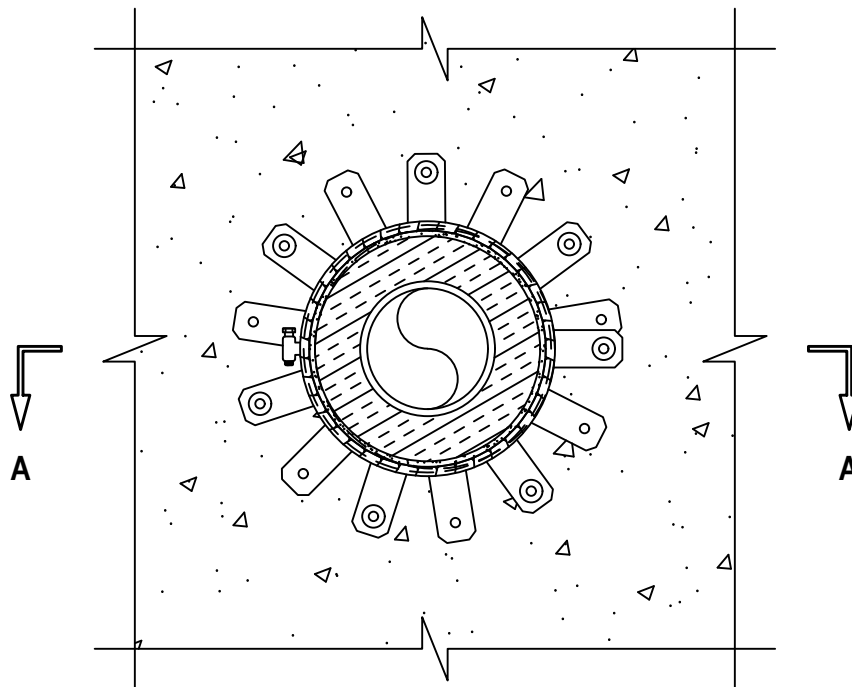


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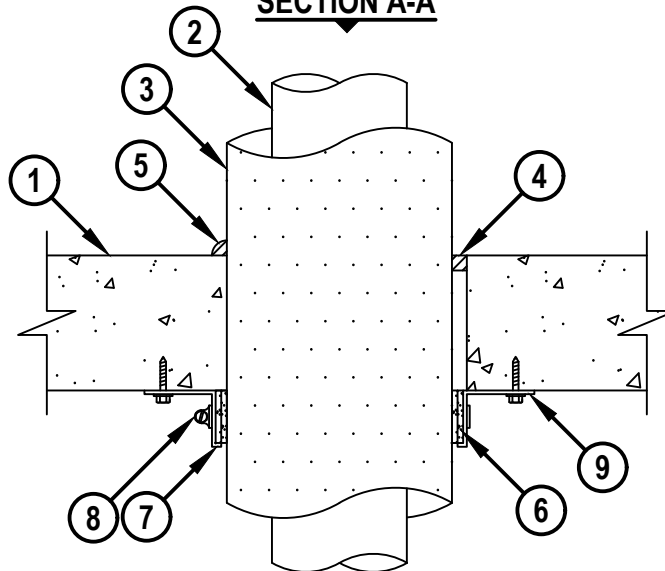
INSULATED METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 2-HR.
T-RATING = 1-3/4-HR.

BOTTOM VIEW



SECTION A-A



CAJ5457a.071124

HILTI
Hilti Firestop Systems

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

Sheet	1 of 2
Scale	5/32" = 1"
Date	July 11, 2024

Drawing No.

CAJ
5457a

Saving Lives through Innovation and Education

INSULATED METAL PIPE THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL

F-RATING = 2-HR.

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

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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 STEEL PIPE (SCHEDULE 40 OR HEAVIER).
 - B. MAXIMUM 4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 4" NOMINAL DIAMETER COPPER PIPE OR TUBING (TYPE L OR HEAVIER).
3. NOMINAL 1-1/2" THICK AB/PVC PIPE INSULATION.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
5. MINIMUM 1/2" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.
6. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE.
7. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER WRAP STRIPS, OVERLAPPING MINIMUM 1".
8. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP(S) FASTENED AT MID-HEIGHT OF RETAINING COLLAR (SEE NOTE NO. 3 BELOW).
9. FASTEN EVERY OTHER TAB 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.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 8".
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 5/8".
 3. AS AN ALTERNATE TO COLLAR CLAMP (ITEM 8 ABOVE), TWO NO. 10 x 3/16" OR 1/4" LONG SHEET METAL SCREWS INSTALLED AT THE CENTER OF THE 1" OVERLAP.
 4. HILTI CP 648E WRAP STRIP(S) WITH RETAINING COLLAR AND HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT ARE REQUIRED ON BOTH SIDES OF A WALL.

**Hilti Firestop Systems**

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Sheet	2 of 2
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