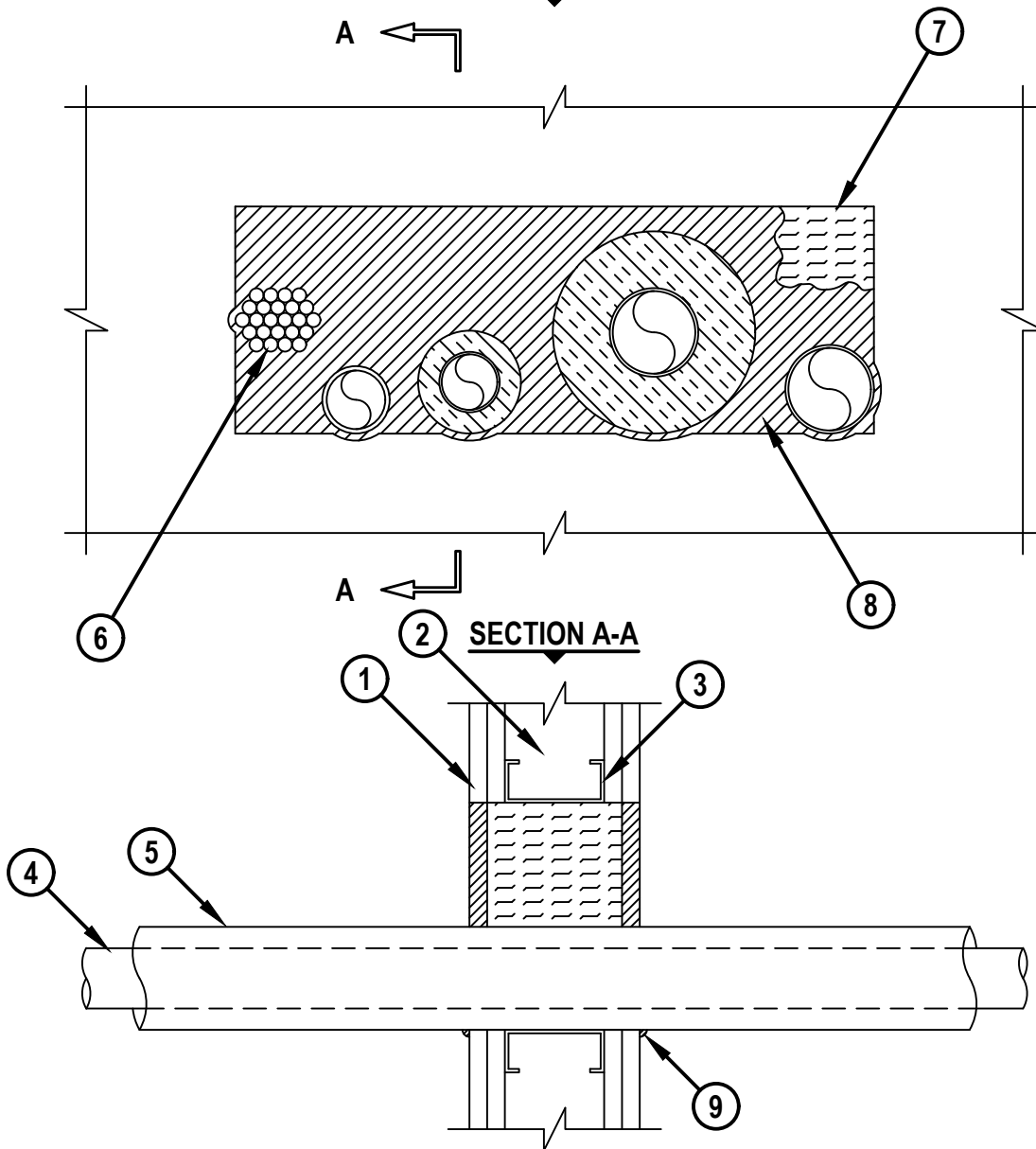


MULTIPLE PENETRATING ITEMS THROUGH GYPSUM WALL ASSEMBLY

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

T-RATING = 0-HR.

NOTE : TESTED TO A 2.5 PA PRESSURE DIFFERENTIAL

FRONT VIEW

1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300, U400, OR V400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR. SHOWN).

2. [NOT SHOWN] WOOD STUDS TO CONSIST OF NOMINAL 2" x 4" LUMBER. STEEL STUDS TO BE MINIMUM 3-1/2" WIDE.

3. OPENING TO BE "FRAMED-OUT" WITH ADDITIONAL FRAMING MEMBERS.



Hilti Firestop Systems

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

Sheet 1 of 2

Scale 3/16" = 1"

Date Sep. 11, 2018

Drawing No.

WL
8065e

Saving Lives through Innovation and Education

MULTIPLE PENETRATING ITEMS THROUGH GYPSUM WALL ASSEMBLY

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

T-RATING = 0-HR.

NOTE : TESTED TO A 2.5 PA PRESSURE DIFFERENTIAL

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4. ONE OR MORE OF THE FOLLOWING PIPES, CONDUITS, OR TUBES, AND IN ANY COMBINATION, MAY BE INSTALLED WITHIN THE OPENING :
- A. MAXIMUM 3" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 10 OR HEAVIER).
 - B. MAXIMUM 3" NOMINAL DIAMETER CAST OR DUCTILE IRON PIPE.
 - C. MAXIMUM 3" NOMINAL DIAMETER COPPER PIPE OR TUBING.
 - D. MAXIMUM 3" NOMINAL DIAMETER STEEL CONDUIT OR EMT.
 - E. MAXIMUM 2" NOMINAL DIAMETER PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM) (CELLULAR OR SOLID CORE).
 - F. MAXIMUM 2" NOMINAL DIAMETER CPVC PLASTIC PIPE (SDR 13.5) (CLOSED PIPING SYSTEM ONLY)
 - G. MAXIMUM 2" NOMINAL DIAMETER RIGID NON METALLIC CONDUIT (RNC) (SCHEDULE 40).
 - H. MAXIMUM 1" NOMINAL DIAMETER CROSS-LINKED POLYETHYLENE (PEX) TUBING (CLOSED PIPING SYSTEM ONLY).
5. ONE OR MORE METALLIC PENETRANTS OR TUBES MAY BE INSULATED WITH ANY OF THE FOLLOWING TYPES OF INSULATION :
- A. MINIMUM 1" TO MAXIMUM 2" THICK GLASS-FIBER PIPE INSULATION.
 - B. MINIMUM 1/2" TO MAXIMUM 3/4" THICK AB/PVC PIPE INSULATION.
 - C. MINIMUM 1" TO MAXIMUM 2" THICK MINERAL FIBER PIPE INSULATION SECURED WITH 18 GA. STEEL WIRE SPACED 12" C/C.
6. MAXIMUM 3" DIAMETER CABLE BUNDLE TO CONSIST 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 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 (+GROUND) NO. 12 AWG ROMEX CABLE WITH PVC JACKET.
 - F. RG/U COAXIAL CABLE (MAXIMUM 1/2" DIAMETER) WITH PVC JACKET.
7. MINIMUM 3-1/2" OR 4-3/4" THICKNESS MINERAL WOOL (MINIMUM 4 PCF DENSITY) TIGHTLY PACKED FOR 1-HR. OR 2-HR. FIRE-RATING, RESPECTIVELY.
8. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
9. MINIMUM 1/4" BEAD HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT APPLIED AT POINT OF CONTACT.

NOTES : 1. MAXIMUM SIZE OF OPENING TO BE ONE OF THE FOLLOWING :

A. 22-3/4" x 8" IN STEEL STUD WALLS.

B. 14-1/2" x 8" IN WOOD STUD WALLS.

2. ANNULAR SPACE BETWEEN PENETRANTS = MINIMUM 1", MAXIMUM 22".

3. ANNULAR SPACE BETWEEN PENETRANTS AND OPENING = MINIMUM 0", MAXIMUM 22".

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Sheet	2 of 2
Scale	-
Date	Sep. 11, 2018

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