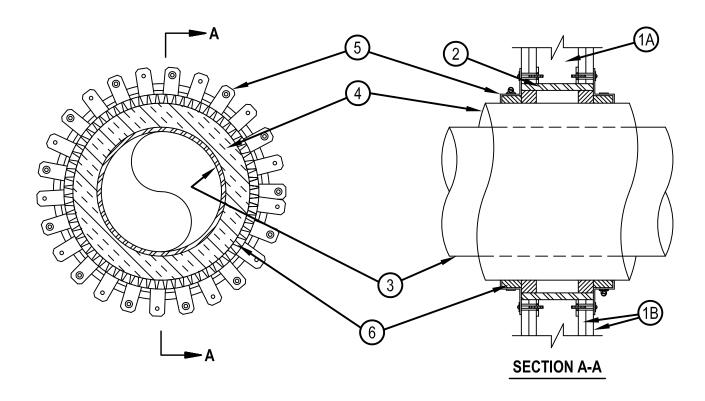


System No. W-L-5025

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 and 2 Hr (See Items 1 and 6)	F Rating — 1 and 2 Hr (See Items 1 and 6)
T Rating — 0 and 3/4 Hr (See Item 1)	FT Rating — 0 and 3/4 Hr (See Item 1)
L Rating At Ambient — 4 CFM/sq ft	FH Rating — 1 and 2 Hr (See Items 1 and 6)
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 and 3/4 Hr (See Item 1)
W Rating — Class 1 (See Item 2B)	L Rating At Ambient — 4 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



- 1. Wall Assembly The 1 or 2 hr fire-rated gypsum wallboard/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300, U400, V400 or W400 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
 - A. Studs Wall framing may 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 16 in.(406 mm) OC. Steel studs to be min 2-1/2 in. (64 mm) wide and spaced max 24 in. (610 mm) OC.
 - B. Gypsum Board* 5/8 in. (16 mm) thick, 4 ft (122 cm) wide with square or tapered edges. The gypsum wallboard type, number of layers, fastener type and sheet orientation shall be as specified in the individual Wall and Partition Design. Max diam of opening is 14-1/2 in. (368 mm) for wood stud walls and 18 in. (457 mm) for steel stud walls.
 - The hourly F, FH Ratings of the firestop system are equal to the hourly fire rating of the wall assembly in which it is installed. The T, FT, FTH Ratings are 0 and 3/4 hr when installed in 1 and 2 hr rated walls, respectivley.
- 2. Metallic Sleeve (Optional) Nom 18 in. (457 mm) diam (or smaller) Schedule 40 (or thinner) steel pipe cast into wall assembly with joint compound and installed flush with wall surfaces.



System No. W-L-5025

- 3. Through-Penetrants One metallic pipe or tubing to be centered within the firestop system. Pipe or tubing to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubing may be used:
 - A. Steel Pipe Nom 10 in. (254 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
 - B. Copper Tubing Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing.
 - C. Copper Pipe Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.
- 4. Pipe Covering* Nom 2 in. (51 mm) 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 the product. A nom annular space of 1-1/8 in.(29 mm) is required within the firestop system.
 - See Pipe and Equipment Covering Materials (BRGU) category in the Building Material Directory for the names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.
- 5. Steel Collar Collar fabricated from precut 0.017 in. (0.43 mm) thick (28 MSG) galv sheet steel available from the sealant manufacturer. Collar shall be nom 2 in. (51 mm) deep with min 1-1/4 in. (32 mm) wide by 2 in. (51 mm) long anchor tabs for securement to wall surface. Retainer tabs, 1/4 in. (6 mm) wide by 3/4 in. (19 mm) long and located opposite the anchor tabs are folded 90 degrees toward pipe surface to maintain the annular space around the pipe and to retain the fill material. Collar secured to surface of wall with 1/4 in. (6 mm) toggle bolts. A nom 1/2 in. (13 mm) wide stainless steel hose clamp was secured to each of the collars at mid-depth.
- 6. Fill, Void or Cavity Material* Sealant In 1 hr fire rated assemblies, min 5/8 in. (16 mm) thickness of fill material applied within the annulus. In 2 hr fire rated assemblies, min 1-1/4 in. (32 mm) thickness of fill material applied within the annulus. Additional fill material applied to completely fill the collars.

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.

