

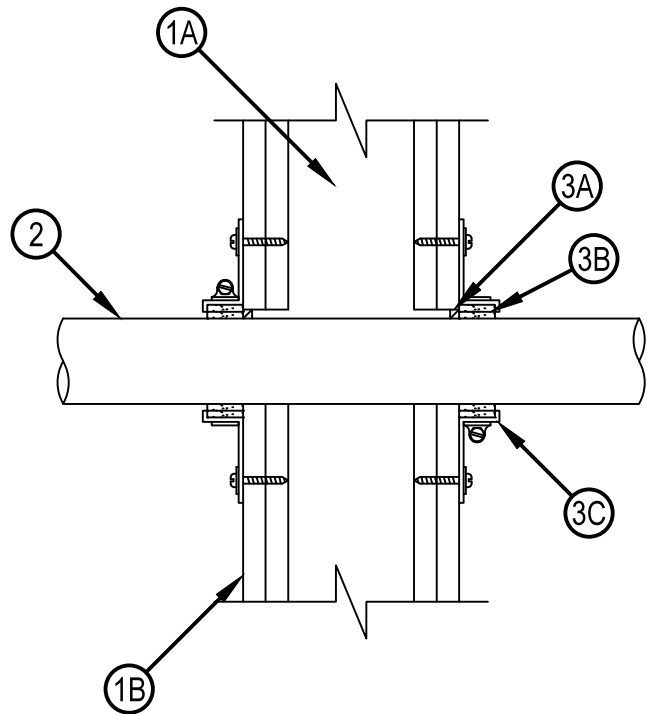
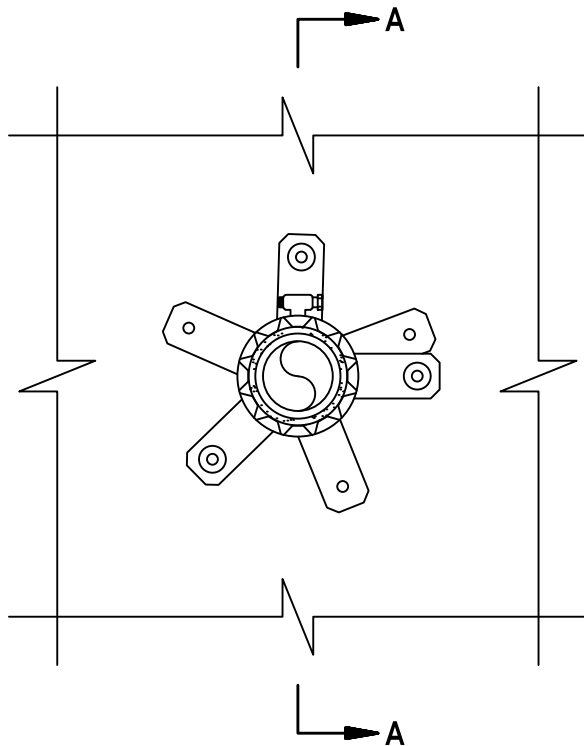


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Underwriters Laboratories, Inc.  
to UL 1479

## System No. W-L-2453

F Ratings - 1 and 2 Hr (See Item 1)  
T Ratings - 0 and 1-3/4 Hr (See Item 1)

WL 2453



**SECTION A-A**

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.
  - 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 2-5/8 in. (67 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 1-3/4 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 1/4 in. (6 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 2 in. (51 mm) diam (or smaller) Schedule 80 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - B. Polypropylene (PP) Pipe — Nom 2 in. (51 mm) diam (or smaller) Schedule 80 PP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.



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

A. Fill, Void or Cavity Material\* — Sealant — 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. (25 mm) wide intumescent wrap strip. Wrap strip 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. (0.41 mm) thick (No. 28 gauge) galv steel available from fill material manufacturer. Collar shall be min 1 in. (25 mm) deep 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. (0.71 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.

\* 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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