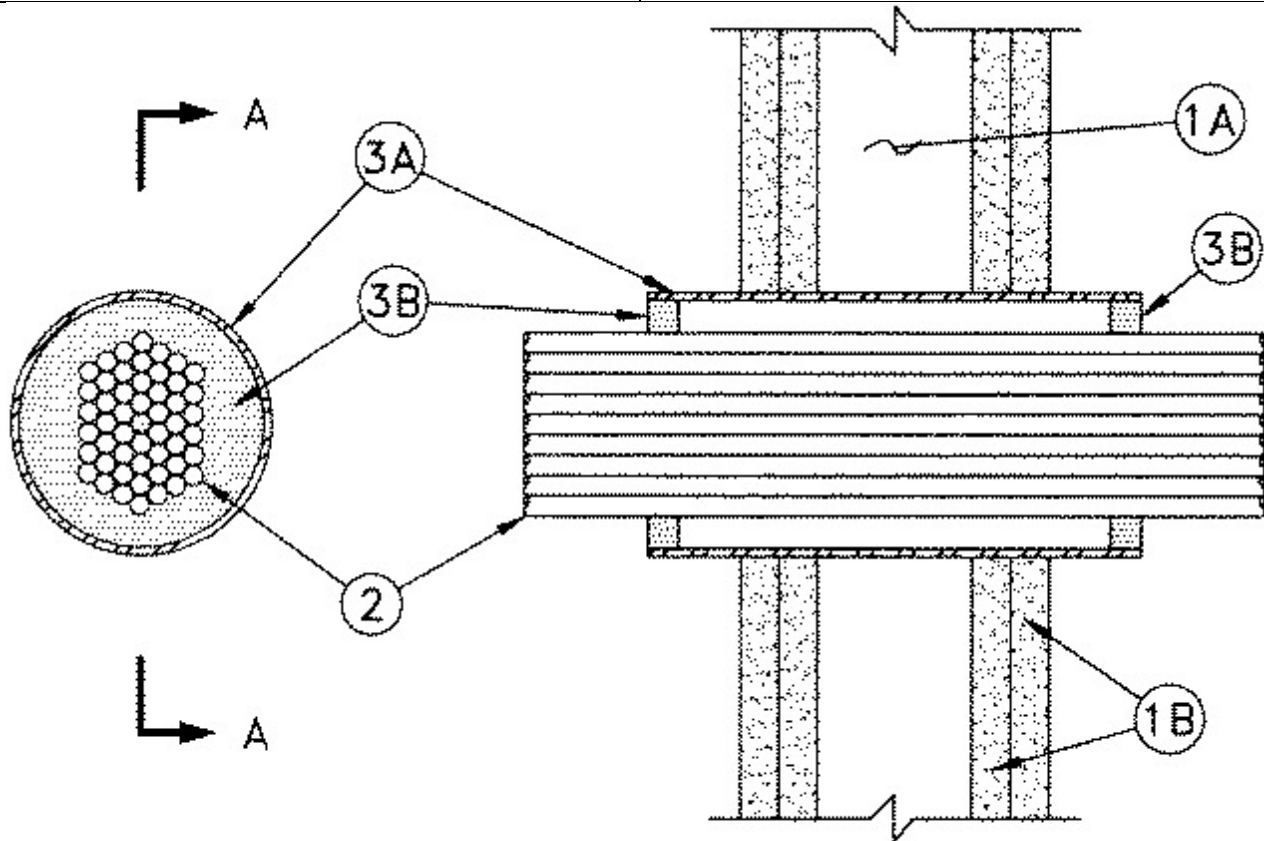




### System No. W-L-3199

July 16, 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 - 1/2 and 1 Hr (See Item 1)	FT Ratings - 1/2 and 1 Hr (See Item 1)
L Rating At Ambient - Less Than 1 CFM/sq ft	FH Ratings - 1 and 2 Hr (See Item 1)
L Rating At 400 F - 1.4 CFM/sq ft	FTH Ratings - 1/2 and 1 Hr (See Item 1)
	L Rating At Ambient - Less Than 1 CFM/sq ft
	L Rating At 400 F - 1.4 CFM/sq ft



**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 in the individual U300, U400 or V400 Series Wall and Partition Designs 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, 4 ft (1.2 m) wide 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 or U400 Series Design in the UL Fire Resistance Directory. Max diam of opening is 4-1/2 in. (114 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 1/2 hr and 1 hr for 1 and 2 hr rated assemblies, respectively.**

**2. Cables** — Aggregate cross-sectional area of cables in opening to be max 18.6 percent of the cross-sectional area of the opening. Cables to be bundled together and rigidly supported on both sides of wall assembly. The annular space between cable bundle and edge of metallic sleeve (Item 3A) shall be min 0 in. (point contact) to max 2 in. (51 mm). The following types and sizes of cables may be used:

A. Max 7/C No. 16 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation and XLPE or PVC jacket.

B. Max 4 pairs No. 24 AWG (or smaller) copper conductor data cables with Hylar insulation and jacket.

C. Max 2/C No. 12 AWG (or smaller) cables with PVC insulation and jacket.

D. Max 62.5/125 micron fibre optic cables with PVC insulation and jacket.

E. Type RG59/U coaxial cables with polyethylene (PE) insulation and PVC jacket.

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

A. **Metallic Sleeve** — Nom 4 in. (102 mm) diam (or smaller) steel, iron, or EMT sleeve with 0.083 in. (2.1 mm) wall thickness (or thicker), tightly fitted into wall opening. Length of sleeve to be equal to thickness of wall plus 2 in. (51 mm) such that, when installed, the ends of the sleeve project 1 in. (25 mm) beyond each surface of the wall.

B. **Fill, Void or Cavity Material\* - Sealant** — Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with ends of steel sleeve. Fill material to be forced into interstices of cable group to seal any voids on both surfaces of wall. A min 3/8 in. (10 mm) bead of the sealant shall be applied at the interfaces of the sleeve and both wall surfaces.

**RECTORSEAL** — FlameSafe® FS900+, Metacaulk MC 150+, Biostop BF 150+

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