

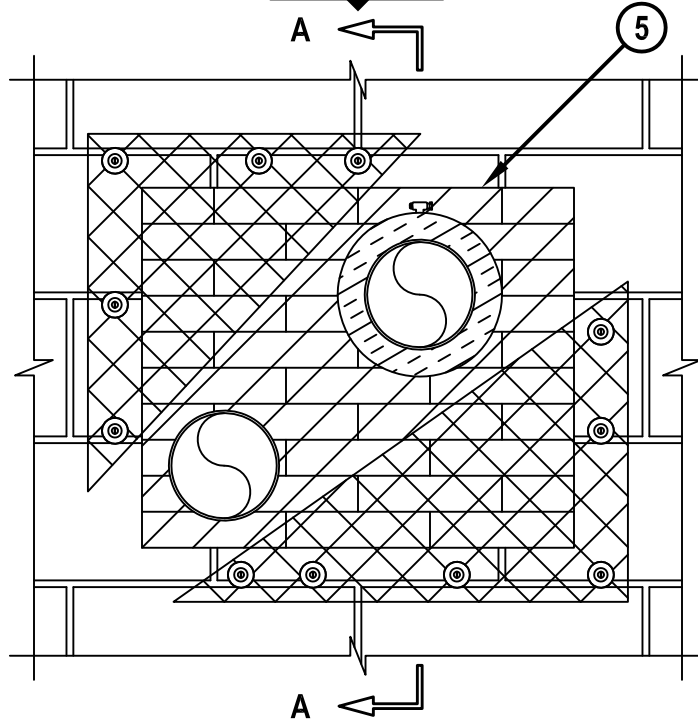
MULTIPLE PENETRANTS THROUGH CONCRETE BLOCK WALL ASSEMBLY

F-RATING = 4-HR.

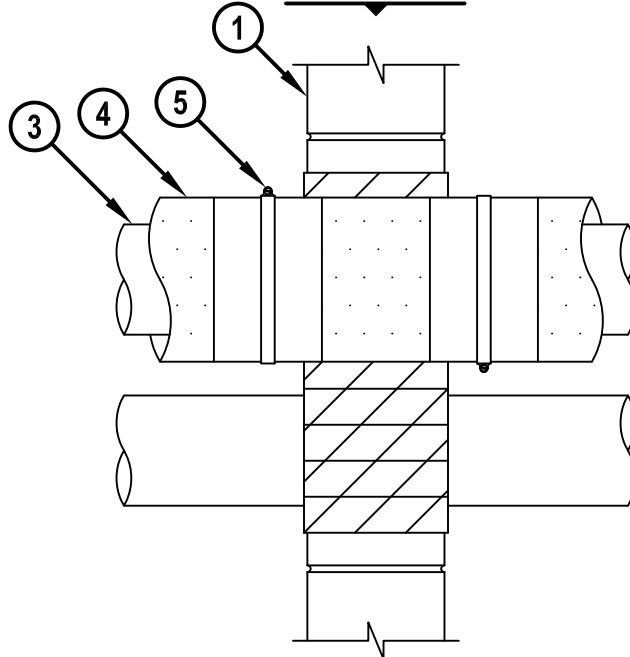
T-RATING = 0-HR.

WJ8008b.010915

FRONT VIEW



SECTION A-A



Hilti Firestop Systems

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

Sheet	1 of 2
Scale	3/32" = 1"
Date	Jan. 09, 2015

Drawing No.

**WJ
8008b**

Saving Lives through Innovation and Education

MULTIPLE PENETRANTS THROUGH CONCRETE BLOCK WALL ASSEMBLY

F-RATING = 4-HR.
T-RATING = 0-HR.

WJ8008b.010915

1. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL ASSEMBLY (MIN. 7-5/8" THICK) (4-HR. FIRE-RATING).
2. PENETRATING ITEMS (MAX. QTY. = 2) TO CONSIST OF ANY COMBINATION OF THE FOLLOWING :
 - A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - C. MAXIMUM 6" NOMINAL DIAMETER STEEL CONDUIT.
 - D. MAXIMUM 4" NOMINAL DIAMETER EMT.
3. [OPTIONAL] NOMINAL 1-1/2" THICK GLASS-FIBER PIPE INSULATION (MIN. 3.5 PCF DENSITY).
4. MINIMUM 6" LONG JACKET FORMED OF MINIMUM 0.010" THICKNESS STEEL SHEET SECURED IN PLACE WITH MINIMUM 1/2" WIDE STAINLESS STEEL HOSE CLAMP LOCATED AT CENTER OF JACKET. ENDS OF THE JACKET TO OVERLAP BY A MINIMUM 2" AND EXTEND 1" INTO OPENING.
5. HILTI CFS-BL FIRESTOP BLOCK OR HILTI FS 657 FIRE BLOCK (2" THICK x 5" WIDE x 8" DEEP, REFERENCE : FRONT VIEW) FIRMLY PACKED WITHIN OPENING. EITHER ONE OR A COMBINATION OF BLOCK TYPES MAY BE USED.

- NOTES :**
1. MAXIMUM AREA OF OPENING = 480 SQ. IN., WITH A MAXIMUM DIMENSION OF 24".
 2. ANNULAR SPACE BETWEEN PIPES, CONDUITS, OR TUBING AND PERIPHERY OF OPENING = MINIMUM 1-1/2", MAXIMUM 4".
 3. ANNULAR SPACE BETWEEN PIPES, CONDUITS, OR TUBING = MINIMUM 4", MAXIMUM 6-3/4".
 4. ANNULAR SPACE BETWEEN INSULATED PIPES AND PERIPHERY OF OPENING = NOMINAL 1-1/2".
 5. APPLY HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT IN ANY VOID THAT MAY EXIST AROUND PENETRANTS OR FIRESTOP/FIRE BLOCKS.
 6. IF THE ANNULAR SPACE IS GREATER THAN 4", THEN ATTACH A STEEL WIRE MESH (NOMINAL 2" SQUARES, NO. 16 SWG) WITH 1/4" DIAMETER x 1" LONG STEEL CONCRETE ANCHORS AND 1-1/2" DIAMETER FENDER WASHERS (SPACED MAXIMUM 8" C/C) ON BOTH SIDES OF WALL ASSEMBLY. STEEL WIRE MESH SHALL BEGIN MAXIMUM 2-1/2" FROM THE PENETRANT AND OVERLAP MINIMUM 3" BEYOND THE PERIPHERY OF THE OPENING.



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

Sheet	2 of 2
Scale	-
Date	Jan. 09, 2015

Drawing No.
WJ
8008b