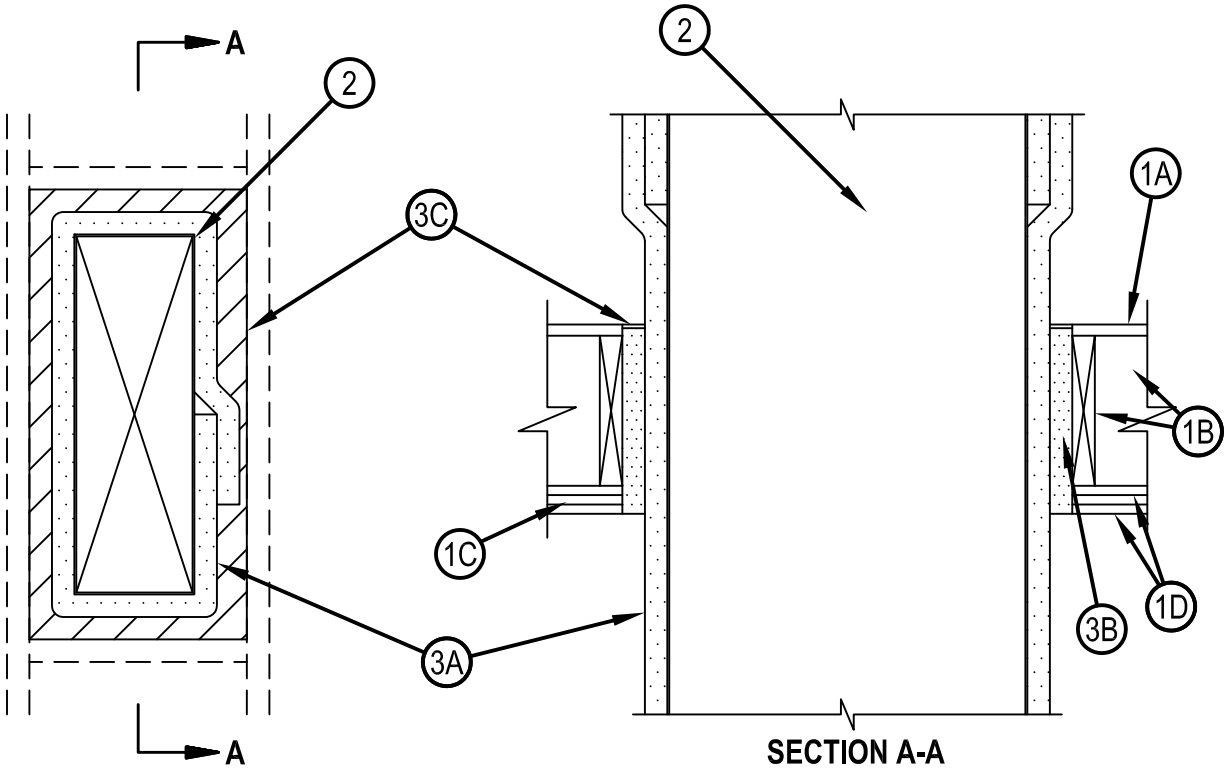
System No. F-C-7036

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 — 1 and 2 Hr (See Item 1)Hr	FT Ratings — 1 and 2 Hr (See Item 1)
	FH Ratings — 1 and 2 Hr (See Item 1)r
	FTH Ratings — 1 and 2 Hr (See Item 1)



SECTION A-A

1. Floor-Ceiling Assembly — The 1 hr fire rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. The 2 hr fire rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design No. L505, L511 or L536 in the UL Fire Resistance Directory. The general construction details of the floor-ceiling assembly are summarized below:

   A. Flooring System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture* as specified in the individual Floor-Ceiling Design. Max area of floor opening is 435 sq in. (0.28 m2) with a max dimension of 30 in. (762 mm).

   B. Wood Joists — For 1 hr fire rated floor-ceiling assemblies nom 10 in. (254 mm) deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members* with bridging as required and with ends firestopped. For 2 hr fire rated floor-ceiling assemblies, nom 2 by 10 in. (51 by 254 mm) lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped. Additional framing member to be installed to form a rectangular opening around the through penetrant.

   C. Furring Channels — In 2 hr fire rated assemblies, resilient galv steel furring installed perpendicular to wood joists between first and second layers of gypsum board (Item 1D). Furring channels spaced max 24 in. (610 mm) OC. When required as specified in the individual 1 hr fire rated Floor-Ceiling Design, resilient galv steel furring installed perpendicular to wood joists between gypsum board and wood joists. Furring channels spaced max 24 in. (610 mm) OC. If furring channels are used within the assembly, additional furring channels to be installed around the periphery of the opening.

   D. Gypsum Board* — Nom 4 ft (1.2 m) wide by 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. First layer of gypsum board secured to wood joists or furring channels as specified in the individual Floor-Ceiling Design. Second layer of gypsum board (2 hr fire rated assembly) screw-attached to furring channels as specified in the individual Floor-Ceiling Design. Max area of ceiling opening is 435 sq in. (0.28 m2) with a max dimension of 30 in. (762 mm).

   The hourly F and T Ratings of the firestop system are equal to the hourly fire rating of the floor-ceiling in which it is installed.

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2. Steel Duct — One steel duct to be centered within the firestop system. Steel duct to be rigidly supported on both sides of floor-ceiling assembly. The following types of steel ducts may be used:
   A. Steel Air Duct — Min 26 gauge (0.5 mm) galv steel duct having a max perimeter dimension of 63 in. (1.6 m) and a max individual dimension of 24 in. (610 mm).
   B. Steel Grease Duct — Min 16 gauge (1.5 mm) thick carbon steel duct having a max perimeter dimension of 63 in. (1.6 m) and a max individual dimension of 24 in. (610 mm).
3. Firestop System — The firestop system shall consist of the following:
   A. Duct Wrap Materials* — Nom 1-1/2 in. (38 mm) thick blanket totally encapsulated within foil-scrim facers. The steel grease duct shall be wrapped with two layers of duct wrap installed in accordance with Grease Duct Assembly No. G-18. See Grease Duct Assemblies in Vol. 2 of the Fire Resistance Directory. The steel air duct shall be wrapped with one layer of duct wrap installed in accordance with Ventilation Assembly No. V-19. See Ventilation Duct Assemblies in Vol. 2 of the Fire Resistance Directory. The annular space between the insulated steel duct and the periphery of the opening shall be nom 1-1/2 in. (38 mm).
   THERMAL CERAMICS INC — FireMaster Fast Wrap+, FireMaster FastWrap XL, or Pyroscat Duct Wrap XL.
   B. Packing Material — Min 10-3/8 in. (264 mm) and 11-5/8 in. (295 mm) thickness of unfaced scrap duct wrap material compressed 50 percent into opening as a permanent form between the insulated steel duct and the periphery of the opening for 1 and 2 hr fire rated floor-ceiling assemblies, respectively. At point contact location between overlap of duct wrap material and floor-ceiling assembly, packing material shall be firmly packed to max extent possible on both sides of the floor-ceiling assembly. Packing material to be installed flush with bottom surface of ceiling and recessed from top surface of floor to accommodate the required thickness of fill material.
   C. Fill, Void or Cavity Material* — Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within annulus on top surface of floor. A min 1/4 in. (6 mm) diam bead of sealant shall be applied at the plywood floor/insulated steel duct interface on both surfaces of floor-ceiling assembly.
   EGS NELSON FIRESTOP — ES1399 or LBS3 Sealant
   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS ONE Sealant or FS-ONE MAX Intumescent Sealant
   RECTORSEAL — 835+ Sealant, FS 900+ Sealant, FS 1900 Sealant
   SPECIFIED TECHNOLOGIES INC — SpecSeal Series SSS Sealant, SpecSeal LC 150 Sealant, SpecSeal LCI Sealant or SpecSeal LE600 Sealant
   THERMAL CERAMICS INC — FireMaster Putty
   TREMCO INC — Fyre-Sil, TREMstop Acrylic or TREMstop Intumescent Acrylic Sealant, FyreCaulk or TREMstop IA+

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