

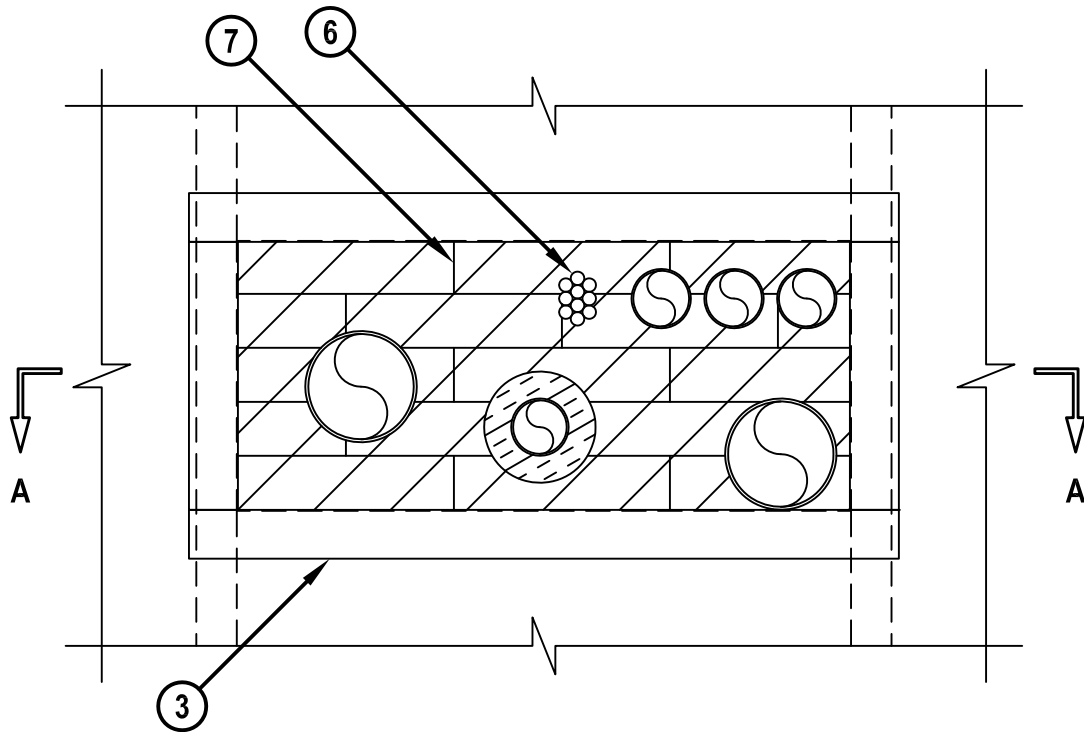
UL/cUL SYSTEM NO. W-L-8098

MULTIPLE PENETRATING ITEMS THROUGH GYPSUM SHAFT WALL ASSEMBLY

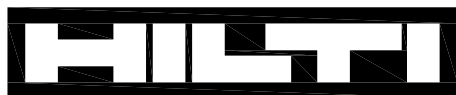
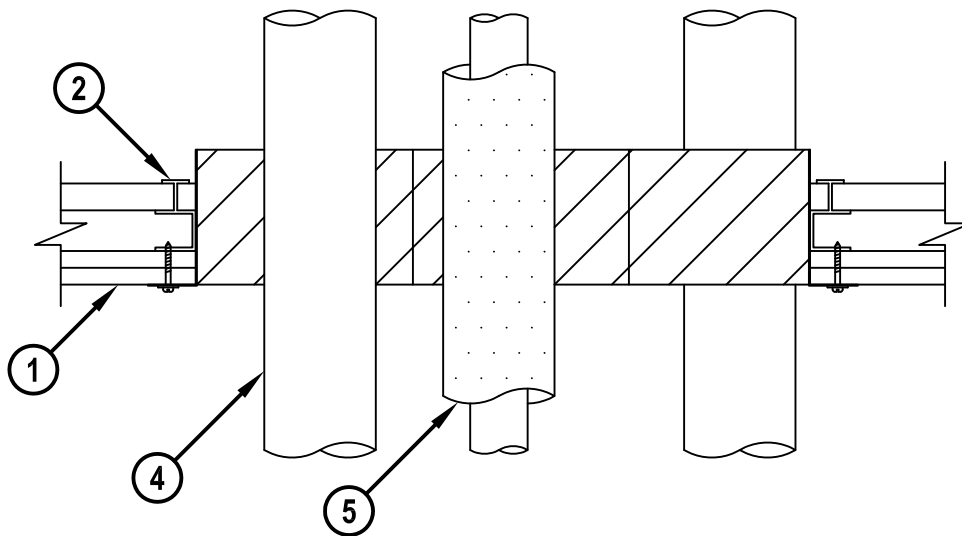
F-RATING = 1-HR. OR 2-HR.
T-RATING = 0-HR., 1/2-HR., OR 3/4-HR.

WL8098b.011515

FRONT VIEW



SECTION A-A



Hilti Firestop Systems

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

Sheet 1 of 2

Scale 9/64" = 1"

Date Jan. 15, 2015

Drawing No.

**WL
8098b**

Saving Lives through Innovation and Education

MULTIPLE PENETRATING ITEMS THROUGH GYPSUM SHAFT WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.
 T-RATING = 0-HR., 1/2-HR., OR 3/4-HR.

WL8098b.011515

1. GYPSUM SHAFT WALL ASSEMBLY (UL/cUL CLASSIFIED U400, V400, OR W400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).
2. "C-T" OR "C-H" SHAPED STEEL STUDS (MINIMUM 2-1/2" WIDE x 1-1/2" DEEP, MIN. 25 GA.) SPACED MAXIMUM 24" OC.
3. MINIMUM 1-3/4" x 5" (MIN. 24 GA.) STEEL ANGLE, HILTI L-SLEEVE, OR HILTI Z-FRAME CUT TO FIT ALL FOUR SIDES OF OPENING. SLEEVE/ANGLE TO BE SECURED TO ONE SIDE OF WALL THROUGH THE FLANGES WITH MINIMUM 1-1/2" LONG DRYWALL SCREWS (SPACED MAX. 8" OC) AROUND PERIMETER OF OPENING.
4. ONE OR MORE OF THE FOLLOWING MAY BE INSTALLED WITHIN THE OPENING :
 - 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 COPPER PIPE OR TUBING.
 - D. MAXIMUM 4" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
5. [OPTIONAL] ONE OR MORE METALLIC PIPES MAY BE INSULATED WITH NOMINAL 3/4" OR 1" AB/PVC PIPE INSULATION.
6. ONE MAXIMUM 2" DIAMETER CABLE BUNDLE CONSISTING OF ANY OF THE FOLLOWING :
 - A. MAXIMUM 25 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
 - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR POWER CABLE WITH PVC JACKET.
 - C. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE WITH PVC JACKET.
 - D. MAXIMUM 3/C NO. 8 AWG, WITH BARE ALUMINUM GROUND, STEEL METAL CLAD CABLE.
 - E. MAXIMUM 3/C (WITH GROUND) NO. 8 AWG NON-METALLIC SHEATHED CABLE (ROMEX) WITH PVC JACKET.
 - F. TYPE R GU/59 COAXIAL CABLE WITH PVC JACKET.
 - G. MAXIMUM 4 PAIR NO. 22 AWG CAT 5 OR CAT 6 DATA CABLE.
7. HILTI CFS-BL FIRESTOP BLOCK (2" THICK x 8" WIDE x 5" DEEP, REFERENCE : FRONT VIEW) FIRMLY PACKED WITHIN WALL, FLUSH WITH FINISHED SIDE OF WALL.

NOTES : 1. MAXIMUM SIZE OF OPENING = 22-3/4" x 10".
 2. ANNULAR SPACE BETWEEN PENETRANTS AND BETWEEN PENETRANTS AND PERIPHERY OF OPENING = MINIMUM 1/2".
 3. APPLY HILTI FS-ONE MAX OR FS-ONE INTUMESCENT FIRESTOP SEALANT OR HILTI CP 618 FIRESTOP PUTTY STICK INTO ANY VOID THAT MAY EXIST AROUND PENETRANTS, INTO INTERSTICES OF CABLES, OR BETWEEN FIRESTOP BLOCKS TO MAXIMUM EXTENT POSSIBLE.



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Scale	-
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