

XHEZ.F-B-2042 - 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

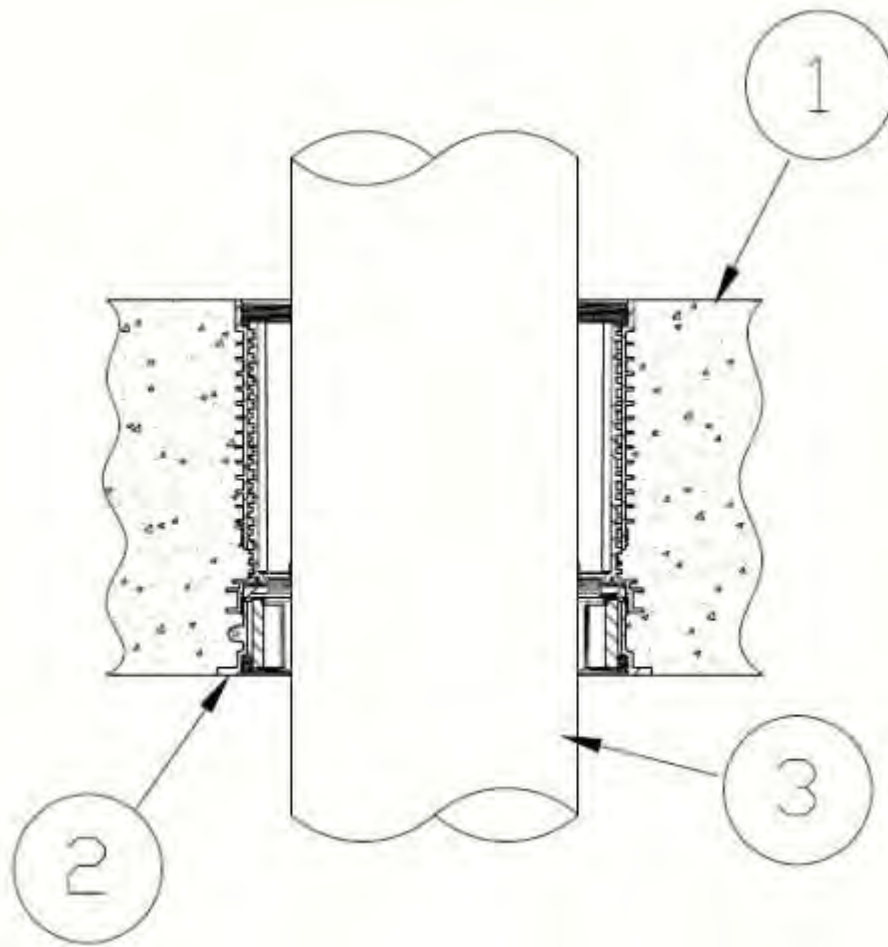
System No. F-B-2042

July 08, 2020

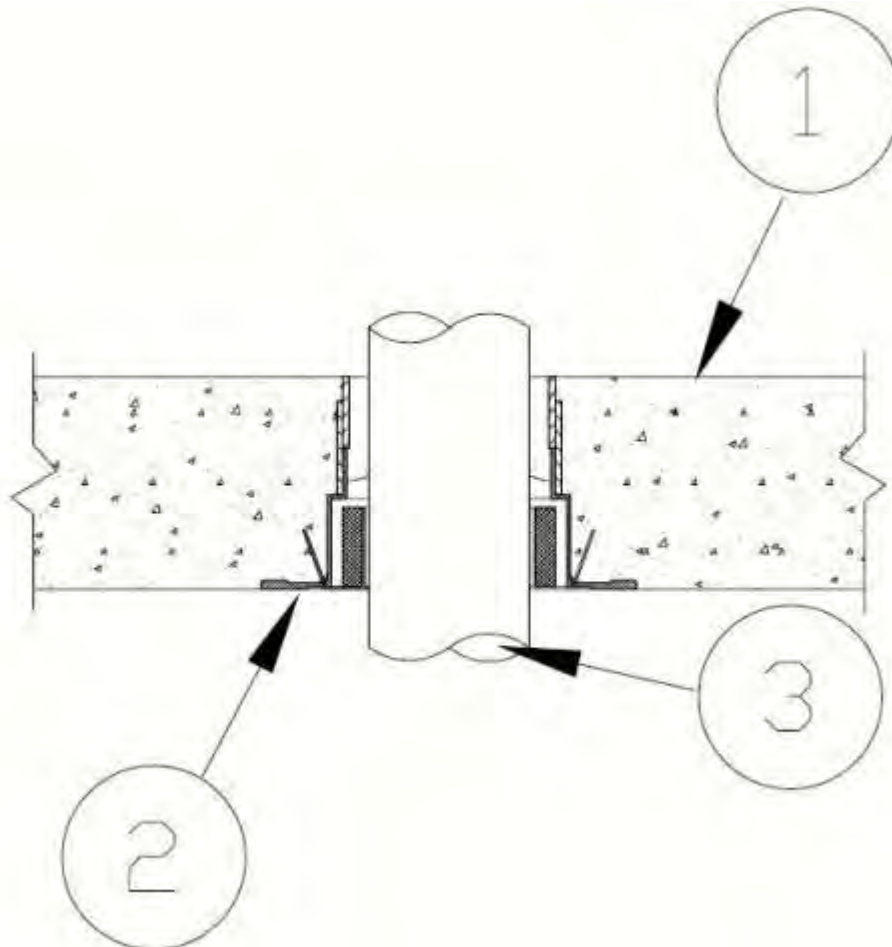
ANSI/UL1479 (ASTM E814)

CAN/ULC S115

F Ratings — 2 and 3 Hr (See Item 3)	F Ratings — 2 and 3 Hr (See Item 3)
T Ratings — 0 and 3 Hr (See Item 3)	FT Ratings — 0 and 3 Hr (See Item 3)
W Ratings — Class 1 (See Item 5)	FH Ratings — 2 and 3 Hr (See Item 3)
L Rating At Ambient — Less Than 1 CFM/Device	FTH Ratings — 0 and 3 Hr (See Item 3)
L Rating At 400°F — Less Than 1 CFM/Device	L Rating At Ambient — Less Than 5.1 L/s-Device
	L Rating At 400°F — Less Than 5.1 L/s-Device



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.

System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side for up to 2 or 3 hours (See Item 3).

1. **Floor Assembly** — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete when measured above base of device excluding any adapters.

2. **Firestop Device*** — Cast in place firestop device permanently embedded during concrete placement or grouted in concrete assembly in accordance with accompanying installation instructions. For Conf A HFP devices and optional accessories (not shown) includes sleeve extension, water module, aerator adapter and/or water dam installed in accordance with installation instructions. For Conf B devices, optional accessory (not shown) aerator adapter installed in accordance with the 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)	Conf A Firestop Devices Concrete Slab	Conf A Firestop Devices Concrete over Fluted Metal Deck (Not Shown)	Conf B Firestop Devices Concrete Slab	Conf B Firestop Devices Concrete over Fluted Metal Deck (Not Shown)
1/2 to 1-1/4* (13 to 32*)	HFP-P1, HFP-P1B	add HFPCD1	OPS-PL-0100, WD-PL-0200	CD-OPS-PL-0100, CD-PL-0200
1-1/4 to 2 (32 to 51)	HFP-P2, HFP-P2B	add HFPCD2	OPS-PL-0200, WD-PL-0300	CD-OPS-PL-0200, CD-PL-0300
2 to 3 (51 to 76)	HFP-P3, HFP-P3B	add HFPCD3	OPS-PL-0300, WD-PL-0400	CD-OPS-PL-0300, CD-PL-0400
3 to 4 (76 to 102)	HFP-P4, HFP-P4B	add HFPCD4	OPS-PL-0400, WD-PL-0500	CD-OPS-PL-0400, CD-PL-0500
5 to 6 (127 to 152)	HFP-P6, HFP-P6B	add HFPCD6-DC	OPS-PL-0600, WD-PL-0800	CD-OPS-PL-0600, CD-PL-0800

*Refer to W & L Rating table below

Penetrant diameters are allowed up to two even device sizes smaller than permitted in the table above, the use of Items 4B and 5 is required.

HOLDRITE — HydroFlame OPS-PL, CD-PL-x, CD-OPS-PL-x, WD-PL-x, HFP-Px, HFP-PxB

3. **Through Penetrant** — One nonmetallic pipe or conduit to be installed within the firestop device. Pipe or conduit 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. **Polyvinyl Chloride (PVC) Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

A1. **Polyvinyl Chloride (PVC) Pipe** — As an alternate to Item A, Nom 6 in. (152 mm) diam (or smaller) solid or cellular core Schedule 40 polyvinyl chloride (PVC) pipe.

IPEX INC — System 15 piping

A2. **PVC-XFR Pipe** — As an alternate to Item A, Nom 6 in. (152 mm) diam (or smaller) solid or cellular core Schedule 40 pipe. **3hr. F & T Rating**

When nom 5 in. or 6 in. (127 or 152 mm) diam PVC pipe is used, F Rating is 2 hr and T Rating is 0 hr (HFP devices only), F Rating is 3 hr and T Rating is 3 hr.

B. **Rigid Nonmetallic Conduit+** — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70). **When nom 5 in. or 6 in. (127 or 152 mm) diam PVC conduit is used, F Rating is 2 hr and T Rating is 0 hr (HFP devices only), F Rating is 3 hr and T Rating is 3 hr.**

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 6 in. (152 mm) diam (or smaller) SDR 13.5 (or heavier) or Schedule 40 CPVC pipe for use in closed (process or supply) piping systems.

C1. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — As an alternate to Item C, Nom 6 in. (152 mm) diam (or smaller) SDR 13.5 CPVC for use in closed (process or supply) piping systems.

IPEX INC — AquaRise

When nom 5 in. or 6 in. (127 or 152 mm) diam CPVC pipe is used, F Rating is 2 hr and T Rating is 0 hr (HFP devices only), F Rating is 3 hr and T Rating is 3 hr.

D. **Acrylonitrile Butadiene Styrene (ABS) Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems. **When max 4 in. (102 mm) diam ABS pipe is used, F Rating is 3 hr and T Rating is 3 hr.**

E. **Cross-Linked Polyethylene (PEX) Tubing** — Nom 2 in. (51 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems. HFP series devices (only) Nom 3 in. (76 mm) diam (or smaller) SDR PEX tubing in closed (process or supply) piping systems. **When max 2 in. (51 mm) diam or smaller PEX tubing is used, F Rating is 3 hr and T Rating is 3 hr. For HPF series devices when max 3 in. (76 mm) diam or smaller PEX tubing is used, F Rating is 3 hr and T Rating is 3 hr.**

E1. **Cross-Linked Polyethylene (PEX) Tubing** — As an alternate to Item E, Nom 2 in. (51 mm) diam (or smaller) Sharkbite SDR 9 PEX tubing for use in closed (process or supply) piping systems. (HFP series devices only) Nom 3 in. (76 mm) diam (or smaller) SDR PEX tubing in closed (process or supply) piping systems. **When max 3 in. (51 mm) diam PEX pipe is used, F Rating is 3 hr and T Rating is 3 hr.**

F. **Polypropylene (PP) Pipe** — Nom 3 in. (76 mm) diam (or smaller) Aquatherm SDR 7.4 or 11 PP pipe for use in closed (process or supply) piping systems. **When max 3 in. (76 mm) diam AquaTherm PP pipe is used, F Rating is 3 hr and T Rating is 3 hr.**

F1. **Polypropylene (PP) Pipe** — As an alternate to Item F Nom 6 in. (152 mm) diam (or smaller) Aquatherm SDR 7.4, 11, 17.6 pipe for use in closed (process or supply) piping systems. 3 hr. F & T Rating.

G. **Polypropylene (PP-RCT) Pipe** — As an alternate to Item F, Nom 6 in. (152 mm) diam (or smaller) SDR 7.4, 11, 17.6 Niron pipe for use in closed (process or supply) piping systems. 3 hr. F & T Rating.

50 PA exposure limits the F Rating to 2 hr, for Item 3A2 50 PA exposure F Rating is 3 hr.

4. **Packing Material** — (Optional) — Min 2 in. (51 mm) depth of min 4 pcf (64 kg/m³) mineral wool batt insulation tightly-packed into annular space with its top surface 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.

4B. **Packing Material** — (Optional instead of Item 4, Not Shown) — When penetrant diameters are smaller than the device size range in the table above, Min. 3-3/4 in. depth from floor surface or to fullest extent possible to top of inner seal of min 4 pcf (64 kg/m³) 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.

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. A Min 1/2 in. (13 mm) thickness of sealant applied within the annulus, flush with the top surface of floor to attain W-Rating. 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 when sealant is optional 100% silicone sealant can be used.

For Configuration A (ONLY), The W Rating and L Ratings apply according to the Table below.

Device size	Penetrant with (IPS) Diam in. (mm)	Penetrant with (CTS) Diam in. (mm)	W RATING	W RATING L Rating
HFP-x1, HFP-x1B	1/2 to 1 (13 to 25)	1/2 to 1-1/4 (13 to 32)	YES	YES
HFP-x2, HFP-x2B	1-1/4 to 2 (32 to 51)	1-1/2 to 2 (38 to 51)	YES	YES
HFP-x2, HFP-x2B	N/A	1-1/4 (32)	YES, with Items 4 or 4A& 5 Above	YES, with Items 4 or 4A& 5 Above
HFP-x3, HFP-x3B	2 to 3 (51 to 76)	2-1/2 to 3 (64 to 76)	YES	YES
HFP-x3, HFP-x3B	N/A	2 (51)	YES, with Items 4 or 4A & 5 Above	YES, with Items 4 or 4A & 5 Above
HFP-x4, HFP-x4B	3 to 4 (76 to 102)	3-1/2 to 4 (89 to 102)	YES	YES
HFP-x4, HFP-x4B	N/A	3 (76)	YES, with Items 4 or 4A & 5 Above	YES, with Items 4 or 4A & 5 Above
HFP-x5, HFP-x5B	4 to 5 (102 to 127)	5 (127)	YES	YES
HFP-x5, HFP-x5B	N/A	4 (102)	YES, with Items 4 or 4A & 5 Above	YES, with Items 4 or 4A & 5 Above
HFP-x6, HFP-x6B	5 to 6 (127 to 152)	6 (152)	YES	YES
HFP-x6, HFP-x6B	N/A	5 (127)	YES, with Items 4 or 4A & 5 Above	YES, with Items 4 or 4A & 5 Above

Note: IPS is Iron pipe diameter standard and CTS is Copper tube diameter standard/

If inner seal is torn or compromised in any way, Items 4 and Item 5 can be used to achieve W and L Ratings. When the penetrant is smaller than the device range sealant (Item 5) must be used to obtain W and L Rating

For Configuration B (ONLY), W Rating and L Ratings apply only when packing material (Item 4), (Item 4A), and (Item 5) sealant are used.

RELIANCE WORLDWIDE CORPORATION DBA HOLDRITE HYDROFLAME — HydroFlame 100, HydroFlame 200, HydroFlame 300SL, HydroFlame 300 CG

6. **Pipe Tee Fitting System** — (Optional, Not Shown) — For use with PVC pipe (Item 3A) only, 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 penetrant (Item 3A) with compression type pipe coupling elastomeric gasket with stainless steel jacket and stainless steel band clamps for use in vented (drain, waste or vent) iron pipe systems. Installed (Item 3A) penetrant 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.

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

+Bearing the UL Listing Mark

Last Updated on 2020-07-08

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