



# XHEZ.W-L-4103 - Through-penetration Firestop Systems

## 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. W-L-4103

July 09, 2020

#### ANSI/UL1479 (ASTM E814)

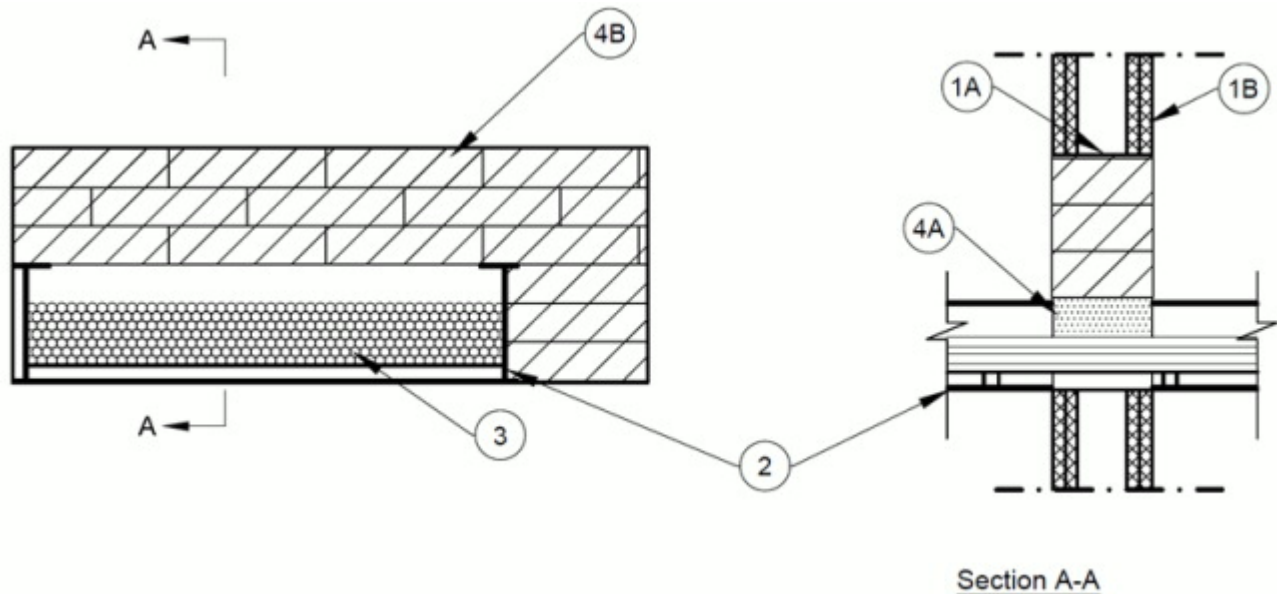
F Rating — 2 Hr
T Rating — 0 or 1 Hr (See Item 2)

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Section A-A

**1. Wall Assembly** — The 1 or 2 hr fire rated gypsum board/steel stud wall assembly shall be constructed of the materials and in the manner described in the individual U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:

A. **Studs** — Wall framing shall consist of steel channel studs. Studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. Additional studs shall be installed horizontally to form a rectangular box around the opening.

B. **Gypsum Board\*** — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max area of opening is 384 in.<sup>2</sup> (2477 cm<sup>2</sup>) with a max dimension of 32 in. (813 mm).

**The hourly F Ratings are dependent upon the hourly rating of the wall in which it is installed.**

**2. Cable Tray** — Max 24 in. (610 mm) wide by max 6 in. (152 mm) deep open ladder cable tray with channel-shaped side rails formed of min 0.070 in. (1.8 mm) thick (15 gauge) aluminum or 0.07 in. thick galv steel. Max one cable tray per opening. Cable tray to be rigidly supported on both sides of floor or wall assembly.

**The hourly T Ratings shall be 0 hr when a steel cable tray is used.**

**3. Cables** — Aggregate cross-sectional area of cables in cable tray not to exceed 50 percent of the cross-sectional area of the cable tray based on a max 5 in. (127 mm) cable loading depth within the tray. Any combination of the following types and sizes of cables may be used:

A. Max 300 pair No. 24 AWG (or smaller) copper conductor telecommunication cables with polyvinyl chloride (PVC) insulation and jacket.

B. Max 1/C 500 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) insulation and jacket.

C. Max 3/C No. 2 AWG copper or aluminum conductor cables with PVC insulation and jacket.

D. Max 7/C No. 12 AWG copper conductor power and control cables with PVC or cross-linked polyethylene (XLPE) insulation and jacket and PVC jacket.

E. Multiple fiber optic communication cables jacketed with PVC and having a max outside diameter of 1/2 in. (13mm).

F. Max No. 18 AWG Type RG/6 coaxial cable with polyvinyl chloride insulation.

**4. Firestop System** — The firestop system shall consist of the following: >

A. **Fill, Void or Cavity Material\*** — Min 4-1/2 in. (114 mm) thickness of fill material to be forced into interstices of cables, between cables and cable tray, and around the periphery of the cables / cable tray. Max area of fill 224 in.<sup>2</sup> (1445 cm<sup>2</sup>) with a maximum dimension of 32 in (813 mm). The max vertical annular space to the periphery of the opening or block/foam interface shall be 3-1/2 in (89 mm) and 8 in. (203 mm) horizontally and vertically respectively.

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After installation of blocks (Item 4B), fill material to be forced between blocks and periphery of opening to max extent possible from either surface of wall.

**TENMAT INC** — Fire Protection Foam FF360

**B. Fill, Void or Cavity Material\*** — Blocks tightly-packed into the opening to fill annular space between cable tray or foam and periphery of opening. Blocks installed with 5 in. (127 mm) dimension projecting through wall and centered within the opening.

**TENMAT INC** — Fire Protection Block FF260

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

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