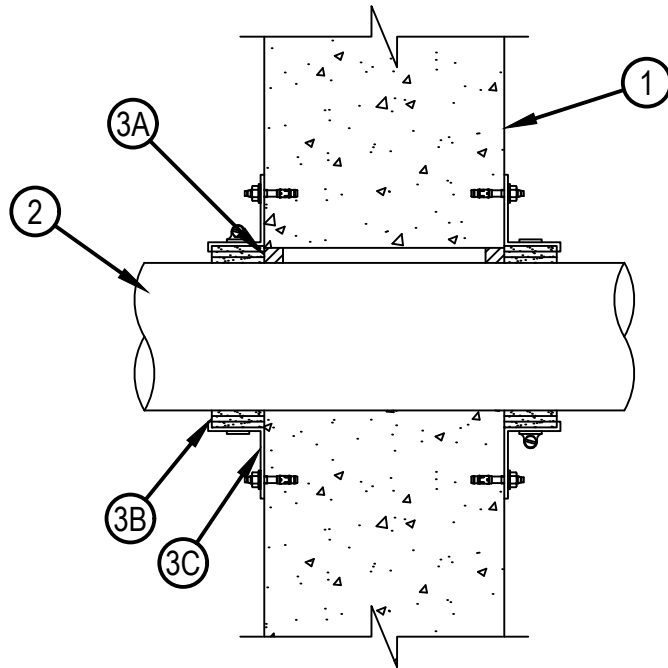
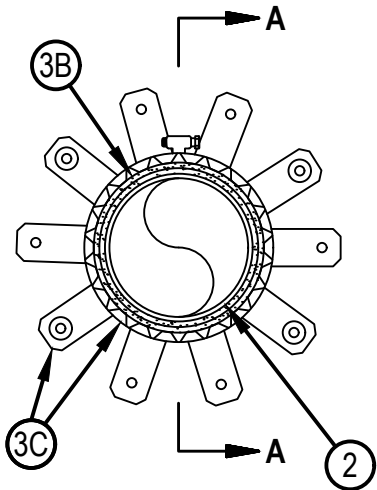




Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. W-J-2218
F Rating — 2 Hr
T Ratings — 1-1/2 and 2 Hr (See Item 2)

WJ 2218



SECTION A-A

1. Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete. Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 9 in. (229 mm).

See Concrete Blocks (CAZT) category in the Fire Resistance Directory for names of manufacturers.

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. 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.
- F. Polypropylene (PP-RTC) 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.
- G. Polypropylene (PP-RTC) 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.
- H. Polypropylene (PP-RTC) 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.

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



Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of
Underwriters Laboratories, Inc.
August 02, 2021

System No. W-J-2218

WJ 2218

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

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 expansion 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.



Hilti Firestop Systems

Reproduced by HILTI, Inc. Courtesy of
Underwriters Laboratories, Inc.
August 02, 2021