

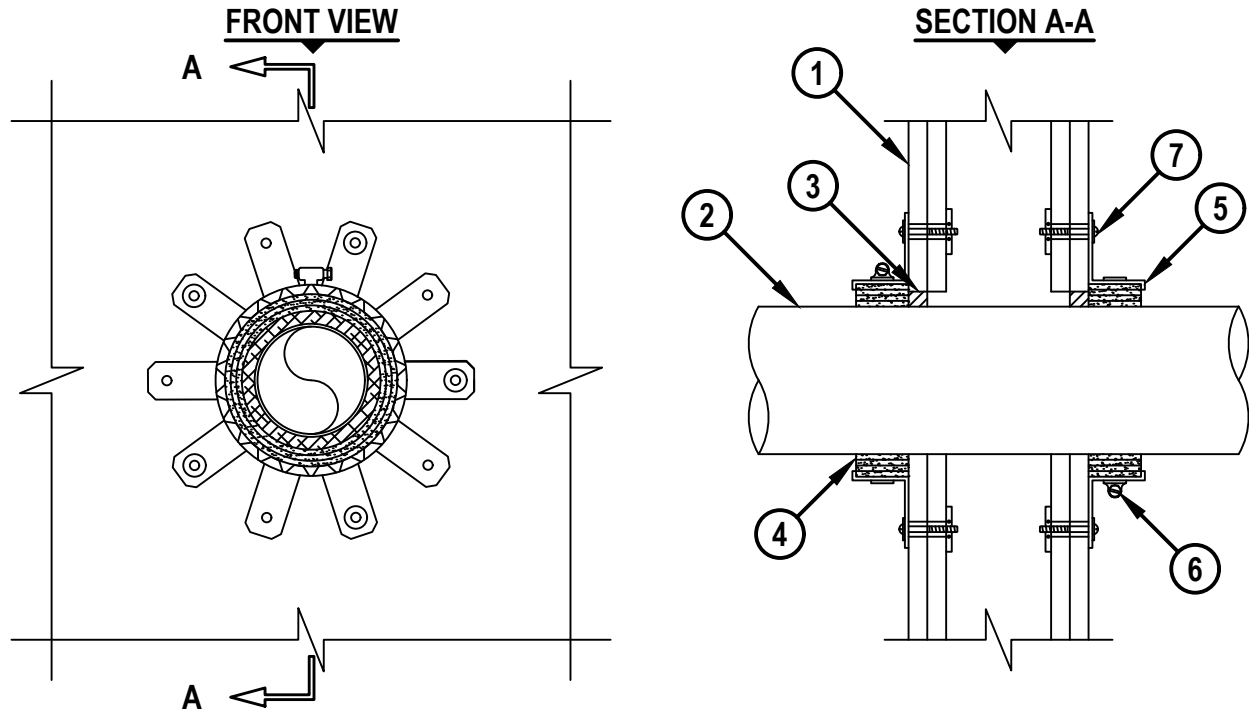
PLASTIC PIPE THROUGH GYPSUM WALL ASSEMBLY

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

FT-RATING = SEE TABLE BELOW

FH AND FTH-RATINGS = SEE TABLE BELOW

NOTE : TESTED WITH A 50 Pa PRESSURE DIFFERENTIAL



cUL WL2744b.091021

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. PENETRATING ITEM TO BE ONE OF THE FOLLOWING :
 - A. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER AQUATHERM GREENPIPE POLYPROPYLENE (PP-R) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED OR VENTED PIPING SYSTEM).
 - B. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER AQUATHERM BLUEPIPE POLYPROPYLENE (PP-R) PLASTIC PIPE (SDR 9, 11, OR 17.6) (CLOSED OR VENTED PIPING SYSTEM).
 - C. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER AQUATECHNIK NA FUSION-TECH POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.4 OR 11) (CLOSED OR VENTED PIPING SYSTEM).
 - D. MAXIMUM 4" (110 MM OD) NOMINAL DIAMETER NUPI AMERICAS NIRON POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 7.3, 9 OR 11) (CLOSED OR VENTED PIPING SYSTEM).
 - E. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER UPONOR POLYPROPYLENE (PP-RCT) PLASTIC PIPE (SDR 9 OR 11) (CLOSED OR VENTED PIPING SYSTEM).
 - F. MAXIMUM 4" (125 MM OD) NOMINAL DIAMETER NAPSYS-HR PVC PLASTIC PIPE (SCHEDULE 40) (CLOSED OR VENTED PIPING SYSTEM).



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

Sheet	1 of 2
Scale	5/32" = 1"
Date	Sep. 10, 2021

Drawing No.

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3. MINIMUM 5/8" DEPTH HILTI FS-ONE MAX INTUMESCENT FIRESTOP SEALANT FLUSH WITH EACH SIDE OF WALL.
4. HILTI CP 648E WRAP STRIP (NOMINAL 3/16" THICK x 1-3/4" WIDE) CONTINUOUSLY WRAPPED AROUND THE OUTER CIRCUMFERENCE OF THE PIPE, COVERING FOUR TIMES, WITH ENDS BUTTED AND HELD IN PLACE WITH TAPE. WRAP STRIP TO BE BUTTED TIGHTLY AGAINST BOTH SURFACES OF GYPSUM WALL.
5. HILTI 1-3/4" RETAINING COLLAR WRAPPED OVER THE WRAP STRIPS, OVERLAPPING MINIMUM 1".
6. NOMINAL 1/2" WIDE STAINLESS STEEL HOSE CLAMP FASTENED AT MID-HEIGHT OF RETAINING COLLAR. AS AN ALTERNATIVE, COLLAR MAY BE SECURED TOGETHER AT OVERLAP LOCATION WITH TWO NO. 8 SHEET METAL SCREWS.
7. MINIMUM FOUR TABS OF RETAINING COLLAR (SYMMETRICALLY SPACED) SECURED TO BOTH SIDES OF GYPSUM WALL WITH 1/4" DIAMETER LONG STEEL TOGGLE BOLTS WITH 3/4" DIAMETER STEEL WASHERS.

PENETRANT	F-RATING (HR)	FT-RATING (HR)	FH-RATING (HR)	FTH-RATING (HR)
2A, 2B, 2C, 2D	1	0	0	0
	2	3/4	0	0
2E	1	1	1	1
	2	2	2	2
2F	1	3/4	0	0
	2	1-1/2	0	0

NOTES : 1. MAXIMUM DIAMETER OF OPENING = 5" (FOR PENETRANT TYPE 2F) OR 6" (FOR ALL OTHER PENETRANT TYPES).
 2. ANNULAR SPACE = MINIMUM 0", MAXIMUM 5/8" (FOR PENETRANT TYPE 2F) OR 1-1/8" (FOR ALL OTHER PENETRANTS TYPES).



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Sheet	2 of 2
Scale	-
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