

## CORRUGATED CAST-IN-PLACE SLEEVE CD-0125 – CD-0800

### For use in

- Concrete floor assemblies with corrugated metal form decks.

### Product Description

- HydroFlame corrugated sleeves offer a passage way for a variety of pipe sizes and types that pass through concrete floors in multi-story buildings.
- These sleeves are delivered to the job site completely assembled and need only be fastened to the corrugated metal deck for final installation.
- HydroFlame sleeves appreciably reduce job time and material expenses by not requiring core drilling or other apparatuses to form a void in the floor for the passage of different piping systems and types.

### Through Penetrants

½" - 6" pipe sizes: Steel Pipe, Iron Pipe, Conduit (Steel conduit or electrical metallic tubing), Copper Tubing, PEX, Copper Pipe, PVC, CPVC, ABS etc...

### Product Feature & Benefits

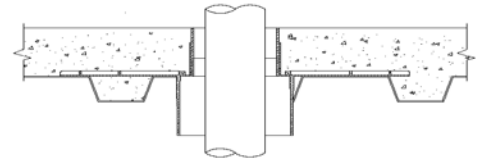
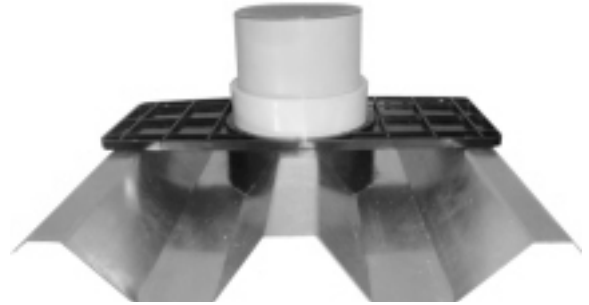
- Simple and quick installation
- Reduces time to form a void in the concrete floor for the passage of different piping systems and types
- Very rigid during concrete pours
- OSHA compliant Safety Cap included

### Not for use in

- Walls

### Storage of Device

- Store in factory boxes and desired location on jobsite or other preferred area



Corrugated Floor, Pass Through Sleeve, Detail



## Installation Instructions

- Lay out the corrugated deck for the appropriate corrugated deck device, cut the hole in the corrugated deck to the outside dimension of the bottom extension portion of the device.
- Select the correct sleeve for pipe size and concrete thickness. Align the hatch marks on lower base to layout lines on corrugated deck to center the sleeve for the pipe that will penetrate through. Attach sleeve to deck with sheet metal screws using the holes provided in the lower base. Make sure the protective cap is securely inserted in the sleeve top before pouring concrete.
- Pour the concrete slab around the device to the appropriate slab thickness.
- Remove the protective cap from the top portion of the device after concrete has cured before inserting pipe.
- Insert your pipe of choice through the bottom or top of device.
- Note: Fire Protection By Others

**Note:** HOLDRITE HYDROFLAME is not responsible for sleeve performance when installation instructions are not followed and will not be liable for damage to property or persons due to improper installation of materials or through attempts to utilize the material under conditions which exceed the designed capacities. Purchaser agrees to indemnify and hold HOLDRITE harmless for any and all claims, liabilities, damages, costs and expenses asserted against HOLDRITE or incurred by us because of injuries to persons or damages to property resulting from the improper installation or misuse of the material. For additional warranty limitations, refer to HOLDRITE's Limited Warranty dated 1/15/13.

Product Submittal	
Job Name:	Architect/Owner:
Date:	Contractor:
Part#:	Qty:
	Notes:

## System No. F-A-5054 XHEZ.F-A-5054 Through-penetration Firestop Systems

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### 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

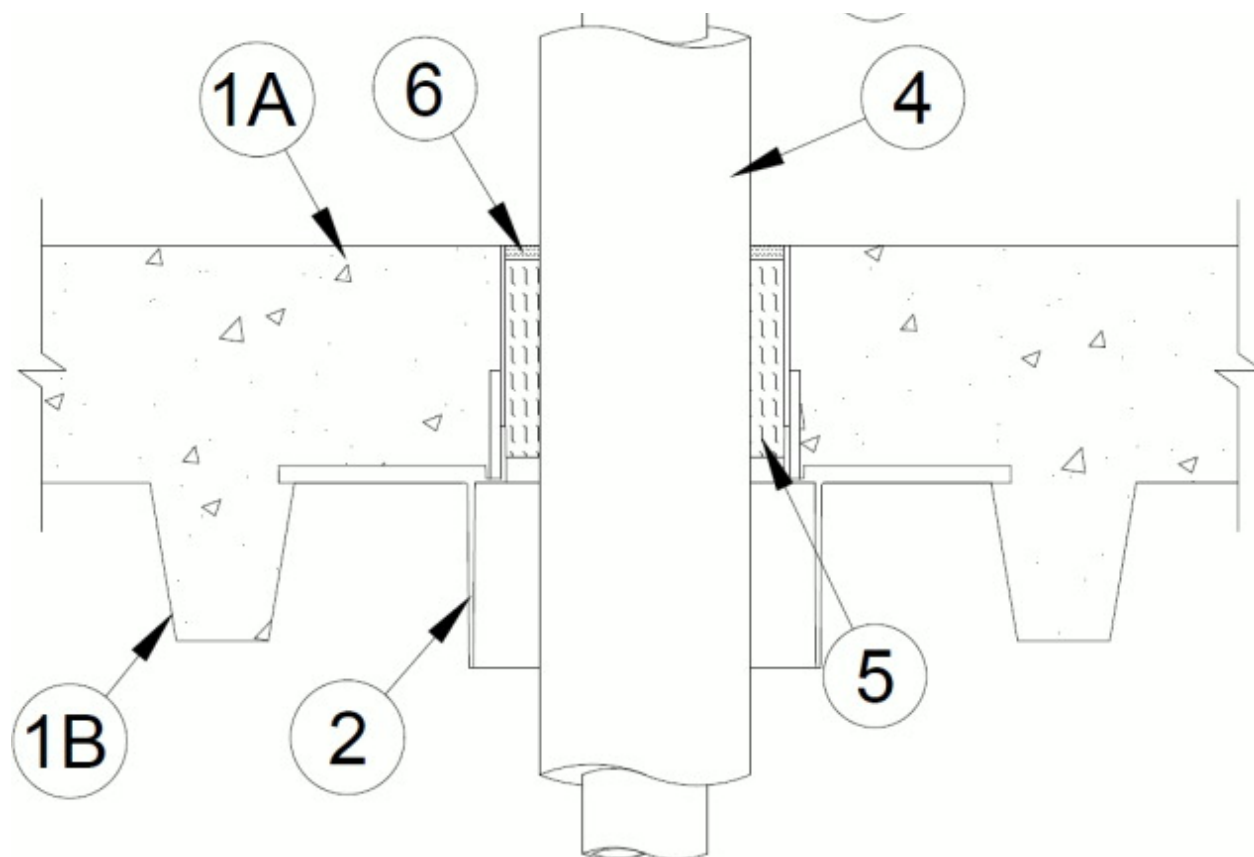
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-5054

June 27, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1-1/2 Hr	FT Rating — 1-1/2 Hr
	FH Rating — 2 Hr
	FTH Rating — 1-1/2 Hr



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

B. **Steel Floor and Form Units\*** — Composite or non-composite 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.

**2. Firestop Device\*** — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**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.

**4. Pipe Covering\*** — 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.

**5. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

**TREMCO INC** — Fyre-Sil Sealant or Fyre-Sil S.L. Sealant

**\* 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 2016-06-27

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## System No. F-A-5044 XHEZ.F-A-5044 Through-penetration Firestop Systems

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- Only products which bear UL's Mark are considered Certified.

### XHEZ - Through-penetration Firestop Systems

#### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

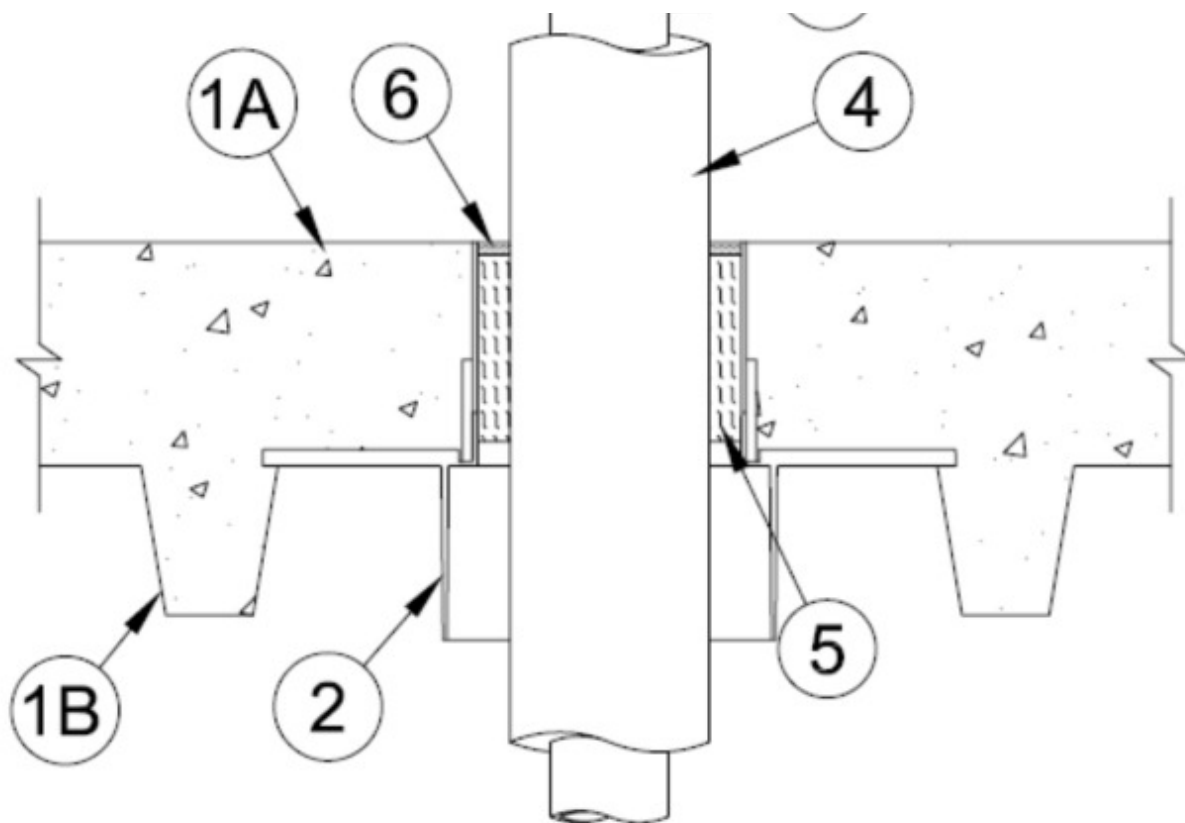
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-5044

June 27, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 1-1/2 Hr	FT Rating — 1-1/2 Hr
	FH Rating — 2 Hr
	FTH Rating — 1-1/2 Hr



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

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.

**2. Firestop Device\*** — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**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.

**4. Pipe Covering\*** — 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.

**5. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

**3M COMPANY 3M FIRE PROTECTION PRODUCTS** — FB-1000NS, FB1003SL, FB-3000 W I

**\* 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 2016-06-27

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## System No. F-A-5043 XHEZ.F-A-5043 Through-penetration Firestop Systems

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- 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](#)

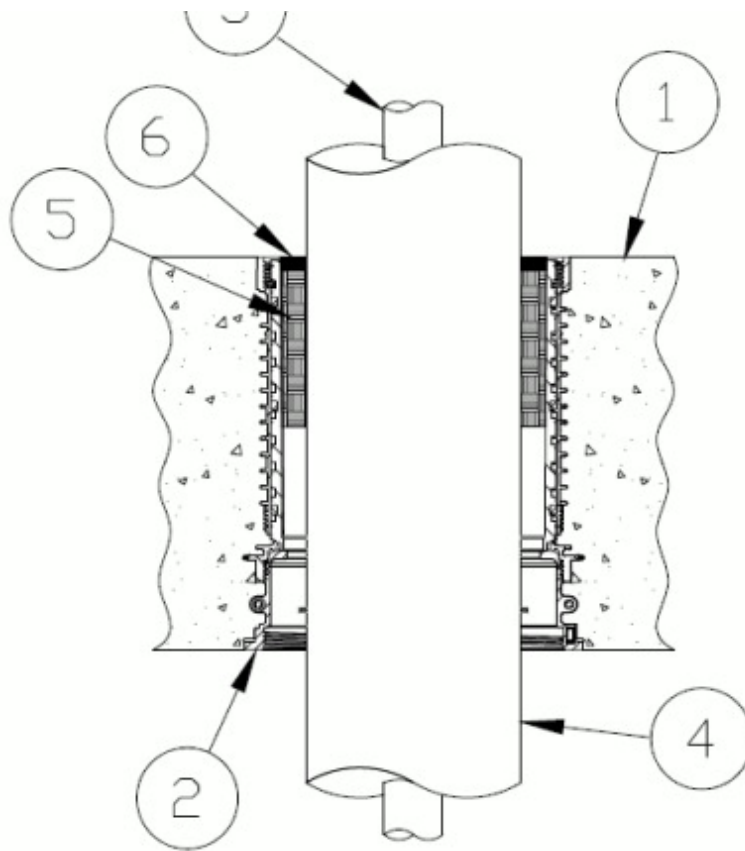
[See General Information for Through-penetration Firestop Systems Certified for Canada](#)

### System No. F-A-5043

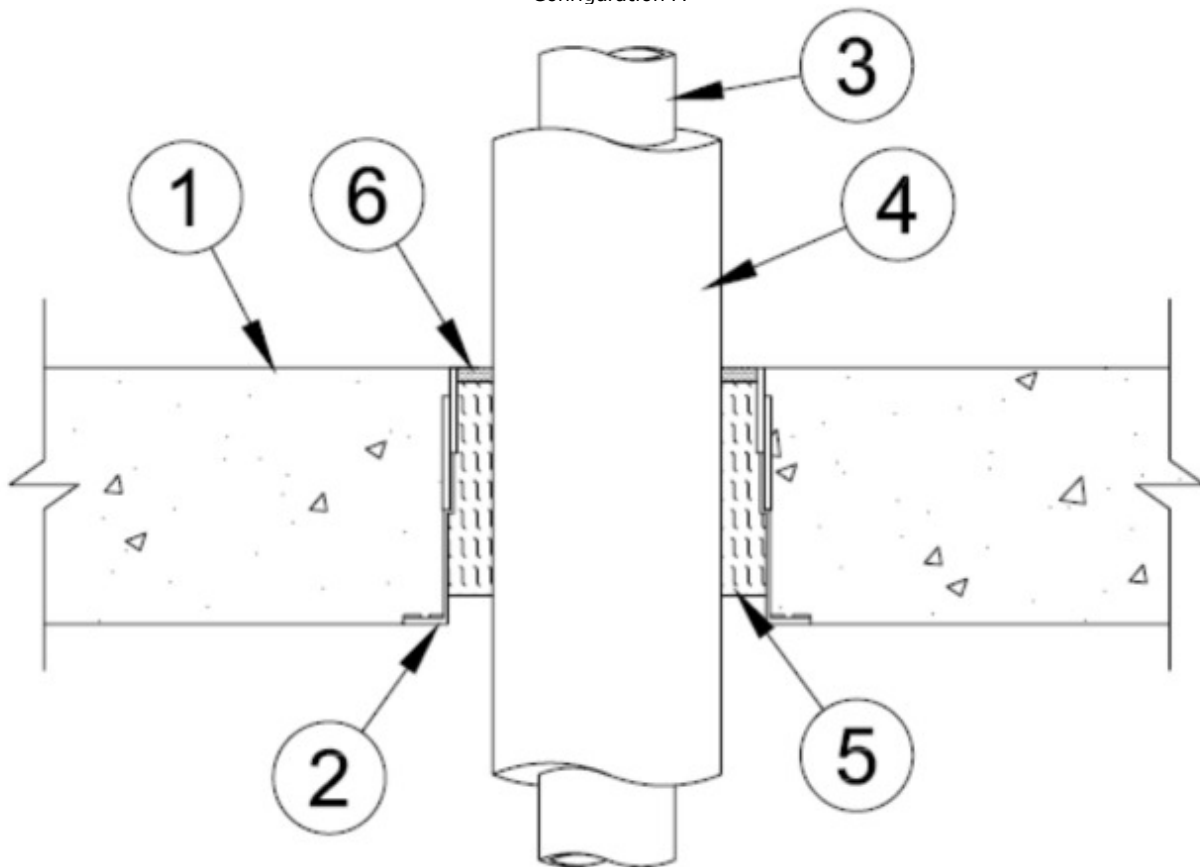
September 16, 2016

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 <sup>2</sup>	FH Ratings — 2 or 3 Hr (See Items 1 and 2)
L Rating At 400 F — Less Than 1 CFM/ft <sup>2</sup>	FTH Ratings — 1-1/4 or 1-1/2 Hr
W Rating — Class 1 (see Item 4)	L Rating At Ambient — Less Than 5.1 L/s/m <sup>2</sup>
	L Rating At 400 F — Less Than 5.1 L/s/m <sup>2</sup>





Configuration A



Configuration B

1. **Floor Assembly** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) 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/m<sup>3</sup>) 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 in accordance with accompanying installation instructions. For HFP devices the optional accessories (not shown) includes a sleeve extension, 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, HFP-M6, HFP-M6B, HFP-H7, HFP-H7B	add HFPCD6

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

**SECURUS INC, DBA 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 hav 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/m<sup>3</sup>) 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/m<sup>3</sup>) 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 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:

**SECURUS INC, DBA HOLDRITE** — HydroFlame WD, CD Sleeve

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\*** — 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.

**Note: L and W Rating only apply when pipe covering is 1/2 in. (13 mm) or less.**

5. **Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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).**

**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 2016-09-16

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## System No. F-A-2269 XHEZ.F-A-2269 Through-penetration Firestop Systems

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### XHEZ - Through-penetration Firestop Systems

#### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

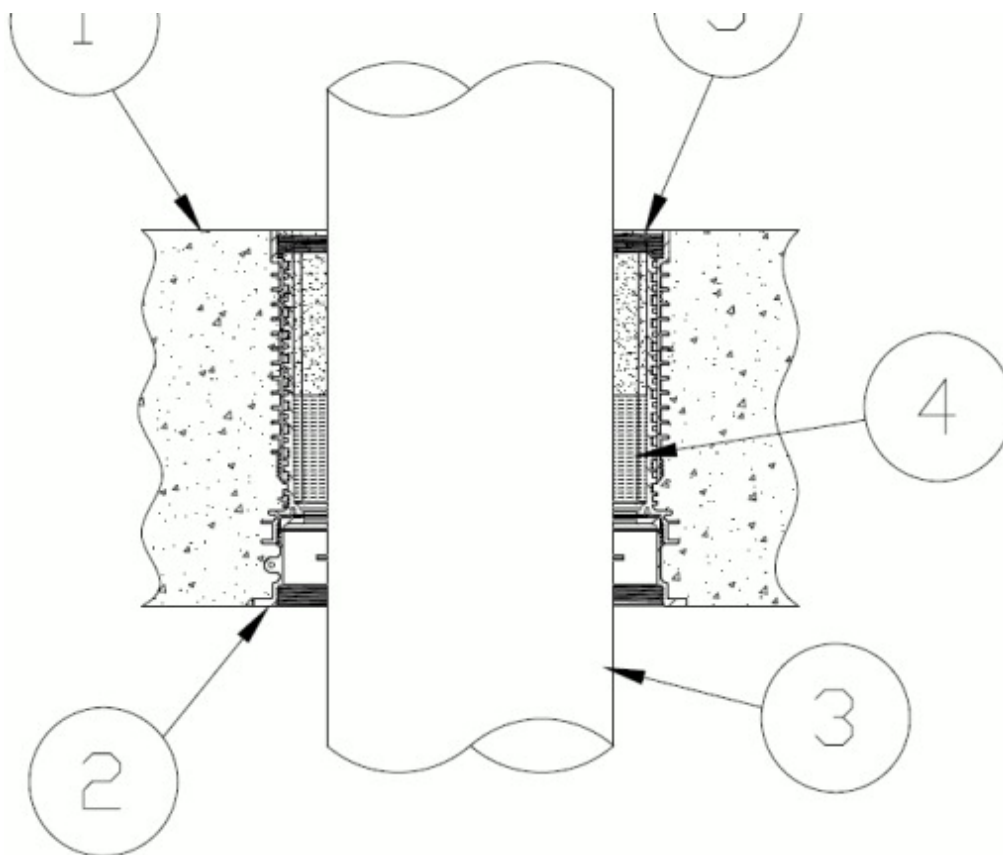
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-2269

September 12, 2016

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



Configuration A

**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** — 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 4-1/2 in. (114 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.

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

**2. Firestop Device\*** — Cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be installed flush with top and bottom surfaces of floor. For Conf A HFP devices and optional accessories (not shown) includes sleeve extension, deck adapter, water module, aerator adapter midbody seal and/or water dam installed in accordance with installation instructions. The devices are sized to accommodate the nom pipe sizes.

**SECURUS INC, DBA HOLDRITE** — HydroFlame HFP-H2 HFP-H2B, HFP-H3, HFP-H3B, HFP-H4, HFP-H4B

**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 2 in. (51 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.

B. **Rigid Nonmetallic Conduit+** — Nom 2 in. (52 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe** — Nom 2 in. (51 mm) diam (or smaller) SDR 13.5 (or heavier) or Schedule 40 CPVC pipe for use in closed (process or supply) piping

(drain, waste or vent) piping systems.

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.

F. **Polypropylene (PP) Pipe** — Nom 2 in. (51 mm) diam (or smaller) Aquatherm SDR 7.4 or 11 PP pipe for use in closed (process or supply) piping systems.

**The T, FT and FTH ratings are 1/2 hr except when Item 3F Polypropylene is used then T, FT and FTH are 0 hr.**

4. **Packing Material** — (Optional) — Min 2 in. (102 mm) depth of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation tightly-packed into annular space with its top surface recessed min 1/4 in. (6 mm) from top surface of floor.

5. **Fill, Void or Cavity Material\* — Sealant** — Min 2 in. (51 mm) thickness of sealant applied within the annulus, flush with the top surface of floor.

**RECTORSEAL** — Metacaulk 1000

**\* 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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## System No. F-A-1155 XHEZ.F-A-1155 Through-penetration Firestop Systems

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### XHEZ - Through-penetration Firestop Systems

#### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

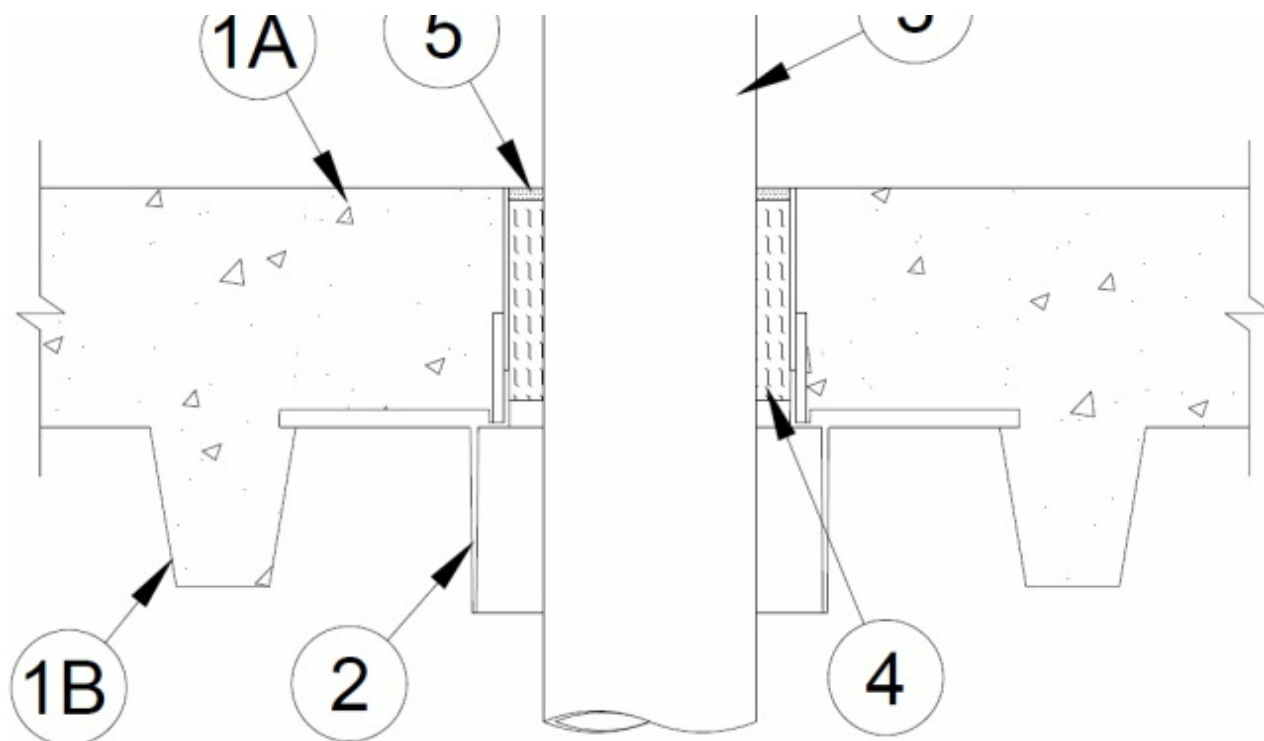
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-1155

June 28, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</sup>



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

B. **Steel Floor and Form Units\*** — Composite or non-composite 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.

**2. Firestop Device\*** — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**3. Through-Penetrant** — One metallic pipe, conduit or tubing installed concentrically within the firestop system. The annular space shall be min 1/2 in. (13 mm) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

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

B. **Conduit** — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.

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

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

**4. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

**5. 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. Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

**TREMCO INC** — Fyre-Sil Sealant or Fyre-Sil S.L. Sealant



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 above assembly.

**\* 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 2016-06-28

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## System No. F-A-1123 XHEZ.F-A-1123 Through-penetration Firestop Systems

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- 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

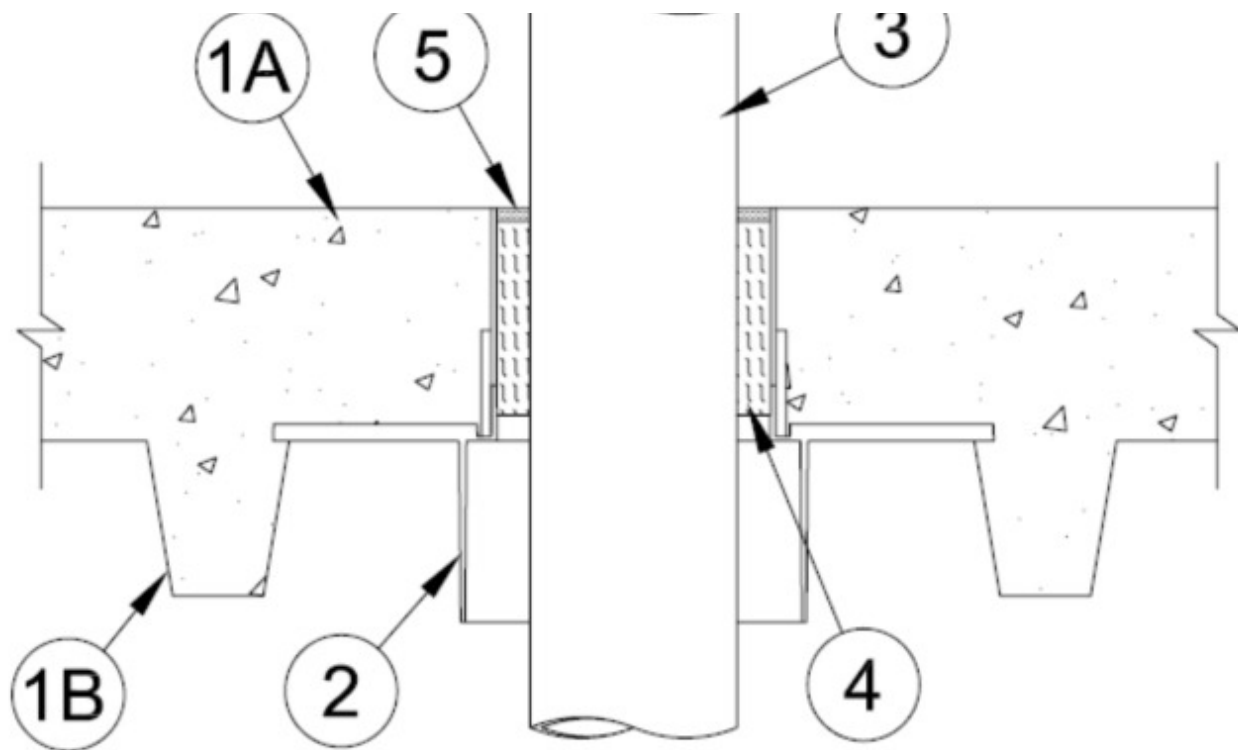
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-1123

June 27, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</sup>



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

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.

**2. Firestop Device\*** — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**3. Through-Penetrant** — One metallic pipe, conduit or tubing installed concentrically within the firestop system. The annular space shall be min 1/2 in. (13 mm) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

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

B. **Conduit** — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.

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

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

**4. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

**5. 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. Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

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

secured to metallic penetrant (Item 3D) 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 3D) 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 above assembly.

**\* 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 2016-06-27

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## System No. F-A-1122 XHEZ.F-A-1122 Through-penetration Firestop Systems

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### Design/System/Construction/Assembly Usage Disclaimer

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- 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

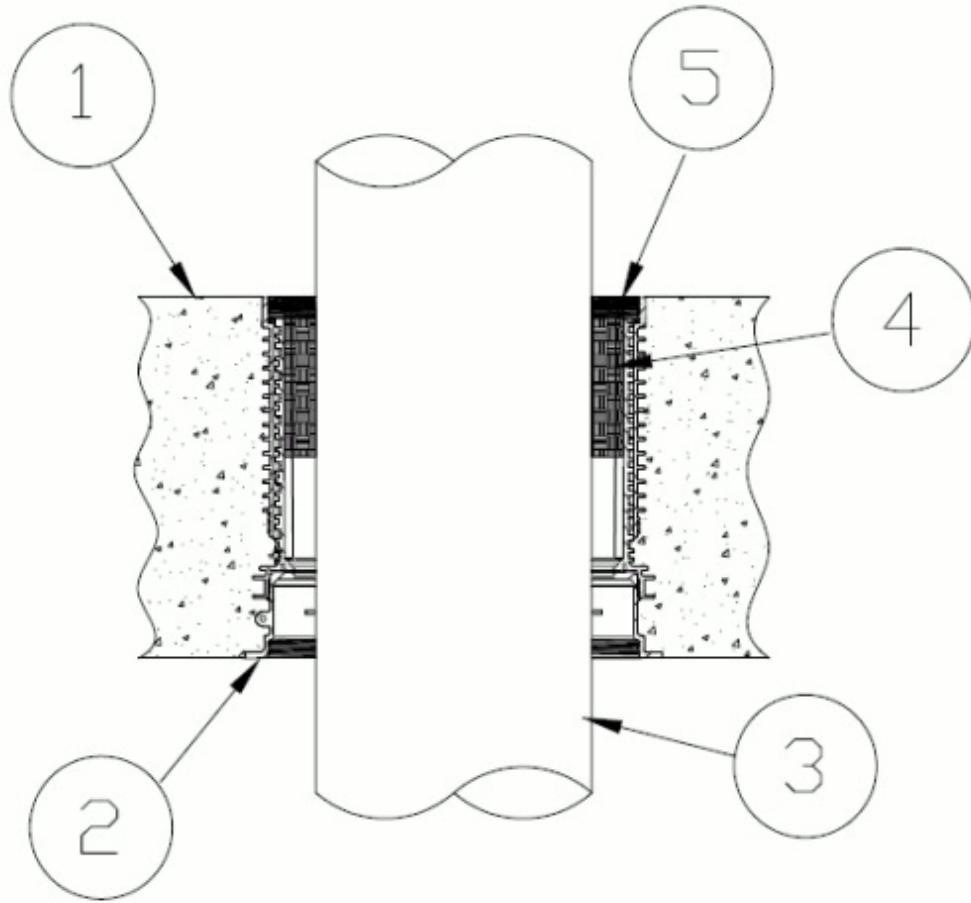
[See General Information for Through-penetration Firestop Systems](#)

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

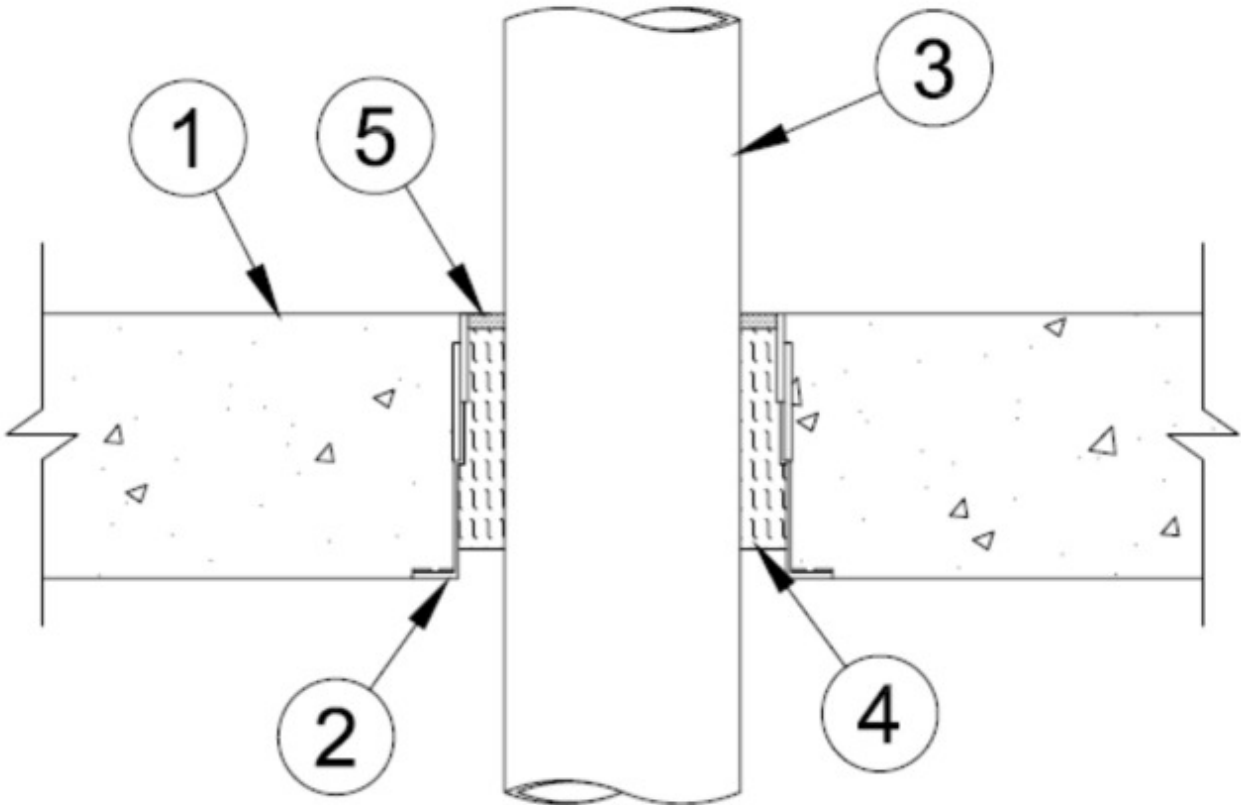
### System No. F-A-1122

September 12, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</sup>



Configuration A



Configuration B

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

1A. **Alternate Floor Assembly** — (Optional, Not Shown) — The fire rated unprotected concrete and steel 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 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight 100-150 pcf (1600-2400 kg/m<sup>3</sup>) concrete, measured above the base of the device.

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.

#### Configuration A

2. **Firestop Device\*** — Cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be installed flush with top and bottom surfaces of floor. Optional accessories (not shown) includes sleeve extension, water module, deck adapter, mid body seal and/or aerator adapter installed in accordance with installation instructions.

The devices are sized to accommodate the following nom pipe sizes:

Nom Pipe Diam in. (mm)	Devices for Concrete Slab	Devices for Fluted Deck (Not Shown)
1/4 to 1-1/4 (6 to 32)	HFP-H2, HFP-H2B	add HFPCD1
1 to 2 (25 to 51)	HFP-H3, HFP-H3B	add HFPCD2
1-1/4 to 3 (32 to 76)	HFP-H4, HFP-H4B	add HFPCD3
2-1/2 to 4 (64 to 102)	HFP-H5, HFP-H5B	add HFPCD4
4 to 6 (102 to 152)	HFP-H7, HFP-H7B	add HFPCD6

**SECURUS INC, DBA HOLDRITE** — HydroFlame, HFP-Hx, HFP-HxB

3. **Through-Penetrant** — One metallic pipe, conduit or tubing installed concentrically within the firestop system. The annular space shall be min 1/2 in. (13 mm) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

A. **Steel Pipe** — Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Conduit** — Nom 6 in. (152 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.

C. **Copper Tubing** — Nom 6 in. (152 mm) diam (or smaller) Type M (or heavier) copper tubing.

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

4. **Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

5. **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 to attain W Rating.

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

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

6. **Pipe Tee Fitting System** — (Optional, Not Shown) — For use with Iron Pipe (Item 3D) 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 metallic penetrant (Item 3D) 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 3D) 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 above assembly.

#### Configuration B

2. **Firestop Device\*** — Max 8 in. (203 mm) diam cast in place firestop device permanently embedded during concrete placement 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.

**SECURUS INC, DBA HOLDRITE** — HydroFlame WD, CD Sleeve

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, conduit or tubing installed concentrically within the firestop system. The annular space shall be min 1/2 in. (13 mm) to max 2-3/8 in. (60 mm). Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types of pipe, conduit or tubing may be used:

- A. **Steel Pipe** — Nom 4 in. (102 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. **Conduit** — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing (EMT) or steel conduit.
- C. **Copper Tubing** — Nom 4 in. (102 mm) diam (or smaller) Type M (or heavier) copper tubing.
- D. **Iron Pipe** — Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.

**4. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) 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.

**5. 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. Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

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

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

**6. Pipe Tee Fitting System** — (Optional, Not Shown) — For use with Iron Pipe (Item 3D) 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 metallic penetrant (Item 3D) 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 3D) 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 above assembly.

**\* 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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## System No. F-A-0033 XHEZ.F-A-0033 Through-penetration Firestop Systems

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### XHEZ - Through-penetration Firestop Systems

#### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

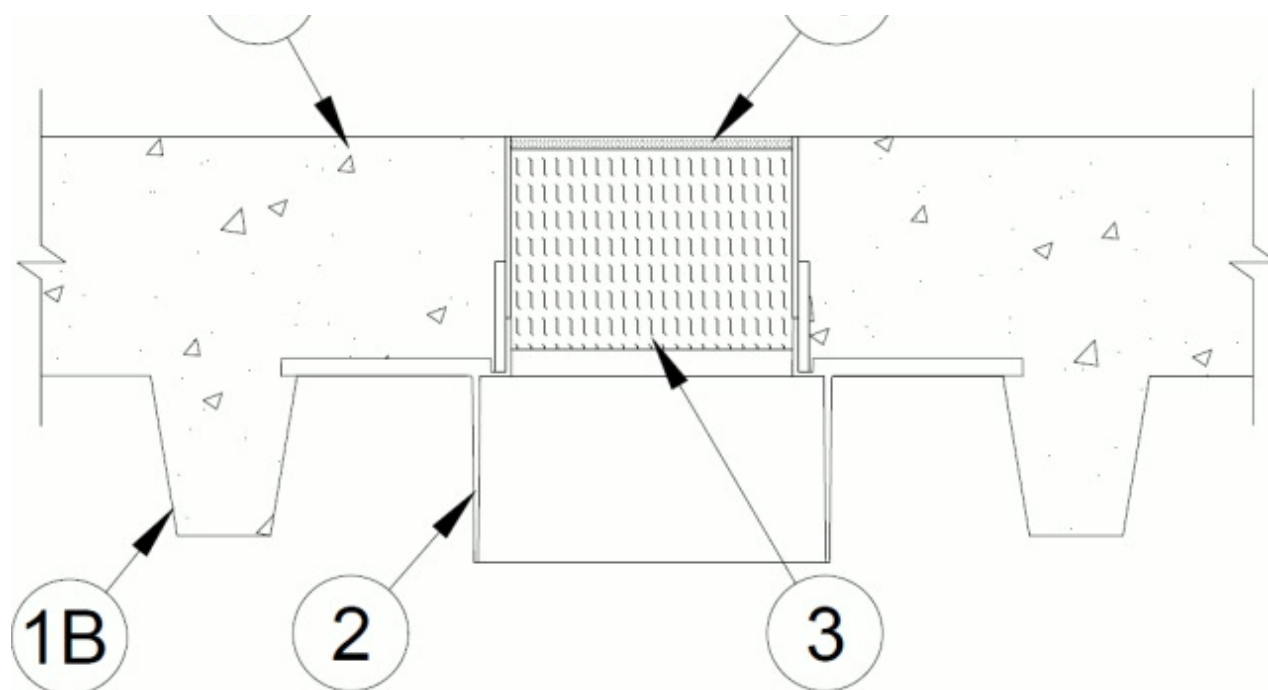
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-0033

June 27, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 2 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</sup>



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

B. **Steel Floor and Form Units\*** — Composite or non-composite 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.

**2. Firestop Device\*** — Max 6 in. (152 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**3. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into firestop device 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.

**4. 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. Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

**TREMCO INC** — Fyre-Sil Sealant or Fyre-Sil S.L. Sealant

**\* 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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## System No. F-A-0027 XHEZ.F-A-0027 Through-penetration Firestop Systems

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- Only products which bear UL's Mark are considered Certified.

### XHEZ - Through-penetration Firestop Systems

#### XHEZ7 - Through-penetration Firestop Systems Certified for Canada

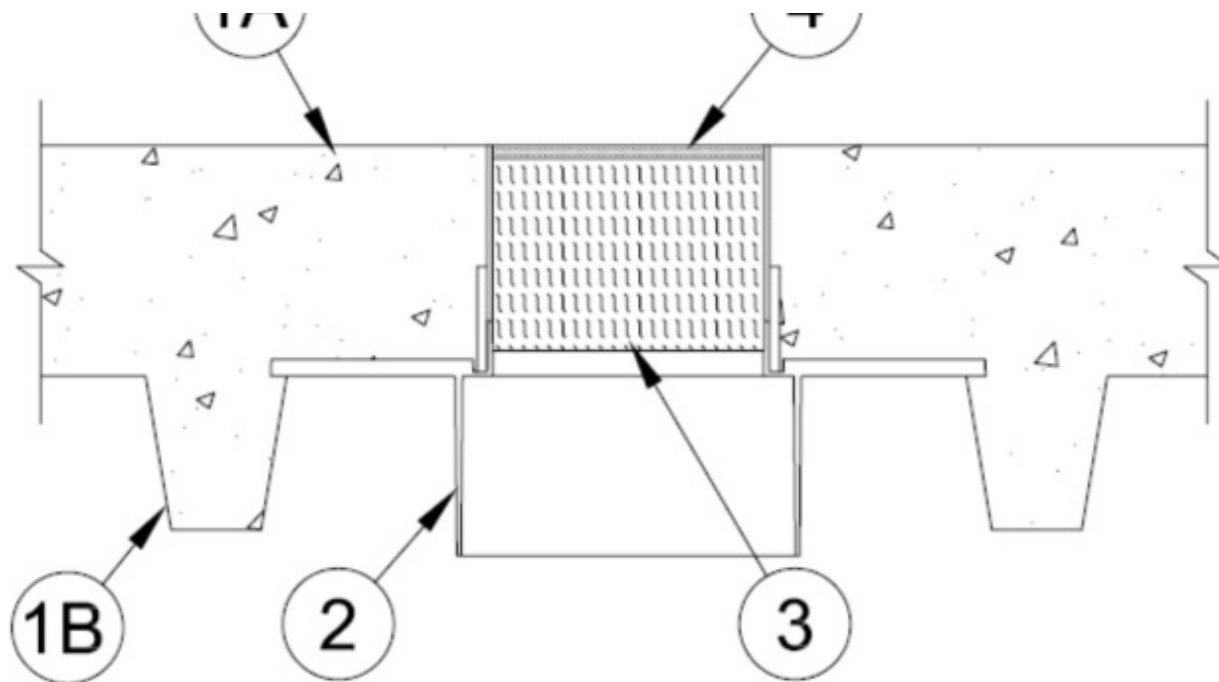
[See General Information for Through-penetration Firestop Systems](#)

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

### System No. F-A-0027

June 27, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 2 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</sup>



**1. Floor Assembly** — 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 4-1/2 in. (114 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.

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.

**2. Firestop Device\*** — Max 6 in. (152 mm) diam cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be inserted through circular cutout in fluted floor unit and secured to crests of steel floor unit with steel screws. Top sleeve extension of device to be installed flush with top surface of floor.

**SECURUS INC, DBA HOLDRITE** — HydroFlame CD Sleeve

**3. Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into firestop device 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.

**4. 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. Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

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

**\* 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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## System No. F-A-0026 XHEZ.F-A-0026 Through-penetration Firestop Systems

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### 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

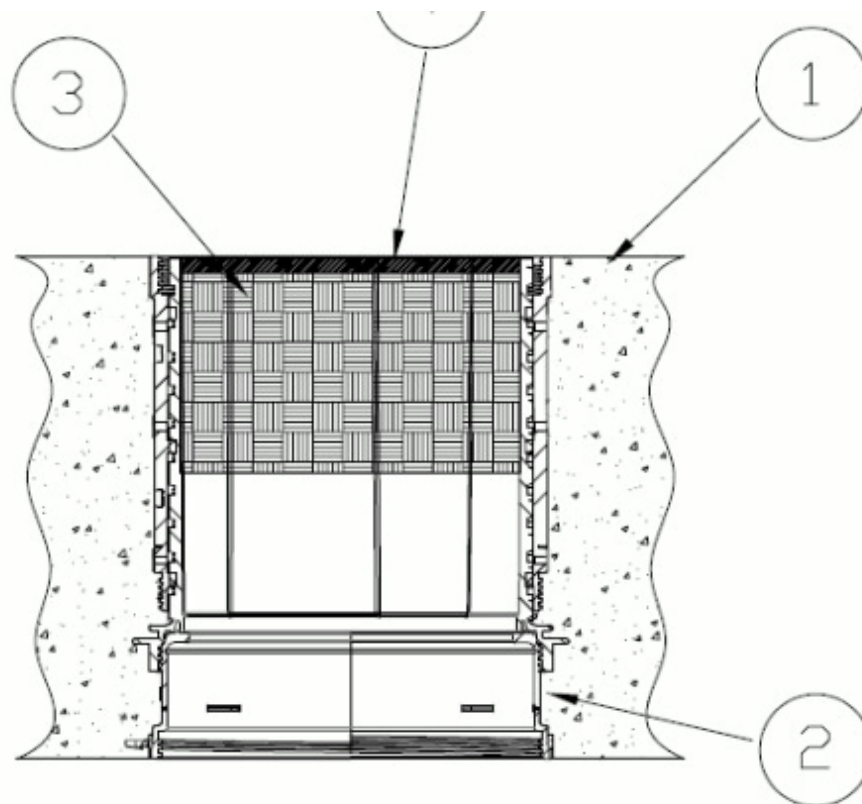
[See General Information for Through-penetration Firestop Systems](#)

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

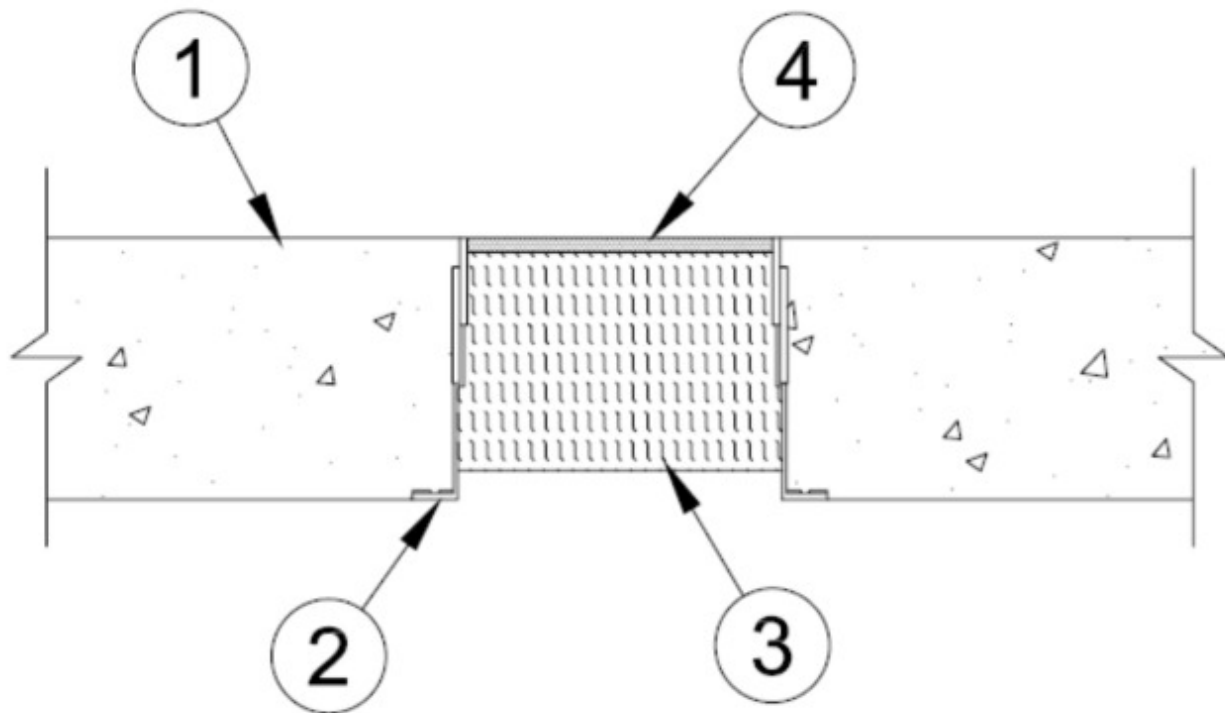
### System No. F-A-0026

September 12, 2016

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 2 Hr	F Rating — 2 Hr
T Rating — 2 Hr	FT Rating — 2 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Rating — 2 Hr
L Rating At 400 F — 2 CFM/sq ft	FTH Rating — 2 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 5.1 L/s/m <sup>3</sup>
	L Rating At 400 F — 10.2 L/s/m <sup>3</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** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete.

A. **Concrete** — Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) 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\*** — Max 6 in. (152 mm) cast in place firestop device permanently embedded during concrete placement in accordance with accompanying installation instructions. The device shall be installed flush with top and bottom surfaces of floor. For HFP devices the optional accessory (not shown) includes a sleeve extension and / or deck adapter installed in accordance with installation instructions. The devices are sized to accommodate the following nom pipe sizes:

Nom Pipe Diam in. (mm)	Conf A Firestop Devices for Concrete Slab	Conf A Firestop Devices for Fluted Deck (Not Shown)	Conf B Firestop Devices for Concrete Slab	Conf B Firestop Devices for Fluted Deck (Not Shown)
1/2 to 1 (13 to 25) HFP-H Size Below 1/4 to 1-1/4 (6 to 32)	HFP-M1, HFP-P1, HFP-H2, HFP-P1B, HFP-M1B, HFP-H2B	add HFPCD1	WD sleeve	CD sleeve
1-1/4 to 2 (32 to 51) HFP-H Size Below 1 to 2 (25 to 51)	HFP-P2, HFP-M2, HFP-H3, HFP-P2B, HFP-M2B, HFP-H3B	add HFPCD2	WD sleeve	CD sleeve
2 to 3 (51 to 76) HFP-H Size Below 1-1/4 to 3 (32 to 76)	HFP-P3, HFP-M3, HFP-H4, HFP-P3B, HFP-M3B, HFP-H4B	add HFPCD3	WD sleeve	CD sleeve
3 to 4 (76 to 102) HFP-H Size Below 2-1/2 to 4 (64 to 102)	HFP-P4, HFP-M4, HFP-H5, HFP-P4B, HFP-M4B, HFP-H5B	add HFPCD4	WD sleeve	CD sleeve
5 to 6 (127 to 152) HFP-H Size Below 4 to 6 (102 to 152)	HFP-P6, HFP-M6, HFP-H7, HFP-P6B, HFP-M6B, HFP-H7B	add HFPCD6	WD sleeve	CD sleeve

**SECURUS INC, DBA HOLDRITE** — (Configuration A) HFP-Mx, HFP-Px, HFP-Hx, HFP-PxB, HFP-MxB, HFP-HxB, (Configuration B) HydroFlame WD Sleeve, CD Sleeve

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. **Packing Material** — Min 3-3/4 in. (95 mm) thickness of min 4 pcf (64 kg/m<sup>3</sup>) mineral wool batt insulation firmly packed into firestop device 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.

4. **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. Conf B, Sealant must lap onto top surface of concrete floor around entire perimeter of firestop device to attain W Rating.

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

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

Last Updated on 2016-09-12

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