

PLASTIC PIPE THROUGH CONCRETE FLOOR OVER METAL DECKING ASSEMBLY

F-RATING = 1-HR., 2-HR., OR 3-HR.

FT-RATING = 0-HR., 1/4-HR., 3/4-HR., OR 2-HR.

FH-RATING = 0-HR. OR 3-HR.

FTH-RATING = 0-HR. OR 2-HR.

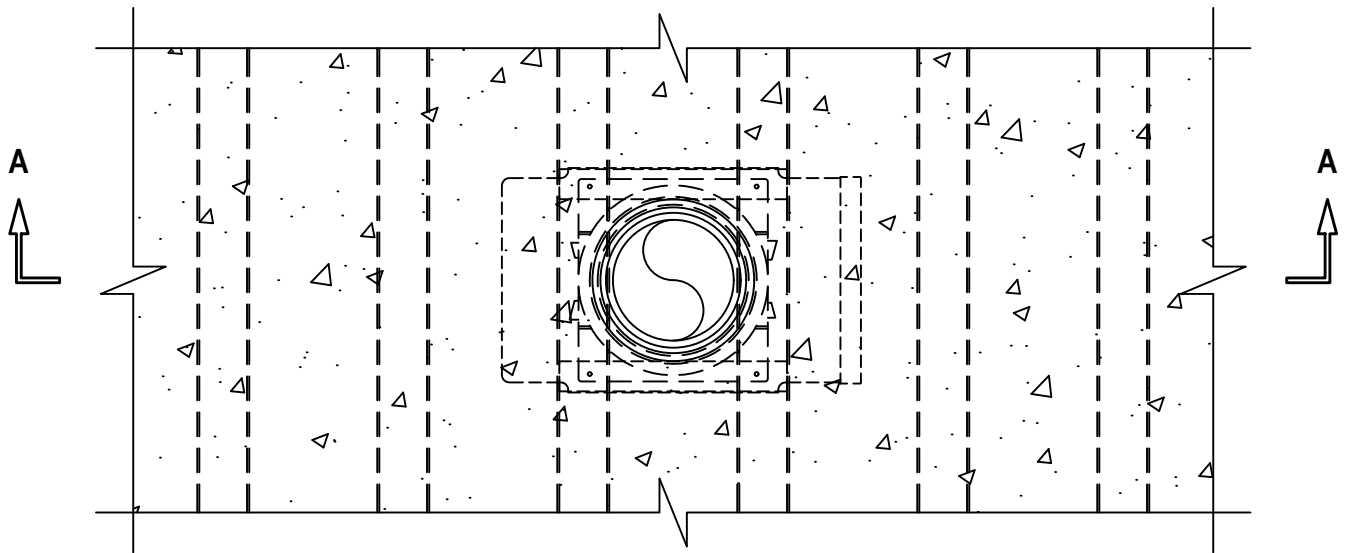
L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT (SEE NOTE NO. 2 BELOW)

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

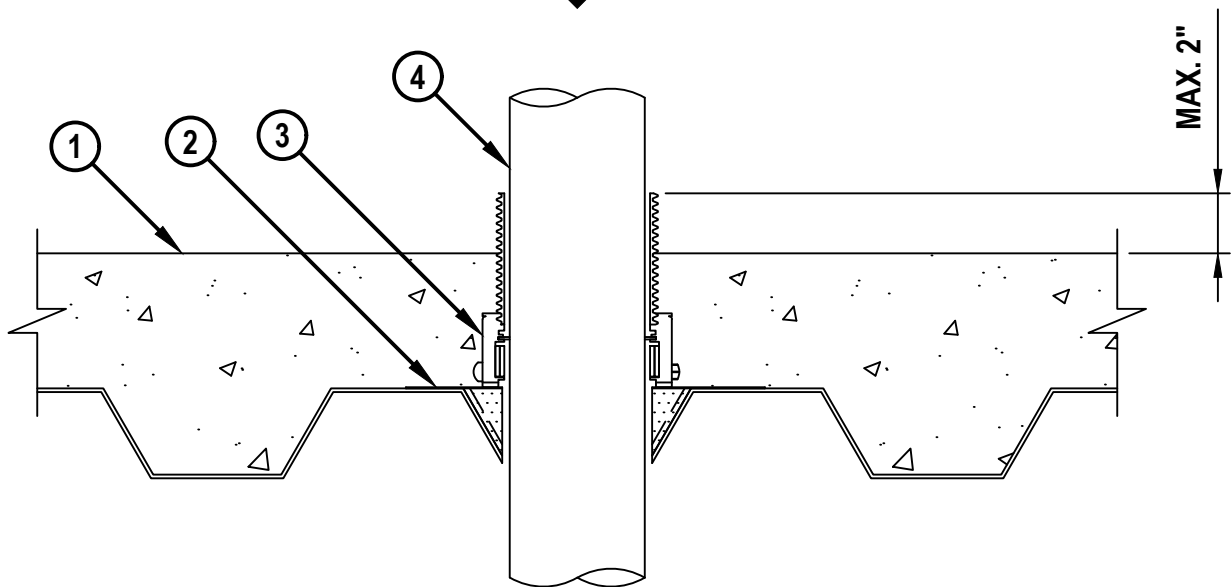
NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

cUL FA2317b.111319

TOP VIEW



SECTION A-A



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

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1. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR ASSEMBLY (MINIMUM 2-1/2", 4-1/2", OR 6" THICK) OVER METAL DECKING (UL/cUL CLASSIFIED D900 SERIES) WITH 2" OR 3" FLUTED DECKS (1-HR., 2-HR., OR 3-HR. FIRE-RATING).
2. HILTI CFS-CID MD PLT [W2" OR W3"] METAL DECK PLATFORM SECURED TO DECK WITH ONE FASTENER IN EACH CORNER.
3. HILTI CFS-CID MD [P OR PX] [2", 3", OR 4"]/[2.5"/4"] FIRESTOP CAST-IN DEVICE FOR METAL DECK SECURED TO HILTI CFS-CID MD PLT METAL DECK PLATFORM WITH SCREWS.
4. PENETRATING ITEM TO BE ONE OF THE FOLLOWING (CLOSED OR VENTED PIPING SYSTEMS EXCEPT AS INDICATED) :
 - A. MAXIMUM 4" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CELLULAR AND SOLID CORE).
 - B. MAXIMUM 4" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 11, SDR 13.5, OR SDR 17).
 - C. MAXIMUM 4" NOMINAL DIAMETER AQUARISE CPVC PLASTIC PIPE (SDR 11) MANUFACTURED BY IPEX, INC. (CLOSED PIPING SYSTEM ONLY).
 - D. MAXIMUM 4" NOMINAL DIAMETER ABS PLASTIC PIPE (SCHEDULE 40) (CELLULAR AND SOLID CORE).
 - E. MAXIMUM 4" NOMINAL DIAMETER FRPP PLASTIC PIPE (SCHEDULE 40).
 - F. MAXIMUM 4" NOMINAL DIAMETER RIGID NONMETALLIC CONDUIT (SCH 40 PVC).
 - G. MAXIMUM 4" NOMINAL DIAMETER SYSTEM 15 PVC PLASTIC PIPE (CELLULAR OR SOLID CORE) MANUFACTURED BY IPEX, INC.
 - H. MAXIMUM 2" NOMINAL DIAMETER PEX TUBING (SDR 9).
 - I. MAXIMUM 4" NOMINAL DIAMETER XFR-PVC PLASTIC PIPE (SCHEDULE 40) (SOLID CORE) MANUFACTURED BY IPEX, INC.

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MIN CONCRETE THICKNESS	NOM PIPE DIAM.	PRODUCT DESCRIPTION	RATING, HR.			
			F	FT	FH	FTH
2-1/2"	2" (PVC OR CPVC ONLY)	CFS-CID MD [P OR PX] 2"	2	3/4	0	0
2-1/2"	3" (PVC OR CPVC ONLY)	CFS-CID MD [P OR PX] 3"	2	0	0	0
2-1/2"	4" (PVC OR CPVC ONLY)	CFS-CID MD [P OR PX] 4"	2	0	0	0
4-1/2"	1-1/2" (ALL BUT PEX/XFR)	CFS-CID MD [P OR PX] 2"	2	2	0	0
4-1/2"	3" (ALL BUT PEX/XFR)	CFS-CID MD [P OR PX] 4"	3	2	3	2
4-1/2"	3" (ALL BUT PEX/XFR)	CFS-CID MD [P OR PX] 3"	3	0	0	0
4-1/2"	2" (ALL BUT PEX/XFR)	CFS-CID MD [P OR PX] 2"	2	2	0	0
4-1/2"	4" (ALL BUT PEX/XFR)	CFS-CID MD [P OR PX] 4"	3	2	3	2
6"	3" (PVC OR CPVC ONLY)	CFS-CID MD [P OR PX] 3"	2	2	2	2
2-1/2"	2" (PEX ONLY)	CFS-CID MD [P OR PX] 2"	2	0 AND 1*	2	1
2-1/2"	2 (PEX ONLY)	CFS-CID MD [P OR PX] 2"	3	0 AND 2*	0	0
2-1/2"	LESS THAN 2" (PEX ONLY)	CFS-CID MD [P OR PX] 2"	3	0	0	0
2-1/2"	2" XFR-PVC	CFS-CID MD PX 2"	2	1/4	0	0
2-1/2"	3" XFR-PVC	CFS-CID MD PX 3"	2	1/4	2	1/4
2-1/2"	4" XFR-PVC	CFS-CID MD PX 4"	2	1	2	1

***T-RATING IS 0-HOUR FOR VENTED PIPING SYSTEMS**

- NOTES :**
1. ABS AND FRPP PLASTIC PIPE MAY ONLY BE INSTALLED IN MINIMUM 4-1/2" THICK CONCRETE FLOORS. FT AND FTH-RATINGS ARE 0-HR. WHEN ABS AND FRPP PIPES ARE USED.
 2. L-RATING APPLIES ONLY WHEN DIAMETER OF PIPE EQUALS SIZE OF DEVICE (3" PIPE IN 3" DEVICE, ETC.).
 3. [OPTIONAL] TO OBTAIN 2-HR. FT-RATING ON ABS OR PVC PLASTIC PIPES (3" AND SMALLER) WHERE FT-RATING IS LISTED AS LESS THAN 2-HRS IN TABLE ABOVE, A 1/2" THICK PIECE OF GLASS-FIBER PIPE INSULATION MAY BE SECURED TO PIPE AT THE TOP OF THE FLOOR EXTENDING MINIMUM 12" ABOVE THE FLOOR SURFACE. PIPE INSULATION SECURED WITH METAL FASTENERS OR BUTT TAPE. WHEN (NOMINAL) PIPE DIAMETER IS LESS THAN DEVICE SIZE MINIMUM 1-1/4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) SHALL BE TIGHTLY PACKED INTO HILTI CP 680-P FLUSH WITH TOP SURFACE OF DEVICE.



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