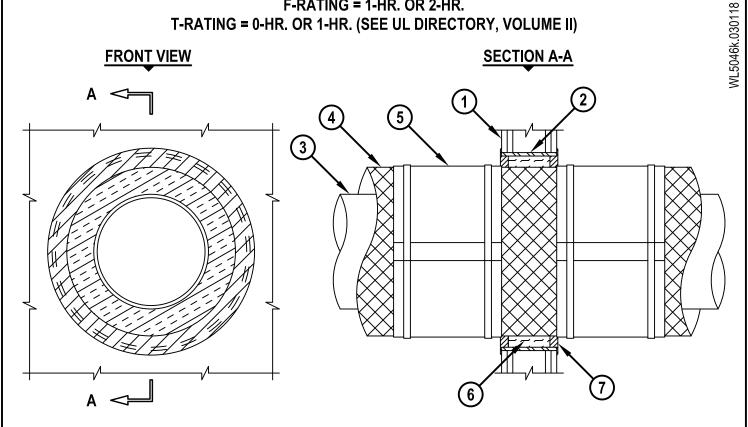
## UL/cUL SYSTEM NO. W-L-5046

## INSULATED METAL PIPE THROUGH A SLEEVE IN GYPSUM WALL ASSEMBLY

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

T-RATING = 0-HR. OR 1-HR. (SEE UL DIRECTORY, VOLUME II)



- 1. GYPSUM WALL ASSEMBLY (UL/cUL CLASSIFIED U300 OR U400 SERIES) (1-HR. OR 2-HR. FIRE-RATING) (2-HR SHOWN).
- 2. MAXIMUM 22" NOMINAL DIAMETER STEEL PIPE SLEEVE (SCHEDULE 40 OR THINNER).
- 3. PENETRATING ITEM TO BE ONE OF THE FOLLOWING:
  - A. MAXIMUM 12" NOMINAL DIAMETER STEEL PIPE (SCHEDULE 40 OR HEAVIER).
  - **B. MAXIMUM 6" NOMINAL DIAMETER COPPER PIPE.**
- 4. FOAMGLASS PIPE INSULATION (1-1/2" TO 3" THICK).
- 5. [OPTIONAL] MINIMUM 12" LONG JACKET FORMED OF MINIMUM 0.010" THICKNESS STEEL OR ALUMINUM SHEET SECURED IN PLACE WITH 2 STEEL BAND CLAMPS. ENDS OF THE JACKET TO OVERLAP BY A MINIMUM 2".
- 6. MINERAL WOOL (MIN. 4 PCF DENSITY) TIGHTLY PACKED (SEE NOTE NO. 3 BELOW).
- 7. MINIMUM 3/4" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.

NOTES: 1. MAXIMUM DIAMETER OF OPENING = 22".

- 2. ANNULAR SPACE = MINIMUM 3/4", MAXIMUM 3".
- 3. MINIMUM 2-1/4" OR 3-1/2" THICKNESS MINERAL WOOL (MIN. 4 PCF DENSITY) REQUIRED FOR 1-HR. OR 2-HR. WALLS, RESPECTIVELY.



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

Sheet	1 of 1
Scale	3/32" = 1"
Date	Mar. 01, 2018

Drawing No. 5046k