

UL/cUL SYSTEM NO. W-L-2043

# INSULATED PLASTIC PIPE THROUGH GYPSUM WALL ASSEMBLY

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

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

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

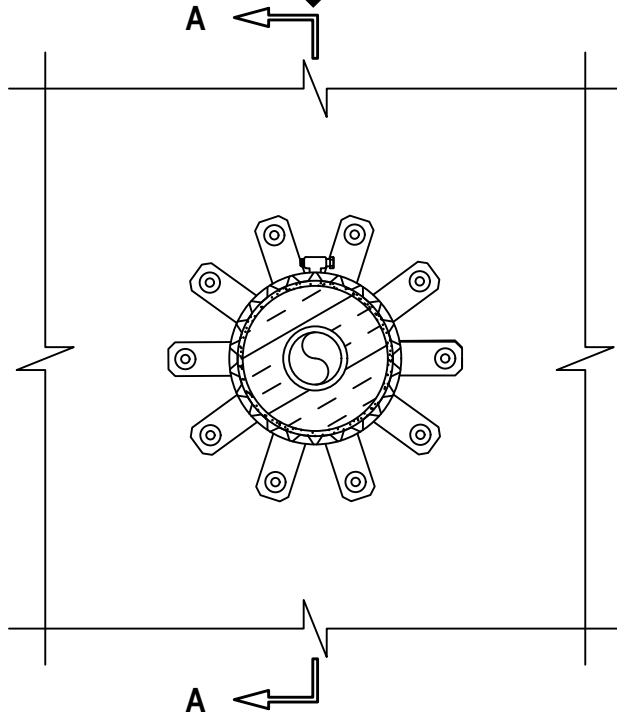
FH-RATING = 1-HR. OR 2-HR.

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

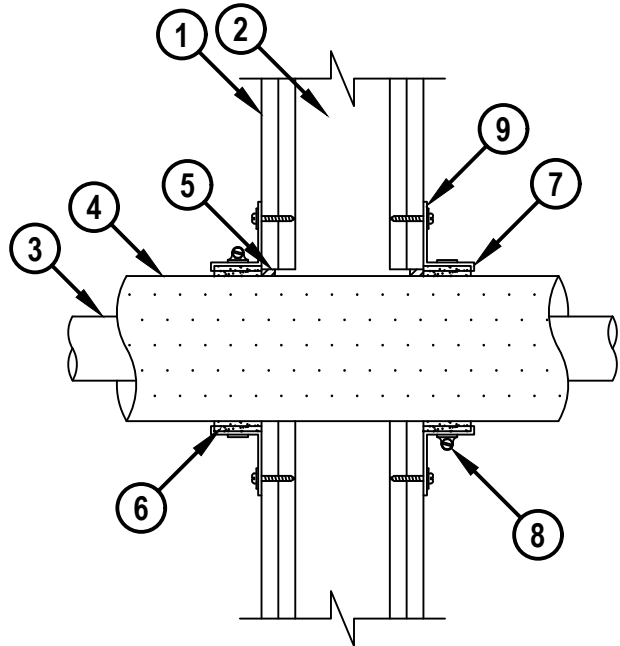
NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL

WL2043d.030823

**FRONT VIEW**



**SECTION A-A**



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

Sheet	1 of 2
Scale	9/64" = 1"
Date	Mar. 08, 2023

Drawing No.  
**WL**  
**2043d**

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1. GYPSUM WALL ASSEMBLY (UL 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. MAXIMUM 2" NOMINAL DIAMETER POLYPROPYLENE (PP) PLASTIC PIPE (SCHEDULE 80) (CLOSED OR VENTED PIPING SYSTEM).
4. PIPE INSULATION TO BE ONE OF THE FOLLOWING :
  - A. NOMINAL 1" THICK AB/PVC PIPE INSULATION.
  - B. NOMINAL 1-1/2" THICK GLASS-FIBER PIPE INSULATION WITH ALL SERVICE JACKET.
  - C. NOMINAL 1-1/2" THICK MINERAL FIBER PIPE INSULATION (MIN. 3.5 PCF DENSITY) WITH FOIL-SCRIM-KRAFT OR ALL SERVICE JACKET.
5. MINIMUM 1/2" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT.
6. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE INSULATED PIPE, COVERING TWO TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE BUTTED TIGHTLY AGAINST BOTH SURFACES OF WALL.
7. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER THE WRAP STRIPS, OVERLAPPING MINIMUM 1".
8. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP SECURED AT MID-HEIGHT OF RETAINING COLLAR.
9. EVERY OTHER TAB OF RETAINING COLLAR SECURED TO WALL WITH 3/16" x 2-1/2" LONG TOGGLE BOLTS WITH 1-1/4" DIAMETER STEEL WASHERS OR AT EVERY TAB WITH 3/16" x 1-1/4" LONG STEEL LAMINATING SCREWS WITH 1-1/4" DIAMETER STEEL WASHERS.

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 5-7/8".  
2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 1/4".  
3. WHEN MINERAL FIBER PIPE INSULATION IS USED, SECURE INSULATION WITH MIN. 18 AWG STAINLESS STEEL WIRE AT MAXIMUM 12" OC.



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Sheet	2 of 2
Scale	-
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