



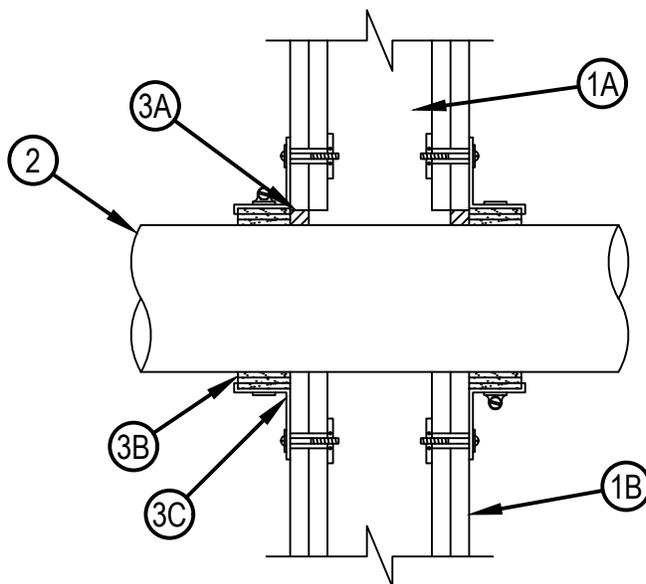
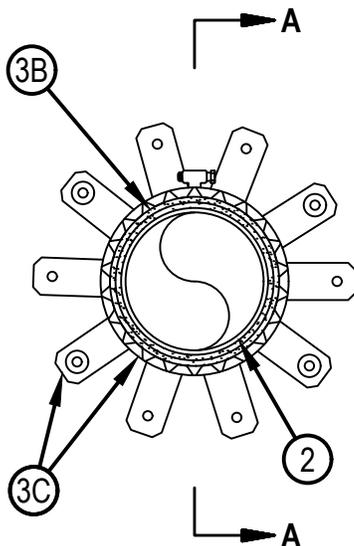
Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

## System No. W-L-2510

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 1/2, 1, 1-1/2 and 2 Hr (See Items 1 and 2)

WL 2510



**SECTION A-A**

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

- A. Studs — Wall framing may consist of either wood studs 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\* — The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design in the UL Fire Resistance Directory. Max diam of opening is 9 in. (229 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. See Table in Item 2 for T Rating.

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. Polypropylene (PP) Pipe — Nom 4 in. (100 mm OD) diam (or smaller) SDR11 PP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- B. Polypropylene (PP-R) Pipe — Nom 8 in. (200 mm OD) diam (or smaller) Aquatherm Greenpipe SDR 7.4 or 11 PP pipe for use in closed (process or supply) piping systems
- C. Polypropylene (PP-R) Pipe — Nom 8 in. (200 mm OD) diam (or smaller) Aquatherm Bluepipe SDR 9 or 11 PP pipe for use in closed (process or supply) piping systems.
- D. Polypropylene (PP) Pipe — Nom 4 in. (125 mm OD) diam (or smaller) Orion Polystar™ CT-White SDR 11, SDR 9 or SDR 7.4 PP pipe for use in closed (process or supply) piping systems.
- E. Polypropylene (PP-RCT) Pipe — Nom 4 in. (110 mm OD) diam (or smaller) SDR 7.3, 11 or 17 Niron pipe for use in closed (process or supply) or open (drain, waste and vented) piping systems. Nom 8 in. (200 mm OD) diam (or smaller) SDR 7.3 or 11 Niron pipe for use in closed (process or supply) piping systems.
- F. Polypropylene (PP-RCT) Pipe — Nom 8 in. (200 mm OD) diam (or smaller) SDR 7.4 or 11 Aquatechnik NA Fusion-Tech pipe for use in closed (process or supply) piping systems.
- G. Polypropylene (PP-RCT) Pipe — Nom 8 in. (200 mm OD) diam (or smaller) SDR 9 or 11 Uponor pipe for use in closed (process or supply) piping systems.



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November 15, 2021

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WL 2510

The T Rating of the firestop system is dependent on the penetrant type, nom penetrant size and F Rating of the wall assembly as noted below:

F Rating	T Rating, hr					
	Penetrant Type					
hr	2A	2B, 2C	2D (Max 2 in. diam)	2D	2E	2F, 2G, 2H
2	2	2	2	1-1/2	1-1/2	2
1	1	1	1	1/2	1/2	1

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

A. Fill, Void or Cavity Materials\* — Sealant — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with both surfaces of wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — 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. Layers of wrap strip are continuously wrapped around the through-penetrant with ends butted and held in place with tape. See Table below for number of layers of wrap strip required. Wrap strip butted tightly against both surfaces of wall.

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

Nom Pipe Diam, in.	No. of Layers of Wrap Strip Required
8 (or smaller)	4
4 (or smaller)	3
2 (or smaller)	2

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 nom 1 3/4 in. (44 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 attachment to both surfaces of wall. The opposite side incorporates retainer tabs, 1/2 in. (13 mm) wide by 3/16 in. (5 mm) long, which are bent 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, or collar shall be secured with min two No. 8 sheet metal screws at the overlap. Collar secured to both surfaces of wall with a min of four 1/4 in. (6 mm) diam steel toggle bolts along with min 3/4 in. (19 mm) diam steel washers symmetrically spaced.

\* 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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