

**ALUMINUM TUBING THROUGH CONCRETE FLOOR/WALL OR BLOCK WALL**

F-RATING = 2-HR.

T-RATING = 0-HR.

L-RATING AT AMBIENT = LESS THAN 1 CFM / SQ FT

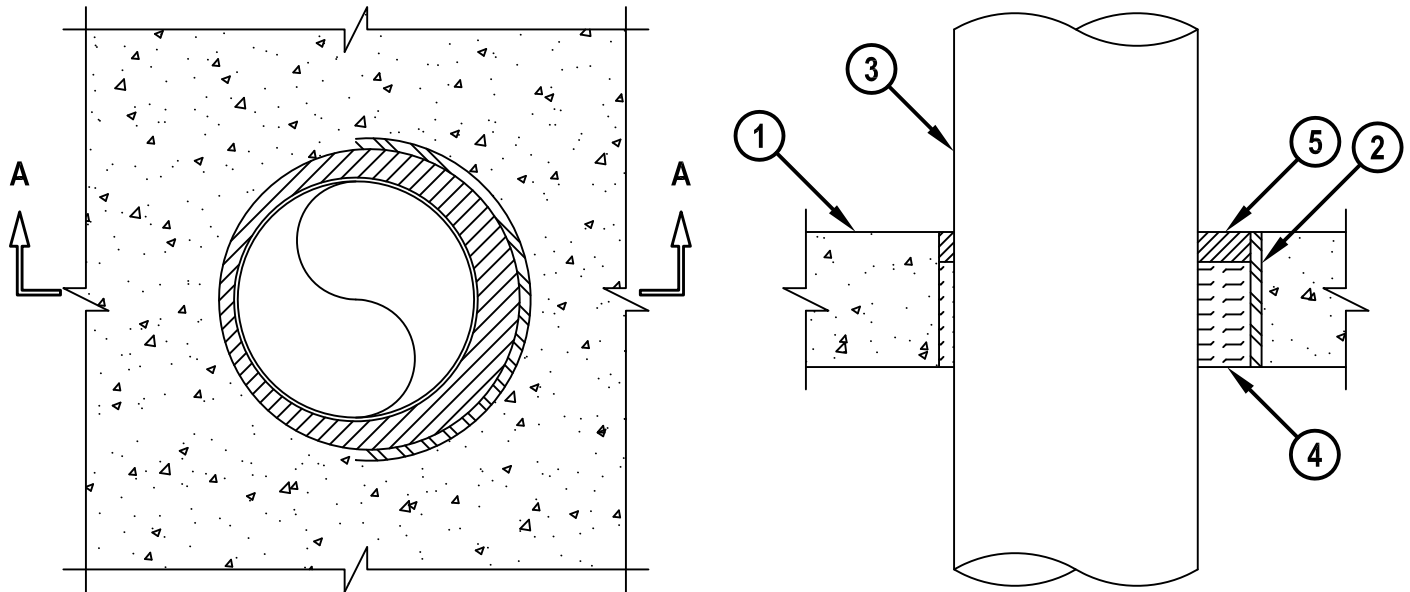
L-RATING AT 400° F = 4 CFM / SQ FT

W-RATING = CLASS I (SEE NOTE NO. 4 BELOW)

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**TOP VIEW**

**SECTION A-A**



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/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. [OPTIONAL] MAXIMUM 10" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 40 OR HEAVIER).
3. MAXIMUM 8" NOMINAL DIAMETER ALUMINUM TUBING WITH A WALL THICKNESS OF 0.060" (OR HEAVIER).
4. MINIMUM 3-1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
5. MINIMUM 1" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.

**NOTES :**

1. MAXIMUM DIAMETER OF OPENING = 10".
2. ANNULAR SPACE = MINIMUM 1/2", MAXIMUM 1-1/2".
3. MINIMUM 1" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF WALL ASSEMBLY.
4. W-RATING ONLY APPLIES WHEN FS-ONE MAX IS USED. FOR W-RATING, AN ADDITIONAL FILM SHALL BE APPLIED OVER SLEEVE (WHEN USED) LAPPING MINIMUM 1/2" ONTO FLOOR.



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

Sheet	1 of 1
Scale	5/32" = 1"
Date	Mar. 30, 2015

Drawing No.  
**CAJ  
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