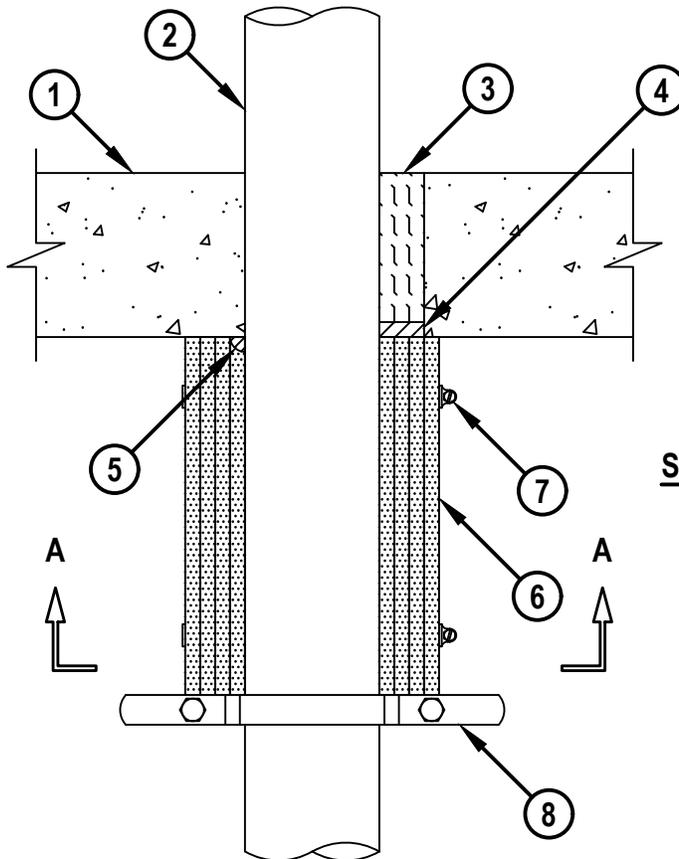


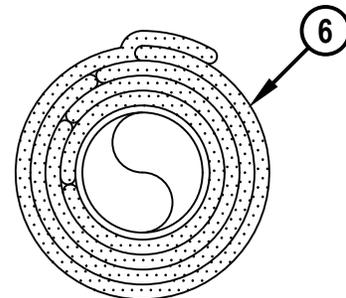
UL/cUL SYSTEM NO. C-BJ-1072
METAL PIPE THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR.
 T-RATING = 1-3/4-HR. OR 2-HR. (SEE TABLE BELOW)

CROSS-SECTIONAL VIEW



SECTION A-A : SEAM DETAIL



1. CONCRETE FLOOR OR WALL ASSEMBLY (2-HR. FIRE-RATING) :
 - A. LIGHTWEIGHT OR NORMAL WEIGHT CONCRETE FLOOR OR WALL ASSEMBLY (MINIMUM 6" THICK).
 - B. ANY UL/cUL CLASSIFIED CONCRETE BLOCK WALL.
2. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 4" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 4" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
3. MINIMUM 5-1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED AND RECESSED TO ACCOMMODATE SEALANT.
4. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.



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Sheet	1 of 2
Scale	5/32" = 1"
Date	Oct. 18, 2022

Drawing No.
**CBJ
 1072a**

Saving Lives through Innovation and Education

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METAL PIPE THROUGH CONCRETE FLOOR ASSEMBLY

F-RATING = 2-HR.

T-RATING = 1-3/4-HR. OR 2-HR. (SEE TABLE BELOW)

CBJ1072a.101822

5. WHERE ANNULAR SPACE IS 0", APPLY MINIMUM 1/2" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT AT POINT OF CONTACT PRIOR TO INSTALLATION OF ENDO-SHIELD.
6. HILTI CFP-ES ENDO-SHIELD INSTALLED IN THREE OR FOUR LAYERS AS FOLLOWS (SEE TABLE AND NOTE NO. 3 BELOW) :
 - A. FIRST LAYER OF ENDO-SHIELD SHALL EXTEND MINIMUM 12" BELOW THE FLOOR, OR BOTH SIDES OF WALL, AND BE TIGHTLY WRAPPED AROUND THE PENETRANT WITH ENDS TIGHTLY BUTTED.
 - B. SECOND LAYER OF ENDO-SHIELD SHALL EXTEND MINIMUM 12" BELOW THE FLOOR, OR BOTH SIDES OF WALL, AND BE TIGHTLY WRAPPED AROUND THE FIRST LAYER OF ENDO-SHIELD WITH ENDS TIGHTLY BUTTED AND VERTICAL SEAM OFFSET 2" FROM SEAM IN FIRST LAYER OF ENDO-SHIELD.
 - C. THIRD LAYER OF ENDO-SHIELD SHALL EXTEND MINIMUM 12" BELOW THE FLOOR, OR BOTH SIDES OF WALL, AND BE TIGHTLY WRAPPED AROUND THE SECOND LAYER OF ENDO-SHIELD WITH ENDS TIGHTLY BUTTED AND VERTICAL SEAM OFFSET 2" FROM SEAM IN SECOND LAYER OF ENDO-SHIELD.
 - D. OUTER LAYER OF ENDO-SHIELD SHALL EXTEND MINIMUM 12" BELOW THE FLOOR, OR BOTH SIDES OF WALL, AND BE TIGHTLY WRAPPED AROUND THE PREVIOUS LAYER OF ENDO-SHIELD OFFSET 2" FROM SEAM WITHIN PREVIOUS LAYER OF ENDO-SHIELD AND TO EXTEND MINIMUM 2" BEYOND START OF SEAM WITHIN THE OUTER LAYER.
 - E. MINIMUM 3" WIDE ALUMINUM TAPE TO BE APPLIED AND CENTERED OVER LONGITUDINAL SEAMS WITHIN EACH LAYER OF ENDO-SHIELD.
7. STAINLESS STEEL CLAMP: INSTALL 1/2" WIDE STAINLESS STEEL HOSE CLAMPS TO SECURE INSULATION (ITEM 6) AROUND PENETRATING ITEM (ITEM 2). INSTALL HOSE CLAMPS AROUND INSULATION SPACED 2" FROM THE ENDS OF THE INSULATION.
8. RISER CLAMP: INSTALL APPROPRIATELY SIZED GALVANIZED STEEL RISER CLAMP AROUND PENETRATING ITEM (ITEM 2) FLUSH WITH THE END OF THE INSULATION (ITEM 6).
9. [NOT SHOWN] FOR FLOOR ASSEMBLIES, INSTALL APPROPRIATELY SIZED GALVANIZED STEEL RISER CLAMP AROUND PENETRATING ITEM (ITEM 2) FLUSH WITH THE TOP OF THE FLOOR.

NUMBER OF LAYERS	T-RATING, HR.
3	1-3/4
4	2

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 6".
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1-1/2".
 3. WHEN 1-3/4 HOUR T-RATING IS REQUIRED ITEMS 6A, 6B, 6D, AND 6E ARE REQUIRED; WHEN 2 HOUR T-RATING IS REQUIRED ALL COMPONENTS LISTED WITHIN ITEM 6 ARE REQUIRED.



Hilti Firestop Systems

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