

# XHEZ.W-J-3247 - 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

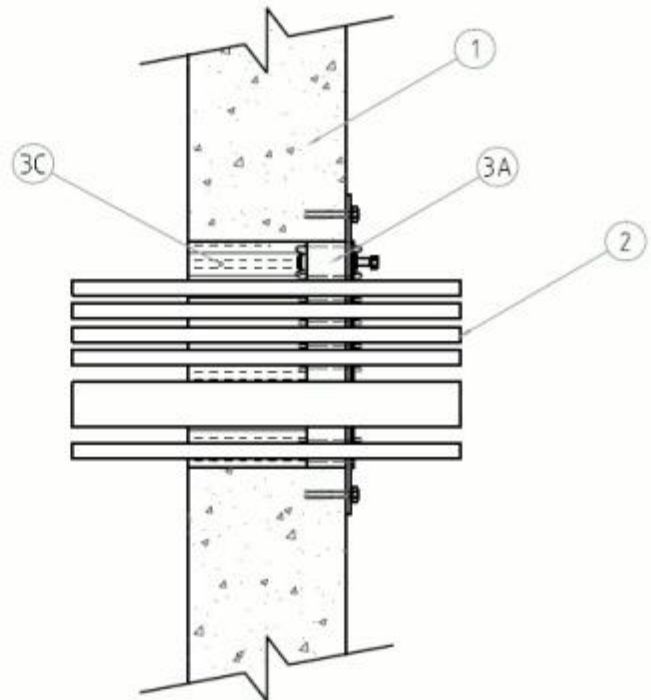
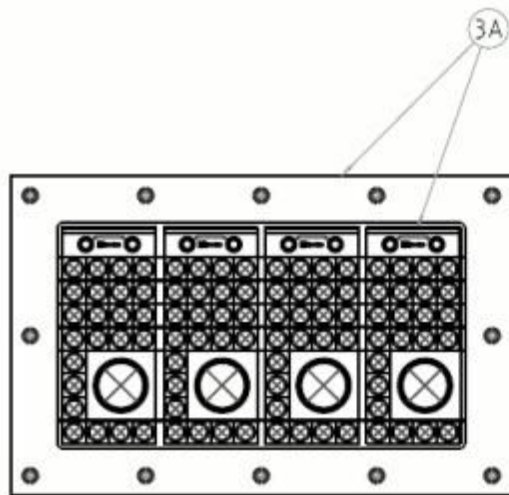
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. W-J-3247

October 03, 2017

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating —2 Hr	F Rating — 2 Hr
T Ratings — 0 and 1/2 Hr (See Item 3)	FT Ratings — 0 and 1/2 Hr (See Item 3)
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
	FTH Ratings — 0 and 1/2 Hr (See Item 3)
	L Rating At Ambient — Less Than 5.1 L/s/m <sup>2</sup>



1. **Wall Assembly** — Min 5 in. (127 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Rectangular opening to have dimensions which are max 1/4 in. (6 mm) greater than the width and height of the firestop device frame (Item 3A), excluding mounting flanges. Max dimension of framed opening is 21-1/16 in. (535 mm) wide by 11-5/8 in. (295 mm) high (G 8X4 Device).

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

2. **Cables** — Within the loading area for each firestop device module the cables may represent a 0 to 100 percent visual fill. Cables to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

- A. Max 4/C No. 8 AWG copper conductor power cable with Crosslinked Polyolefin insulation and Neoprene jacket materials.
- B. Max 19/C No. 14 AWG TC or TC-ER type copper conductor control power cable with Ethylene Propylene Rubber(EPR) insulation and Chlorinated Polyethylene (CPE) jacket materials.
- C. Max 3/C No. 750 kcmil metal clad or Tech 90 type copper conductor power cable with XLP insulation and PVC jacket materials.
- D. Max 3/C No. 500 kcmil copper conductor power cable with Ethylene Propylene Rubber(EPR) insulation and PVC jacket materials.
- E. Max 3/C No. 14 AWG MC type copper conductor power cable with XLP insulation and PVC jacket materials.
- F. Max 2/C No. 14 AWG metal clad or Tech 90 type copper conductor control power cable with XLP insulation and PVC jacket materials.
- G. Max 3/C No. 500 kcmil TC or TC-ER type copper conductor power cable with Okonite FRM Insulation and PVC jacket materials.
- H. Max 3/C No. 500 MCM TC or TC-ER type copper conductor power cable with Polyethylene insulation and PVC jacket materials.

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

**A. Firestop Devices\*** — Firestop devices each consist of a rectangular steel frame, multi diameter elastomeric sealing modules, steel stay plates and a compression unit consisting of a Roxtec Wedge. The firestop devices shall be inserted into the opening on one side of the wall assembly. The steel frame of each firestop device shall be secured to the wall by means of 3/8 in. (10 mm) diam by min 1-3/4 in. (44 mm) long steel anchor bolts in conjunction with nuts and steel washers through the pre-drilled holes spaced max 3-1/2 in. (89 mm) OC in the device frame mounting flange. The rectangular opening(s) of each 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 sheets 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 devices shall be installed in accordance with the accompanying installation instructions.

**ROXTEC INTERNATIONAL AB** — -2x1, B-4x1, B-6x1, B-8x1, G-2x1, G-2x2, G-2x3, G-2x4, G-4x1, G-4x2, G-4x3, G-4x4, G-6x1, G-6x2, G-6x3, G-6x4, G-8x1, G-8x2, G-8x3, G-8x4, GH-2X1, GH-2X2, GH-2X3, GH-2X4, GH-4X1, GH-4X2, GH-4X3, GH-4X4, GH-6X1, GH-6X2, GH-6X3, GH-6X4, GH-8X1, GH-8X2, GH-8X3, GH-8X4, GH BG-2X1, GH BG-2X2, GH BG 2X3, GH BG 2X4, GH BG-4X1, GH BG-4X2, GH BG 4X3, GH BG 4X4, GH BG-6X1, GH BG-6X2, GH BG 6X3, GH BG 6X4, GH BG-8X1, GH BG 8X2, GH BG 8X3, GH BG 8X4, , GHM-2x1, GHM-2x2, GHM-2X3, GHM-2X4, GHM-4x1, GHM-4x2, GHM-4X3, GHM-4X4, GHM-6x1, GHM-6x2, GHM-6X3, GHM-6X4, GHM-8x1, GHM-8X2, GHM-8X3, GHM-8X4, GHM BG-2X1, GHM BG-2X2, GHM BG 2X3, GHM BG 2X4, GHM BG-4X1, GHM BG-4X2, GHM BG 4X3, GHM BG 4X4, GHM BG-6X1, GHM BG-6X2, GHM BG 6X3, GHM BG 6X4, GHM BG-8X1, GHM BG 8X2, GHM BG 8X3, GHM BG 8X4, GKOH-2x1, GKOH-4x1, GKOH-6x1, GKOH-8x1, GOH-2x1, GOH-4x1, GOH-6x1, GOH-8x1, SF-2x1, SF-2x2, SF-2x3, SF-2x4, SF-4x1, SF-4x2, SF-4x3, SF-4x4, SF-6x1, SF-6x2, SF-6x3, SF-6x4, SF-8x1, SF-8x2, SF-8x3, SF-8x4

**ROXTEC INC** — B-2x1, B-4x1, B-6x1, B-8x1, G-2x1, G-2x2, G-2x3, G-2x4, G-4x1, G-4x2, G-4x3, G-4x4, G-6x1, G-6x2, G-6x3, G-6x4, G-8x1, G-8x2, G-8x3, G-8x4, GH-2X1, GH-2X2, GH-2X3, GH-2X4, GH-4X1, GH-4X2, GH-4X3, GH-4X4, GH-6X1, GH-6X2, GH-6X3, GH-6X4, GH-8X1, GH-8X2, GH-8X3, GH-8X4, GH BG-2X1, GH BG-2X2, GH BG 2X3, GH BG 2X4, GH BG-4X1, GH BG-4X2, GH BG 4X3, GH BG 4X4, GH BG-6X1, GH BG-6X2, GH BG 6X3, GH BG 6X4, GH BG-8X1, GH BG 8X2, GH BG 8X3, GH BG 8X4, , GHM-2x1, GHM-2x2, GHM-2X3, GHM-2X4, GHM-4x1, GHM-4x2, GHM-4X3, GHM-4X4, GHM-6x1, GHM-6x2, GHM-6X3, GHM-6X4, GHM-8x1, GHM-8X2, GHM-8X3, GHM-8X4, GHM BG-2X1, GHM BG-2X2, GHM BG 2X3, GHM BG 2X4, GHM BG-4X1, GHM BG-4X2, GHM BG 4X3, GHM BG 4X4, GHM BG-6X1, GHM BG-6X2, GHM BG 6X3, GHM BG 6X4, GHM BG-8X1, GHM BG 8X2, GHM BG 8X3, GHM BG 8X4, GKOH-2x1, GKOH-4x1, GKOH-6x1, GKOH-8x1, GOH-2x1, GOH-4x1, GOH-6x1, GOH-8x1, SF-2x1, SF-2x2, SF-2x3, SF-2x4, SF-4x1, SF-4x2, SF-4x3, SF-4x4, SF-6x1, SF-6x2, SF-6x3, SF-6x4, SF-8x1, SF-8x2, SF-8x3, SF-8x4

**Where RM ES B, RM PE B or RM BG, RM BG B, RM BG C elastomeric sealing modules are used the T, FT and FTH Ratings are 0 Hr.**

**B. Silicone RTV Sealant** — (Not Shown) — A min 1/4 in. (6 mm) diam bead of silicone RTV sealant shall be applied as a gasket between the device frame mounting flange and the concrete wall. The sealant bead shall be located between the edge of the opening and the line of fasteners around the entire perimeter of the opening.

**B1. Butyl Rubber Gasket** — (Not Shown) — As an alternate to the RTV sealant, a nom 5/16 in. (8 mm) thick by 5/16 in. (8 mm) 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 bracket the line of fasteners along each side of the device.

**C. Packing Material** — Min 3 in. (76 mm) thickness of min 2.76 pcf (44 kg/m<sup>3</sup>) density mineral wool batt insulation shall be firmly packed within the through opening. Pieces cut to length and tightly friction-fit between framing of wall opening and cables and in-between cables and made flush with wall surface.

**\* 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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