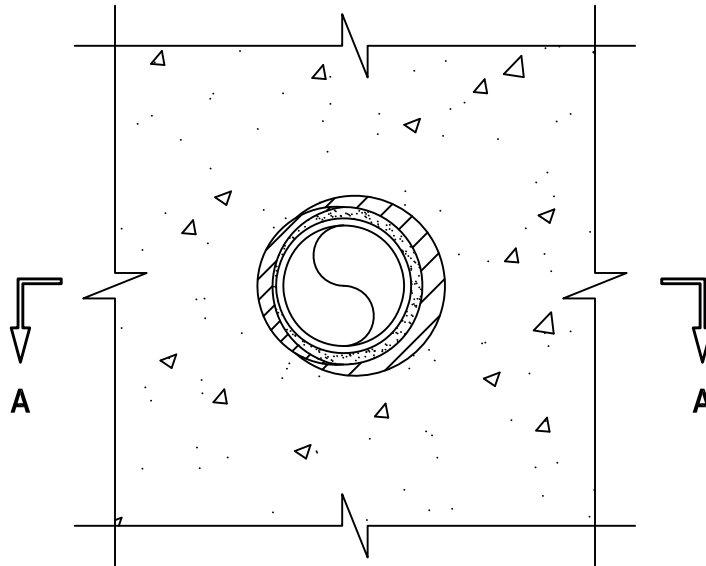


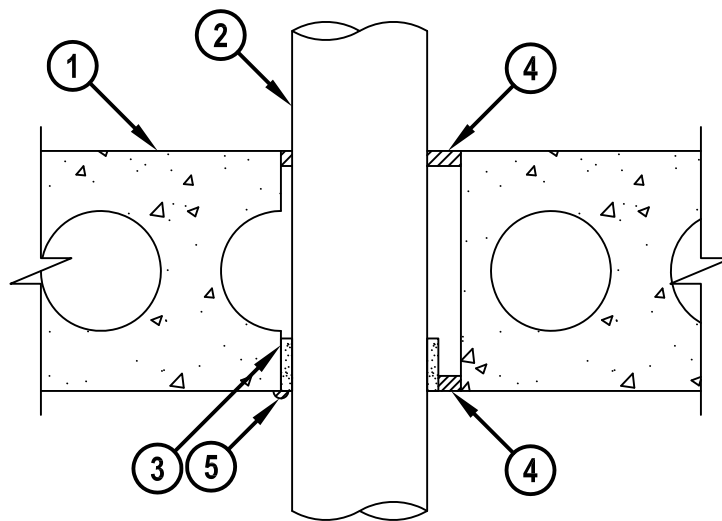
UL SYSTEM NO. F-B-2029
**PLASTIC PIPE THROUGH CONCRETE FLOOR OR
 HOLLOW-CORE CONCRETE FLOOR ASSEMBLY**

F-RATING = 3-HR.
 T-RATING = 0-HR. OR 2-HR.
 W-RATING = CLASS I (SEE NOTE NO. 3 BELOW)

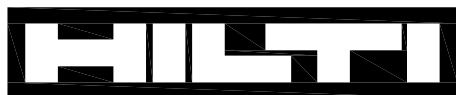
BOTTOM VIEW



SECTION A-A



FB2029e.010715



Hilti Firestop Systems

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

Sheet	1 of 2
Scale	5/32" = 1"
Date	Jan. 07, 2015

Drawing No.

**FB
 2029e**

Saving Lives through Innovation and Education

**PLASTIC PIPE THROUGH CONCRETE FLOOR OR
HOLLOW-CORE CONCRETE FLOOR ASSEMBLY**

F-RATING = 3-HR.

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

W-RATING = CLASS I (SEE NOTE NO. 3 BELOW)

FB2029e.010715

1. CONCRETE FLOOR ASSEMBLY (3-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR (MINIMUM 8" THICK).
 - B. ANY UL CLASSIFIED PRECAST (HOLLOW-CORE) CONCRETE FLOOR (MINIMUM 8" THICK).
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 4" NOMINAL DIAMETER PVC PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - B. MAXIMUM 4" NOMINAL DIAMETER ABS PLASTIC PIPE (CELLULAR OR SOLID CORE).
 - C. MAXIMUM 4" NOMINAL DIAMETER CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
 - D. MAXIMUM 4" NOMINAL DIAMETER RIGID NON-METALLIC CONDUIT (RNC).
3. HILTI CP 648S WRAP STRIP WRAPPED CONTINUOUSLY AROUND THE OUTER CIRCUMFERENCE OF PIPE, AND HELD IN PLACE WITH INTEGRATED FASTENING TAPE. WRAP STRIP INSTALLED FLUSH WITH BOTTOM OF FLOOR (SEE TABLE BELOW).
4. HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT, HILTI CP 601S ELASTOMERIC FIRESTOP SEALANT, OR HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT INSTALLED FLUSH WITH TOP AND BOTTOM SURFACES OF FLOOR (SEE NOTE NO. 2 BELOW) :
 - A. MINIMUM 1/4" DEPTH FOR NOMINAL 3" PIPES OR SMALLER.
 - B. MINIMUM 1/2" DEPTH FOR 4" PIPES.
5. MINIMUM 1/4" BEAD HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT, HILTI CP 601S ELASTOMERIC FIRESTOP SEALANT, OR HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT APPLIED AT WRAP STRIP/CONCRETE INTERFACE AT BOTTOM OF FLOOR.

NOMINAL PIPE DIAMETER	PRODUCT DESCRIPTION	MAXIMUM DIAMETER OF OPENING	ANNULAR SPACE	
			MINIMUM	MAXIMUM
1-1/2"	CP 648S-1.5" US	2-1/2"	3/16"	7/16"
2"	CP 648S-2" US	3"	3/16"	7/16"
3"	CP 648S-3" US	4"	3/16"	5/16"
4"	CP 648S-4" US	6"	1/2"	1"

NOTES : 1. CLOSED OR VENTED PIPING SYSTEM (PVC, ABS, RNC = SCHEDULE 40; CPVC = SDR 13.5).
 2. AS AN ALTERNATE TO HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT, HILTI CP 601S ELASTOMERIC FIRESTOP SEALANT INSTALLED ON THE TOP SURFACE OF THE FLOOR, HILTI CP 604 SELF-LEVELING FIRESTOP SEALANT OR HILTI CFS-S SIL SL FIRESTOP SILICONE SEALANT MAY BE USED.
 3. W-RATING APPLIES ONLY WHEN HILTI CP 601S ELASTOMERIC FIRESTOP SEALANT, HILTI CP 604 SELF-LEVELING FIRESTOP SEALANT, HILTI CFS-S SIL GG FIRESTOP SILICONE SEALANT, OR HILTI CFS-S SIL SL FIRESTOP SILICONE SEALANT IS USED ON TOP SURFACE OF FLOOR.



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Sheet	2 of 2
Scale	-
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