ONLINE CERTIFICATIONS DIRECTORY

# XHEZ.F-C-3089
# Through-penetration Firestop Systems

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## Design/System/Construction/Assembly Usage Disclaimer

- Authorities Having Jurisdiction should be consulted in all cases as to the particular requirements covering the installation and use of UL Listed or Classified products, equipment, system, devices, and materials.
- Authorities Having Jurisdiction should be consulted before construction.
- Fire resistance assemblies and products are developed by the design submitter and have been investigated by UL for compliance with applicable requirements. The published information cannot always address every construction nuance encountered in the field.
- When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.
- Only products which bear UL's Mark are considered as Classified, Listed, or Recognized.

## Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

## System No. F-C-3089

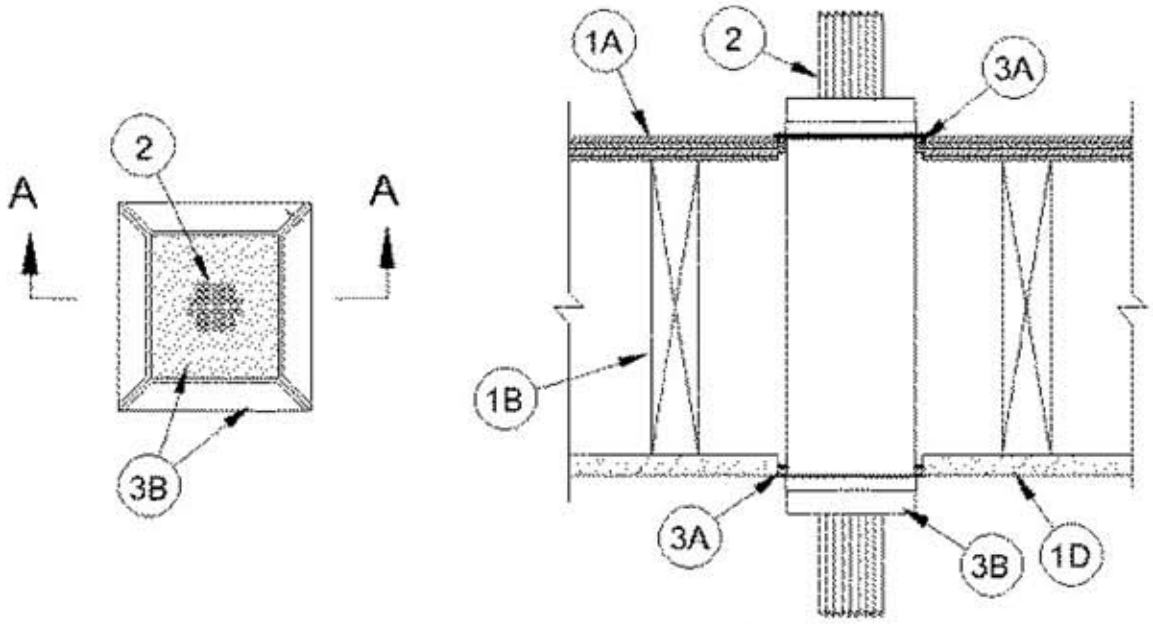
June 22, 2009

**F Rating — 1 Hr**

**T Rating — 1 Hr**

**L Rating At Ambient — 2 CFM**

**L Rating At 400 F — Less than 1 CFM**




Section A-A

1. **Floor Assembly —** The 1 hr fire-rated wood joist Floor-Ceiling assembly shall be constructed of the materials and in the manner described in the individual L500 Series Design in the UL Fire Resistance Directory and shall include the following construction features:

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 area of opening is 20-1/4 in.2 (130.6 $cm^2$) with a max dimension of 4-1/2 in. (114 mm).

B. **Joists —** Nom 2 by 10 in. (51 by 254 mm) deep lumber joists spaced 16 in. (406 mm) OC with nom 1 by 3 in. (25 by 76 mm) lumber bridging and with ends firestopped.

C. **Furring Channels —** (Not Shown) - Resilient galv steel furring channels installed perpendicular to wood joists (Item 1B) as required in the individual Floor-Ceiling Design.

D. **Gypsum Board* —** Nom 5/8 in. (16 mm) thick as specified in the individual Floor-Ceiling Design. Max area of opening is 20-1/4 in.2 (130.6 $cm^2$) with a max dimension of 4-1/2 in. (114 mm).

1.1 **Chase Wall —** (Optional, Not Shown) - The through penetrant (Item 2) may be routed through a 1 hr fire rated single, double or staggered wood stud/gypsum board chase wall 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 6 in. (51 by 152 mm), or double nom 2 by 4 in. (51 by 102 mm) lumber studs.

B. **Sole Plate —** Nom 2 by 6 in. (51 by 152 mm) or parallel 2 by 4 in. (51 by 102 mm) lumber plates, tightly butted. Max area of opening is 20-1/4 in.2 (130.6 cm2) with a max dimension of 4-1/2 in. (114 mm).

C. **Top Plate —** The double top plate shall consist of 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. Max area of opening is 20-1/4 in.2 (130.6 cm2) with a max dimension of 4-1/2 in. (114 mm).

D. **Gypsum Board* —** Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.

2. **Cables —** The loading area within the firestop device shall be a min of 0 percent (empty) to a max of 25 percent visual fill. Cable bundle to be centered within opening and rigidly supported on both sides of floor-ceiling assembly. Any combination of the following types and sizes of cables may be used:

A. Max 2 /C No. 18 AWG with polyvinyl chloride (PVC) insulation and jacket materials.

B. Max 4 pair No. 24 AWG telephone cable with PVC insulation and jacket materials.

C. Max RG/U (or smaller) coaxial cable with fluorinated ethylene insulation and jacket materials.

D. Max 3/C (with ground) No. 14 AWG (or smaller) nonmetallic sheathed (Romex) cable with PVC insulation and jacket materials.

E. Max 1/C No. 4 AWG copper conductor cable with insulation and jacket materials.

3. **Firestop System —** The details of the firestop system shall be as follows:

A. **Fill, Void or Cavity Material* - Sealant —** Min 1/2 in. (13 mm) thickness of fill material within the annulus, flush with top surface of floor or top of chase wall sole plate. Min 1/4 in. (6 mm) thickness of fill material within the annulus, flush with bottom surface of ceiling. Additional 1/4 in. (6 mm) thickness of fill material applied under mounting flange of firestop device (Item 3B) and lapping a min 1 in. (25 mm) on bottom surface of ceiling.

**ABESCO LTD** — CP 310 FR Acrylic Intumescent Caulk

B. **Firestop Device* —** Firestop device consists of a nominal 4 by 4 by 13 in. (102 by 102 by 330 mm) long galv hinged steel sleeve with an intumescent material lining. Firestop device to be centered within opening and installed in accordance with the accompanying installation instructions. The space between the firestop device and the periphery of the opening shall be nom 1/4 in. (6 mm). Firestop device secured in place by means of steel split mounting flanges sized to accommodate the firestop device. Steel split mounting flanges installed on both sides of floor-ceiling and secured together with steel set screws. The firestop device is to be installed with its ends projecting an equal distance beyond each surface of the floor -ceiling assembly. Nom 1 in. (25 mm) thick foam plugs sized to accommodate the cable bundle to be installed flush with each end of

device on both sides of floor-ceiling assembly.

**ABESCO LTD** — CT 120/E Cable Transit

*Bearing the UL Classification Mark

Last Updated on 2009-06-22

Questions? Notice of Disclaimer Page Top