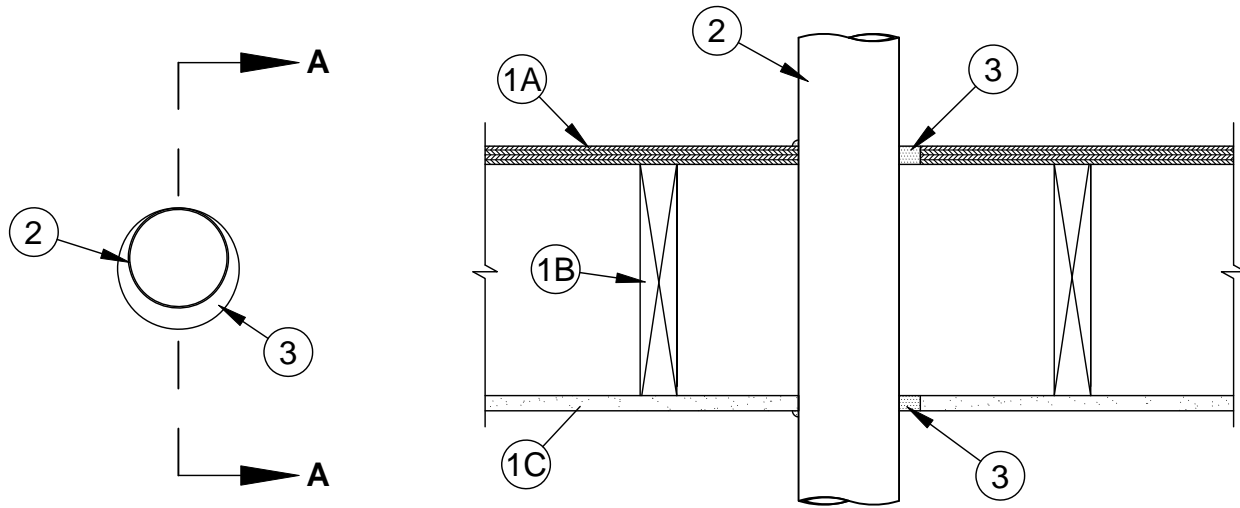




## System No. F-C-1074

F Ratings - 1 Hr and 2 Hr (See Item 1)  
 T Ratings - 1/4, 1/2 and 1 Hr (See Item 2)  
 L Rating At Ambient - Less Than 1 CFM/sq ft  
 L Rating At 400 F - Less Than 1 CFM/sq ft



### Section A-A

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. The 2 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in Design Nos. L505, L511 or L536 in the UL Fire Resistance Directory. **The F Rating of the firestop system is equal to the fire rating of the floor-ceiling assembly.** The general construction features of the floor assembly are 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. Diam of opening to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. greater than the diam of the pipe.
  - 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\*** - Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Diam of opening to be max 1 in. (25 mm) greater than diam of pipe.
  - D. **Furring Channel** - (Not Shown) - In 2 hr fire-rated assemblies, resilient galv steel furring channels installed perpendicular to wood joists between base and face layers of gypsum board (Item C). Furring channels spaced max 24 in. (610 mm) OC with additional short lengths of furring channel installed adjacent to and max 3 in. (76 mm) from two opposing sides of penetrant.
- 1A. **Chase Wall** - (Optional, Not Shown) - The through penetrant (Item 2) may be routed through a 1 or 2 hr fire rated single, double or staggered wood stud/gypsum board chase wall. Depth of chase wall stud cavity to be min 1 in. (25 mm) greater than the diameter of the through penetrant (Item 2). The chase wall shall be constructed of the materials and in the manner specified in the individual U300 Series Wall and Partition Designs in the UL Fire Resistance Directory and shall include the following construction features:
  - A. **Studs** - Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or double nom 2 by 4 in. lumber studs.
  - B. **Sole Plate** - Nom 2 by 4 in. (51 by 102 mm), 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Diam of opening is to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity is 5-1/2 in. (140 mm).



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- C. **Top Plate** - The double top plate shall consist of two nom 2 by 4 in. (51 by 102 mm), two 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. Diam of opening is to be max 1 in. (25 mm) larger than diam of pipe. As an alternate, the opening may be square-cut with a max dimension 1 in. (25 mm) greater than the diam of the pipe. Plates may be discontinuous over opening, terminating at two opposing edges of opening. Max length of discontinuity is 5-1/2 in. (140 mm).
- D. **Steel Plate** - When lumber plates are discontinuous, nom 1-1/2 in. (38 mm) wide No. 20 gauge (or heavier) galv steel plates shall be installed to connect discontinuous lumber plates and to provide a form for the fill material. Steel plates sized to lap 2 in. (51 mm) onto each discontinuous lumber plate and secured to lumber plates with steel screws or nails.
- E. **Gypsum Board\*** - Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

- 2. **Through Penetrant** - One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the opening. Annular space to be min 0 in. (point contact) to max 1 in. (0 to 25 mm). Penetrant to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipe, conduit or tubing may be used:
  - A. **Steel Pipe** - Nom 4 in. (102 mm) diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - B. **Iron Pipe** - Nom 4 in. (102 mm) diam (or smaller) cast or ductile iron pipe.
  - C. **Conduit** - Nom 4 in. (102 mm) diam (or smaller) steel conduit, steel electrical metallic tubing or flexible steel conduit.
  - D. **Copper Pipe or Tube** - Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe or Type L (or heavier) copper tube.

The T Rating is 1/4 hr when copper pipe or tube is used in 1 hr fire-rated assemblies. The T Rating is 1/2 hr when copper pipe of tube is used in 2 hr fire-rated assemblies. When steel pipe, iron pipe, steel conduit or flexible metal piping (Item 2A) is used, T Rating is 1 hr.

- 2A. **Through Penetrating Product\* - Flexible Metal Piping** - As an alternate to Item 2, one nom 2 in. (51 mm) diam (or smaller) steel flexible metal pipe to be installed either concentrically or eccentrically within the firestop system. Annular space to be min 0 in. (point contact) to max 1 in. (0 to 25 mm). Penetrant to be rigidly supported on both sides of floor-ceiling assembly.

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- 3. **Fill, Void or Cavity Material\* - Sealant** - Min 3/4 in. (19 mm) thickness of fill material applied within the annulus, flush with the top surface of the floor or sole plate. Min 5/8 in. (16 mm) thickness of fill material applied within the annulus, flush with bottom surface of ceiling or top plate. Min 1/4 in. (6 mm) diam bead of fill material applied at point contact location on the top surface of floor or sole plate and at the penetrant/ceiling or top plate interface.

**SPECIFIED TECHNOLOGIES INC** - SpecSeal LCI Sealant or Type WF300 Firestop Caulk

\*Bearing the UL Classification Mark



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