ONLINE CERTIFICATIONS DIRECTORY

XHEZ.W-L-2452
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. W-L-2452

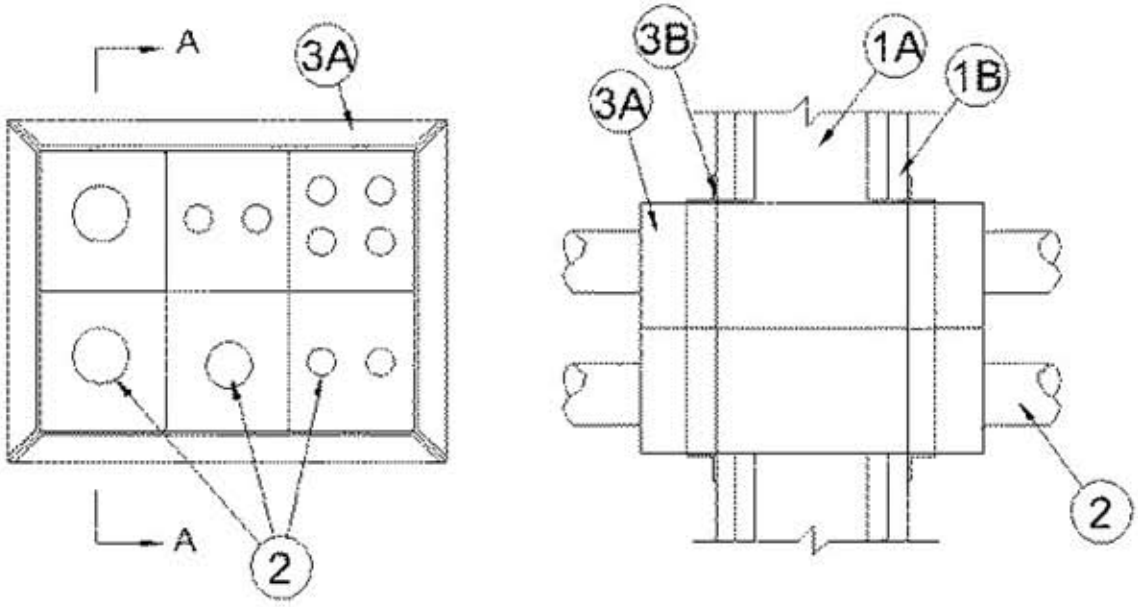
August 06, 2009

F Ratings — 1 or 2 Hr (See Item 1)

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. **Wall Assembly —** The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner described in the individual U300, U400 or V400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs —** Wall framing may consist of either wood or steel channel studs. Wood studs to consist of nom 2 by 4 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 3-1/2 in. (89 mm) wide spaced max 24 in. (610 mm) OC.

B. **Gypsum Board* —** Min 5/8 in. (16 mm) thick gypsum board. Max area of opening is 98.5 in.^{2} (635 cm^2) with a max dimension of is 12-1/8 in. (308 mm) for square devices. Max diam of opening is 4-1/2 in. (114 mm) for round devices.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants —** One or more nonmetallic pipes, conduits or tubes, as described in a single line item below, may be installed concentrically or eccentrically within each firestop device (Item 3A) without any limitations on annular space. If multiple through penetrations are installed within the firestop device, the through penetrants may be bundled together. Through penetrants to be rigidly supported on both sides of wall assembly. The following types and sizes of through penetrants may be used:

A. **Polyvinyl Chloride (PVC) Pipe —** One nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. **Rigid Nonmetallic Conduit+ —** One nom 2 in. (51 mm) diam (or smaller) Schedule 40 PVC conduit installed in accordance with the National Electrical Code (NFPA No. 70).

See **Rigid Nonmetallic, Schedule 40 and 80 PVC Conduit** (DZYR) category in the Electrical Construction Equipment Directory for names of manufacturers.

C. **Chlorinated Polyvinyl Chloride (CPVC) Pipe —** One nom 2 in. (51 mm) diam (or smaller) SDR11 CPVC pipe for use in closed (process or supply) piping systems.

D. **Crosslinked Polyethylene (PEX) Tubing —** One nom 2 in. (51 mm) diam (or smaller) SDR 9 PEX tubing for use in closed (process or supply) piping systems.

E. **Electrical Nonmetallic Tubing (ENT)+ —** Max four nom 1-1/4 in. (32 mm) diam (or smaller) ENT installed in accordance with the National Electrical Code (NFPA No. 70).

See **Electrical Nonmetallic Tubing** (FKHU) category in the Electrical Construction Equipment Directory for names of manufacturers.

F. **Optical Fiber/Communications/Signaling/Coaxial Cable Raceways+ —** Max four nom 1-1/4 in. (32 mm) diam (or smaller) plenum rated raceways installed in accordance with the National Electrical Code (NFPA No. 70).

See **Optical Fiber/Communications/Signaling/Coaxial Cable Raceway** (QAZM) category in the Electrical Construction Equipment Directory for names of manufacturers.

G. **Acrylonitrile Butadiene Styrene (ABS) Pipe —** One nom 2 in. (51 mm) diam (or smaller) Schedule 40 solid or cellular core ABS for use in closed (process or supply) or vented (drain, waste or vent) piping systems

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

A. **Firestop Device* —** A max of six 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 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. (51mm) diam 10 in. (254 mm) or a nom 4 in. (102 mm) diam by 10 in. (254 mm) powder coated steel transit incorporating internal intumescent material, foam plugs and mounting flanges. Firestop device(s) to be installed within opening with ends projecting an equal distance beyond each surface of wall assembly in accordance with the accompanying installation instructions. The annular space between device(s) and periphery of opening shall be min 0 in. (0 mm, point contact) to max 1/8 in. (3 mm). Firestop device(s) 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 wall after installation of fill material, and secured together with supplied steel set screws. Nom 1-1/2 in. (38mm) thick pre-cut foam plugs sized to accommodate the through penetrant(s) and installed flush with each end of device on both sides of wall assembly.

ABESCO LTD — CT120 Cable Transit

B. **Fill, Void or Cavity Materials* - Caulk —** Min 1/8 in. (3 mm) bead of fill material shall be applied at interface of gypsum board and firestop devices immediately prior to the installation of the mounting flanges. An additional bead of caulk shall be placed between ganged devices on both sides of wall when multiple devices are used.

ABESCO LTD — CP310 FR Acrylic Intumescent Caulk

+ Bearing the UL Listing Mark

*Bearing the UL Classification Mark

Last Updated on 2009-08-06

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