

RENOVATION
Wranglers

Owner: Renovation Wranglers
102 E 26th St
Bryan, TX 77803
kate@renovationwranglers.com | 979.450.9969

ARCHITECTURE
Architect of Record: LKB Architecture
2929 Allen Pkwy Suite 200
Houston, TX 77019
isa@lkbarchitecture.com | 713.425.3076

DUDDLEY
Structural: Dudley
Firm # 18677
6102 Imperial Loop Drive
College Station, TX 77845
corieka@dudleyeng.com | (979) 777-0720

amc
ENGINEERS
MEP: AMC Engineers
Texas Firm #9441
508 E Jackson St # 552
Bunnet, TX 78611
info@amcengineers.com | 512.535.6427

5/26/22, 11:33 AM iqluprospector.com_en/profile_XHEZ.F-C-3012 - Through-penetration Firestop Systems | UL Product IQ

UL Product IQ®

XHEZ.F-C-3012 - 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 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. F-C-3012
April 06, 2018

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

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SECTION A-A

- Floor-Ceiling Assembly** — The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The general construction features of the floor-ceiling assembly are summarized below:
 - 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 opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
 - 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.
 - Furring Channels** — (Not Shown) — (As required) — Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
 - Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening for 1 or 2 hr assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.

The F Rating of the firestop system is equal to the rating of the floor-ceiling assembly.

- Chase Wall** — (Optional) — The through penetrant (Item 3) may be routed through a fire-rated or non-rated single, double or staggered wood stud/gypsum wallboard chase wall. The chase wall shall be constructed to include the following construction features:
 - Studs** — Nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 - Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm) or 2 in. (51 mm), respectively.
 - Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening for 1 or 2 hr rated assembly is 2-1/2 in. (64 mm)

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or 2 in. (51 mm), respectively.

D. Gypsum Board* — One or two layers of min 1/2 in. (13 mm) gypsum board.

3. Cables — In 1 hr fire-rated assemblies, aggregate cross-sectional area of cables in opening to be max 45 percent of the cross-sectional area of the opening (max 2 in. (51 mm) diam bundle). Cables to be rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductors may be used:

- RG 59 coaxial cable with single copper conductor, cellular polyethylene cellular foam insulation and polyvinyl chloride (PVC) jacket.
- Max 8/C No. 22 AWG telephone cable with polyvinyl chloride (PVC) jacketing.
- Max 2/C No. 12 AWG cable with polyvinyl chloride (PVC) insulation and jacketing.
- Max 3/C with ground No. 2/0 AWG aluminum or copper Type SER cable with polyvinyl chloride (PVC) insulation.
- Max 3/C with ground No. 2/0 AWG Type NM cable with polyvinyl chloride (PVC) insulation.
- Max 3/C No. 12 AWG MC (BX) cable with polyvinyl chloride (PVC) insulation.
- Max 1 in. diam metal clad TEK cable with PVC jacket.
- Max 4/C with ground No. 300 kcmil (or smaller) aluminum SER cable with PVC insulation and jacket.

L Through Penetrating Product* — Any cables, **Metal-Clad Cable*** or **Armored Cable*** currently Classified under the **Through Penetrating Products** category.

See **Through Penetrating Product** (XHLV) category in the Fire Resistance Directory for names of manufacturers.

The T Rating is 1 and 1-3/4 hr for 1 and 2 hr rated assemblies, respectively, for cables 3A through 3G. The T Rating is 0 hr for cables 3H and 3L.

4. Fill, Void or Cavity Material* — Sealant — Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material also applied within the annulus, flush with bottom surface of ceiling or lower top plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-611A Sealant or FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

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

Last Updated on 2018-04-06

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6A A614 FIRE STOP - FLOOR - FRAMED - ELECTRIC CABLE - F 1HR&2HR - T 1HR&2HR - L NA - HILTI - XHEZ.F-C-3012 12" = 1'-0"

5/26/22, 11:38 AM iqluprospector.com_en/profile_XHEZ.F-C-8009 - Through-penetration Firestop Systems | UL Product IQ

UL Product IQ®

XHEZ.F-C-8009 - Through-penetration Firestop Systems

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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. F-C-8009
January 21, 2015

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating — 1 Hr
T Rating — 1 Hr	FT Rating — 1 Hr
	FH Rating — 1 Hr
	FTH Rating — 1 Hr

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SECTION A-A

System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

- 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 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
 - 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 opening is 3 in. (76 mm).
 - 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.
 - Gypsum Board*** — Thickness, type, number of layers and fasteners shall be as specified in the individual Floor-Ceiling Design. Max diam of opening in ceiling (when chase wall (Item 2) is not provided) is 3 in. (76 mm).
- Chase Wall** — (Optional, Not Shown) — The through penetrant (Item 3) may be routed through a 1 hr 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:
 - Studs** — Nom 2 by 6 in. (51 by 152 mm) lumber or double nom 2 by 4 in. (51 by 102 mm) lumber studs.
 - Sole Plate** — Nom 2 by 6 in. (51 by 152 mm) lumber or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max diam of opening shall be 3 in. (76 mm).
 - Top Plate** — The double top plate shall consist of two nom 2 by 6 in. (51 by 152 mm) lumber plates or 2 sets of parallel nom 2 by 4 in. (51 by 102 mm) lumber, tightly butted. Max diam of opening is 3 in. (76 mm).

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

3. Through Penetrants — Pipe, cable and tubing to be bundled and rigidly supported on both sides of floor assembly. A non annular space of min 0 in. (point contact) to max 1/2 in. (13 mm) is required within the firestop system. The following types and sizes of pipe, cable and tubing are to be used in the firestop system in sufficient quantities to fill the firestop device:

- Cable** — Type PTF thermoset cable, 5/8 No. 18 AWG copper conductor, plastic insulation and jacket.
- Polyvinyl Chloride (PVC) Pipe** — Nom 1-1/2 in. (38 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- Copper Tubing** — Nom 3/4 in. (19 mm) diam (or smaller) Type L (or heavier) copper tubing.
- Copper Tubing** — Nom 1/2 in. (13 mm) diam (or smaller) Type L (or heavier) copper tubing.

4. Tube Insulation — Plastics* — Nom 1/2 in. (13 mm) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Insulation to be installed only on one through relevant having a max nom diam of 3/4 in. (19 mm).

See Plastics* (QMFZZ) category in the Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL94 Flammability Classification of 94-5VA may be used.

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

- Firestop Device*** — **Firestop Collar** — Firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the penetrants and secured to underside of gypsum wallboard ceiling using the anchor hooks provided with the collar. The anchor hooks are to be secured to the surface of the ceiling with min 3/16 in. diam min 2-1/2 in. long toggle bolts.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 64-3 90/3" N, CP 64-3 63/2" N, CP 64-3 50/1-1/2" N.

*Bearing the UL Recognized Component Mark
*Bearing the UL Classification Marking

Last Updated on 2015-01-21

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6A A614 FIRE STOP - FLOOR - FRAMED - GROUPINGS - F 1HR&2HR - T 1HR&2HR - L NA - HILTI - XHEZ.F-C-8009 12" = 1'-0"

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Date	Description
08/10/2022	Issued for Permit
08/26/2022	Permit Revisions

Architect: OpeningDesign
17 S Fairchild | FL 7
Madison, WI 53703
ryan@openingdesign.com | 773.425.6456

FIRE STOP DETAILS - FLOOR
MARCO POLO - 101 33RD STREET - CITY OF BRYAN TOWNSITE, BLOCK 96, LOT 3-5 & PT OF 6 & PT OF ALLEY - BRYAN, TX 77803

A614