

THROUGH-PENETRATION FIRESTOP SYSTEM

Assembly Usage Disclaimer

Search Parameters

Manufacturer

Holdrite

XHEZ - Through-penetration Firestop Systems

XHEZ7 - Through-penetration Firestop Systems Certified for Canada

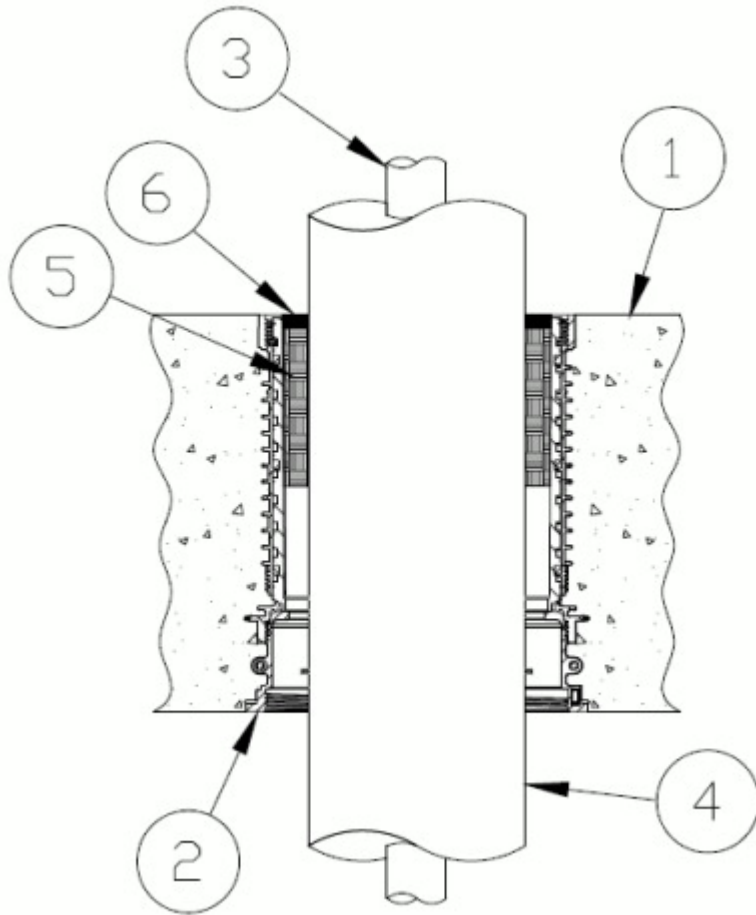
See General Information for Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems Certified for Canada

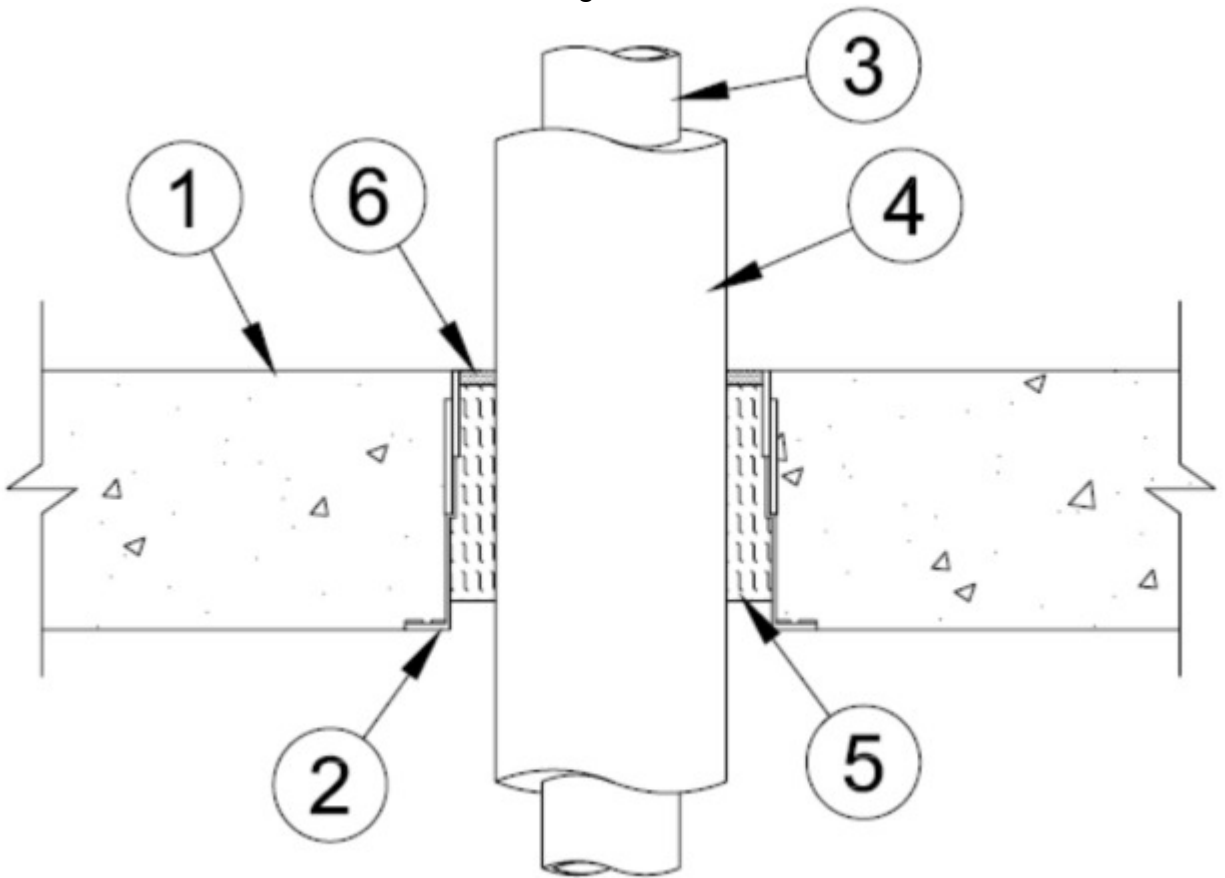
System No. F-A-5043

November 16, 2017

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 or 3 Hr (See Items 1 and 2)	F Ratings — 2 or 3 Hr (See Items 1 and 2)
T Ratings — 1-1/4 or 1-1/2 Hr (See Item 2)	FT Ratings — 1-1/4 or 1-1/2 Hr (See Item 2)
L Rating At Ambient — Less Than 1 CFM/ft ²	FH Ratings — 2 or 3 Hr (See Items 1 and 2)
L Rating At 400 F — Less Than 1 CFM/ft ²	FTH Ratings — 1-1/4 or 1-1/2 Hr
W Rating — Class 1 (see Item 4, 5 & 6)	L Rating At Ambient — Less Than 5.1 L/s/m ²
	L Rating At 400 F — Less Than 5.1 L/s/m ²



Configuration A



Configuration B

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.

Configuration A

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.

1A. Alternate Floor Assembly — (Not Shown) — The fire rated unprotected concrete and steel deck floor assembly shall be constructed of the material and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. Concrete — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, as measured from the top plane of the steel floor units.

B. Steel Floor and Form Units* — Composite or non-composite max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.

2. Firestop Device* — Sleeve — Max 8 in. (203 mm) diam WD sleeve or Max 6 in. (152 mm) HFP Series cast in place firestop device permanently embedded during concrete placement or grouted in concrete assembly in accordance with accompanying installation instructions. For HFP devices the optional accessories (not shown) includes a sleeve extension, aerator adaptor, water module, deck adapter and/or water dam installed in accordance with installation instructions. The device shall be installed flush with top and bottom surfaces of floor. The devices are sized to accommodate the following nom pipe sizes:

Nom Pipe Diam in. (mm) with (Item 4 below) Insulation Thickness will determine which device size to use.	Firestop Devices for Concrete Slab	Firestop Devices for Fluted Deck (Not Shown)
1/2 to 1 (13 to 25)	HFP-P1, HFP-M1, HFP-H2, HFP-P1B, HFP-M1B, HFP-H2B	add HFPCD1
1-1/4 to 2 (32 to 51)	HFP-P2, HFP-M2, HFP-H3, HFP-P2B, HFP-M2B, HFP-H3B	add HFPCD2
2 to 3 (51 to 76)	HFP-P3, HFP-M3, HFP-H4, HFP-P3B, HFP-M3B, HFP-H4B	add HFPCD3
3 to 4 (76 to 102)	HFP-P4, HFP-M4, HFP-H5, HFP-P4B, HFP-M4B, HFP-H5B	add HFPCD4
	HFP-P6, HFP-P6B,	add HFPCD6

HFP Series devices do not require the use of Packing material (Item 5) or Sealant (Item 6) when sized according to installation instructions.

HOLDRITE — HFP-Px, HFP-Hx, HFP-PxB, HFP-HxB, HFP-Mx and HFP-MxB

F Rating is limited to 2 hour when HFP-H series devices are used in Config A & all other HFP series devices have a 3 hour F Rating and a 1-1/4 T Rating.

Configuration B

Note: F rating is limited to 2 hours when configuration B is used.

1. Floor Assembly — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.

1A. Alternate Floor Assembly — (Not Shown) — The fire rated unprotected concrete and steel deck floor assembly shall be constructed of the material and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:

A. Concrete — Min 4-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete, as measured from the top plane of the steel floor units.

B. Steel Floor and Form Units* — Composite or non-composite max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.

2. Firestop Device* — Sleeve — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement or grouted in concrete assembly in accordance with accompanying installation instructions. The device shall be installed flush with top and bottom surfaces of floor. The devices are sized to accommodate the nom pipe sizes:

HOLDRITE — HydroFlame WD Sleeve, WD-PL, CD Sleeve, CD-PL, OPS-PL, CD-OPS-PL, OPS-MT, CD-OPS-MT

When HydroFlame WD 0600 Sleeve is used, the nominal 1 by 0.3 in. (25 by 7.6 mm) void created by the stepped base within the sleeve shall be tightly-packed with mineral wool batt insulation (Item 4) during firestop installation if concrete floor assembly is less than 7 in. (178 mm) thick.

3. Through-Penetrant — One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe or tubing may be used:

A. **Steel Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Copper Tubing** — Nom 4 in. (102 mm) diam (or smaller) Type M (or heavier) copper tubing.

C. **Copper Pipe** — Nom 4 in. (102) diam (or smaller) Regular (or heavy) copper pipe.

D. **Iron Pipe** — Nom 4 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

4. **Pipe Covering*** —

A. Max 1-1/2 in. (38 mm) thick hollow cylindrical heavy density mineral fiber units with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. A min annular space of 1/2 in. (13 mm) is required within the firestop system.

See **Pipe and Equipment Covering — Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

B. **PVC Jacket++** — Additional PVC jacket, supplied in sheet form, shall be tightly wrapped around the all service jacket on the pipe covering (Item 4A) with the longitudinal seam continuously sealed using the self-sealing lap tape or adhesive supplied with the jacket. The jacket is to be nom 48 in. (1.22 m) wide by nom 20 or 30 mil (0.5 or 0.8 mm) thick. The jacket shall extend downward into and/or through the opening from a point 36 to 40 in. (0.91 to 1.02 m) above the top surface of the floor assembly. **The PVC jacket must be used for the W Rating to apply.**

See **Plastics** (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component plastic material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.

Note: L and W Rating only apply when pipe covering is 1-1/2 in. (38 mm) or less.

5. **Packing Material** — Min 2 in. (51 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form so that the width of the wool is compressed at least 50 percent. Packing material to be recessed from top surface of floor as required to accommodate the required thickness of fill material. **Packing material is optional for HFP-Px, HFP-PxB, HFP-Mx, HFP-MxB series devices (See Item 2).**

6. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6 mm) thickness of sealant applied within the annulus, flush with the top surface of floor. When pipe covering (Item 4) thickness is greater than 1 in. (25 mm), the min thickness of sealant applied within the annulus shall be 1/2 in. (13 mm). **Sealant is optional for HFP-Px, HFP-PxB, HFP-Mx, HFP-MxB series devices (See Item 2).** As an alternate 100% Silicone can be used for HFP-Px, HFP-PxB, HFP-Mx, and HFP-MxB series devices (See Item 2)

For Configuration A and B, the W Rating applies only when (Item 4, Item 5 & Item 6) is used. Recess Packing Material as required for thickness of sealant.

Note: Configuration A from 2-1/2 in. to 4-1/2 in. concrete for a W Rating to apply. Max 2 in. Packing Material is optional but sealant is required to achieve W Rating.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — FB-1000NS, FB-1003SL, FB-3000 WT

RECTORSEAL — Metacaulk 835+ or Biotherm 100 or 200

*** 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 2017-11-16

Design/System/Construction/Assembly Usage Disclaimer

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- 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.

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