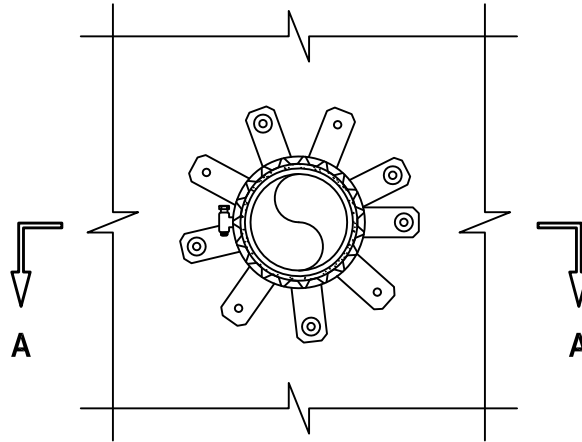


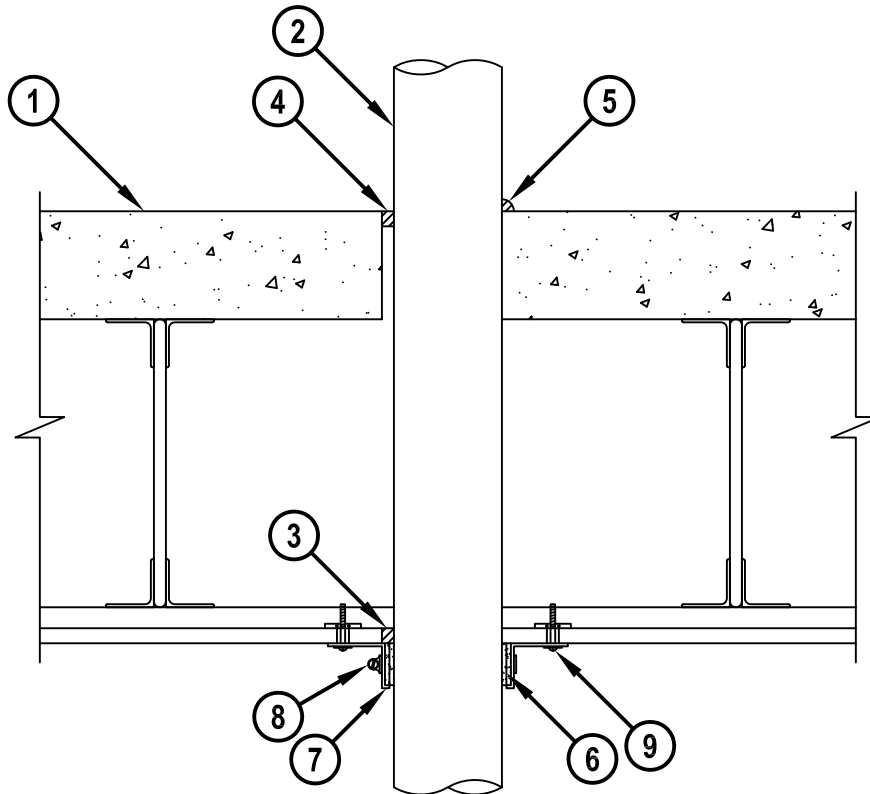
UL SYSTEM NO. F-E-2027
PLASTIC PIPE THROUGH CONCRETE FLOOR/CEILING ASSEMBLY

F-RATING = 1-HR.
T-RATING = 3/4-HR. OR 1-HR.

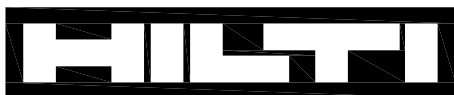
BOTTOM VIEW



SECTION A-A



FE2027c.010815



Hilti Firestop Systems

HILTI, Inc.
Tulsa, Oklahoma USA (800) 879-8000

Sheet	1 of 2
Scale	1/8" = 1"
Date	Jan. 08, 2015

Drawing No.

**FE
2027c**

Saving Lives through Innovation and Education

PLASTIC PIPE THROUGH CONCRETE FLOOR/CEILING ASSEMBLY

F-RATING = 1-HR.
T-RATING = 3/4-HR. OR 1-HR.

FE2027c.010815

1. CONCRETE AND STEEL JOIST FLOOR/CEILING ASSEMBLY (UL CLASSIFIED G500 SERIES) (1-HR. FIRE-RATING).
2. PENETRATING ITEM TO ONE OF THE FOLLOWING (ALSO SEE NOTE NO. 3 BELOW) :
 - A. MAXIMUM 4" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - B. MAXIMUM 4" NOMINAL DIAMETER CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
3. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT FLUSH WITH BOTTOM SURFACE OF GYPSUM CEILING.
4. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT FLUSH WITH TOP SURFACE OF FLOOR.
5. MINIMUM 1/2" BEAD HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT ON TOP SURFACE OF FLOOR.
6. HILTI CP 648E FIRESTOP WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND PIPE, AS SPECIFIED IN TABLE BELOW, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.
7. HILTI RETAINING COLLAR WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 1".
8. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR.
9. EVERY OTHER TAB OF RETAINING COLLAR SECURED TO GYPSUM CEILING WITH 1/4" DIAMETER x 1-1/2" LONG STEEL TOGGLE BOLTS WITH 3/4" DIAMETER WASHERS (EX. HILTI TOGGLER BOLT).

NOMINAL PIPE DIAMETER	NO. OF LAYERS OF CP 648E	ANNULAR SPACE		T-RATING
		MINIMUM	MAXIMUM	
2"	1	0"	1/4"	1-HR.
3"	2	0"	1/2"	3/4-HR.
4"	2	0"	1/2"	3/4-HR.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 5".
 2. CLOSED OR VENTED PIPING SYSTEMS (PVC = SCHEDULE 40; CPVC = SDR 13.5).
 3. AS AN ALTERNATE TO UTILIZING CP 648E FIRESTOP WRAP STRIP WITH RETAINING COLLAR, HILTI CP 643N FIRESTOP COLLAR MAY BE USED. FIRESTOP COLLAR TO BE ATTACHED TO GYPSUM CEILING WITH 1/4" DIAMETER x 1-1/2" LONG STEEL TOGGLE BOLTS WITH 3/4" DIAMETER WASHERS AT EACH FASTENING HOOK.

 Hilti Firestop Systems	HILTI, Inc. Tulsa, Oklahoma USA (800) 879-8000	Sheet 2 of 2	Drawing No. FE 2027c
		Scale -	
		Date Jan. 08, 2015	
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