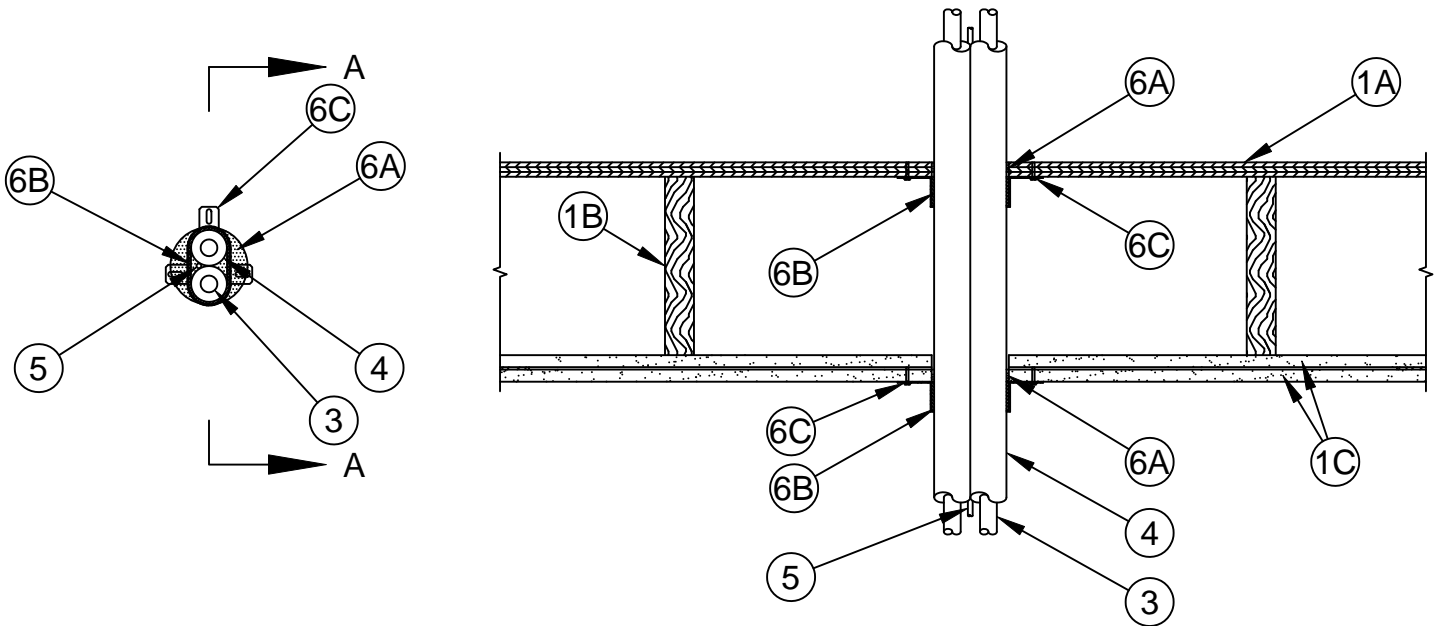




System No. F-C-8052

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings - 1 and 2 Hr (See Item 1)	F Rating - 1 and 2 Hr (See Item 1)
T Rating - 0 and 1-1/2 Hr (See Item 1)	FT Rating - 0 and 1-1/2 Hr (See Item 1)
	FH Rating - 1 and 2 Hr (See Item 1)
	FTH Rating - 0 and 1-1/2 Hr (See Item 1)



1. **Floor - Ceiling Assembly** - The 1 or 2 hr fire-rated solid or trussed lumber joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory. **The F and FH Ratings of the firestop system are equal to the fire rating of the floor-ceiling assembly. When the F rating is 1 hour the T, FT and FTH Ratings are 0 HR.** 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. Max diam of opening shall be 4 in. (102 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 fire stopped.
 - C. **Gypsum Board*** - Thickness, type, number of layers and fasteners as required in the individual Floor-Ceiling Design. Max diam of opening shall be 4 in. (102 mm).
 - D. **Furring Channel** - (Not Shown) (As required) Resilient galvanized steel furring installed in accordance with the manner specified in the individual L500 Series Designs in the Fire Resistance Directory.
2. **Chase Wall** - (Optional, Not Shown) - The through penetrants (Items 3 and 5) may be routed through a 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 penetrants. The chase wall 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), 2 by 8 in. (51 by 203 mm) or double nom 2 by 4 in. (51 by 102 mm) 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. Max diam of opening shall be 4 in. (102 mm).



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- C. **Top Plate** - The single or double top plate shall consist of one or two nom 2 by 4 in. (51 by 102 mm), or one or two nom 2 by 6 in. (51 by 152 mm), or one or two sets of parallel 2 by 4 in. (51 by 102 mm), lumber plates, tightly butted. Max diam of opening shall be 4 in. (102 mm).
- D. **Gypsum Board*** - Min. 1/2 in. thick rated or non-rated gypsum board.
3. **Through Penetrants** - A max of two pipes, conduits or tubing to be installed within the opening. The annular space between the pipes, conduits or tubing and the periphery of the opening shall be min 1/8 in. (3.2 mm) to max 2 in. (51 mm). The annular space between the pipes, conduits or tubing and other penetrants shall be a min 0 in. (point contact) to a max 1/8 in. (3.2 mm). Pipes, conduits or tubing to be rigidly supported on both sides of floor-ceiling assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
- A. **Steel Pipe** - Nom 3/4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
- B. **Iron Pipe** - Nom 3/4 in. diam (or smaller) cast or ductile iron pipe.
- C. **Conduit** - Nom 3/4 in. diam (or smaller) rigid steel conduit or steel electrical metallic tubing (EMT).
- D. **Copper Pipe** - Nom 3/4 in. diam (or smaller) regular (or heavier) copper pipe.
- E. **Copper Tube** - Nom 3/4 in. diam (or smaller) Type L (or heavier) copper tube
4. **Pipe Insulation - Foamed Plastic*** - Nom 1/2 in. (13 mm) thick polyethylene (PE) foamed plastic insulation. The insulation may be preassembled on a max of two pipes or tubes.
- See **Foamed Plastic (BRYX)** category in the Building Materials Directory for names of manufacturers. Any foamed plastic pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less may be used.
5. **Cables** - Max four pair No. 18 AWG (or smaller) copper conductor thermostat cable with PVC insulation and jacket. Cable shall be spaced 0 in. (point contact) to max 1/8 in. (3.2 mm) from insulated and bare penetrants. The annular space between the cable and the periphery of the opening shall be min 1/8 in. (3.2 mm) to max 2 in. (51 mm). Cable rigidly supported on both sides of floor-ceiling assembly.
6. **Firestop System** - The firestop system shall consist of the following:
- A. **Fill, Void or Cavity Material* - Sealant** - Min 1/2 in. (13 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. Additional fill material forced into grouped penetrant interstices to max extent possible.
SPECIFIED TECHNOLOGIES INC - SpecSeal Series SSS Sealant, SpecSeal LCI Sealant or Type WF300 Caulk
- B. **Fill, Void or Cavity Material* - Wrap Strip** - Nom 1/8 in. (3.2 mm), 3/16 in. (4.8 mm) or 1/4 in. (6.4 mm) thick intumescent material faced on both sides with a plastic film, supplied in 1-1/2 in. (38 mm) or 2 in. (51 mm) wide strips. One layer of wrap strip encircled around penetrant bundle with ends butted and held in place with masking tape. The wrap strips are wrapped around the through-penetrant on the underside of floor (Item 1A) or sole plate (Item 2B) and the underside of gypsum board ceiling (Item 1C) or top plate (Item 2C).
SPECIFIED TECHNOLOGIES INC - SpecSeal RED, RED2, BLU or BLU2 Wrap Strip
- C. **Steel Collar** - Collar fabricated from coils of precut 0.016 in. (0.4 mm) thick (30 MSG) galv sheet steel available from wrap strip manufacturer. Collar shall be nom 1-1/2 in. (38 mm) to 2 in. (51 mm) deep, dependent upon width of wrap strip, with min three 1 in. (25 mm) wide by 2 in. (51 mm) long anchor tabs for attachment to the floor-ceiling assembly. Retainer tabs, 3/4 in. (19 mm) wide tapering down to 1/4 in. (6 mm) wide and located opposite the anchor tabs, are folded 90 degrees toward through-penetrant surface to maintain the annular space around the through-penetrant and to retain the wrap strips. Steel collar wrapped around wrap strips and penetrant bundle with a 1 in. (25 mm) wide overlap along its perimeter joint. Steel collar tightened around wrap strips and penetrant bundle using min 1/2 in. (13 mm) wide by 0.028 in. (0.71 mm) thick stainless steel hose clamp installed at midheight of the collar or using three symmetrically located No. 8 steel sheet metal screws. Collar secured to subfloor (Item 1A), sole plate (Item 2B) or top plate (Item 2C) with min No. 8 by 3/4 in. (19 mm) long wood screws in conjunction with 1/4 in. (6 mm) by 1 in. (25 mm) diam steel fender washers. Collar secured to finished gypsum board ceiling (Item 1C) with 3/16 in. (4.8 mm) diam by 2 in. (51 mm) long steel toggle bolts in conjunction with 1/4 in. (6 mm) by 1-1/4 in. (32 mm) diam steel fender washers. Three fasteners symmetrically located, are required on the underside of floor or sole plate and the underside of gypsum board ceiling or top plate.

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



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