



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

## System No. W-L-5011

F Rating - 1 and 2 Hr (See Item 1)

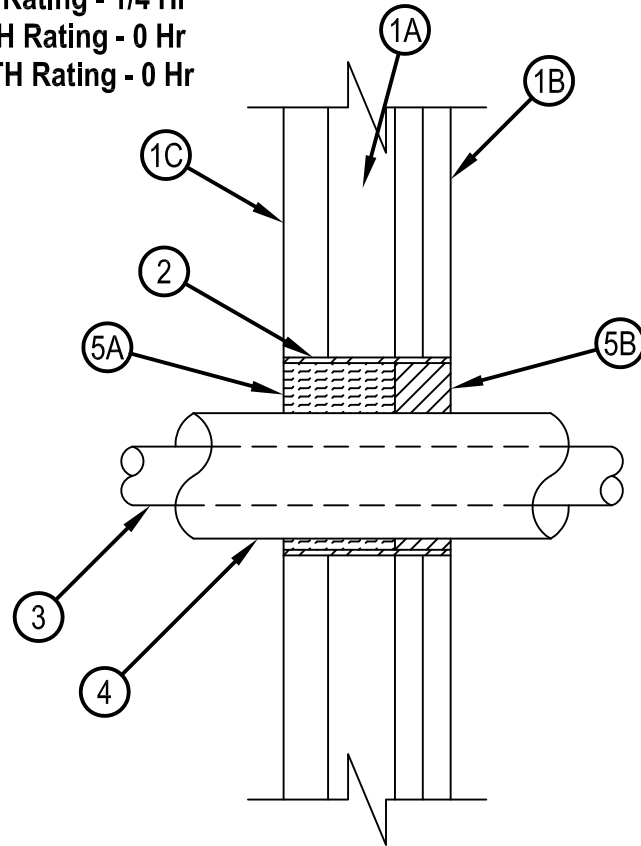
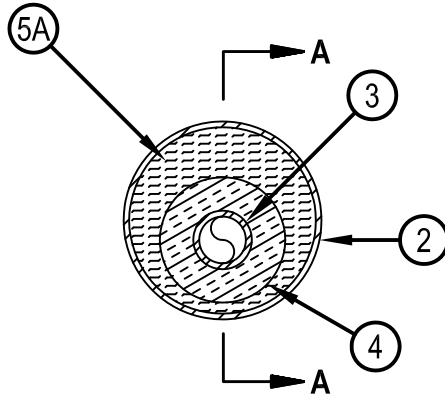
T Rating - 1/4 Hr

FH Rating - 0 Hr

FTH Rating - 0 Hr



WL 5011



**SECTION A-A**

- 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:
  - 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.
  - Gypsum Board\* — Nom 25 mm (1 in.) thick gypsum board liner panels, supplied in nom 610 mm (24 in.) widths and installed vertically as specified in the individual Wall and Partition Design. Max diam of opening is 102 mm (4 in.).
  - 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 as specified in the individual U400 or V400 Series Design. Max diam of opening is 102 mm (4 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.
- 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.
- 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:
  - Steel Pipe — Nom 25 mm (1 in.) diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - Iron Pipe — Nom 25 mm (1 in.) diam (or smaller) cast or ductile iron pipe.
  - Copper Tubing — Nom 25 mm (1 in.) diam (or smaller) Type L (or heavier) copper tubing.
  - Copper Pipe — Nom 25 mm (1 in.) diam (or smaller) Regular (or heavier) copper pipe.



**Hilti Firestop Systems**

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.

January 27, 2015

## System No. W-L-5011



WL5011

4. Tube Insulation+ — Max 19 mm (3/4 in.) thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. The annular space between the tube insulation and sleeve shall be min 6 mm (1/4 in.) to max 29 mm (1-1/8 in.).  
See Plastics+ (QMFZ2) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.
5. Firestop System — The firestop system shall consist of the following:
  - A. Packing Material — Min 51 mm (2 in.) and 64 mm (2-1/2 in.) thickness of min 64 kg/m<sup>3</sup> (4 pcf) mineral wool batt insulation for 1 and 2 hr fire rated wall assemblies, respectively. Packing material to be 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.
  - B. Fill, Void or Cavity Materials\* - Sealant — Min 25 mm (1 in.) thickness of sealant 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.

+Bearing the UL Listing Mark



**Hilti Firestop Systems**

Reproduced by HILTI, Inc. Courtesy of  
Underwriters Laboratories, Inc.  
January 27, 2015