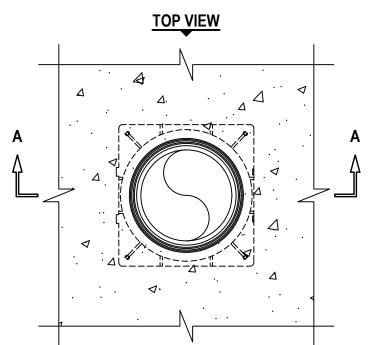
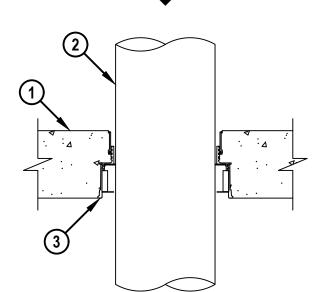
## **UL SYSTEM NO. F-A-2413**

## PLASTIC PIPE THROUGH CONCRETE FLOOR

F-RATING = 2-HR. T-RATING = 2-HR.

L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT L-RATING AT 400°F = LESS THAN 1 CFM / SQ FT W-RATING = CLASS I (SEE NOTES NO. 2 AND 3 BELOW) FA2413b.05242





**SECTION A-A** 



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

Sheet	1 of 2
Scale	5/32" = 1"
Date	May 24, 2024

FA 2413b

## A2413b.052424

## UL SYSTEM NO. F-A-2413 PLASTIC PIPE THROUGH CONCRETE FLOOR

F-RATING = 2-HR.
T-RATING = 2-HR.
NG AT AMBIENT - LESS THAN 1

L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT L-RATING AT 400°F = LESS THAN 1 CFM / SQ FT W-RATING = CLASS I (SEE NOTES NO. 2 AND 3 BELOW)

- 1. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 4-1/2" THICK) (2-HR. FIRE-RATING).
- 2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING (SEE TABLE BELOW):
  - A. MAXIMUM 6" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CELLULAR AND SOLID CORE) (CLOSED OR VENTED PIPING SYSTEM).
  - B. MAXIMUM 6" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM ONLY).
- 3. HILTI CFS-CID U [2", 3", 4", OR 6"] OR CFS-CID U 2" CA CAST-IN FIRESTOP DEVICE CAST OR GROUTED INTO CONCRETE FLOOR (SEE TABLE BELOW) WITH A MAXIMUM 2" EXTENSION ABOVE TOP SURFACE OF CONCRETE FLOOR.

NOMINAL PIPE DIAMETER	PRODUCT DESCRIPTION	T-RATING
1-1/4" TO 2"	CFS-CID U 2", CFS-CID U 2" CA	2-HR.
2" TO 3"	CFS-CID U 3"	2-HR.
3" TO 4"	CFS-CID U 4"	2-HR.
6"	CFS-CID U 6"	2-HR.

NOTES: 1. WHEN PIPE DIAMETER IS SMALLER THAN INDICATED ABOVE, MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) SHALL BE TIGHTLY PACKED INTO HILTI CFS-CID U OR CFS-CID U CA, FLUSH WITH TOP SURFACE OF DEVICE AND T-RATING = 0-HR.

- 2. L-RATING AND W-RATING APPLIES TO PIPE DIAMETERS AND FIRESTOP DEVICES AS LISTED IN TABLE ABOVE.
- 3. WHEN W-RATING IS REQUIRED WHEN NOMINAL PIPE DIAMETER MATCHES DEVICE SIZE, PIPE MAY BE INSTALLED IN ANY ORIENTATION. WHEN NOMINAL SIZE IS SMALLER THAN DEVICE SIZE, PIPE MUST BE INSTALLED FROM THE BOTTOM.



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

Sheet	2 of 2
Scale	-
Date	May 24, 2024

FA 2413b