Note #1

Note #2

Notes #3, 4 & 5



METALLIC CAST-IN-PLACE SLEEVE PS SERIES (PS-CT, PS-CH, PS-CI, PS-CX, PS-ST & PS-ET)

For use in

 Concrete floor assemblies with flat form decks and dust and fiber free environments such as hospitals, computer centers and laboratories

Product Description

- HydroFlame sleeves offer fire and water protection 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 form deck for final installation.
- HydroFlame sleeves appreciably reduce job time and material expenses by not requiring additional steps, such as cutting and caulking.
- OSHA compliant safety cap

Metallic Through Penetrants

½" - 6" pipe sizes: Steel Pipe, Iron Pipe, Conduit (Steel conduit or electrical metallic tubing), Copper

Product Feature & Benefits

- Simple and quick installation, Snug fit holds pipe in place
- Helps prevent water, fire, smoke, moisture & mold intrusion, Helps eliminate rework due to water damage
- Reduces time to finish building by allowing dry in of bottom floors faster
- Sleeves are pre-cut at the factory to your specified height

Not for use in Walls

Safety & Precautions

Keep this device out of reach of children and read the Material & Safety Data Sheet

Storage of Device

 Store in a covered or closed area protected from weather and do not stack devices on top of one another other than how they are shipped from manufacture







Technical Data for HYDROFLAME Firestop Device		
Physical Properties		
Color: Gray/Black		
Heat Expansion (Intumescence)		
Expansion begins:		410°F (210°C)
Significant expansion:		555°F (290°C)
Free expansion:		25 times (5 min @ 662°[350°C])
Weatherability (Tested to ASTM G23 and G53)		
Test Condition	Temperature/Humidity 90°F (32°C)/90%	
Time	120 Days	
After Exposure	No change in expansion	
Surface Burning Characteristics (ASTM E84, UL 723)		
Flame spread index: 0		
Smoke development index: 5		
Testing Data		
UL Fire Tested & Listed to UL 1479 (ASTM E814) Standards		
L Rating UL		
W Rating UL		
F Rating UL – 3 Hours		
		·

Installation Instructions

- (1) Select the correct sleeve for pipe type, size and concrete thickness. Align the hatch marks on lower base to layout lines on form deck to center the sleeve for the pipe that will penetrate through. Attach sleeve to deck with nails through the nail slots provided in the lower base. A minimum of four nails should be used when nailing down the device to form deck. Make sure the protective cap is securely inserted in the sleeve top before pouring concrete. Note: It is recommended to use 6 penny nails through the nail slots to secure device to the deck. You may use appropriate staples to secure the device to form deck by straddling the nail slots on the edge of the base. DO NOT USE SCREWS TO SECURE THE DEVICE TO FORM DECK BECAUSE THE FORM DECK OR DEVICE COULD BE DAMAGED. A Minimum of 4 holes should be used for nailing the sleeve to the wood form deck. Make sure the protective cap is securely inserted in the sleeve top before pouring concrete.
- (2) Pour the concrete slab around the device to the appropriate slab thickness.
- (3) As the form deck is removed after the appropriate concrete curing time has been accomplished, the nails can be pulled through the nail slots on the base, as designed. Remove the protective cap from the top portion of the device before inserting pipe.
- (4) Prior to installation, thoroughly clean the outside of the pipe to be inserted through the sleeve. The pipe must be free of concrete, dirt, paint, rust or anything protruding from the outside of pipe including burrs of pipe material. Make sure the mid-body seal membrane is clean of all debris, dirt, concrete or anything that might have gotten on the mid-body seal membrane during or after construction that could damage the sealing surface of the mid-body seal membrane when the pipe is inserted through the mid-body seal. Failure to perform proper cleaning could damage the mid-body seal membrane of the sleeve when the pipe is installed..
- (5) After cleaning the debris from the surface of the pipe, it can now be inserted through the device. Recommendations:
 - a. Insert the pipe of choice up through the bottom of the device. Note: If circumstances arrive in the field, you may insert the pipe of choice down through the top of the device. Care should be taken to avoid coming in contact with the top of the fire ring tabs that hold the fire material in place in the lower section of the device.
 - b. Use of the factory beveled end of the cast iron or steel pipe should be inserted through the device, if not, cast iron or steel pipe shall have a slight bevel applied to the end of pipe being inserted through the device to ease installation and minimize the possibility of damaging the mid-body seal membrane.
 - c. Use a compatible soap solution or other recommended compatible lubricant to ease installation and further minimize the possibility of damaging the mid-body seal membrane. Lightly coating the mid-body seal center sealing surface will ease the insertion of pipe.
- (6) To ensure that the water-tight feature of the W-Rated sleeving systems perform as required, it is recommended that piping be confirmed to be within manufacturer's specified dimensional tolerances, prior to installing the penetrating pipe into the sleeve. For no-hub cast iron pipe, where a water-tight seal is required and 1) the pipe outer surface is very rough or irregular, or 2) the pipe O.D. is in excess of 25/1000 inch (0.025°) smaller than pipe manufacturer's nominal O.D. specification, it may be necessary to add a bead of compatible silicone sealant around pipe for a fully water-tight seal. Also, due to its smaller O.D. specification, a water-tight seal cannot be guaranteed without using silicone sealant on service weight cast iron pipe. Be sure to use a sealant that is compatible with both the PVC sleeve riser and the penetrating pipe.



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 us or incurred by HOLDRITE 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.

System No. F-A-1107 XHEZ.F-A-1107 Through-penetration Firestop Systems

Page Bottom

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

See General Information for Through-penetration Firestop Systems

System No. F-A-1107

June 04, 2013

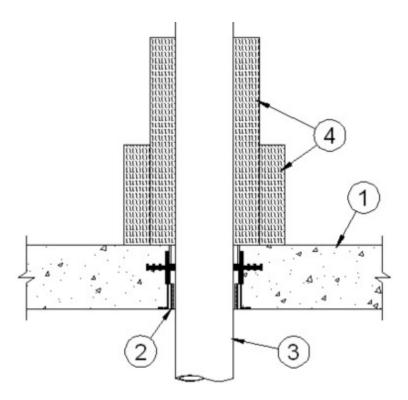
F Rating - 3 Hr

T Rating - 2 Hr

L Rating at Ambient — Less Than 1 CFM/sq ft

L Rating at 400°F - Less than 1 CFM/sq ft

W Rating — Class 1



- 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.
- 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.

SECURUS INC, DBA HOLDRITE — HydroFlame PS-CH, PS-CI, PS-CX, PS-CT, PS-ET, PS-ST

- 3. **Through-Penetrant** One metallic pipe, conduit or tubing to be installed within the firestop device. Pipe, conduit or tubing to be installed in accordance with firestop device installation instructions and rigidly supported on both sides of floor assembly. The following types and sizes of penetrants may be used:
 - A. Steel Pipe Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Copper Tubing Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - D. Copper Pipe Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
 - E. **Conduit** Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing.
- 4. **Duct Wrap Material*** Nom 2 in. (51 mm) thick duct wrap tightly wrapped around penetrant to extend 36 in. (914 mm) above floor. An additional layer of nom 2 in. (51 mm) thick duct wrap tightly wrapped around the first layer of duct wrap to extend 12 in. (305 mm) (914 mm) above floor. All longitudinal seams of both layers of duct wrap are sealed with foil tape.

3M COMPANY 3M FIRE PROTECTION PRODUCTS — FireBarrier Duct Wrap 20A

* 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 2013-06-04

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System No. F-A-1097 XHEZ.F-A-1097 Through-penetration Firestop Systems

Page Bottom

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.

XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. F-A-1097

June 06, 2016

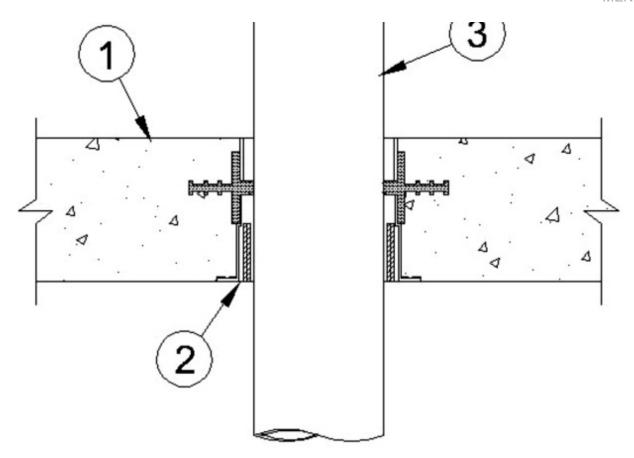
F Rating - 3 Hr

T Rating - 0 Hr

L Rating At Ambient - Less Than 1 CFM/sq ft

L Rating At 400°F - Less Than 1 CFM/sq ft

W Rating — Class 1



- 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.
- 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.

SECURUS INC, DBA HOLDRITE — HydroFlame PS-CH, PS-CI, PS-CX, PS-CT, PS-ET, PS-ST

- 3. Through Penetrant One metallic pipe, conduit or tubing to be installed within the firestop device. Pipe, conduit or tubing 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. Steel Pipe Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Iron Pipe Nom 6 in. (152 mm) diam (or smaller) cast or ductile iron pipe.
 - C. Conduit Nom 6 in. (152 mm) diam (or smaller) rigid steel conduit or nom 4 in. (102 mm) diam steel electrical metallic tubing.
 - D. Copper Tubing Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper
 - E. Copper Pipe Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
- 4. Pipe Tee Fitting System (Optional, Not Shown) For use with Iron Pipe (Item 3B) 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 3B) 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 3B) 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 2016-06-06

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