

UL/cUL SYSTEM NO. W-L-8086

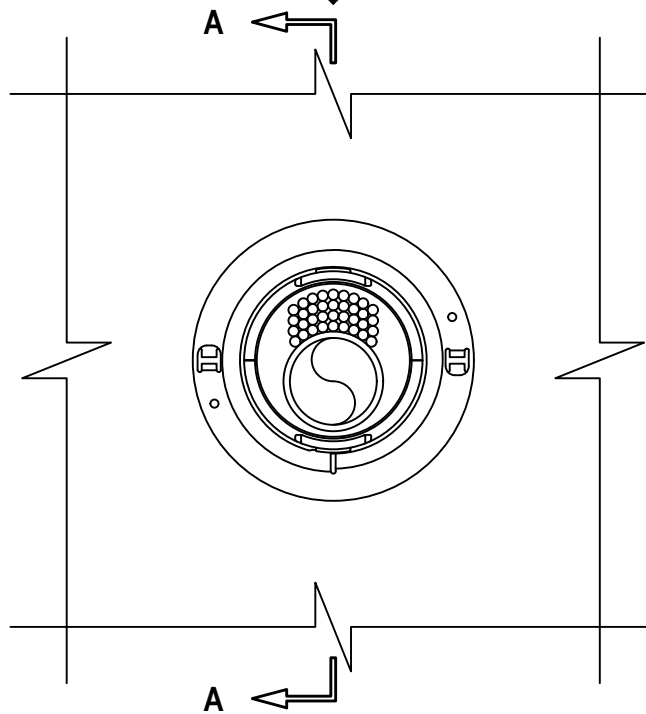
MULTIPLE PENETRATING ITEMS THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.

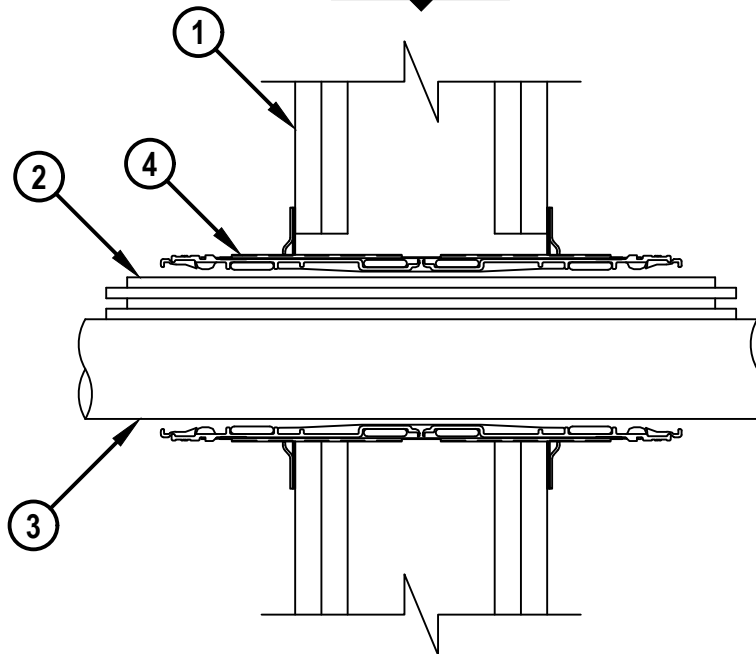
T-RATING = 0-HR., 1/2-HR., 3/4-HR., 1-HR., 1 3/4-HR., OR 2-HR.

WL8086g.072518

FRONT VIEW



SECTION A-A



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

Sheet	1 of 2
Scale	7/32" = 1"
Date	July 25, 2018

Drawing No.
WL
8086g

Saving Lives through Innovation and Education

MULTIPLE PENETRATING ITEMS THROUGH GYPSUM WALL ASSEMBLY

F-RATING = 1-HR. OR 2-HR.

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1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300, U400 OR V400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN) TO INCLUDE THE FOLLOWING CONSTRUCTION FEATURES :
 - A. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER (SPACED MAXIMUM 16" OC). STEEL STUDS TO BE MINIMUM 3-1/2" WIDE (SPACED MAXIMUM 24" OC).
 - B. NOMINAL 5/8" THICK GYPSUM WALLBOARD. TYPE, NUMBER OF LAYERS, AND SHEET ORIENTATION AS SPECIFIED IN THE INDIVIDUAL UL DESIGN.
2. CABLE BUNDLE TO BE A COMBINATION OF ANY OF THE FOLLOWING :
 - A. MAXIMUM 100 PAIR NO. 24 AWG TELEPHONE CABLE WITH PVC JACKET.
 - B. MAXIMUM 7/C NO. 12 AWG COPPER CONDUCTOR CONTROL CABLE WITH PVC OR XLPE JACKET AND INSULATION.
 - C. MAXIMUM 4/0 AWG TYPE RHH GROUND CABLE.
 - D. MAXIMUM 4 PAIR NO. 22 AWG CAT 6 COMPUTER CABLE.
 - E. MAXIMUM RG 6/U COAXIAL CABLE.
 - F. MAXIMUM 1/2" DIAMETER FIBER-OPTIC CABLE (24 FIBER) WITH PVC OR PE JACKET AND INSULATION.
 - G. MAXIMUM 2/C NO. 22 AWG SHIELDED PRINTER CABLE WITH PVC JACKET.
 - H. MAXIMUM 2/C NO. 18 AWG POWER OR NON-POWER LIMITED FIRE ALARM CABLE WITH OR WITHOUT METAL JACKET (MANUFACTURED BY AFC CABLE SYSTEMS, INC.).
 - I. MAXIMUM 1/4" DIAMETER S-VIDEO CABLE CONSISTING OF TWO MAXIMUM 24 AWG 75 OHM COAX OR TWISTED PAIR CABLE WITH PE INSULATION AND PVC JACKET.
 - J. MAXIMUM 3/C NO. 12 AWG METAL CLAD CABLE.
 - K. ANY CABLES, METAL-CLAD CABLES, OR ARMORED CABLES CURRENTLY LISTED UNDER THE THROUGH PENETRATING PRODUCTS CATEGORY.
3. ONE OF THE FOLLOWING PENETRATING ITEMS MAY BE INSTALLED :
 - A. MAXIMUM 2" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 5 OR HEAVIER).
 - B. MAXIMUM 2" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 2" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - D. MAXIMUM 2" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
 - E. MAXIMUM 1" NOMINAL DIAMETER FLEXIBLE STEEL CONDUIT.
4. HILTI CP 653 (BA) SPEED SLEEVE [2" OR 4"] OR HILTI CFS-SL GA L SPEED SLEEVE [4"] SLID INTO AND CENTERED WITHIN WALL. DEVICE FLANGES SPUN CLOCKWISE ONTO DEVICE THREADS, BUTTING TIGHTLY TO BOTH SIDES OF WALL.

- NOTES :**
1. MAXIMUM DIAMETER OF OPENING = 2-1/2" (FOR 2" DEVICE) OR 4-1/2" (FOR 4" DEVICE).
 2. HILTI CFS-SL GA L SPEED SLEEVE SHALL ONLY BE USED IN WALLS 8" THICK OR GREATER.
 3. ANNULAR SPACE BETWEEN DEVICE AND PERIPHERY OF OPENING = MINIMUM 0".
 4. CABLES MAY REPRESENT 0% TO 100% VISUAL FILL OF DEVICE.
 5. [OPTIONAL] AS AN ALTERNATE TO SMOKE GASKET, MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT OR HILTI CP 606 FLEXIBLE FIRESTOP SEALANT FLUSH WITH BOTH SURFACES OF WALL WITH AN ADDITIONAL 1/4" BEAD APPLIED AROUND PERIPHERY OF DEVICE PRIOR TO SECURING DEVICE FLANGES.



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