

Specified Technologies, Inc.

Design No. STI/PF 60-05

Through Penetration
 SpecSeal® LCI Intumescent Firestop Sealant
 ASTM E814, CAN/ULC-S115
 Rating: See Table 1



Pressure Differential: Positive, 0.01 in. w.g. (2.5 Pa)

TABLE 1. RATINGS		
	ASTM E814	CAN/ULC-S115
F-Rating	1 Hr	1 Hr
T-Rating	1 Hr*	NA
FT-Rating	NA	1 Hr*
FH-Rating	NA	1 Hr
FTH Rating	NA	1 Hr*

*The T, FT, and FTH ratings require the use of 2 in. (51 mm) thick JM Micro-Lok HP pipe insulation as specified in Item 2B. Other pipe insulation as specified in Item 2C has not been evaluated for a T, FT, or FTH rating.

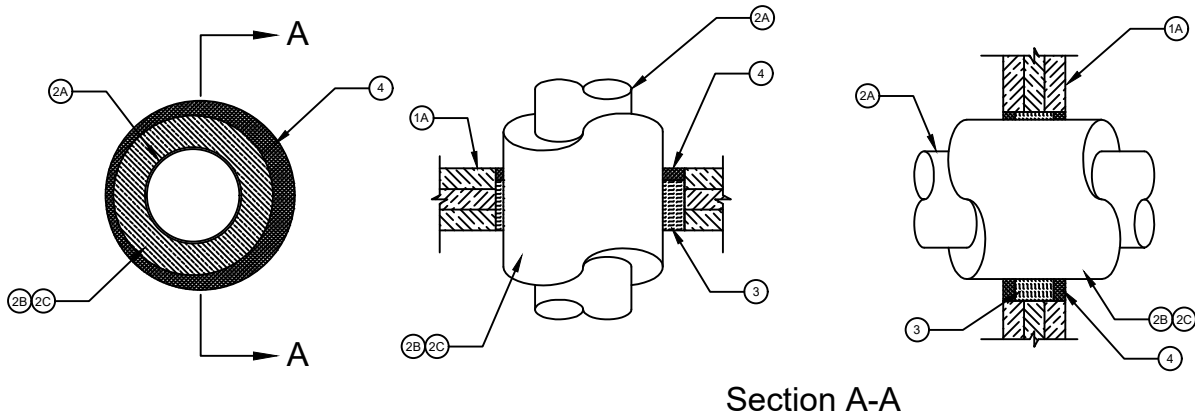


Figure 1. Through Penetration Detail

1. **SUPPORTING CONSTRUCTION:** Use Cross-laminated timber (CLT) certified in accordance with ANSI/APA PRG 320 (2018 or later). Use a min. 1 hour fire-rated floor/ceiling assembly or wall assembly constructed in accordance with its listed or prescribed fire-rated design requirements that has a maximum through opening diameter of 12 in. (305 mm) and meets the following minimum construction requirements:
 - A. Cross Laminated Timber (CLT): Use min. 3- 15/16 in. (100 mm) thick CLT with a min. of 3 plies. Minimum ply thickness is 1-3/16 in. (30 mm).
 - B. Gypsum Board: (Optional, not shown) Gypsum board of any thickness or type may be applied directly to the underside of CLT floor/ceiling assemblies or on both sides of CLT wall assemblies. Secure as recommended by the gypsum manufacturer instructions or as needed to comply with local code requirements.
 - C. Floor Topping (For floor configuration only, Optional, Not Shown) - Use a code compliant floor topping when acceptable for use in the listed or prescribed fire rated floor/ceiling design.



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2. PENETRATING ITEM: Install penetrating items centered or offset within the opening. The annular space and offset shall range from min. 1/4 in. (6 mm) to max. 1 in. (25 mm) within the opening. Penetrating item shall consist of:

A. METALLIC PIPE: Install a max. of one of the following types of pipe or tube:

- Max 6 in. (152 mm) diameter Schedule 10 (or thicker) steel pipe.
- Max 6 in. (152 mm) diameter cast or ductile iron pipe.
- Max 6 in. (152 mm) diameter copper pipe or Tube (Type L or heavier).

B. PIPE INSULATION (Option 1): Penetrating item (Item 2A) shall be insulated with nominal 2 in. (51 mm) thick JM Micro-Lok HP fiberglass pipe insulation with jacket. Longitudinal joints sealed with factory-applied, self-sealing lap tape. Transverse joints secured tape supplied with the pipe insulation.

C. PIPE INSULATION (Option 2 - not rated for T, FT, and FTH Rating): Penetrating item (Item 2A) shall be insulated with max. 2 in. (51 mm) thick cylindrical heavy density (min. 3.5 pcf or 56 kg/m³) glass fiber pipe insulation jacketed on the outside 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 pipe insulation. Only use insulation certified to ASTM E84 or UL 723 with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less for applications requiring compliance with ASTM E814. Only use insulation certified to CAN/ULC-S102 with a Flame Spread Rating of 25 or less and a Smoke Developed Classification of 50 or less for applications requiring compliance with CAN/ULC-S115.

3. PACKING MATERIAL: Use only packing material bearing an Intertek Certified Label and meeting the following minimum requirements. Install min. 4 pcf (64 kg/m³) mineral wool insulation in the annular space to the full depth of the opening in the floor/ceiling or wall assembly (Item 1) except recessed 3/4 in. (19 mm) from top of floor/ceiling assembly or both sides of wall assembly, tightly packed (compressed min. 50%) around the penetrating item (Item 2).

4. FILL, VOID, OR CAVITY MATERIAL: Apply the following material in accordance with manufacturer's instructions and in compliance with the requirements below:

Certified Product: Specified Technologies, Inc. SpecSeal® LCI Intumescent Firestop Sealant

Apply nominal 3/4 in. (19 mm) depth of SpecSeal® LCI Intumescent Firestop Sealant over the packing material (Item 3) to fill the annular space so that it is flush with the top side of the CLT floor assembly, or with both sides of the CLT wall assembly.

Consult the listing report on the Directory of Building Products (<https://bpdirectory.intertek.com>) for the edition of the standard(s) evaluated.

Compliance of the assembly described in this Design Listing with the referenced standard relies on verification that the assembly constructed in the field is consistent with that described herein. Intertek certified products may be verified by the approved Intertek label; other products must be verified by the Authority Having Jurisdiction as meeting the specifications stated herein.

