



XHEZ.W-L-3293 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-3293

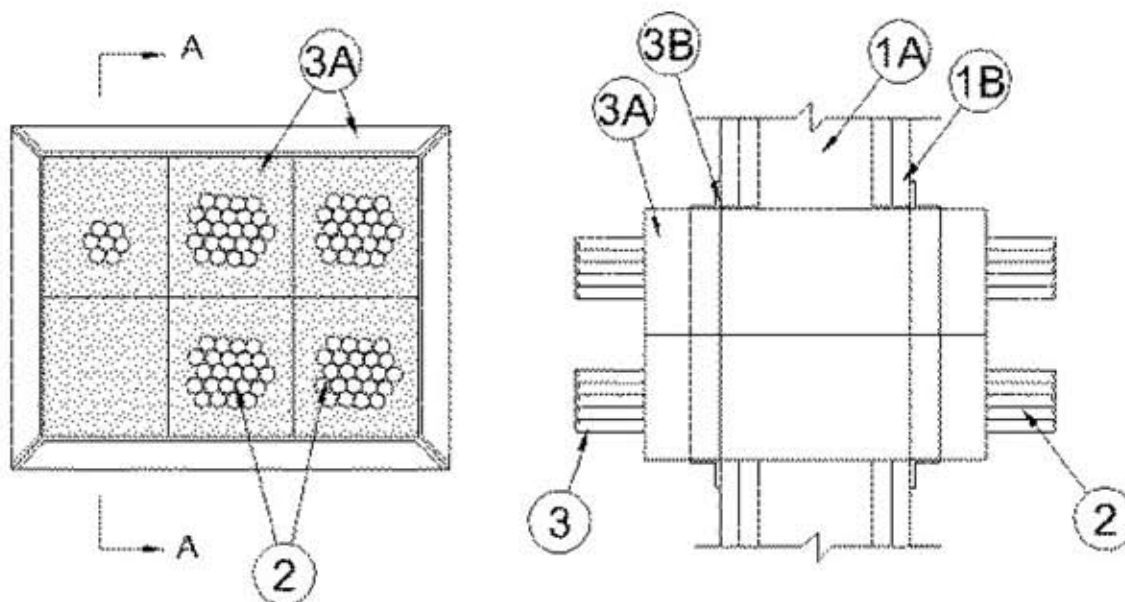
September 11, 2009

F Ratings — 1 or 2 Hr (See Item 1)

T Rating — 0 Hr

L Rating At Ambient — Less Than 1 and 2.8 CFM/Device (See Item 2)

L Rating At 400 F — Less Than 1 and 1.6 CFM/Device (See Item 2)



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 and 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. thick gypsum board. Max area of opening is 98.5 in.² (635 cm²) with a max dimension of is 12-1/8 in. (308 mm) for square devices. 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. Cables — Within the loading area of each firestop device module the cables may represent a 0 to 100 percent visual fill. Cable bundles to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

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

B. Max 4 pair No. 24 AWG copper conductor Cat5e or Cat 6 telephone cable with PVC insulation and jacket materials.

C. Max RG/U (or smaller) coaxial cable with foam high density polyethylene insulation and PVC 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. 8 AWG copper conductor cable with PVC insulation and nylon jacket materials.

F. Max 12 core No. 26 AWG shielded multi coax cable with foam high density polyethylene insulation and PVC jacket.

G. Max 48MM62.5 micron fiber optic cables with having a min FT-6 rating.

H. Max 62.5/125 micron micron fiber optic cables with having a min Riser rating.

I. Max 1/C 3/0 AWG copper conductor cable with PVC insulation and jacket materials.

J. Max three copper conductors (with ground) No. 12 AWG **Metal Clad Cable+**.

K. Max four copper conductors No. 2 AWG **Metal Clad Cable+**.

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L. Max 1/C 2/0 AWG non halogen copper conductor cable.

M. Max 300 pair No. 24 AWG copper conductor telephone cable with PVC insulation and jacket materials.

N. Max 30 pair No. 22 copper conductor shielded switchboard cable with PVC insulation and jacket materials.

O. Max RG/6 (or smaller) coaxial cable with fluorinated ethylene (FE) or PVC insulation and jacket materials.

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

Q. Max 7/C No. 12 AWG copper conductors with PVC insulation and jacket materials.

R. Max 4 pair No. 23 AWG copper conductor Cat 6 telephone cable with PVC insulation and jacket materials.

S. Max three copper conductors (with ground) No. 12 AWG steel **Armored Cable+**.

T. Max 04-02 2 5M fiber optic cables having a max diameter of 0.450 in. (11.4 mm).

U. Max 1/C No. 750 kcmil copper conductors with PVC insulation and fabric jacket materials.

V. Max 3/C with ground No. 2/0 AWG aluminum conductor SER cable with cross linked polyethylene (XLPE) insulation and PVC jacket.

L Rating is less than 1 CFM/Device for a single cable or a blank at ambient and 400 F. The L Rating is 2.8 CFM/Device and 1.6 CFM/Device at ambient and 400 F respectively for all other percentages of fill.

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 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 steel split mounting flanges sized to accommodate the firestop device. Steel split mounting flanges installed on both sides of wall and secured together with supplied steel set screws. Nom 1-1/2 in. (38 mm) thick pre-cut foam plugs sized to accommodate the cables and installed flush with each end of device on both sides of wall assembly. Foam plugs may be recessed 1 in. (25 mm) from each end of device (see Item 3C).

ABESCO LTD — CT120 or CT120/R Transit

B. Fill, Void or Cavity Materials* - Caulk or Putty — Min 1/8 in. (3 mm) thickness of caulk or min 1/2 in. (13 mm) thickness of putty applied within the annulus, flush with both surfaces of wall. 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 or Abesco FR Putty

C. Fill, Void or Cavity Materials* - Putty — (Not Shown. Optional) Foam plug within device recessed 1 in. from each end of device and min 1 in. (25 mm) thickness of putty applied within resulting annulus, flush with both ends of device.

+ Bearing the UL Listing Mark

*Bearing the UL Classification Mark

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