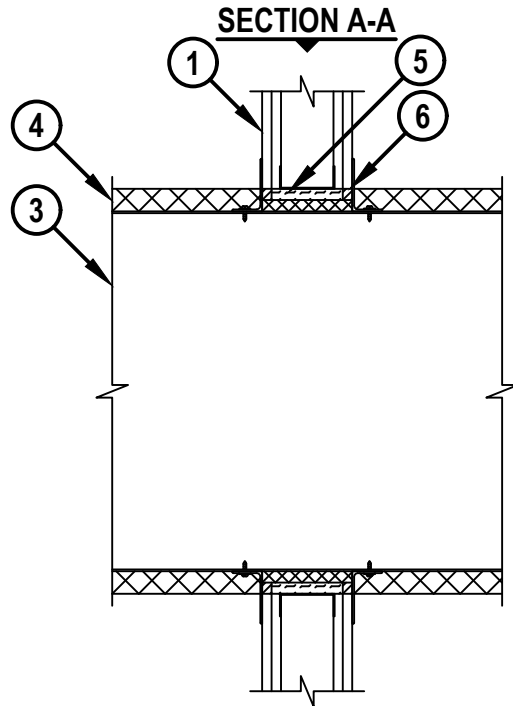
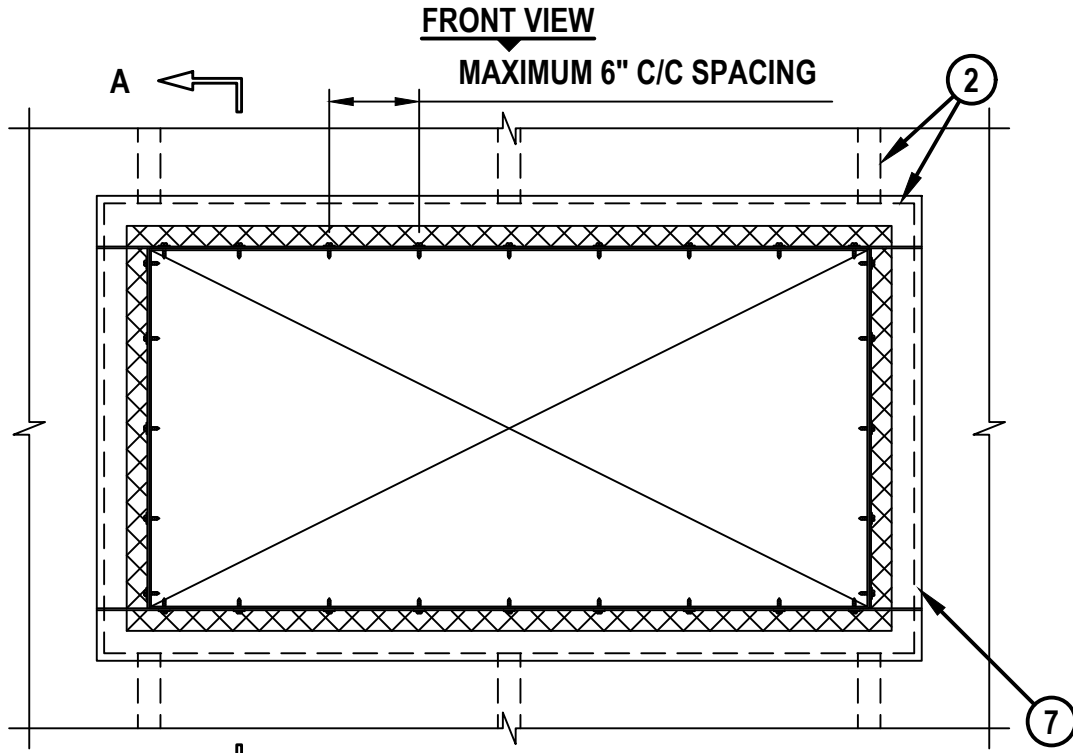


UL/cUL SYSTEM NO. W-L-7156

INSULATED SHEET METAL DUCT THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR., 1-HR. OR 2-HR.

WL7156f.091918



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Tulsa, Oklahoma USA (800) 879-8000

Sheet	1 of 2
Scale	5/64" = 1"
Date	Sep. 19, 2018

Drawing No.
**WL
7156f**

Saving Lives through Innovation and Education

INSULATED SHEET METAL DUCT THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR., 1-HR. OR 2-HR.

WL7156f.091918

1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300, U400 OR V400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 3-1/2" WIDE. OPENING TO BE FRAMED OUT WITH STUD MATERIAL.
3. MAXIMUM 100" x 100" RECTANGULAR SHEET METAL DUCT (CONSTRUCTED AND REINFORCED IN ACCORDANCE WITH SMACNA CONSTRUCTION STANDARDS).
4. NOMINAL 1-1/2" OR 2" THICKNESS GLASS-FIBER DUCT INSULATION (MIN. 3/4 PCF) WITH FOIL-SCRIM-KRAFT FACING. INSULATION TO BE SPLIT TO ALLOW STEEL ANGLE TO BE FASTENED DIRECTLY TO DUCT (SEE NOTE NO. 3 BELOW).
5. MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT. MINIMUM 3-5/8" OR 4-7/8" THICKNESS REQUIRED FOR 1-HR. OR 2-HR, RESPECTIVELY.
6. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT.
7. STEEL RETAINING ANGLE (SEE TABLE NOTE NO. 4 BELOW).

MAXIMUM DUCT DIMENSION	DUCT THICKNESS	MAX. INSULATION THICKNESS (ITEM 4)	ANNULAR SPACE (MIN. - MAX.)	PACKING MATERIAL (ITEM 5) REQUIRED	ANGLE (ITEM 7 REQUIRED)	T-RATING
24 IN. **	24 GA. (OR HEAVIER)	1-1/2"	1/4" TO 1"	NO	NO	0
25" BY 45"	24 GA. (OR HEAVIER)	2"	1/4" TO 3-1/2"	YES	NO	1 OR 2 (SAME AS WALL RATING)

NOTE ** INDICATES THAT WHEN MAX. 1-1/2" THICK INSULATION IS USED, STEEL ANGLES ARE OPTIONAL ON THOSE SIDES OF THE DUCT THAT DO NOT EXCEED THE DIMENSION SPECIFIED.

- NOTES :
1. MAXIMUM SIZE OF OPENING [FOR WOOD STUDS] = 14-1/2" x 14-1/2".
 2. MAXIMUM SIZE OF OPENING [FOR STEEL STUDS] = 105-1/2" x 104".
 3. INSULATION TO BE COMPRESSED MINIMUM 50% SUCH THAT THE ANNULAR SPACE = MIN. 1/2", MAX. 3-1/2".
 4. AFTER SEALING SPACE BETWEEN DUCT AND GYPSUM WALL ASSEMBLY WITH HILTI FIRESTOP SEALANT, FASTEN STEEL ANGLE (MIN. 16 GA.) TO DUCT WITH MINIMUM NO. 10 SHEET METAL SCREWS (SPACED MAXIMUM 1" FROM EACH END OF STEEL DUCT AND SPACED MAXIMUM 6" C/C). STEEL ANGLE TO OVERLAP DUCT BY MINIMUM 2" AND GYPSUM WALL ASSEMBLY BY MINIMUM 1". WHEN DUCT DIMENSION DOES NOT EXCEED 48" AND DUCT AREA DOES NOT EXCEED 1300 SQ. IN., ANGLES MAY BE MIN. 18 GA. ANGLE DOES NOT HAVE TO BE FASTENED TO GYPSUM WALL ASSEMBLY.



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