

UL/cUL SYSTEM NO. F-G-2002

PLASTIC PIPE THROUGH MASS TIMBER FLOOR ASSEMBLY

F-RATING = 2-HR.

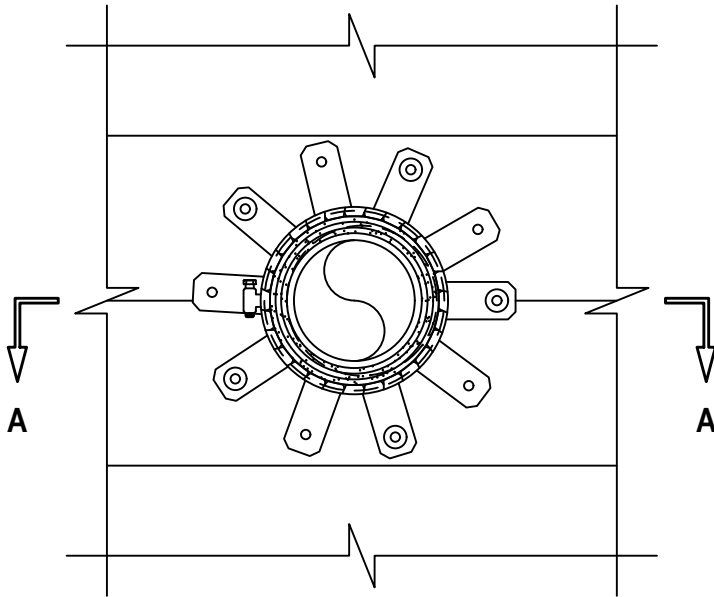
T, FT, AND FTH-RATINGS = 1-3/4-HR. OR 2-HR. (SEE TABLE BELOW)

FH-RATING = 2-HR.

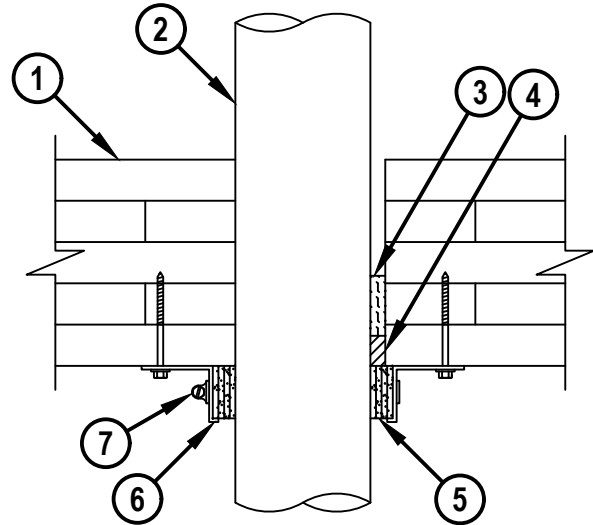
NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

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BOTTOM VIEW



SECTION A-A



HILTI
Hilti Firestop Systems

HILTI, Inc.
Plano, Texas USA (800) 879-8000

Sheet	1 of 2
Scale	5/32" = 1"
Date	Nov. 09, 2023

Drawing No.

**FG
2002a**

Saving Lives through Innovation and Education

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1. CROSS-LAMINATED TIMBER (CLT) PANEL, MINIMUM 6-7/8" (175 MM) THICK, CROSS-LAMINATED TIMBER (CLT) 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 UL XHEZ GUIDE INFORMATION.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 4" (102 MM) NOMINAL DIAMETER XFR-PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).
3. MINIMUM 2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT.
4. MINIMUM 1" (25 MM) DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
5. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" (5 MM) THICK x 1-3/4" (44 MM) WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, WITH ENDS BUTTED AND HELD IN PLACE WITH (MASKING OR ALUMINUM) TAPE. SEE TABLE BELOW FOR THE REQUIRED NUMBER OF WRAP STRIP LAYERS.

PENETRANT	MAX NOM DIAM OF PENETRANT, IN. (MM)	NUMBER OF LAYERS OF WRAP STRIP	T, FT, FTH-RATINGS, HR.
2A	2 (51)	2	1-3/4
2A	4 (102)	4	2

6. HILTI 1-3/4" (44 MM) RETAINING COLLAR WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 2" (52 MM). ATTACH EVERY OTHER TAB TO BOTTOM OF FLOOR WITH 3" LONG WOOD SCREWS AND 3/4" (19 MM) DIAMETER STEEL WASHERS.
7. SECURE COLLAR TOGETHER AT OVERLAP LOCATION WITH NOMINAL 1/2" (13 MM) STEEL HOSE CLAMP.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 5".

2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/2" (13 MM).



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