

System No. F-G-1001

- 1. Floor Assembly Min 6-7/8 in. (175 mm) thick, 5 ply cross laminated timber (CLT) panel, labeled Grade E1 in accordance with ANSI/APA PRG 320 as required by Chapter 6 of International Building Code (IBC) for Type IVA, IVB or IVC construction. The required hourly rating of the CLT floor shall be determined in accordance with Chapter 16 of the National Design Specification (NDS). Additional information regarding the use of CLT as permitted in the IBC is located in the XHEZ Guide Information. The indicated or calculated fire resistance rating of the assembly (Type IV A, B or C) to meet or exceed the F rating of the firestop system. CLT Panel to have a max through opening diameter of 8 in. (203 mm) to accommodate the penetrant.
- 2. Through Penetrant One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. The annular space between the penetrant and the periphery of the opening shall be a min of 1/2 in. (13 mm) to a max of 3 in. (76 mm). 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. Iron Pipe Nom 4 in. (102 mm) diam (or smaller) cast or ductile pipe.
 - C. Conduit Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or rigid steel conduit.
- 3. Packing Material Min 5 in. (127 mm) thickness of min 4 pcf (64 kg/m3) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed nom 1 in. (25 mm) from bottom surface of floor and recessed from the top surface to accommodate the required thickness of fill material (Item 4).
- 4. Fill, Void or Cavity Material* Sealant Min 3/4 in. (16 mm) thickness of fill material applied within the annulus, flush with the top surface of floor.

- 5. Pipe Covering Material* (Optional)_Nom 1/2 in. (12.7 mm) flexible sheet material, to be installed in layers as detailed below. The vertical seams are to be offset a min of 2 in. (51 mm) from the preceding layer of pipe covering material. Min 2 in. (51 mm) overlap at the seam in each layer. Seams to be sealed with nom 3 in. (76 mm) wide FSK or foil tape. The T, FT and FTH Ratings are 0 hr except that, when Item 5 is used, the T, FT and FTH Ratings are 1 hr.
 - A. Initial Layer Pipe covering shall be continuously wrapped around the penetrant for a min one layer (See Table 1). Initial insulation installed butted to the top surface of the sealant (Item 4) and top of floor assembly (Item1).
 - B. Collar Pipe covering shall be continuously wrapped around the initial layer for a min one layer (See Table 1). Outer insulation installed butted to the sealant (Item 4).

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC - CFP-ES Endo-Shield

Penetrant	Initial Insulation		Collar	
Nom Diam, in. (mm)	Layers, Min	Height, in. (mm)	Layers, Min	Height, in. (mm)
≤ 4 (102)	1	8 (203)	1	6 (152)

* 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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HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP601S, CFS-S SIL GG, CFS-S SIL SL, CP606 or FS-ONE MAX Intumescent Sealant.