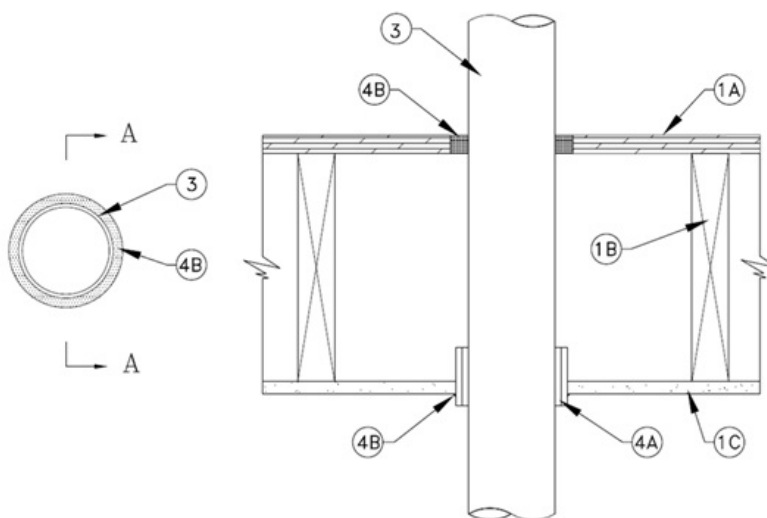


ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 1 Hr	F Rating — 1 Hr
T Ratings — 0 Hr	FT Ratings — 0
L Rating at Ambient — Less Than 1 CFM/sq ft	FH Rating — 1 Hr
L Rating at 400°F — Less Than 1 CFM/sq ft	FTH Ratings — 0
	L Rating at Ambient — Less Than 5.1 L/s/m ²
	L Rating At 204°C — Less Than 5.1 L/s/m ²



SECTION A-A

System tested with a pressure differential of 50 Pa between the exposed and the unexposed surfaces with the higher pressure on the exposed side. (See Table 1)

1. Floor - Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Designs in the UL Fire Resistance Directory, as 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 diam of floor opening is 5-1/2 in. (140 mm).

B. Wood Joists — 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.

C. Gypsum Board* — Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Wallboard secured to joists as specified in the individual Floor-Ceiling Design. Max diam of ceiling opening is 5-1/2 in. (140 mm).

2. Chase Wall (Optional — Not shown) — The through penetrant (Item 3) shall be routed through a 1 hr fire-rated or non-rated single, double or staggered wood stud/gypsum board chase wall constructed of the materials and Partition design in the UL Fire Resistance Directory and shall include the following construction features:

A. Studs — Nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber studs.

B. Sole Plate — Nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) lumber plates, tightly butted.

C. Top Plate — The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm) or nom 2 by 6 in. (51 by 152 mm) or two sets of parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max. diam of opening is 5-1/2 in. (140 mm). Diam of opening in top plate to be 1/2 in. (13 mm) larger than outside diam of pipe.

3. Through Penetrants — One nonmetallic pipe to be installed within the firestop system. Pipe to be rigidly supported on both sides of floor-ceiling assembly. Annular space within the firestop system is dependent upon the max. diam of penetrant as shown in Tabel 1. The following types and sizes of nonmetallic pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 4 in. (102 mm) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Polyvinyl Chloride-XFR (PVC-XFR) Pipe — Nom 4 in. (102 mm) Schedule 40 solid or cellular core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

D. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 4 in. (102 mm) diam (or smaller) SDR13.5 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

E. Rigid Nonmetallic Conduit+ (RNC) — Nom 4 in. (102 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

F. Electrical Nonmetallic Tubing+ (ENT) — Nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

G. Crosslinked Polyethylene (PEX) tubing — Nom 2 in. (51 mm) diam (or smaller) SDR 9 tube used for closed (process or supply) or vented (drain, waste or vent) piping systems, with only [Metacaulk 1000 caulk](#) (Item 4B). The annular space between pipe and periphery of opening shall be min 0 in. (point contact) to max 7/8 in. (22 mm).

Note: When chase wall is constructed of nom 2 by 4 in. (51 by 102 mm) studs, through penetrants are restricted to nom 2 in. (51 mm) diam (or smaller).

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

A. Fill, Void or Cavity Material* — Joint Strip — Nom 2 mm (1/16 in.) thick by 76 mm (3 in.) wide intumescent joint strip tightly wrapped continuously around the outer circumference of the pipe and held in place with tape. Joint strip slid into the annular space with the bottom edge of the joint strip extending 1/2 in. (13 mm) below gypsum board ceiling.

RECTORSEAL — [Metacaulk Joint Strip](#)

B. Fill, Void or Cavity Material* — Caulk — Min 3/4 in. (19 mm) thickness of fill material applied within annulus, flush with top surface of floor. Min 1/4 in. (6.3 mm) thickness of fill material applied at the interface between the Joint strip (4A) and Gypsum board (1C)

On Penetrant G. Min 5/8 in. (16 mm) thickness of fill material — [Metacaulk 1000](#) applied within annulus on top surface of floor. Min 5/8 in. (16 mm) thickness of fill material — [Metacaulk 1000](#) applied within annulus on bottom surface of ceiling or bottom top plate.

RECTORSEAL — [Metacaulk 1000](#), [Metacaulk 150+](#)

Table 1

Penetrant Item	Nom Diam of Pipe, in. (mm)	No. of layers	Min Annular Space, in. (mm)	Max Annular Space, in. (mm)	Max Opening Diam, in. (mm)
A, B, C, D, E	4 (102)	4	3/8 (10)	3/4 (19)	5-1/2 (140)
A, B, C, D, E, F	3 (76)	2	1/4 (6)	1/4 (6)	4 (102)

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