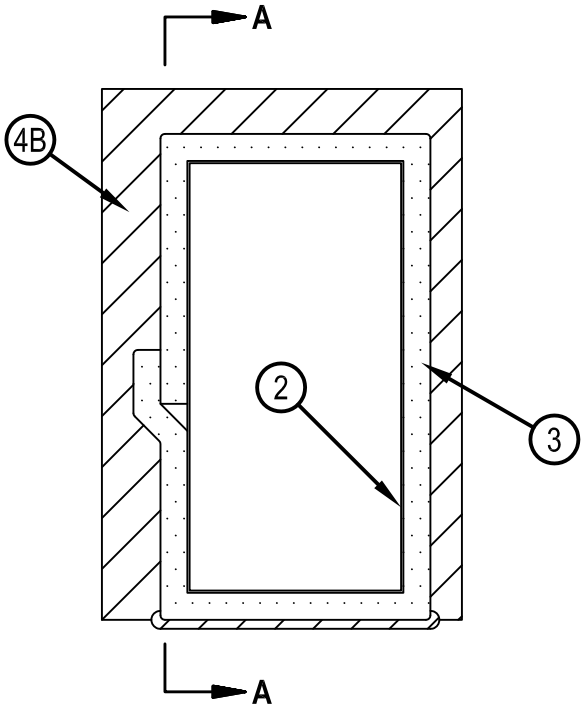
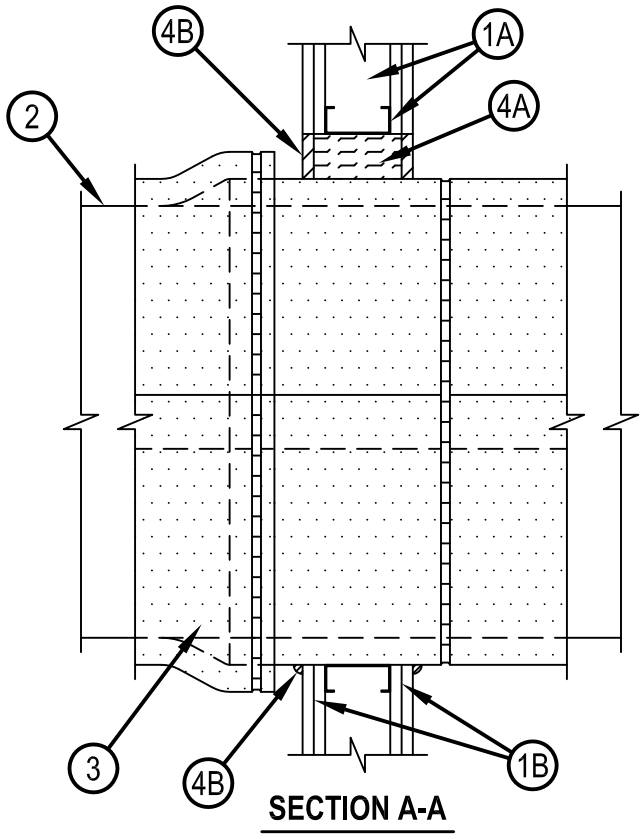
System No. W-L-7158

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 Items 1 and 3)	F Ratings - 1 and 2 Hr (See Items 1 and 3)
T Ratings - 1 and 2 Hr (See Items 1 and 3)	FT Ratings - 1 and 2 Hr (See Items 1 and 3)
	FH Ratings - 1 and 2 Hr (See Items 1 and 3)
	FTH Ratings - 1 and 2 Hr (See Items 1 and 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 in the individual U400, V400 or W400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:
   A. Studs — Wall framing shall consist of min 3-5/8 in. (92 mm) wide steel channel studs spaced max 24 in. (610 mm) OC. Additional 3-5/8 in. (92 mm) wide steel studs shall be used to completely frame the opening.
   B. Gypsum Board* — 5/8 in. (16 mm) thick, 4 ft (1.22 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 U400, V400 or W400 Series Design in the UL Fire Resistance Directory. Max area of opening is 640 in.2 (0.41 m2) with max dimensions of 32 in. (813 mm).
   The F, FH, FT, FTH and T Ratings of the firestop system are equal to the hourly rating of the wall assembly or the hourly rating of the grease duct or ventilation duct assembly (Item 3), whichever is less.
2. Through Penetrant — One max 24 by 12 in., 610 by 305 mm) No. 16 gauge (or heavier) steel air or grease duct to be installed within the firestop system. Duct to be rigidly supported on both sides of wall assembly.

System No. W-L-7158

3. Duct Wrap Materials* — Any UL Classified duct wrap material Classified in accordance with HNKT for Grease Duct Assemblies or HNLJ for Ventilation Duct Assemblies, as listed below. The thickness, type, density, number of layers and installation sequence shall conform to the individual requirements outlined within the applicable grease duct assembly or ventilation duct assembly and shall be installed in accordance with the manufacturer's installation instructions provided with the product. The annular space between the insulated air duct or grease duct and the periphery of the opening shall be a min of 0 in. (point contact) to a max of 2 in. (51 mm).

   The F, FH, FT, FTH and T Ratings of the firestop system are equal to the hourly rating of the wall assembly (Item 1) or the hourly rating of the grease duct or ventilation duct assembly, whichever is less.

   THERMAL CERAMICS INC — FireMaster FastWrap XL, Pyroscat Duct Wrap XL or FireMaster FastWrap+

   UNIFRAX I L L C — FyreWrap Duct Insulation, FIRESTOP BLANKET, FLAMESHIELD or FSB Duct Insulation

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

   A. Packing Material — Min 3-1/2 in. (89 mm) and 4-3/4 in. (121 mm) thickness of unfaced scrap duct wrap material or min 3 pcf (48 kg/m3) mineral wool batt insulation firmly packed into the opening as a permanent form for 1 and 2 hr rated walls, respectively. Packing material to be recessed from both surfaces of wall to accommodate the required thickness of fill material (Item 4B).

   B. Fill, Void or Cavity Material* — Sealant — Min 5/8 in. (16 mm) thickness of sealant applied within annulus, flush with both surfaces of wall. At point contact location between insulated grease or air duct and periphery of opening, a min 1/2 in. (13 mm) diam bead of sealant shall be applied at the gypsum board/insulated grease or air duct interface on both surfaces of the wall assembly.

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant

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