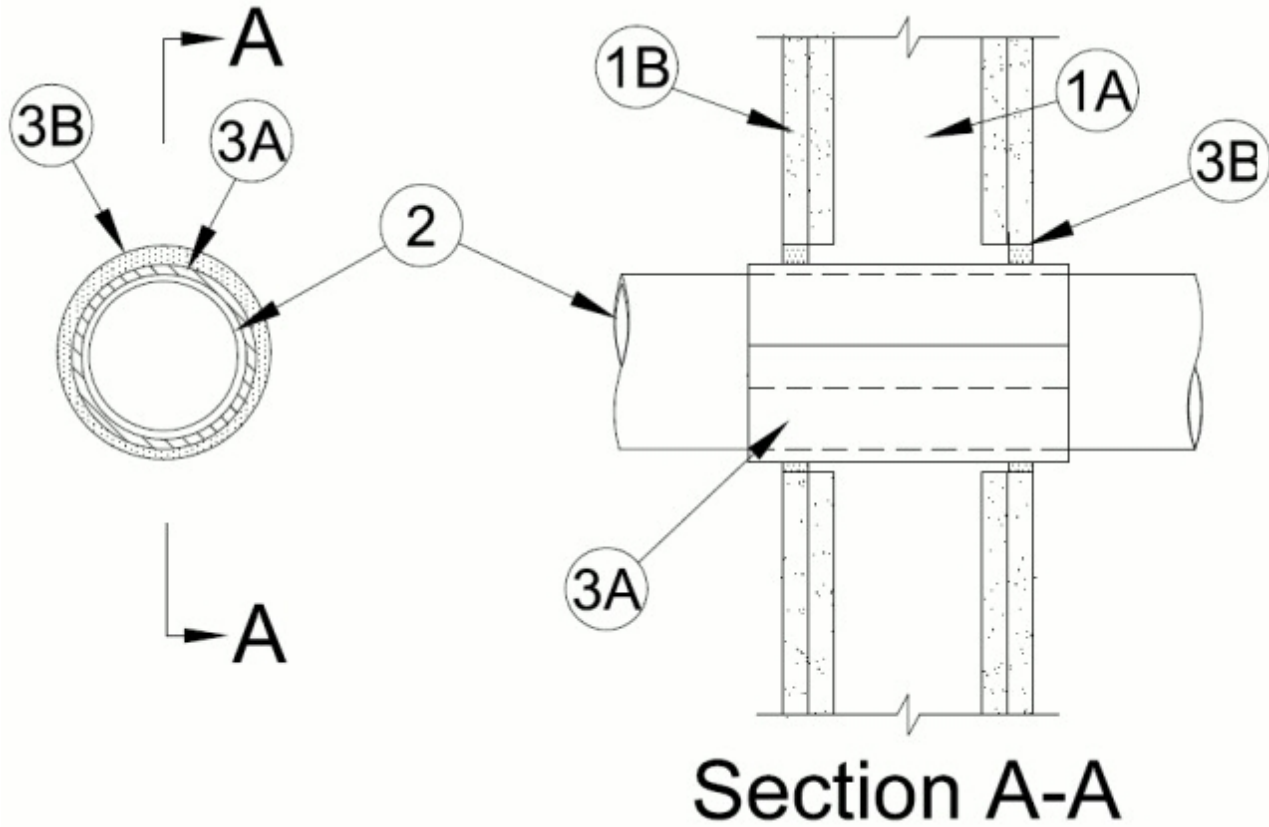




### System No. W-L-2594

August 28, 2014

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 1 and 2 Hr (See Item 1)	F Ratings — 1 and 2 Hr (See Item 1)
T Ratings — 0 and 1/4 Hr (See Item 1)	FT Ratings — 0 and 1/4 Hr (See Item 1)
	FH Ratings — 1 and 2 Hr (See Item 1)
	FTH Ratings — 0 and 1/4 Hr (See Item 1)



System tested with a pressure differential of 2.5 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side.

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 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 3-5/8 in. (92 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board\*** — 5/8 in. (16 mm) thick with square or tapered edges, The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be as specified in the individual U300, U400, V400 or W400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 5 in. (127 mm).

**The hourly F and FH Rating of the firestop system is dependent on the hourly fire rating of the wall assembly in which it is installed. The hourly T, FT and FTH Ratings of the firestop system are 0 hr for 1 hr rated walls and 1/4 hr for 2 hr rated walls.**

**2. Through Penetrant** — One nonmetallic tube to be installed eccentrically or concentrically within the firestop system. Annular space to be min 1/4 in. (6 mm) to max 5/8 in. (16 mm). Tube to be rigidly supported on both sides of the wall assembly. The following types and sizes of nonmetallic tubes may be used:

**A. Crosslinked polyethylene (PEX) Tubing** — Nom 3 in. (76 mm) diam (or smaller) UPONOR - WIRSBO PEX-a SDR 9 tube for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

**B. Crosslinked polyethylene (PEX) Tubing** — Nom 4 in. (102 mm) diam (or smaller) UPONOR - WIRSBO hePEX crosslinked polyethylene (PEX) pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

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

**A. Firestop Device** — Galv steel sleeve lined with an intumescent material. Device to be installed in accordance with the manufacturer's installation instructions along with the following. Device to be wrapped around outer circumference of through penetrant and installed through the annular space of the opening, centered within the wall and extending equally beyond each surface of the wall. The device shall be temporarily secured in place by means of electrical tape, duct tape, fiberglass tape, hose clamps or tie wires around the outer circumference of through penetrant so that the sealant (Item 3B) can be installed.

**RECTORSEAL** — FlameSafe® Intumescent Sleeve 234, Metacaulk Intumescent Sleeve 234 or Biostop Intumescent Sleeve 234

**B. Fill, Void or Cavity Material\* — Sealant** — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus between sleeve and periphery of opening, flush with both surfaces of wall. As an option, after installation of the sealant, the device temporary fasteners (tape, hose clamps etc) referenced in Item 3A can be removed.

**RECTORSEAL** — Metacaulk 1000, Metacaulk 150+, Biostop 500+, Biostop 150+, FlameSafe 1900

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