

UL/cUL SYSTEM NO. W-J-7091

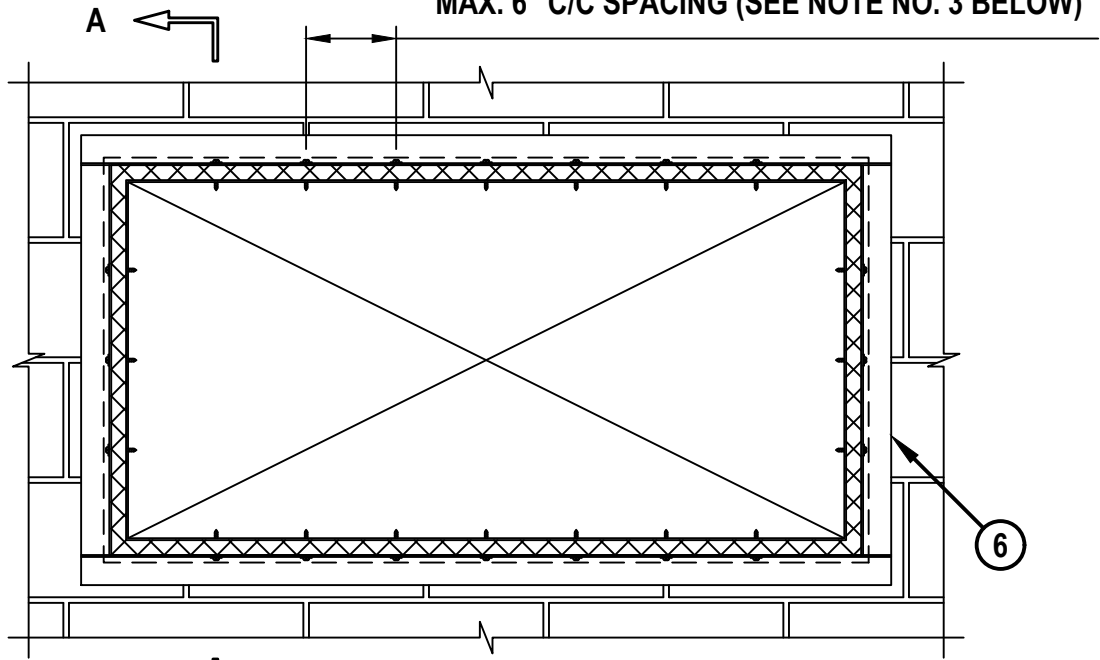
INSULATED SHEET METAL DUCT THROUGH CONCRETE WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 0-HR. OR 2-HR.

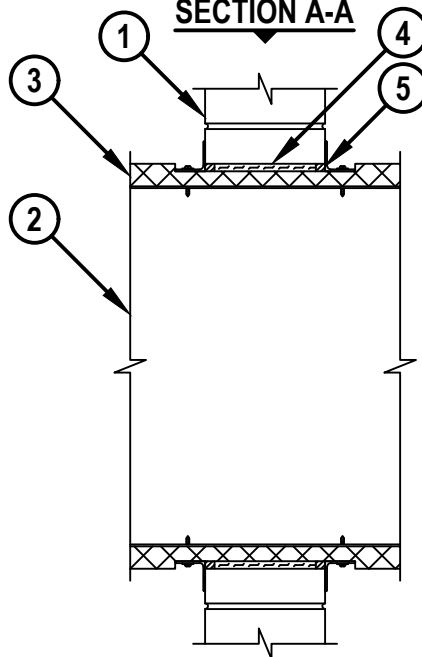
FRONT VIEW

MAX. 6" C/C SPACING (SEE NOTE NO. 3 BELOW)



A ←

SECTION A-A



WJ7091h.020519



Hilti Firestop Systems

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

Sheet 1 of 2

Scale 5/64" = 1"

Date Feb. 05, 2019

Drawing No.

WJ
7091h

Saving Lives through Innovation and Education

INSULATED SHEET METAL DUCT THROUGH CONCRETE WALL OR BLOCK WALL ASSEMBLY

F-RATING = 2-HR.

T-RATING = 0-HR. OR 2-HR.

WJ7091h.020519

1. CONCRETE WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE WALL (MINIMUM 6" THICK).
 - B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. MAXIMUM 60" x 36" RECTANGULAR SHEET METAL DUCT CONSTRUCTED IN ACCORDANCE WITH SMACNA STANDARDS.
3. MAXIMUM 2" THICK GLASS-FIBER DUCT INSULATION (MIN. 3/4 PCF) WITH FOIL-SCRIM-KRAFT FACING (SEE NOTE NO. 2 BELOW). JOINTS SEALED WITH ALUMINUM FOIL TAPE.
4. MINIMUM 3-1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT.
5. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
6. STEEL RETAINING ANGLE (SEE NOTE NO. 3 AND TABLE BELOW).

MAXIMUM DUCT DIMENSION	DUCT THICKNESS	MAX. INSULATION THICKNESS (ITEM 3)	ANNULAR SPACE (MIN. - MAX.)	PACKING MATERIAL (ITEM 4) REQUIRED	ANGLE (ITEM 6) REQUIRED	T-RATING HR.
24" **	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 = 63" x 39".
 2. INSULATION TO BE COMPRESSED MINIMUM 50% SUCH THAT THE ANNULAR SPACE = MINIMUM 1/4", MAXIMUM 3-1/2".
 3. AFTER SEALING SPACE BETWEEN DUCT AND CONCRETE WALL ASSEMBLY WITH HILTI FIRESTOP SEALANT, FASTEN STEEL ANGLE (MIN. 18 GA.) TO DUCT, THROUGH INSULATION, WITH 3/4" LONG NO. 8 SHEET METAL SCREWS SPACED 6" C/C. STEEL ANGLE TO OVERLAP DUCT MINIMUM 2" AND CONCRETE WALL ASSEMBLY BY MINIMUM 1". ANGLE DOES NOT HAVE TO BE FASTENED TO CONCRETE WALL ASSEMBLY.

 Hilti Firestop Systems	HILTI, Inc. Plano, Texas USA (800) 879-8000	Sheet 2 of 2	Drawing No. WJ 7091h
		Scale -	
		Date Feb. 05, 2019	
<i>Saving Lives through Innovation and Education</i>			