

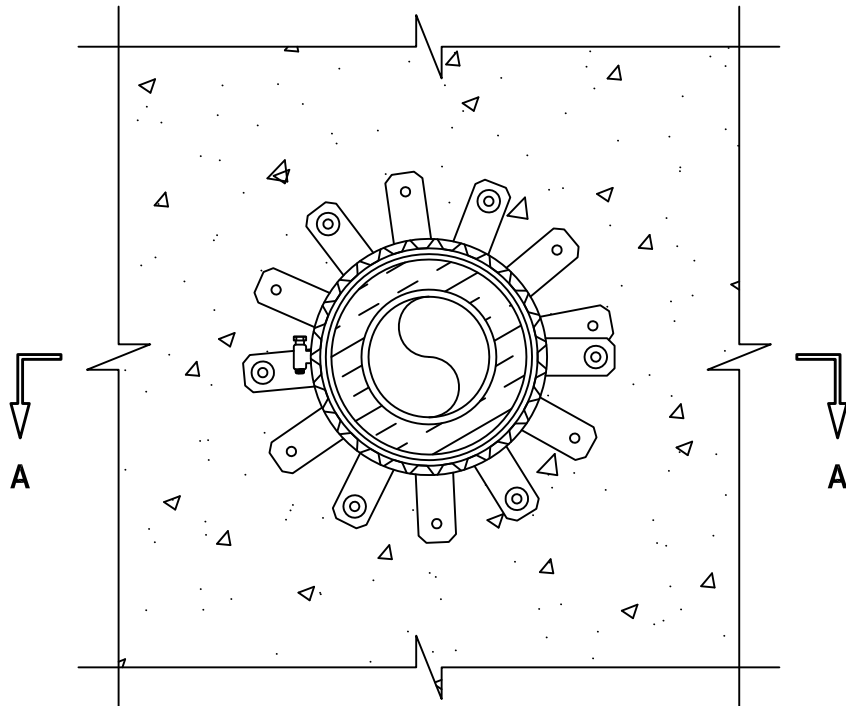
UL SYSTEM NO. C-AJ-5320

INSULATED PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

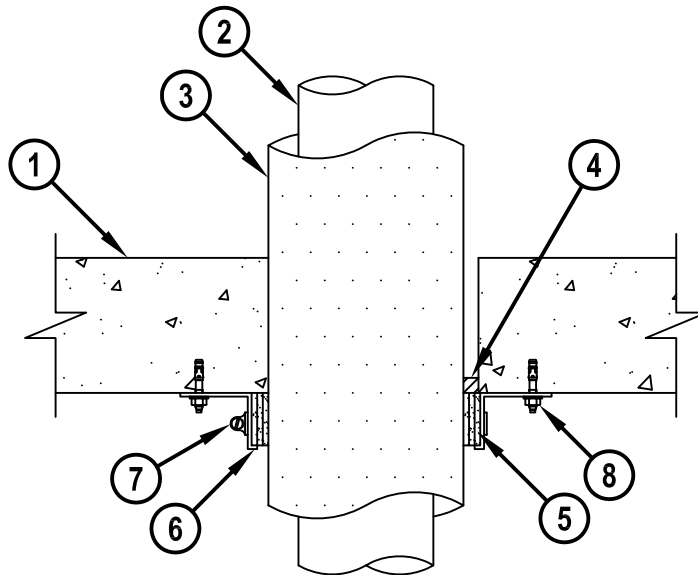
F-RATING = 2-HR.

T-RATING = 2-HR.

BOTTOM VIEW



SECTION A-A



CAJ5320c.0106'15



Hilti Firestop Systems

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

Sheet	1 of 2
Scale	5/32" = 1"
Date	Jan. 06, 2015

Drawing No.

**CAJ
5320c**

Saving Lives through Innovation and Education

INSULATED PLASTIC PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

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

CAJ5320c.010615

1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL (MINIMUM 4-1/2" THICK).
 - B. ANY UL CLASSIFIED CONCRETE BLOCK WALL.
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 CPVC PLASTIC PIPE (CLOSED PIPING SYSTEM ONLY).
3. PENETRATING ITEM TO BE INSULATED WITH ONE OF THE FOLLOWING :
 - A. NOMINAL 3/4" THICK AB/PVC PIPE INSULATION FOR PIPES WITH NOMINAL 1" DIAMETER OR SMALLER.
 - B. NOMINAL 1" THICK GLASS-FIBER PIPE INSULATION FOR PIPES LARGER THAN NOMINAL 1" DIAMETER.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
5. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, AS SPECIFIED IN TABLE BELOW, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.
6. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 1".
7. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP(S) FASTENED AT MID-HEIGHT OF RETAINING COLLAR (SEE NOTE NO. 4 BELOW).
8. FASTEN EVERY OTHER TAB (MINIMUM 2 ANCHOR TABS FOR NOMINAL PIPE DIAMETERS 1" OR LESS) WITH MINIMUM 1/4" DIAMETER BY MINIMUM 1-1/4" LONG STEEL EXPANSION BOLTS, MINIMUM 0.145" DIAMETER BY 1-1/4" LONG POWDER ACTUATED FASTENERS UTILIZING A 1-7/16" DIAMETER BY 1/16" THICK STEEL WASHER, HILTI 1/4" DIAMETER BY 1-1/4" LONG KWIK-CON II+ CONCRETE SCREW ANCHOR, OR HILTI 1/4" DIAMETER BY 1-3/4" LONG KWIK-BOLT 3 STEEL EXPANSION ANCHOR, OR HILTI X-DNI 27 P8 S15 POWDER ACTUATED FASTENER WITH INTEGRAL 9/16" DIAMETER WASHER.

NOMINAL PIPE DIAMETER	NO. OF LAYER(S) OF CP 648E WRAP STRIP	INSULATION TYPE
1" (OR SMALLER)	1	AB/PVC
LARGER THAN 1" (UP TO 4")	3	GLASS-FIBER

NOTES :

1. MAXIMUM DIAMETER OF OPENING = 7".
2. ANNULAR SPACE FOR PIPES INSULATED WITH AB/PVC PIPE INSULATION = MINIMUM 0", MAXIMUM 3/16".
3. ANNULAR SPACE FOR PIPES INSULATED WITH GLASS-FIBER PIPE INSULATION = MINIMUM 0", MAXIMUM 1/2".
4. AS AN ALTERNATE TO COLLAR CLAMP (ITEM NO. 7 ABOVE), TWO NO. 10 x 3/16" OR 1/4" LONG SHEET METAL SCREWS INSTALLED AT THE CENTER OF THE 1" OVERLAP.
5. HILTI CP 648E WRAP STRIP(S) WITH RETAINING COLLAR AND HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON BOTH SIDES OF A WALL.
6. CLOSED OR VENTED PIPING SYSTEM (PVC = SCH 40; CPVC = SDR 13.5).



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