

# XHEZ.F-A-1191 - 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

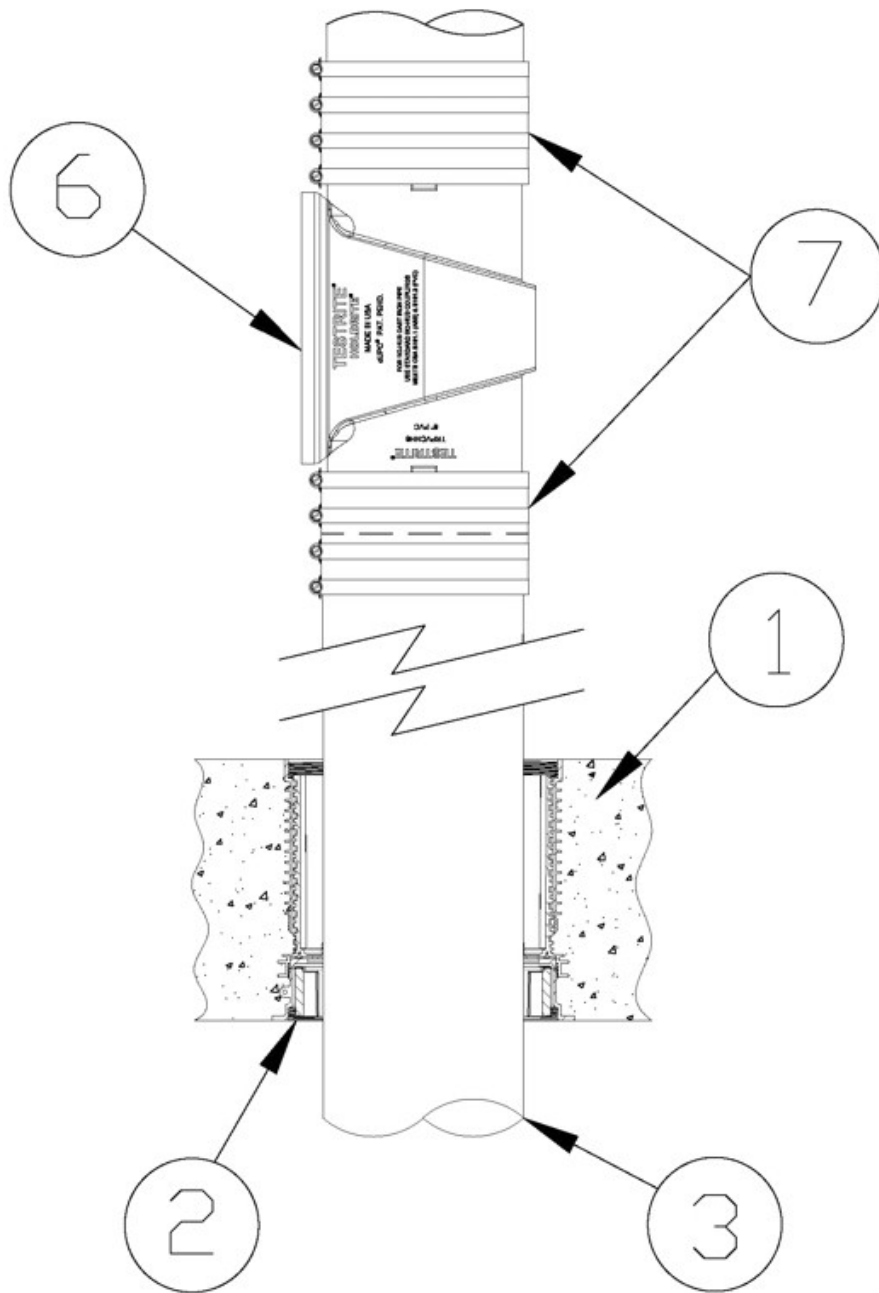
See General Information for Through-penetration Firestop Systems

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

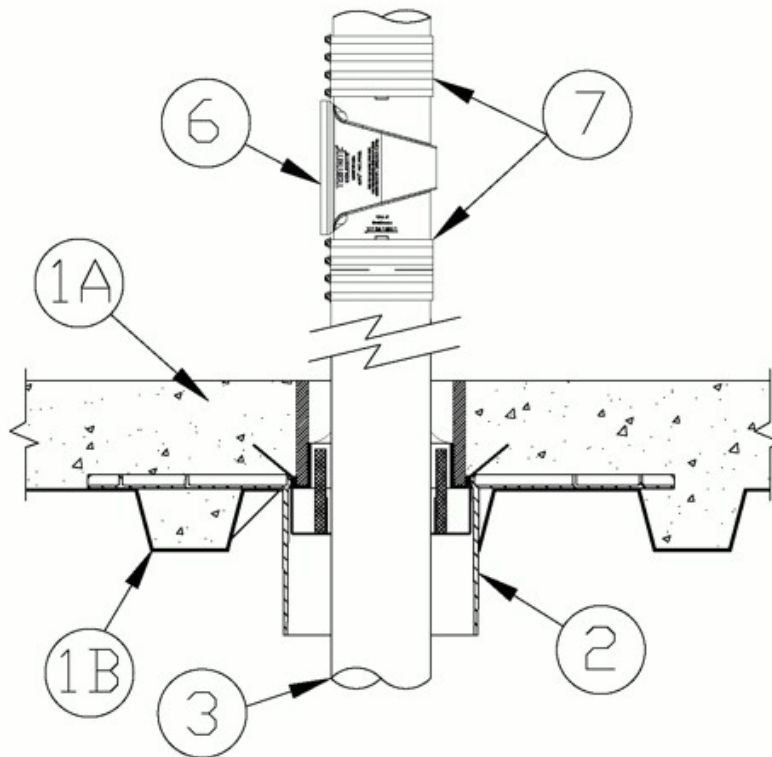
### System No. F-A-1191

April 30, 2019

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 and 3 Hr (See Item 6)	F Ratings — 2 and 3 Hr (See Item 6)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 or 3 Hr
L Rating At 400°F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1 (See Item 5)	L Rating At Ambient — Less Than 5.1 L/s/m <sup>2</sup>
	L Rating At 204°C — Less Than 5.1 L/s/m <sup>2</sup>



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.**

1. **Floor Assembly** — (Config B) The fire-rated concrete and fluted steel deck floor assembly shall be constructed of the materials 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/m<sup>3</sup>) concrete topping, as measured over crests of fluted floor units and over top of device base.

B. **Steel Floor and Form Units\*** — Composite or noncomposite nom 3 in. (76 mm) deep fluted galv units as specified in the individual Floor-Ceiling design. Diam of opening cut through fluted floor unit to be maximum 1/4 in. (6 mm) larger than outside diameter of bottom extension portion of firestop device base.

1. **Floor Assembly** — (Config A) — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100-150 pcf (1600-2400 kg/m<sup>3</sup>) concrete. Measured over the top of the device base.

## Configuration A

2. **Firestop Device\*** — 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. A HFP devices and optional accessories (not shown) includes sleeve extension, water module, deck adapter, aerator adapter and/or water dam installed in accordance with installation instructions. The devices are sized to accommodate the following nom pipe sizes:

Nom Pipe Diam in. (mm)	Firestop Devices for Concrete Slab	Firestop Devices for Fluted Deck (Not Shown)
1-1/4 to 2 (32 to 51)	HFP-M2, HFP-M2B, HFP-P2, HFP-P2B	add HFPCD2
2 to 3 (51 to 76)	HFP-M3, HFP-M3B, HFP-P3, HFP-P3B	add HFPCD3
3 to 4 (76 to 102)	HFP-M4, HFP-M4B, HFP-P4, HFP-P4B	add HFPCD4
5 to 6 (127 to 152)	HFP-M6, HFP-M6B, HFP-P6, HFP-P6B	add HFPCD6

**HOLDRITE** — HydroFlame HFP-Mx, HFP-MxB, HFP-Px HFP-PxB

## Configuration B

2. **Firestop Device\*** — 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. Optional accessory (not shown) aerator adapter installed in accordance with the installation instructions. The devices are sized to accommodate the following nom pipe sizes

Nom Pipe Diam in. (mm)	Firestop Devices for Fluted Deck	Firestop Devices for Concrete Slab (Not Shown)
1-1/4 to 2 (32 to 51)	CD-PL-0200, CD-OPS-PL-0200, CD-OPS-MT-0200	WD-PL-0200, OPS-PL-0200, OPS-MT-0200
2 to 3 (51 to 76)	CD-PL-0300, CD-OPS-PL-0300, CD-OPS-MT-0300	WD-PL-0300, OPS-PL-0300, OPS-MT-0300
3 to 4 (76 to 102)	CD-PL-0400, CD-OPS-PL-0400, CD-OPS-MT-0400	WD-PL-0400, OPS-PL-0400, OPS-MT-0400
5 to 6 (127 to 152)	CD-PL-0600, CD-OPS-PL-0600, CD-OPS-MT-0600	WD-PL-0600, OPS-PL-0600, OPS-MT-0600

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

3. **Through Penetrant** — One metallic pipe to be installed within the firestop device. Pipe to be installed in accordance with firestop device installation instructions and rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

A. **Iron Pipe** — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

4. **Packing Material** — (Optional. Not Shown) — Min 2 in. (51 mm) depth of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation tightly-packed into annular space between penetrant and device, flush with the top surface of the floor. When optional sealant (Item 5) is used, top surface of packing material to be recessed min 1/4 in. (6 mm) from top surface of floor.

4A. **Packing Material** — (Optional instead of 4, Not Shown) — Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor as required to accommodate the required thickness of fill material.

5. **Fill, Void or Cavity Material\* — Sealant** — (Optional, Not Shown) — Min 1/4 in. (6 mm) thickness of sealant applied within the annulus, flush with the top surface of floor. Conf B (Only), Sealant to lap min 1/2 in. (13 mm) onto top surface of concrete around perimeter of firestop device. As an alternate 100% silicone sealant can be used.

**For Configuration A (ONLY), the W Rating and L Ratings apply if penetrant is matched to device size. Where device size does not match penetrant size, W Rating and L Ratings apply only when packing material (Item 4), (Item 4A), and (Item 5) sealant is used.**

**For Configuration B, The L Rating and W Rating applies only when packing material (Item 4) and sealant (Item 5) is used.**

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

**RECTORSEAL** — Metacaulk 835+ or Biotherm 100 or 200

6. **Pipe Tee Fitting System** — (Optional) — One nom 6 in. (152 mm) diam (or smaller) PVC TESTRITE TEE Fitting (matched to penetrant diameter). The PVC TESTRITE TEE Fitting is secured to metallic penetrant (Item 3) with compression type pipe coupling (Item 5) for use in vented (drain, waste or vent) iron pipe systems. Installed penetrant (Item 3) shall extend a minimum of 6 in. (152 mm) above the surface of the floor and minimum 12 in. (302 mm) below the bottom surface of the floor assembly.

7. **Compression Coupling** — When Item 4 is installed pipe to be secured to fitting. with compression type high pressure pipe coupling with elastomeric gasket and a stainless steel jacket with stainless steel band clamps.

**When Item 6 is used between 6 and 24 in. (152 - 610 mm) from the top of the device (Item 2) to bottom connection of (Item 6) and concrete thickness is less than 4-1/2 in. (114 mm) the F rating is limited to 2 Hours.**

**\* 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 2019-04-30

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