



System No. C-AJ-3272
XHEZ.C-AJ-3272
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

XHEZ7 - Through-penetration Firestop Systems Certified for Canada

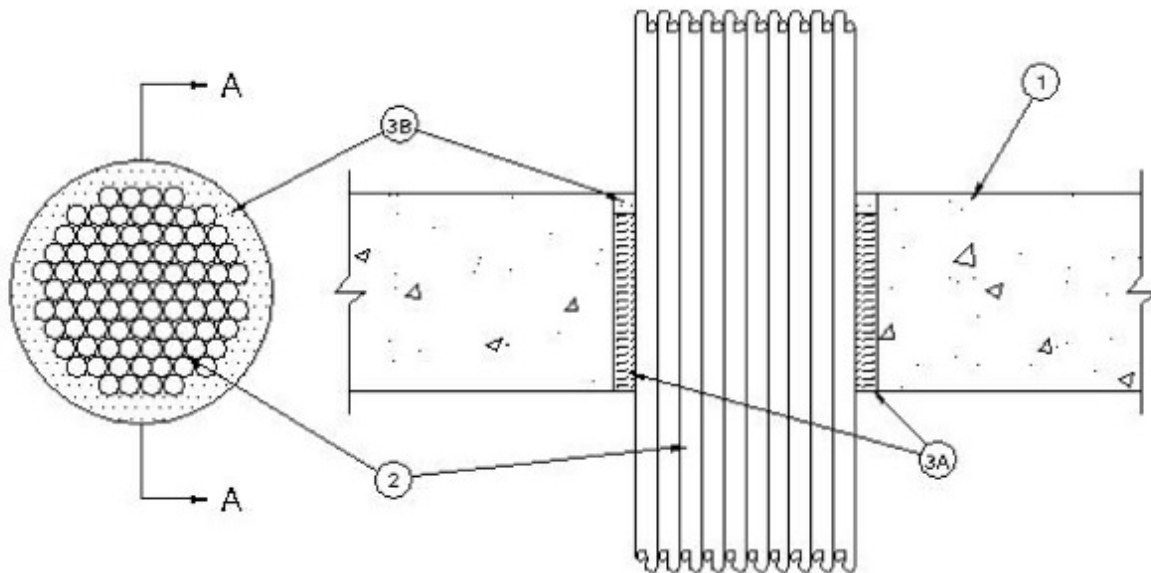
[See General Information for Through-penetration Firestop Systems](#)

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

System No. C-AJ-3272

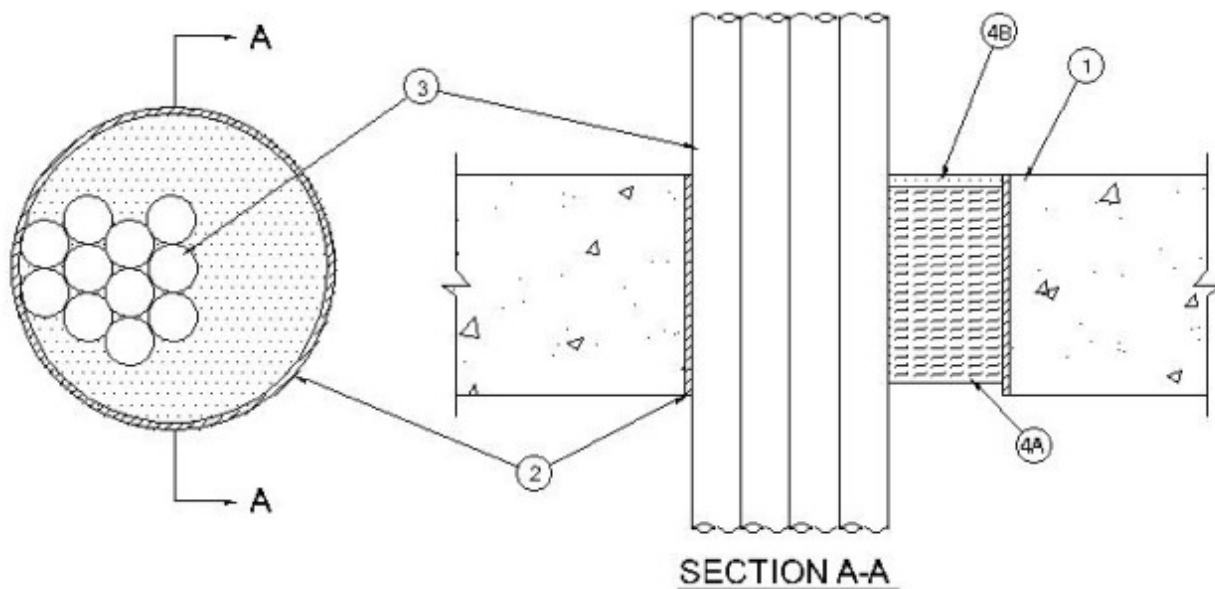
April 22, 2016

| ANSI/UL1479 (ASTM E814) | CAN/ULC S115 |
|---|---|
| F Rating — 2 Hr | F Rating — 2 Hr |
| T Rating — 0, 1/4, 1/2 and 1 Hr (See CONFIGURATION A, Item 2 and CONFIGURATION B, Item 3) | FT Rating — 0, 1/4, 1/2 and 1 Hr |
| | FH Rating — 2 Hr |
| | FTH Rating — 0, 1/4, 1/2 and 1 Hr (See CONFIGURATION A, Item 2 and CONFIGURATION B, Item 3) |



SECTION A-A

CONFIGURATION A



SECTION A-A

Configuration A

1. **Floor or Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf (1600-2400kg/m³)) concrete floor or min 5 in. (127 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified **Concrete Blocks***. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Max diam of opening is 6 in. (152 mm).

See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. **Cables** — Aggregate cross-sectional area of cables in opening to be max 39 percent of the aggregate cross-sectional area of the opening. The cable bundle shall be centered in opening. Cables to be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of copper conductor cables may be used:

- A. Max 1/C — 500 kcmil cable with polyvinyl chloride (PVC) insulation and jacket.
- B. Max 1/C — 350 kcmil cable with polyvinyl chloride cross linked polyethylene (XLPE) insulation and jacket.
- C. Max 3/C — No. 6 cable with PVC insulation and jacket.
- D. Max 300 pair No. 24 AWG copper conductor telephone cables with polyvinyl chloride (PVC) insulation and jacket.

E. Max 24 fibers — 62.5/125um dielectric duct/aerial fiber optic cable with high density polyethylene (HDPE) jacket.

T Rating is 0 hr for Cables A and B.

T Rating is 1/2 hr for Cables C and D.

T Rating is 1 hr for Cable E.

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

A. **Packing Material** — Min 4 in. (102 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor or from both surfaces of wall and hollow-core precast concrete unit as required to accommodate the required thickness of fill material.

B. **Fill,Void or Cavity Material* — Caulk** — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall and hollow-core precast concrete unit. Caulk to be forced into interstices of cable group to max extent possible. When thickness of packing material (Item 3A) increased to 4-1/4 in. (108 mm), min thickness of fill material is 1/4 in. (6 mm).

A/D FIRE PROTECTION SYSTEMS INC — A/D FIREBARRIER Intumescent Sealant, A/D FIREBARRIER Intumescent Sealant II

Configuration B

1. **Floor or Wall Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf (1600-2400 kg/m³)) concrete floor or min 5 in. (127 mm) thick reinforced lightweight or normal weight concrete wall. Wall may also be constructed of any UL Classified **Concrete Blocks***. Floor may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units***. Max diam of opening is 6 in. (152 mm).

See **Concrete Blocks** (CAZT) and **Precast Concrete Units** (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

2. **Steel Sleeve** — (Optional) — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe cast or grouted into floor or wall assembly. Steel sleeve installed flush with the floor or wall surfaces.

3. **Cables** — Aggregate cross sectional area of cables in opening to be max 44 percent of the cross sectional area of the opening. Tight bundle of cables to be installed in the opening. The annular space between the cable bundle and the periphery of the opening shall be min 0 in. (point contact) to max 2 in. (51 mm). Cable bundle to be rigidly supported on both sides of the floor or wall assembly. The following types and sizes of cables may be used:

A. Max 200 pair No. 24 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.

B. Max 1/C No. 350 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.

C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.

D. Max 3/C No. 3/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.

E. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable.

F. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.

G. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.

H. Max RG/U coaxial cable with fluorinated ethylene insulation and jacket.

I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Mylar jacket and insulation.

T Rating is 1/4 hr for above Cables.

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

A. **Packing Material** — Min 4-1/4 in. (108 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation compressed and tightly packed into opening. Packing material recessed from top surface of floor or both surfaces of wall and hollow-core precast concrete unit as required to accommodate the required thickness of fill material.

B. **Fill,Void or Cavity Material* — Caulk** — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall and hollow-core precast concrete unit. Caulk to be forced into interstices of cable group to max extent possible.

*** 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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