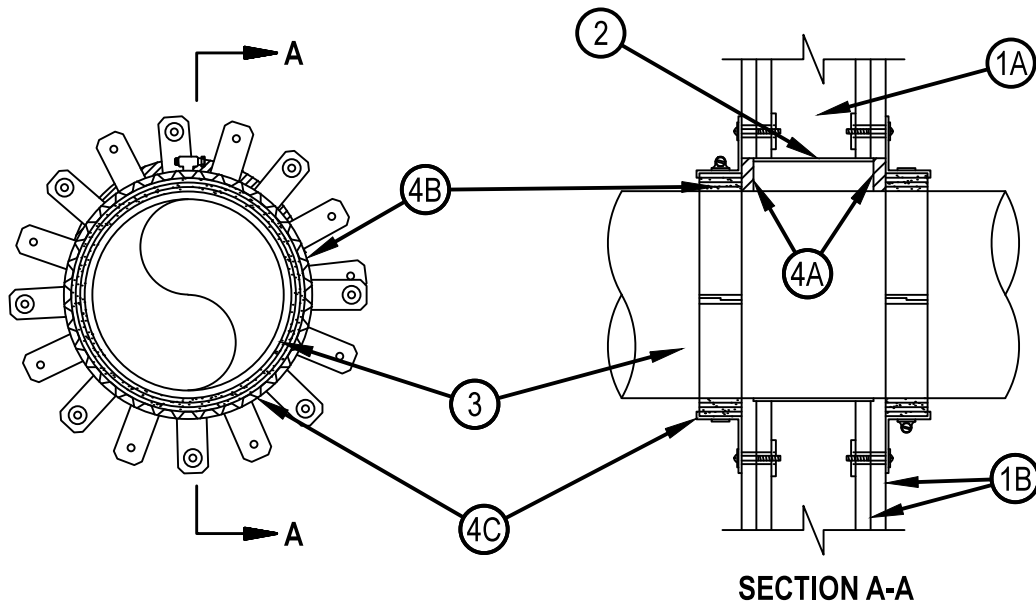




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to UL 1479

System No. W-L-2236
F Rating - 1 AND 2 Hr (SEE ITEM 1)
T Ratings - 1 AND 1-1/4 Hr (SEE ITEM 3)

WL 2236



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Studs — Wall framing shall consist of either wood or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
 - B. Gypsum Board* — Min 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual U300 or U400 Wall and Partition Design. Max diam of opening is 10 in. (254 mm).

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed. The hourly T Rating of the firestop system is 1 and 1-1/4 hr when installed in 1 and 2 hr rated walls, respectively.
2. Steel Wire Mesh — (Optional) Cylindrical sleeve fabricated from No. 8 steel wire mesh and having a min 2 in. (51 mm) lap along the longitudinal seam. Length of steel mesh to be 1/2 in. (13 mm) less than thickness of wall. Steel wire mesh to be centered and formed to fit periphery of through opening.
3. Through Penetrants — One nonmetallic pipe to be installed either eccentrically or concentrically within the firestop system. The annular space shall be min 0 in. (point contact) to max 1-3/8 in. (35 mm). Pipe to be rigidly supported on both sides of wall assembly. The following types and sizes of nonmetallic pipes may be used:
 - A. Polyvinyl Chloride (PVC) Pipe — Nom 8 in. (203 mm) diam (or smaller) Schedule 40 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 8 in. (203 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.



Hilti Firestop Systems

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WL 2236

4. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Material* — Sealant — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

B. Fill, Void or Cavity Material* — Wrap Strip — Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. Four layers of wrap strip are individually wrapped around the through-penetrant with ends butted and held in place with tape. Butted ends in successive layer shall be offset. Wrap strip butted tightly against both surface of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W45/1-3/4 Wrap Strip

C. Steel Collar — Collar fabricated from coils of precut min 0.017 in. thick (No. 28 MSG) galv steel available from the sealant manufacturer. Collar shall be nom 1-3/4 in. (44 mm) deep with 1 in. (25 mm) wide by 2 in. (51 mm) long anchors tabs on 2 in. (51 mm) centers for securement to wall assembly. The anchor tabs shall be bent 90 degree outward for securement to the wall assembly. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, prebent toward the pipe surface. Collar shall be tightly wrapped over the wrap strip, overlapping min. 1 in. (25 mm) at seam. A nom 1/2 in. (13 mm) wide stainless steel hose clamp shall be secured to the collar at its mid-height. Collar secured to both surfaces of wall assembly with 1/8 in. (3 mm) diam by 2-1/4 in. (57 mm) long steel hollow wall anchors in conjunction with 3/16 by 1/2 in. (5 by 13 mm) diam washers at every other anchor tab.

* Indicates such products shall bear the UL or cUL Certification Mark for jurisdictions employing the UL or cUL Certification (such as Canada), respectively.



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