

# XHEZ.F-C-2489 - 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

### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

See General Information for Through-penetration Firestop Systems

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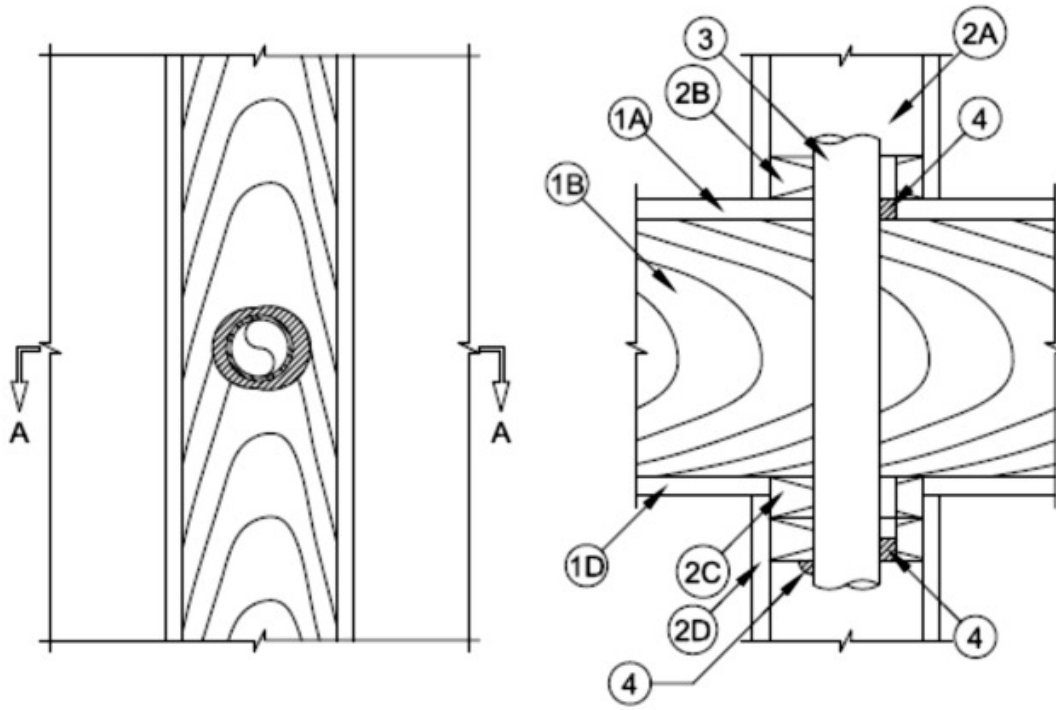
#### System No. F-C-2489

June 03, 2019

**ANSI/UL1479 (ASTM E814)**

**CAN/ULC S115**

F Rating — 1 Hr	F Rating — 1 Hr
T Ratings — 3/4 and 1 Hr (See Item 3)	FT Ratings — 3/4 and 1 Hr (See Item 3)
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 Hr
L Rating at 400°F — Less Than 1 CFM/sq ft	FTH Ratings — 3/4 and 1 Hr (See Item 3)
	L Rating at Ambient — Less Than 5.1 L/s/m <sup>2</sup>
	L Rating at 204°C — Less Than 5.1 L/s/m <sup>2</sup>



1. **Floor — Ceiling Assembly** — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as 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 4 in. (102 mm).
  - 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.
  - C. **Gypsum Board\*** — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard secured to joists as specified in the individual Floor-Ceiling Design.
2. **Chase Wall** — The through penetrant (Item No. 3) shall be routed through wood stud/gypsum board chase wall and shall include the following construction features:
- A. **Studs** — Nom 2 by 6 in. (51 by 152 mm) lumber studs.
  - B. **Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening or length of notch-out in sole plate to be 1/2 in. (13 mm) larger than outside diam of pipe.
  - C. **Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates. Diam of opening or length of notch-out in top plate to be 1/2 in. (13 mm) larger than outside diam of pipe.
  - D. **Gypsum Board** — Min 1/2 in. (13 mm) thick rated or nonrated gypsum board.
- 2A. **Alternate Chase Wall** — (Not Shown) — For nom 2 in. diam (or smaller) through penetrants (Item No. 3), the pipes may be routed through wood stud/gypsum board chase wall as an alternate to Item 2 and shall include the following construction features:
- A. **Studs** — Nom 2 by 4 in. (51 by 102 mm) lumber studs.
  - B. **Sole Plate** — Nom 2 by 4 in. (51 by 102 mm) lumber plates. Diam of opening or length of notch-out in sole plate to be 1/2 in. (13 mm) larger than outside diam of pipe.
  - C. **Top Plate** — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm) lumber plates. Diam of opening or length of notch-out in top plate to be 1/2 in. (13 mm) larger than outside diam of pipe.
  - D. **Gypsum Board** — Min 1/2 in. (13 mm) thick rated or nonrated gypsum board.
3. **Through Penetrants** — One nonmetallic pipe to be centered within the firestop system. The annular space between pipe and periphery of opening shall be 0 in. (point contact) to 1/2 in. (13 mm) Pipe to be rigidly supported on both sides of floor assembly. The following types and sizes of nonmetallic pipes may be used:
- A. **Polyvinyl Chloride (PVC) Pipe** — Nom 3 in. (76 mm) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. **T Rating is 1 h.**
  - B. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 3 in. (76 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems. **T Rating is 1 h.**

C. **Rigid Non-Metallic Conduit +** — Nom 3 in. (76 mm) Diam (or smaller) PVC conduit installed in accordance with the National Electrical Code (NFPA 70). **T Rating is 1 h.**

D. **Electrical Nonmetallic Tubing+** — Nom 3 in. (76 mm) (or smaller) PVC tubing installed in accordance with the National Electrical Code (NFPA 70). **T Rating is 1 h.**

E. **Crosslinked Polyethylene (PEX) tubing** — Nom 1-1/2 in. (38 mm) diam (or smaller) SDR 9 tube used for closed (process or supply) or vented (drain, waste or vent) piping systems, with HydroFlame 200 (Item 4A). **T Rating is 3/4 h.**

F. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom. 2 in. (51 mm) diam (or smaller) Blazemaster® SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems. **T Rating is 1 h.**

G. **Polypropylene (PP) Pipe** — Nom 2 in. (51 mm) diam (or smaller) Aquatherm Greenpipe SDR 11 PP pipe for use in closed (process or supply) piping systems, with HydroFlame 200 (Item 4A). Maximum total annular space shall be 1/2 in. with no point contact. **T Rating is 1 hr.**

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

A. **Fill, Void or Cavity Material\*** — **Caulk** — Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor. Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with bottom surface of top plate. Min 1/2 in. (13 mm) crown bead at point contact.

**RELIANCE WORLDWIDE CORPORATION DBA HOLDRITE HYDROFLAME** — HydroFlame 200 or HydroFlame 100

**\* 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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