-E-2021 XHEZ.F-E-2021 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

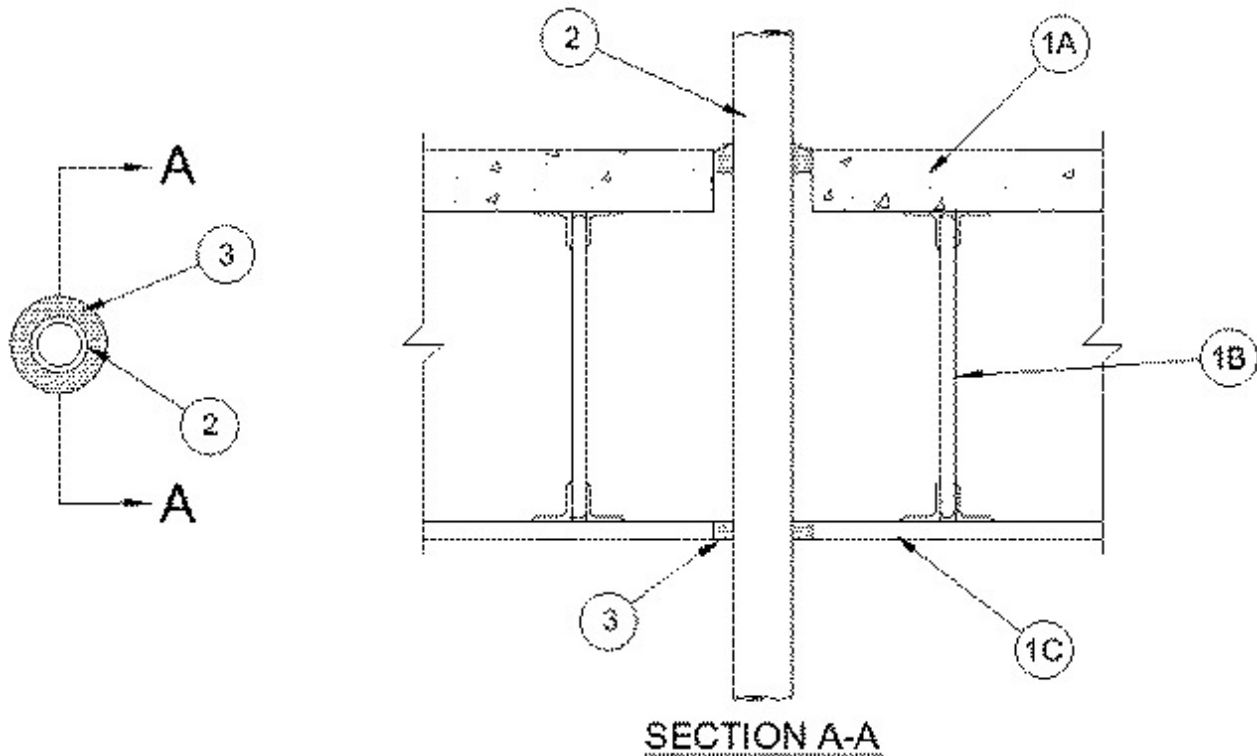
[See General Information for Through-penetration Firestop Systems](#)

System No. F-E-2021

June 08, 2006

F Rating — 1 Hr

T Rating — 1 Hr



1. Floor-Ceiling Assembly — The 1 hr fire rated concrete and steel joist Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual G500 Series Design in the UL Fire Resistance Directory, as summarized below:

A. **Concrete Floor** — Normal weight or lightweight (100-150 pcf) concrete over metal lath or steel deck as specified in the individual G500 Series Design. Max diam of floor opening is 2-7/8 in.

B. **Joists** — Steel joists or **Structural Steel Members*** as specified in the individual G500 Series Design.

C. **Gypsum Board*** — Min 5/8 in. thick, screw-attached to furring channels as specified in the individual G500 Series Design. Max diam of ceiling opening is 2-7/8 in.

2. **Through Penetrant** — One nonmetallic pipe, conduit or tubing to be centered within the opening. The annular space between penetrant and pipe, conduit or tubing of opening shall be a nom ¼ in. Penetrant to be located approx midway between joists and rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipe, conduits or tubing may be used:

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

B. **Chlorinated Polyvinyl (CPVC) Pipe** — Nom 2 in. diam (or smaller) SDR13.5 CPVC pipe for use in vented (drain, waste or vent) or closed (process or supply) piping systems.

C. **Rigid Nonmetallic Conduit+** — Nom 2 in. diam (or smaller) PVC conduit installed in accordance with Article 347 of the National Electrical Code (NFPA 70).

3. **Fill, Void or Cavity Materials* - Sealant** — Fill material applied within the annulus, flush with top surface of floor. Additional fill material shall be applied such that a min 1/4 in. crown is formed around the through penetrant on the top surface of the floor. The thickness of fill material within the top surface of the floor is dependent upon the type of fill material as shown below. Min 5/8 in. thickness of fill material applied within the annulus, flush with bottom surface of ceiling.

Type of Fill Material	Thickness of Fill Material Within Top Surface of Floor, In
A/D FIREBARRIER Silicone	1-1/4

A/D FIRE PROTECTION SYSTEMS INC — A/D FIREBARRIER Silicone

*** Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.**

+Bearing the UL Listing Mark

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