



Classified by  
Underwriters Laboratories, Inc.  
to UL 1479

## System No. W-L-2078

F Ratings — 1 and 2 Hr (See Item 1)

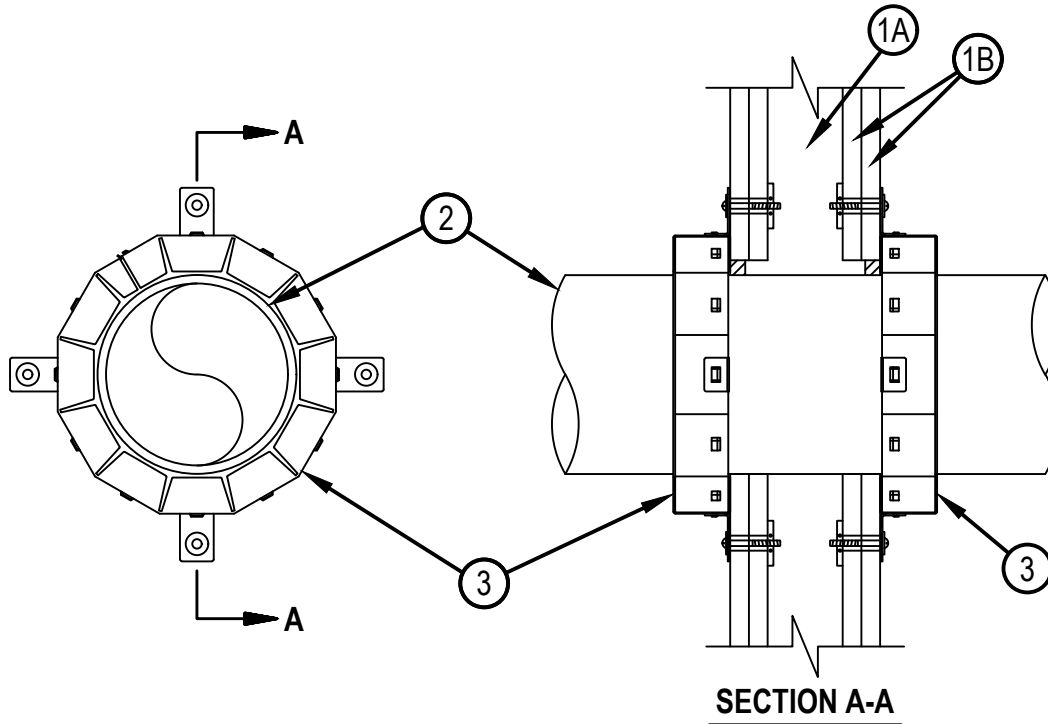
T Ratings — 0, 1 and 2 Hr (See Items 2 and 3)

L Rating (Without Movement) At Ambient — 3 CFM/sq ft

L Rating (Without Movement) At 400°F — Less Than 1 CFM/sq ft

M Rating (Movement) — See Table 1

WL 2078



1. Wall Assembly — The fire-rated gypsum board/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 construction features noted below:
  - 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 max 16 in. (406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC. For M Rating, steel studs to be min 3-5/8 in. (92 mm) wide.
  - B. Gypsum Board\* — Nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design. Max diam of opening is 11-1/2 in. (292 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 M Rating is applicable only to 1 hr rated walls and the T Rating is 0 hr.
2. Through-Penetrants — One nonmetallic pipe, conduit or tubing to be installed within the firestop system. The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 1/2 in. (13 mm). Pipe or conduit to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic pipes may be used:
  - A. Polyvinyl Chloride (PVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) Schedule 40 solid-core or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.
  - B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 10 in. (254 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) piping systems.
  - C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 solid-core or cellular core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems
  - D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 6 in. (152 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.



Hilti Firestop Systems

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January 21, 2020

E. Polyvinylidene Fluoride (PVDF) Pipe — Nom 4 in. (102 mm) diam (or smaller) PVDF pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

F. Crosslinked Polyethylene (PEX) Tubing — Nom 4 in. (102 mm) diam (or smaller) SDR 9 Uponor AquaPEX or Wirsbo hePEX PEX tube for use in closed (process or supply) piping systems.

When max 6 in. diam pipe is used, T Rating is equal to the hourly fire rating of the wall except that when penetrant type 2F is used, T Rating is 0 hr. When nom 8 in. or 10 in. (203 or 254 mm) diam pipe is used, T Rating is 0 hr. For systems with M Rating, the T Rating is 0 hr.

3. Firestop Device\* — Firestop Collar — 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 the wall using the anchor hooks provided with the collar. (Minimum two anchor hooks for 1-1/2 and 2 in. (38 and 51 mm) diam pipes, three anchor hooks for 3 and 4 in. (76 and 102 mm) diam pipes, four anchor hooks for 6 in. (152 mm) diam pipes, ten anchor hooks for 8 in. (203 mm) diam pipes and twelve anchor hooks for 10 in. (254 mm) diam pipes. The anchor hooks are to be secured to the surface of wall with 3/16 in. (4.8 mm) diam by 2-1/2 in. (64 mm) long steel toggle bolts along with washers. As an alternate for pipe sizes of nom 4 in. diam or less, min No. 10 by 1-1/2 in. (254 by 38 mm) long drywall or laminate screws with min 3/4 in. (19 mm) steel washers may be used. When the drywall or laminate screw is used, T Rating shall not exceed 1 hr.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 643 50/1.5"N, CP 643 63/2"N, CP 643 90/3"N, CP 643 110/4"N, CP 643 160/6"N, CP 644-200/8" US and CP 644-250/10" US Firestop Collars

4. Fill, Void or Cavity Material\* — Sealant - (Not Shown) — Min 1/2 in. (13 mm) thickness of sealant applied within the annular space for nom 8 in. and 10 in. (203 and 254 mm) diam pipes, flush with each side of wall. Sealant in annular space is optional for max 6 in. (152 mm) diam pipes except that for penetrant type 2F, sealant is required. A min 1/4 in. (6 mm) thickness of sealant is required within the annular space, flush with each side of wall, to attain the L Ratings for max 6 in. (152 mm) diam pipes. For systems with M Rating, the sealant should not be installed.

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

The M Rating for the firestop system is dependent on the variables as noted in the Table 1 below.

Table 1							
Movement Direction	Penetrant Item	Nominal Penetrant Diameter	Annular Space	Movement	Sealant Depth	F Rating	L Rating
Y	2A	2 in.	Max 1/4 in.	100%	5/8 in.	1 hr.	N/A
Z	2A	2 in.	Min. 1/4 in.	3.21 in.	5/8 in.	1 hr.	N/A

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

