ONLINE CERTIFICATIONS DIRECTORY

XHEZ.C-AJ-1539
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. C-AJ-1539

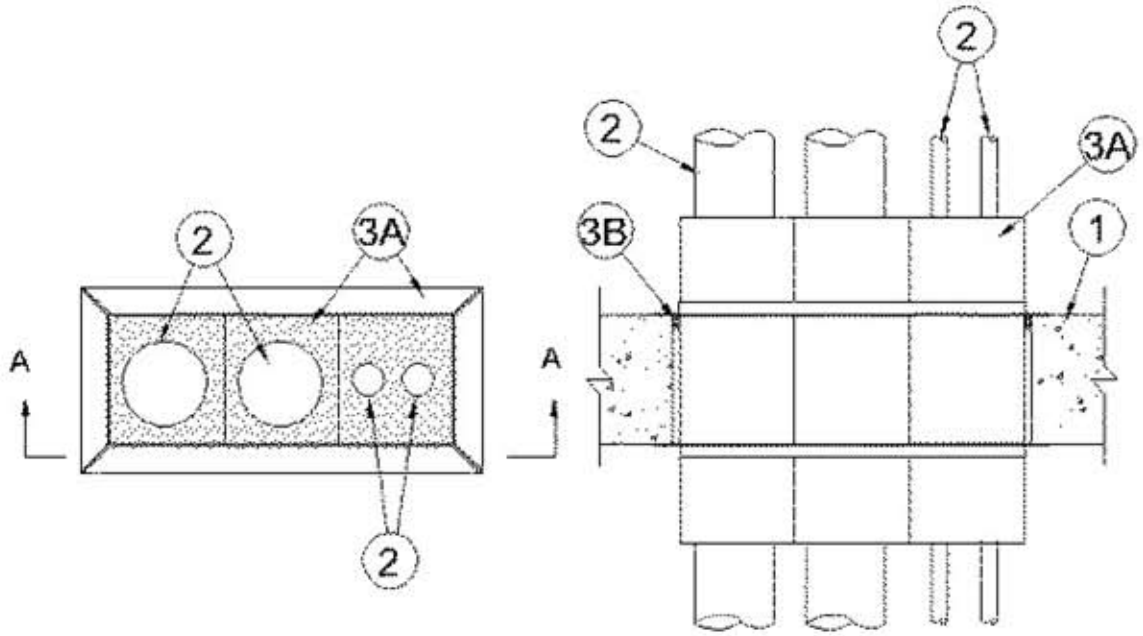
August 06, 2009

F Ratings — 2 and 3 Hr (See Items 1 and 2)

T Rating — 0 Hr

L Rating At Ambient — Less Than 1 CFM/Device

L Rating At 400 F — Less Than 1 CFM/Device



Section A-A

1. **Floor or Wall Assembly —** Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete required for 2 hr F Rating. Min 4-1/2 in. (114 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m^3) concrete required for 3 hr F Rating. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max area of opening is 56 in.2 (363 cm^2) with a max dimension of 12-1/2 in. (318 mm) for square devices. Max diam of opening is 2-1/2 in. (64 mm) for nom 2 in. (51 mm) round devices and 4-1/2 in. (114 mm) for nom 4 in. (102 mm) round devices.

See **Concrete Blocks** (CAZT) category in Fire Resistance Directory for names of manufacturers.

2. **Through Penetrant —** One or more metallic pipe, tubing or conduit may be installed concentrically or eccentrically within each firestop device (Item 3A). If multiple through penetrants are installed within the firestop device, a min 1/4 in. (6 mm) annular space is required between the through penetrants. Through penetrants to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of through penetrants may be used:

A. **Steel Pipe —** Nom 3 in. (76 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe —** Nom 3 in. (76 mm) diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing —** Nom 3 in. (76 mm) diam (or smaller) Type L (or heavier) copper tube.

D. **Copper Pipe —** Nom 3 in. (76 mm) diam (or smaller) Regular (or heavier) copper pipe.

E. **Conduit —** Nom 3 in. (76 mm) diam (or smaller) steel electric metallic tubing (EMT) or rigid steel conduit.

F. **Through-Penetrating Product* - Flexible Metal Piping —** Nom 1-1/4 in. (32 mm) diam (or smaller) steel flexible metal piping.

OMEGA FLEX INC — TracPipe Flexible Gas Piping

The F Rating of the firestop system is dependent upon the max nom diam of the through penetrant. If the max nom diam is nom 1-1/4 in. or less, the F Rating is 3 hr. If the max nom diam is greater than 1-1/2 in., the F Rating is 2 hr.

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

A. **Firestop Device* —** A max of three square firestop devices may be ganged together. As an alternate, one round device may be centered within a round opening. Each device consists of a nom 2-1/2 by 2-1/2 by 10 in. (64 by 64 by 254 mm), a nom 4 by 4 by 10 in. (102 by 102 by 254 mm), a nom 2 in. (51 mm) diam by 10 in. (254 mm) or a nom 4 in. (102 mm) diam by 10 in. painted steel transit incorporating internal intumescent material, foam plugs and mounting flanges. In nom 2 -1/2 by 2-1/2 in. (64 by 64 mm) devices, the max nom diam of the through penetrant (Item 2) shall not exceed 1-1/4 in. (32 mm). Firestop device to be centered within opening and installed with ends projecting an equal distance beyond each surface of the floor or wall assembly in accordance with the accompanying installation instructions. The annular space between the firestop device(s) and the periphery of the opening shall be 0 in. (point contact) to max 1/4 in. (6 mm). Firestop devices secured in place by means of fill material (Item 3B) and steel split mounting flanges sized to accommodate the firestop device. Steel split mounting flanges installed on both sides of floor or wall after installation of fill material and secured to together with supplied steel set screws. Nom 1-1/2 in. (38 mm) thick foam plugs cut to accommodate the through penetrant(s) and installed flush with each end of device on both sides of floor or wall assembly.

ABESCO LTD — CT120 or CT120/R Transit

B. **Fill, Void or Cavity Materials* - Caulk —** Min 1/8 in. (3 mm) thickness of fill material applied within the annulus, flush with top surface of floor or with both surfaces of wall. An additional bead of caulk shall be placed between ganged devices on both sides of floor or wall when multiple devices are used.

ABESCO LTD — CP310 FR Acrylic Intumescent Caulk

*Bearing the UL Classification Mark

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