9/23/2015 XHEZ.W-L-7001 - Through-penetration Firestop Systems

UL ONLINE CERTIFICATIONS DIRECTORY

System No. W-L-7001
XHEZ.W-L-7001
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 Certified products, equipment, system, devices, and materials.
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- 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 Certified.

XHEZ - Through-penetration Firestop Systems

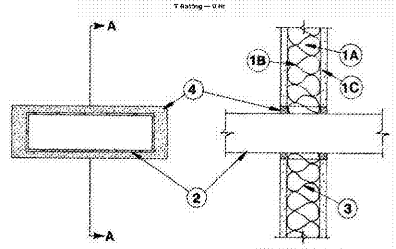
See General Information for Through-penetration Firestop Systems

System No. W-L-7001

May 01, 1997

F Rating — 1 Hr

T Rating — 0 Hr



SECTION A-A

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

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

B. **Batts and Blankets* —** Nom 1-1/2 in. thick glass fiber batts friction fitted to fill interior of stud cavities.

C. **Gypsum Board* —** The gypsum wallboard type, thickness, number of layers and orientation shall be as specified in the individual wall and partition Design. Max area of opening is 48 sq in. with max dimension of 12 in.

2. **Air Duct —** Prefabricated 24 MSG sheet metal air duct. Max cross sectional area of duct is 30 sq in. with max dimension of 10 in. A min 7/16 to max 1-5/8 in. annular space is required within the firestop system. Air duct to be rigidly supported on both sides of wall assembly.

3. **Forming Material* —** Min 2-1/2 in. thickness of min 3.5 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Forming material to be recessed from both surfaces of wall as accommodate the required thickness of fill material.

THERMAFIBER INC — Type SAF

4. **Fill, Void or Cavity Material* — Sealant —** Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Dry mix material mixed with water at a rate of 3:1 parts dry mix to 1 lb part water by weight in accordance with the accompanying installation instructions.

UNITED STATES GYPSUM CO — Type FC

4A. **Fill, Void or Cavity Material* —** Not Shown — Two component fill material used as an alternate to Item 4. Min 1/2 in. thickness of fill material applied within the annulus, flush with both surfaces of wall. Ready-mixed component mixed with accelerator component at a rate of 20 parts of ready-mixed component to 1 part of accelerator component by weight in accordance with the accompanying installation instructions.

UNITED STATES GYPSUM CO — Type RFC

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

1. **Floor or Wall Assembly —** Reinforced lightweight or normal weight (100-150 pcf) concrete having a min thickness as specified in the table below (Item 3). Wall may also be constructed of any UL Classified Concrete Blocks*. Max diam of opening is 8 in.

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

2. **Metallic Sleeve —** (Optional) — Nom 8 in. diam (or smaller) Schedule 40 (or heavier) steel sleeve cast or grouted into wall or floor assembly, flush with floor or wall surfaces.

3. **Through Penetrants —** One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor or wall assembly. The annular space shall be as specified in the table below. The following types and sizes of metallic pipes, conduits or tubing may be used:

A. **Steel Pipe —** Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Conduit —** Nom 4 in. diam (or smaller) steel electrical metallic tubing.

C. **Conduit —** Nom 6 in. diam (or smaller) rigid galv steel conduit.

The F and T rating of the system is dependent upon the diam of the pipe or conduit and annular space between the pipe or conduit and the periphery of the opening as shown in the table below:

Floor or Wall	Min Floor or Wall Thkns In.	Max Diam of Steel Pipe or Conduit In.	Min Annular Space In.	Max Annular Space In.	Min Fill Mtl Thkns In.	Min Forming Mtl Thkns In.	F Rating Hr	T Rating Hr
F	3-3/4	1-1/2	3/8	2-1/8	1	2-3/4	2	0
F	3-3/4	6	3/8	3/4	1	2-3/4	2	0
F	3-3/4	6	3/8	1	2	1-3/4	2	0
F	4-1/2	1-1/2	3/8	2-1/8	1	3-1/2	2	3/4
F	4-1/2	6	3/8	3/4	1	3-1/2	3	0
F	4-1/2	6	3/8	1	2	2-1/2	3	0
W	5-1/2	1-1/2	3/8	2-1/8	1	3-1/2	3	3/4
W	5-1/2	6	3/8	3/4	1	3-1/2	3	0
W	5-1/2	1-1/2	3/8	2-1/8	2	2-1/2	3	1
W	5-1/2	6	3/8	1	2	2-1/2	3	0

4. **Forming Material* —** Min 4.0 pcf mineral wool batt insulation firmly packed into opening as a permanent form at the min thickness specified in the above table (Item 3). Forming material to be recessed from top surface of floor or from both surfaces of wall as required to accommodate the required thickness of fill material.

THERMAFIBER INC — Type SAF

5. **Fill, Void or Cavity Material* — Caulk —** Min thickness of fill material as specified in the above table (Item 3) applied within the annulus, flush with top surface of floor or with both surfaces of wall.

UNITED STATES GYPSUM CO — Type AS

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XHEZ.C-AJ-1020 - Through-penetration Firestop Systems

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9/23/2015 XHEZ.C-AJ-1020 - Through-penetration Firestop Systems

UL ONLINE CERTIFICATIONS DIRECTORY

System No. C-AJ-1020
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XHEZ - Through-penetration Firestop Systems

See General Information for Through-penetration Firestop Systems

System No. C-AJ-1020

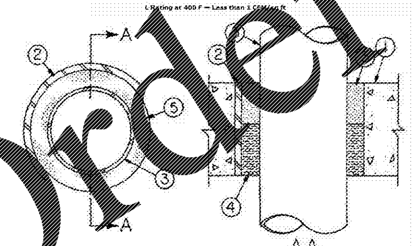
December 02, 2010

F Rating — 2 and 3 Hr (See Item 3)

T Rating — 0, 3/4 and 1 Hr (See Item 3)

L Rating at Ambient — Less than 1 CFM/sq ft

L Rating at 400 F — Less than 1 CFM/sq ft



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CONSULTANT

SEAL

STATE OF GEORGIA
ROBERT SUSSENBACH
CERTIFICATE No. 4042
REGISTERED ARCHITECT

DATE	NO.	DESCRIPTION
03/27/18		GDOE PRELIMINARY SUBMITTAL / DESIGN DEVELOPMENT
06/19/18		50% CONSTRUCTION DOCUMENTS
09/17/18		GDOE CHECK-SET/ PERMIT SET
10/10/18		FINAL GDOE SUBMITTAL
11/01/18		ISSUED FOR PROPOSALS

DOE FACILITY CODE: 660 -3066
RIVERWOOD HIGH SCHOOL-PHASE 3-8
AUDITORIUM/GYMNASIUM ADDITION
5900 RAIDER DRIVE NW SANDY SPRINGS, GA 30328
FULTON COUNTY SCHOOLS RFP NO. 411-19

CHAPMAN GRIFFIN LANIER SUSSENBACH ARCHITECTS
400 Galleria Pkwy . Suite 100 . Atlanta, Ga 30339 . Phone: 404.733.5493

SHEET TITLE
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DATE: 09/17/18

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