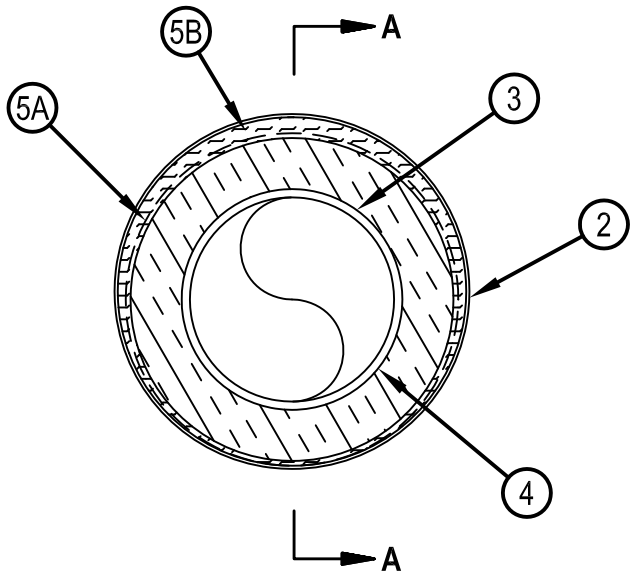
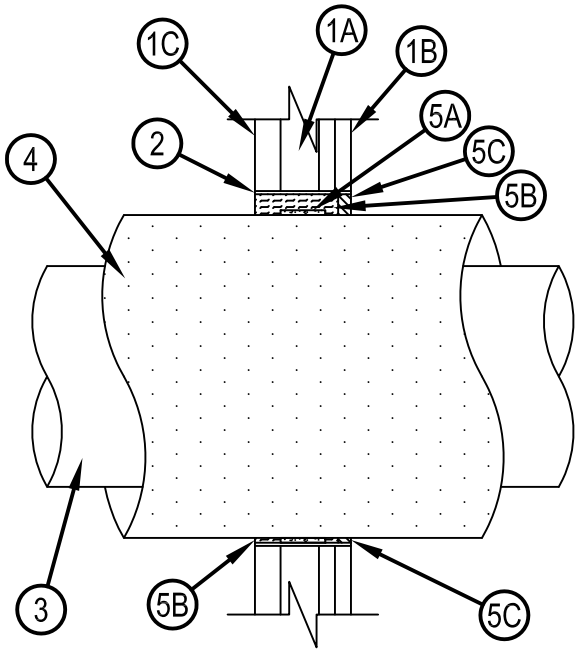
CANADA ONLY

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

System No. W-L-5010

F Ratings — 1 and 2 Hr (See Item 1)
FT Ratings - 0 and 1 Hr (See Item 4)
FH Rating — 0 Hr
FTH Rating — 0 Hr





SECTION A-A

1. Wall Assembly — The 1 or 2 hr fire-rated shaft wall assembly shall be constructed of the materials and in the manner specified in the individual U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
   A. Steel Studs — C-H or C-T shaped studs, 64 mm (2-1/2 in.) wide by 38 mm (1 1/2 in.) deep, spaced 610 mm (24 in.) OC.
   B. Gypsum Board* — 25 mm thick gypsum board liner panels, supplied in nom 610 mm widths and installed vertically as specified in the individual Wall and Partition Design. Max diam of opening is 356 mm (14 in.).
   C. Gypsum Board* — Min 13 mm (1/2 in.) thick, 1.22 m (4 ft) wide with square or tapered edges. The gypsum board type, thickness, number of layers, fastener type and sheet orientation shall be Wall and Partition Design. Max diam of opening is 356 mm (14 in.). The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.
2. Steel Sleeve — Cylindrical sleeve fabricated from nom 0.49 mm (0.019 in.) thick (or lighter) galv sheet steel and having a min 25 mm (1 in.) lap along the longitudinal seam. Length of steel sleeve to be equal to thickness of wall such that, when installed, the ends of the sleeve will be flush with each wall surface. Sleeve installed by coiling the sheet steel to a diam smaller than the max diam through opening, inserting the coil through the opening and releasing the coil to let it uncoil against the circular cutouts in the gypsum board layers.
3. Through Penetrants — One metallic pipe or tube installed within the firestop system. Pipe or tube to be rigidly supported on both sides of wall assembly. The following types of metallic pipes or tubes may be used:
   A. Steel Pipe — Nom 203 mm (8 in.) diam (or smaller) Schedule 10 (or heavier) steel pipe.
   B. Iron Pipe — Nom 203 mm (8 in.)diam (or smaller) cast or ductile iron pipe.
   C. Copper Tubing — Nom 51 mm (2 in.) diam (or smaller) Type L (or heavier) copper tubing.
   D. Copper Pipe — Nom 51 mm (2 in.) diam (or smaller) Regular (or heavier) copper pipe.

4. Pipe Covering — Max 51 mm (2 in.) thick hollow cylindrical heavy density (min 3.5 pcf or 56 kg/m3) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with product. Annular space between the pipe covering and sleeve shall be min 5 mm (3/16 in.) to max 21 mm (13/16 in.).

   See Pipe and Equipment Covering-Materials (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Value of 25 or less and a smoke Developed Value of 50 or less may be used.

   The T Rating of the firestop system is dependent upon the thickness of the pipe covering. If the nom thickness of the pipe covering is 51 mm, (2 in.) the T Rating is 1 hr. If the nominal thickness of the pipe covering is less than 51 mm (2 in.), the T Rating is 0 hr.

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

   A. Fill, Void or Cavity Materials* — Wrap Strip — Nom 5 mm (3/16 in.) thick intumescent material supplied in 45 mm (1 3/4 in.) wide strips. One layer of wrap strip tightly wrapped around pipe covering and held in position using tape. Wrap strip to be recessed from finished surface of wall (Item 1C) approx 19 mm (3/4 in.) such that the leading edge of wrap strip is flush with inner surface of gypsum board liner panel (Item 1B).

   HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 648E Wrap Strip

   B. Packing Material — Min 70 mm (2—3/4 in.) and 83 mm (3 1/4 in.) thickness of min 64 kg/m3 (4 pcf) mineral wool batt insulation for 1 and 2 hr fire rated wall assemblies, respectively. Packing material firmly packed into opening as a permanent form and to be recessed from finished surface of wall to accommodate the required thickness of fill material.

   C. Fill, Void or Cavity Materials* - Sealant — Min 13 mm (1/2 in.) thickness of caulk applied within annulus, flush with finished surface of 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.