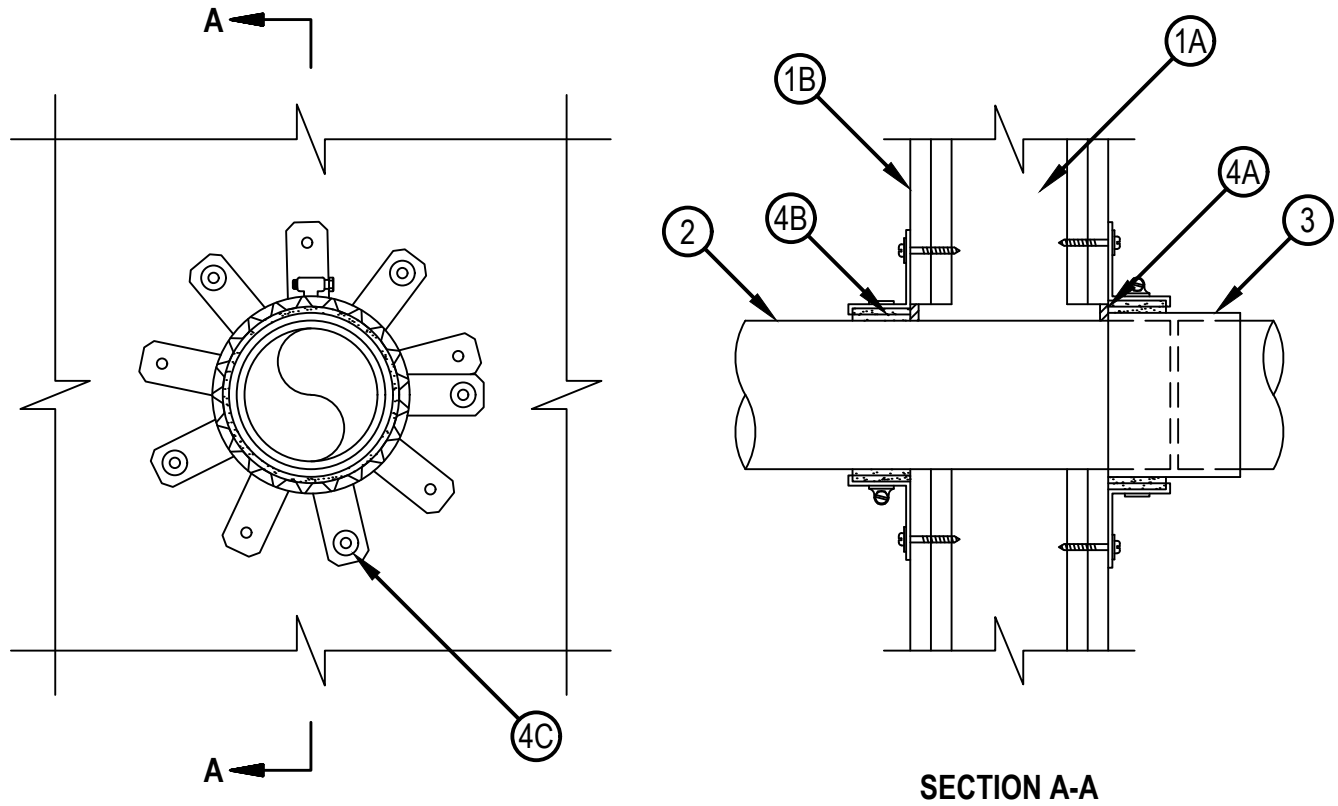




Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. W-L-2411
F Ratings - 1 and 2 Hr (See Item 1)
T Ratings - 0 and 1-1/2 Hr (See Item 1)

WL 2411



1. Wall Assembly — The 1 or 2 hr fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified if the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the Fire Resistance Directory and shall include the following construction features:

A. Studs — Wall framing shall consist of either wood studs or channel shaped steel studs. Wood studs to consist of 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, fabricated from min 25 MSG galvanized steel, spaced max 24 in. (610 mm) OC. Additional studs to be used to completely frame around opening.

B. Gypsum Board* — Min 5/8 in. (16 mm) thick with square or tapered edges. The gypsum board type, number of layers and sheet orientation shall be as specified in the individual Wall and Partition Design Number. The max diam of opening is 5 in. (127 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 is 0 and 1-1/2 Hr for 1 and 2 Hr rated assemblies, respectively.

2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space between pipe and periphery of opening to be min 0 in. (point contact) and max 1/2 in. (13 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 4 in. (102 mm) diam (or smaller) Schedule 40 solid or cellular 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 4 in. (102 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 solid ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 (or heavier) FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



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WL 2411

3. Nonmetallic Pipe Coupling — (Optional) - Pipe coupling to be the same size and type of pipe and installed such that one end of coupling is flush with either side of wall assembly and extending outward. As an alternate, the coupling may be recessed into annular space within the opening and extend a nom 1/4 in. (6 mm) beyond the steel collar on either side of the wall.
4. Firestop System — The firestop system shall consist of the following:
- A. Fill, Void or Cavity Material* — Sealant — If the coupling (Item 3) is recessed into the opening, a min 1/4 in. (6 mm) thickness of fill material, shall be 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 in. wide intumescent wrap strip for penetrants having a nom diam 2 in. (51 mm) or less. Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip for penetrants having a nom diam greater than 2 in. (51 mm). Layers of wrap strip are continuously wrapped around the pipe two times with end held in place with aluminum tape. Wrap strip butted tightly both surfaces of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648E Wrap Strip
- C. Steel Collar — Steel collar fabricated from coils of precut min 0.016 in. (0.4 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be min 1 in. (25 mm) and 1-3/4 in. (44 mm) deep for 1 in. (25 mm) and 1-3/4 in. (44 mm) wrap strips, respectively with 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs on 1-3/4 in. (44 mm) centers for securement to both surfaces of wall. In addition, collars contain preformed retainer tabs 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, located opposite the anchor tabs. Collar shall be tightly wrapped over the wrap strip, overlapping min 1 in. (25 mm) at seam and compressed with a min 1/2 in. (13 mm) wide by 0.028 in. (0.7 mm) thick stainless steel band at collar mid-height. Every other anchor tab of collar secured to surface of wall with min 1-1/2 in. (38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers.
- D. Firestop Device*- Firestop Collar — (not shown) - As an alternate to the wrap strip and steel collar (Items 4B and 4C), when optional pipe coupling Item 4) is not used, firestop collar shall be installed in accordance with the accompanying installation instructions. Collar to be installed and latched around the pipe and secured to both sides of wall. Minimum 2 anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes and 3 anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes. The anchor hooks are to be secured with min 1-1/2 in. (38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 50/1.5"N, CP 643 63/2"N, CP 643 90/3"N or CP 643 110/4"N
Firestop Collar

* 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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