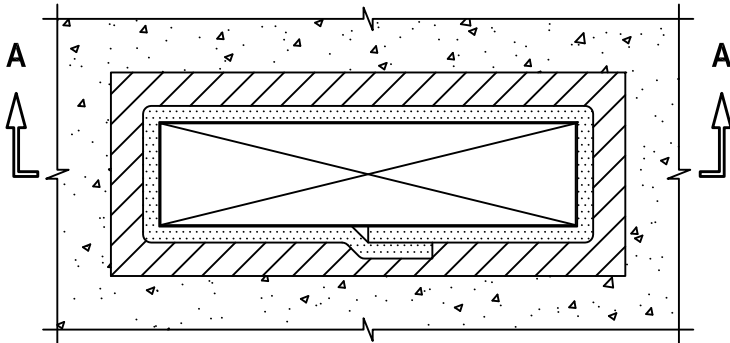


**INSULATED DUCT (THERMAL CERAMICS) THROUGH CONCRETE FLOOR/WALL
OR BLOCK WALL ASSEMBLY**

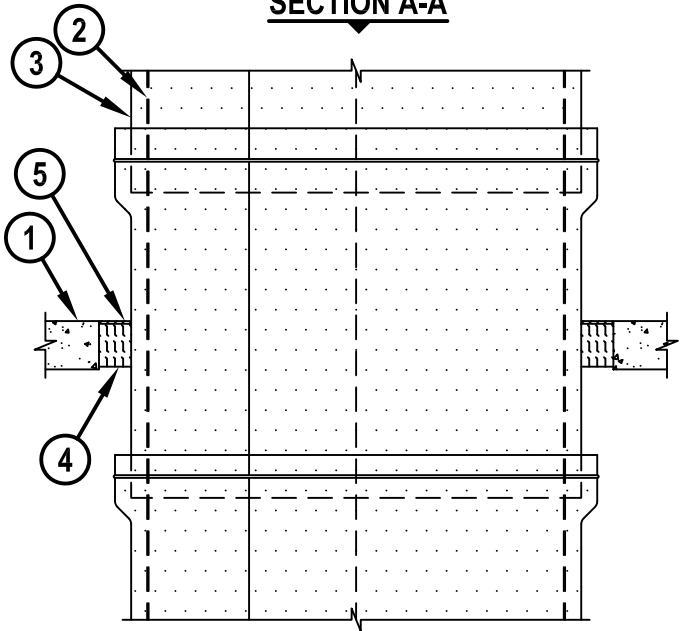
F-RATING = 2-HR.
T-RATING = 2-HR.

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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 (MINIMUM 4-1/2" THICK).
 - B. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 4-3/4" THICK).
 - C. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. STEEL AIR DUCT (MIN. 0.030" THICK) WITH A MAXIMUM WIDTH TO HEIGHT RATIO OF 4:1, WITH A MAXIMUM DIMENSION OF 39", AND CONSTRUCTED IN ACCORDANCE WITH SMACNA HVAC STANDARDS (SEE NOTE NO. 3 BELOW).
3. NOMINAL 1-1/2" THICK FIREMASTER® FAST WRAP+ MANUFACTURED BY THERMAL CERAMICS INSTALLED IN ACCORDANCE WITH VENTILATION ASSEMBLY NO. V-19.
4. MINIMUM 4" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED.
5. MINIMUM 1/4" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.

- NOTES :**
1. MAXIMUM AREA OF OPENING = 912 SQ. IN., WITH MAXIMUM DIMENSION OF 48".
 2. ANNULAR SPACE = NOMINAL 3".
 3. DUCT REINFORCEMENT TO CONSIST OF MINIMUM 1-1/2" x 1-1/2" x 1/8" THICK TRANSVERSE STIFFENING ANGLES APPROXIMATELY 2" LESS IN LENGTH THAN THE MAXIMUM DIMENSION, SCREW ATTACHED 8" O.C. TO THE DUCT 3" BEYOND THE TOP SURFACE OF THE FLOOR OR BOTH SIDES OF A WALL.
 4. HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IS REQUIRED ON BOTH SIDES OF A WALL.



HILTI, Inc.
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Sheet	1 of 1
Scale	-
Date	Jan. 06, 2015

Drawing No.

**CAJ
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