

**PLASTIC PIPE THROUGH CONCRETE FLOOR ASSEMBLY**

F-RATING = 2-HR. OR 3-HR.

FT-RATING = 0-HR., 1/4-HR., OR 1/2-HR. (SEE NOTES NO. 3 AND 4 BELOW)

FH-RATING = 2-HR. OR 3-HR.

FTH-RATING = 0-HR., 1/4-HR., OR 1/2-HR. (SEE NOTES NO. 3 AND 4 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)

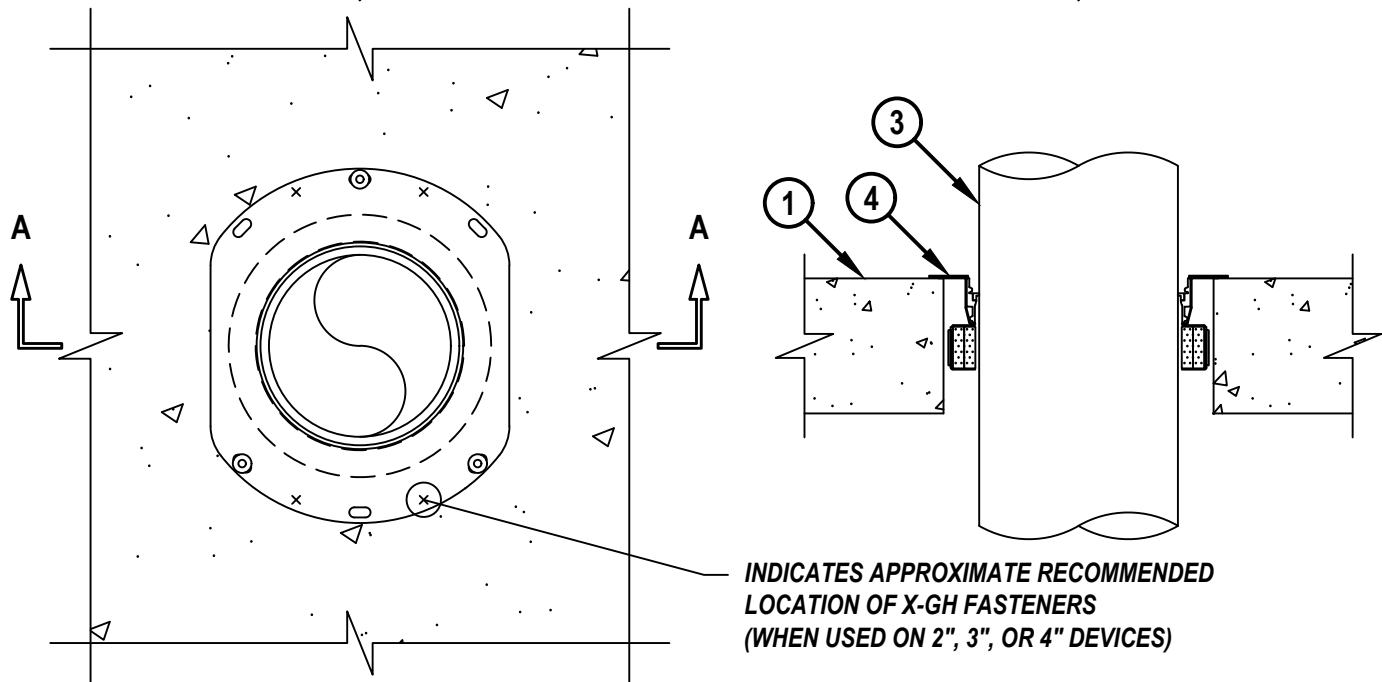
W-RATING = CLASS I (SEE NOTE NO. 2 BELOW)

NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

cUL FA2214c.081722

**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 (2-HR. OR 3-HR. FIRE-RATING) :
  - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 2-1/2" TO 8" THICK).
  - B. STEEL FLOOR UNIT/FLOOR ASSEMBLY - LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 2-1/2" TO 8" 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.



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Scale	5/32" = 1"
Date	Aug. 17, 2022

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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 6" NOMINAL DIAMETER FRPP PLASTIC PIPE.
- E. MAXIMUM 4" NOMINAL DIAMETER AQUARISE CPVC (SDR 11) (CLOSED PIPING SYSTEM) MANUFACTURED BY IPEX INC.

**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.**

MINIMUM CONCRETE THICKNESS	CORE HOLE OR SLEEVE DIAMETER	PRODUCT DESCRIPTION	NOMINAL PIPE DIAMETER	FH-RATING
2-1/2"	4"	CFS-DID 2" MD	2" (OR SMALLER)+	2-HR.
2-1/2"	5"	CFS-DID 3" MD	3"	2-HR.
2-1/2"	6"	CFS-DID 4" MD	4"	2-HR.
2-1/2"	9"	CFS-DID 6" MD	6"	2-HR.
4-1/2"	4"	CFS-DID 2" MD	2" (OR SMALLER)+	3-HR.
4-1/2"	5"	CFS-DID 3" MD	3"	3-HR.
4-1/2"	6"	CFS-DID 4" MD	4"	3-HR.
4-1/2"	9"	CFS-DID 6" MD	6"	3-HR.

**+ 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" MD DEVICE.**



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cUL SYSTEM NO. F-A-2214



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- NOTES : 1. CLOSED OR VENTED PIPING SYSTEM (PVC, ABS, FRPP = 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. WHEN ITEM 2 IS USED, FT AND FTH-RATINGS ARE 0-HR.  
4. WHEN ITEM 3D IS USED, FT AND FTH-RATINGS ARE 1/4-HR.



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