

XHEZ.W-J-8088 - 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.

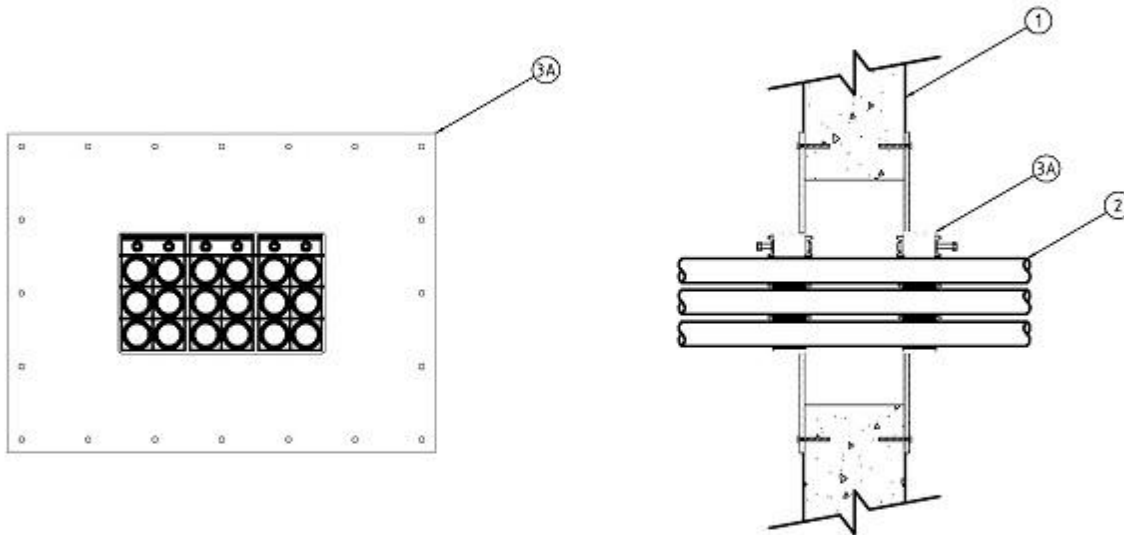
Through-penetration Firestop Systems

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

System No. W-J-8088

November 19, 2021

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 3 Hr	F Rating — 3 Hr
T Rating — 1/2 Hr	FT Rating — 1/2 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 3 Hr
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 1/2 Hr
	L Rating At Ambient — Less Than 5.1 L/s/m ²
	L Rating At 204 C — Less Than 5.1 L/s/m ²



1. **Wall Assembly** —Min 8 in. (203 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 422 sq in. (2722 cm²). Max dimension of opening is 24-7/8 in. (633 mm). The frame's extended flange is to overlap min 3-1/2 in. (89 mm) onto wall surfaces around periphery of opening.

See **Concrete Blocks** (CAZT) in the Fire Resistance Directory for names of manufacturers.

2. **Through Penetrants** – One or more through penetrants shall be installed within each window of the device frame. Any combination of the following through-penetrants may be used. Penetrants to be rigidly supported on both sides of wall assembly.

A. **Cables** —Aggregate cross-sectional area of cables within each window of firestop device is to be 7 in² (4516 mm²) or less. The following types and sizes of cables may be used:

A1. Max 750 kcmil (or smaller) copper conductor shielded or unshielded power cable with polyvinyl chloride (PVC) jacket and ethylene-propylene rubber (EPR) insulation.

A2. Max 500 kcmil (or smaller) copper conductor power cable with outer concentric neutral wires, polyethylene (LLDPE) jacket and polyethylene (TRXLPE) insulation.

A3. Max 3/C 1/0 AWG plus 3C 10 AWG (or smaller) with ground steel armor MC-HL copper conductor power and control cable with Ethylene Propylene Rubber(EPR) insulation and PVC jacket materials.

A4. Max 24 pair No. 16 AWG (or smaller) copper conductor shielded or unshielded instrumentation cable with polyethylene insulation and polyvinyl chloride (PVC) jacket materials.

B. **Metallic Penetrants** —The following types and sizes of metallic penetrants may be used:

B1. Nom 3/4 in. (19 mm) diam (or smaller) Sch 40 steel conduit.

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

A. **Firestop Devices*** —Firestop device consists of a rectangular steel frame with mounting flanges extending max 8-1/4 in. (209.25 mm) , multi diameter elastomeric sealing modules, steel stay plates and a compression unit consisting of a Roxtec Wedge. The firestop device shall be surface mounted and centered over the wall opening on both sides of the wall assembly. The steel frame of the firestop device shall be secured to the wall by means of min 1/4 in. (6 mm) diam by min 1-3/4 in. (44 mm) long steel anchor bolts or concrete screw

anchors through holes spaced max 5-1/2 in. (140 mm) OC in the device frame mounting flange and max 1 in. (25 mm) from ends. The rectangular opening(s) of each window within the device frame shall be filled with multiple rows of multi diameter elastomeric sealing modules with a max of one cable in each sealing module. The layers of the multi diameter sealing modules halves are removed one by one until a max gap of 0.04 in. (1 mm) is formed between the two module halves. When the number of sealing modules exceeds the number of cables, the solid cylindrical cores of the unpenetrated multi diameter sealing modules shall be left in place or "blank" (solid) sealing modules shall be used. During installation of the elastomeric sealing modules, thin steel stay plates shall be used to separate the rows of sealing modules and to retain the sealing modules within the steel frame. After installation of the modules, the bolts of the compression unit are tightened to form an effective seal around the through penetrants and insert modules. The firestop device shall be installed in accordance with the accompanying installation instructions.

ROXTEC INTERNATIONAL AB — G-2X1, G-2X2, G2X3, G-4X1, G-4X2, G-4X3, G-6X1, G-6X2, G-6X3, GH-2X1, GH-2X2, GH-2X3, GH-4X1, GH-4X2, GH4X3, GH-6X1, GH-6X2, GH-6X3, GHM-2X1, GHM-2X2, GHM-2X3, GHM-4X1, GHM-4X2, GHM-4X3, GHM-6X1, GHM-6X2, GHM-6X3, GH BG-2X1, GH BG-2X2, GH BG-2X3, GH BG-4X1, GH BG-4X2, GH BG 4X3, GH BG-6X1, GH BG-6X2, GH BG-6X3, GHM BG-2X1, GHM BG-2X2, GHM BG-2X3, GHM BG-4X1, GHM BG-4X2, GHM BG-4X3, GHM BG-6X1, GHM BG-6X2, GHM BG-6X3, GOH-2x1, GOH-4x1, GOH-6x1, GKOH-2x1, GKOH-4x1, GKOH-6x1, SF-2x1, SF-2X2, SF-2X3, SF-4x1, SF-4X2, SF-4X3, SF-6x1, SF-6X2, SF-6X3.

ROXTEC INC — G-2X1, G-2X2, G-2X3, G-4X1, G-4X2, G-4X3, G-6X1, G-6X2, G-6X3, GH-2X1, GH-2X2, GH-2X3, GH-4X1, GH-4X2, GH-4X3, GH-6X1, GH-6X2, GH-6X3, GHM-2X1, GHM-2X2, GHM-2X3, GHM-4X1, GHM-4X2, GHM-4X3, GHM-6X1, GHM-6X2, GHM-6X3, SF-2x1, SF-2X2, SF-2X3, SF-4x1, SF-4X2, SF-4X3, SF-6x1, SF-6X2, SF-6x3

B. Fill, Void or Cavity Materials* — Sealant —(Not Shown) — Two min 1/4 in. (6 mm) diam beads of sealant shall be applied as a gasket between the device frame mounting flange and the wall. One sealant bead shall be located between the edge of the opening and the line of fasteners around the entire perimeter of the opening, and the other bead between line of fasteners and outer edges of frame mounting flange.

See **Fill, Void or Cavity Material** (XHHW) category in the Fire Resistance Directory for names of manufacturers.

C. Butyl Rubber Gasket — (Not Shown) As an alternate to the sealant (Item B), a nom 5/16 in. (8 mm) thick by 5/16 in. (8mm) wide butyl rubber gasket with self-adhesive may be installed around the mounting flange. The gasket shall be recessed in approx 1/2 in. (13 mm) and 2 in. (51 mm) from the perimeter of the device frame mounting flange such that the continuous gasket brackets the line of fasteners along each side of the device.

*** 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 2021-11-19

The appearance of a company's name or product in this database does not in itself assure that products so identified have been manufactured under UL's Follow-Up Service. Only those products bearing the UL Mark should be considered to be Certified and covered under UL's Follow-Up Service. Always look for the Mark on the product.

UL permits the reproduction of the material contained in the Online Certification Directory subject to the following conditions: 1. The Guide Information, Assemblies, Constructions, Designs, Systems, and/or Certifications (files) must be presented in their entirety and in a non-misleading manner, without any manipulation of the data (or drawings). 2. The statement "Reprinted from the Online Certifications Directory with permission from UL" must appear adjacent to the extracted material. In addition, the reprinted material must include a copyright notice in the following format: "© 2021 UL LLC"