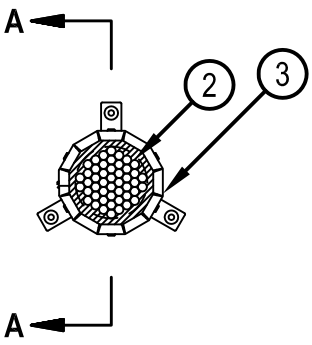
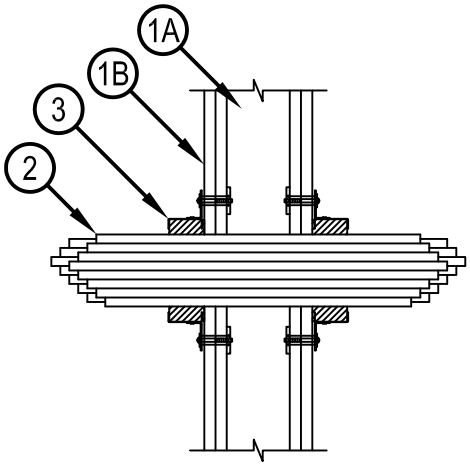
System No. W-L-3396

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

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, 1 and 2 Hr (See Items 2 and 3)	FT Ratings - 0, 1 and 2 Hr (See Items 2 and 3)
L Rating At Ambient - See Item 3	FH Ratings - 1 and 2 Hr (See Item 1)
L Rating At 400F - See Item 3	FTH Ratings - 0, 1 and 2 Hr (See Items 2 and 3)
	L Rating At Ambient - See Item 3
	L Rating At 400F - See Item 3





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 described within the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall incorporate the following construction features:
   A. Studs — Wall framing shall 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 3-1/2 in. (89 mm) wide and spaced max 24 in. (610 mm) OC.
   B. Gypsum Board* — Nom 5/8 in. (16 mm) thick gypsum board as specified in the individual Wall and Partition Design. Opening in gypsum board to be max 4 in. (102 mm) diam.
   The hourly F and FH Ratings of the firestop system are dependent upon the hourly rating of the wall in which it is installed.

1A. Sleeve — (Not Shown, Optional) - Nom 4 in. (102 mm) diam (or smaller) sleeve friction fit into wall opening, flush with both wall surfaces. The following types of sleeves may be used: Schedule 5 (or heavier) steel pipe, min 28 ga steel sleeve, or Schedule 40 solid or cellular core polyvinyl chloride (PVC).

2. Cables — Cables may be installed within opening for a 0 to 100 percent visual fill. When PVC sleeve (Item 1A) is used, the aggregate cross-sectional area of cable in opening to be max 45 percent of the cross-sectional area of the opening. Cables to be tightly bundled and rigidly supported on both sides of wall assembly. Any combination of the following types of cables may be used:
   A. Max 100 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.
   B. Max 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.
   C. Max 4/0 AWG Type RHH ground cable.
   D. Max 4 pr No. 22 AWG Cat 5 or Cat 6 computer cables.
   E. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.
   F. Fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/2 in. (13 mm).
   G. Max 3/C No 12 AWG MC Cable.
   For opening with cables, when the hourly rating of the wall assembly is 1 hr, the T, FT and FTH Ratings are 0 hr. For opening with cables, when the hourly rating of the wall assembly is 2 hr, the T, FT and FTH Ratings are 1 hr.

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3. Firestop Device* — Firestop device consisting of a steel collar with plug to be centered over opening and mounted to face of gypsum board on both sides of wall. Each flange of collar is secured to wall with No. 10 by 1-1/2 in. (38 mm) steel laminating screw and min 9/16 in. (15 mm) diam steel washer through prepunched hole in flange. As an alternate, min 3/16 in. (4.8 mm) diam by 2-1/2 in. (64 mm) long steel toggle bolts in conjunction with min 9/16 in. (15 mm) diam steel washers may be used. For openings with cables, plug within collar cut to fit tightly around the cable bundle. For blank openings (no cables), the hourly F and FH Ratings of the firestop system are equal to the hourly rating of the wall in which it is installed.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CC 4" Firestop Cable Collar
L Ratings apply to blank the openings only per indicated in Table below.

Opening	CFM (per device)		CFM/Sq Ft Opening	
	Ambient	400F	Ambient	400F
Blank Opening Only (no cables)	Less Than 1	Less Than 1	Less Than 1	4
Max 100% visual fill with Cat 5 and/or Cat 6 cables	1.2	Less Than 1	13.2	8.9

4. Fill, Void or Cavity Material* (Optional, Not Shown) — Fill material applied to fill interstices between and around the cable bundle at both sides of wall.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant, CP 618 Putty

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