

# PLASTIC PIPE THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR. OR 3-HR. (SEE NOTE NO. 3 BELOW)

FT-RATING = 0-HR., 1/2-HR., OR 2-HR. (SEE NOTE NO. 3 BELOW)

FH-RATING = 2-HR. OR 3-HR. (SEE NOTE NO. 3 BELOW)

FTH-RATING = 0-HR., 1/2-HR., OR 2-HR. (SEE NOTE NO. 3 BELOW)

L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT (SEE NOTE NO. 2 BELOW)

L-RATING AT 400°F = LESS THAN 1 CFM / SQ FT (SEE NOTE NO. 2 BELOW)

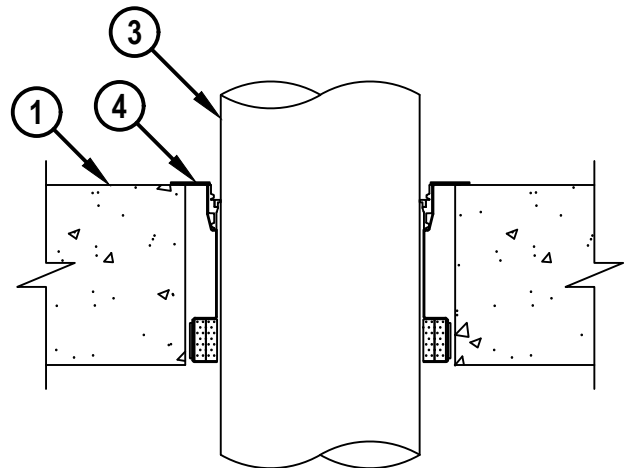
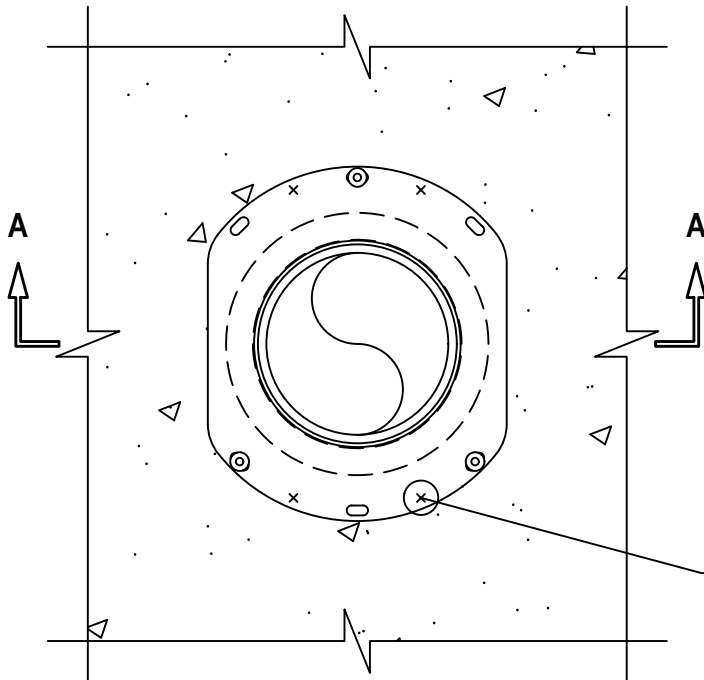
W-RATING = CLASS I (SEE NOTE NO. 2 BELOW)

NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

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**TOP VIEW**

**SECTION A-A**



INDICATES APPROXIMATE RECOMMENDED LOCATION OF X-GH FASTENERS (WHEN USED ON 2", 3", OR 4" DEVICES)

**1. CONCRETE FLOOR ASSEMBLY (3-HR. FIRE-RATING) :**

- A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 6" TO 12" THICK).
- B. STEEL FLOOR UNIT/FLOOR ASSEMBLY - LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 6 TO 12" THICK) OVER METAL DECKING (UL CLASSIFIED D700, D800, OR D900 SERIES).

**2. [OPTIONAL - NOT SHOWN] ANY OF THE FOLLOWING SLEEVES MAY BE USED :**

- A. NOMINAL 4", 5", OR 6" DIAMETER STEEL PIPE SLEEVE (SCHEDULE 10 OR HEAVIER) CAST OR GROUTED INTO FLOOR ASSEMBLY, FLUSH WITH FLOOR SURFACES.
- B. NOMINAL 4", 5", 6", OR 9" DIAMETER GALVANIZED STEEL SLEEVE (MIN. 26 GA.) WITH SQUARE FLANGE SPOT WELDED TO BOTTOM OR MID-HEIGHT OF SLEEVE AND SIZED MINIMUM 2" LARGER THAN SLEEVE DIAMETER. SLEEVE IS TO BE CAST IN PLACE, AND MAY EXTEND A MAXIMUM 4" BELOW BOTTOM SURFACE OF FLOOR AND SIT FLUSH WITH TOP SURFACE OF FLOOR.



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

Sheet	1 of 2
Scale	5/32" = 1"
Date	Aug. 18, 2022

Drawing No.

**cUL**  
**FB2049d**

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**L-RATING AT 400°F = LESS THAN 1 CFM / SQ FT (SEE NOTE NO. 2 BELOW)**  
**W-RATING = CLASS I (SEE NOTE NO. 2 BELOW)**  
**NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL**

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**3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :**

- A. MAXIMUM 6" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
- B. MAXIMUM 6" NOMINAL DIAMETER ABS PLASTIC PIPE (CELLULAR OR SOLID CORE).
- C. MAXIMUM 6" NOMINAL DIAMETER CPVC PLASTIC PIPE.
- D. MAXIMUM 4" NOMINAL DIAMETER FRPP PLASTIC PIPE.
- E. MAXIMUM 4" NOMINAL DIAMETER AQUARISE CPVC PLASTIC PIPE (SDR 11) MANUFACTURED BY IPEX, INC. (CLOSED PIPING SYSTEM ONLY).
- F. MAXIMUM 4" NOMINAL DIAMETER XFR 15/50 PVC PLASTIC PIPE (SOLID CORE).

**4. HILTI CFS-DID FIRESTOP DROP-IN DEVICE INSERTED INTO OPENING (SEE TABLE BELOW) AND SECURED TO TOP OF FLOOR WITH THREE HILTI 1/4" (6mm) DIAMETER BY 1-1/4" (32mm) LONG KWIK-CON II+ CONCRETE SCREW ANCHORS, HILTI 1/4" (6mm) DIAMETER BY 1-3/4" (45mm) LONG KWIK BOLT 3 STEEL EXPANSION ANCHORS, OR HILTI 1/4" (6mm) BY 3/4" (19mm) LONG METAL HIT ANCHORS (INSTALLED IN A TRIANGULAR FASHION THROUGH HOLES PROVIDED). IN ADDITION, FOR NOMINAL 2", 3", AND 4" DEVICES, FOUR 11/16" (18mm) LONG HILTI X-GH P18 MX STEEL FASTENERS MAY BE INSTALLED THROUGH THE STEEL FLANGE, TWO ON EACH SIDE.**

CORE HOLE OR SLEEVE DIAMETER	PRODUCT DESCRIPTION	NOMINAL PIPE DIAMETER
4"	CFS-DID 2" C	2" (OR SMALLER)+
5"	CFS-DID 3" C	3"
6"	CFS-DID 4" C	4"
9"	CFS-DID 6" C	6"

**+ FOR PIPE SMALLER THAN NOMINAL 2" DIAMETER, AN ADAPTER AND HILTI IPS OR CPS TOP SEAL PLUG MUST BE USED IN CONJUNCTION WITH THE CFS-DID 2" C DEVICE.**

- NOTES :**
1. CLOSED OR VENTED PIPING SYSTEM (PVC, ABS, FRPP, XFR 15/50 PVC = SCH 40; CPVC = SDR 13.5).
  2. [OPTIONAL] TO ACHIEVE W-RATING AND/OR L-RATING, WATER BARRIER MODULES MAY BE THREADED ON TOP OF CFS-DID DEVICES FOR NOMINAL 2", 3", 4", AND 6" PIPES (LISTED ABOVE).
  3. FT AND FTH-RATING IS 1/4-HR. WHEN ITEM 3D IS USED. F, FT, FTH, AND FTH-RATING IS 2-HR. WHEN ITEM 3F IS USED.



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