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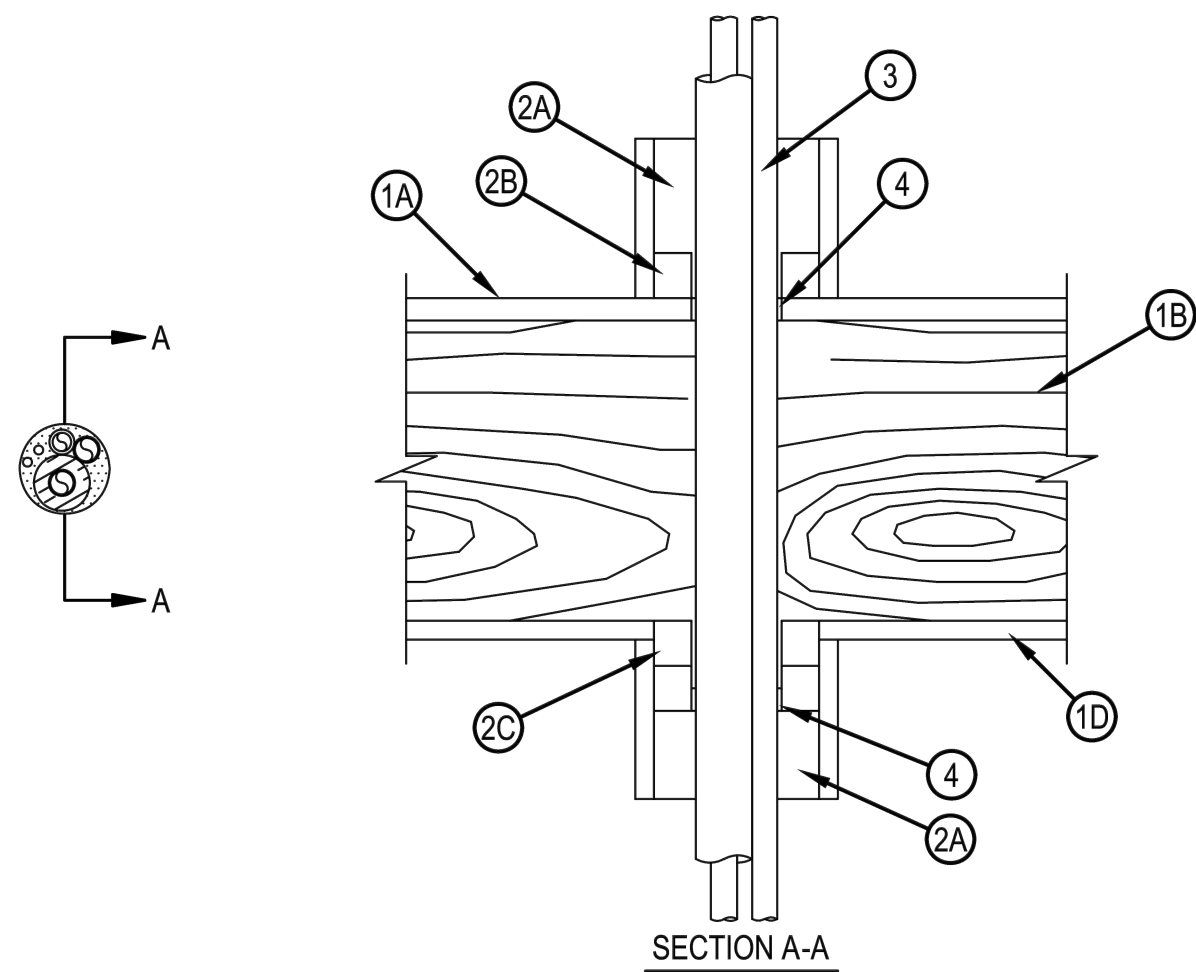
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System No. F-C-8014  
F Rating — 1 Hr  
T Rating — 0 Hr

FC 8014



1. Floor — Ceiling Assembly — The 1 hr fire-rated wood joist floor-ceiling assembly shall be constructed of the materials and in the manner specified in the individual L500 Series Floor-Ceiling Designs in the UL Fire Resistance Directory, as summarized below:
- A. Floor System — Lumber or plywood subfloor with finish floor of lumber, plywood or Floor Topping Mixture\* as specified in individual Floor-Ceiling Design. Max diam of floor opening is 3 in.
  - B. Joists — Nom 10 in. deep (or deeper) lumber, steel or combination lumber and steel joists, trusses or Structural Wood Members\* with bridging as required and with end firestopped.
  - C. Gypsum Board\* — Nom 5/8 in. thick as specified in the individual Floor-Ceiling Design. Max diam of openings is 3 in.
2. Chase Wall — (Optional) - The through penetrant (Item 3) may be routed through a 1 hr fire-rated single, double or staggered wood stud/gypsum wallboard chase wall shall be 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. or double nom 2 by 4 in. lumber studs.
  - B. Sole Plate — Nom 2 by 6 in. or parallel 2 by 4 in. lumber plates, tightly butted.
  - C. Top Plate — The double top plate shall consist of two nom 2 by 6 in. or two sets of parallel 2 by 4 in. lumber plates, tightly butted. Max diam of openings is 3 in.
  - D. Gypsum Board\* — Thickness, type, number of layers and fasteners shall be as specified in the individual Wall and Partition Design.



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System No. F-C-8014  
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3. Through-Penetrants — Pipes, conduits, tubing and cables to be bundled and centered in the opening. The space between penetrants and the periphery of the opening shall be min 1/4 in. to max 3/4 in. Penetrants to be rigidly supported on both sides of the floor-ceiling assembly.
- A. Metallic Pipes — A max of two metallic pipes, conduits or tubing, (one 3/4 in. diam and one 1/2 in. diam) to be installed within the firestop system. The following types and sizes of metallic pipes, conduits or tubing may be used:
- A1. Steel Pipe — Nom 3/4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.
  - A2. Conduit — Nom 3/4 in. diam (or smaller) steel electrical metallic tubing or steel conduit.
  - A3. Copper Tubing — Nom 3/4 in. diam (or smaller) Type L (or heavier) copper tubing.
  - A4. Copper Pipe — Nom 3/4 in. diam (or smaller) Regular (or heavier) copper pipe.
- B. Nonmetallic Pipes — A max of one nonmetallic pipe to be installed within the firestop system. The following types and sizes of nonmetallic pipes may be used:
- B1. Polyvinyl Chloride (PVC) Pipe — Nom 1/2 in. diam (or smaller) Schedule 40 solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
  - B2. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 1/2 in. diam (or smaller) SDR17 CPVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
- C. Cables — A max of two 4/C No. 18 AWG (or smaller) thermostat cables with PVC insulation and PVC/hyton jacketing material.
- D. Tube Insulation — Plastic\* — Nom 1/2 in. thick acrylonitrile butadiene/polyvinyl chloride (AB/PVC) flexible foam furnished in the form of tubing. Tube insulation to be installed on a max of one metallic pipe or tubing.
- See Plastics\* (OMF22) category in the Plastics Recognized Component Directory for names of manufacturers. Any Recognized Component tube insulation material meeting the above specifications and having a UL 94 Flammability Classification of 94-5VA may be used.
4. Fill, Void or Cavity Material\* — Sealant — Min 3/4 in. thickness of fill material applied within the annulus, flush with top surface of floor or sole plate. Min 5/8 in. thickness of fill material applied within the annulus, flush with the bottom surface of the ceiling or lower top plate.
- HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS — ONE Sealant

\*Bearing the UL Classification Marking  
\*Bearing the UL Recognized Component Mark



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3735 Green Rd.  
Beechwood, OH, 44122

Drawing not to scale

The products used in the above assembly have been tested in accordance with the following:

- ASTM E814 (UL1479) Standard Test Method for Through Penetration Firestopping.
- ASTM E119 (UL 263) Standard for Fire Tests of Building Construction and Materials.

The above described assembly and products have been tested and are based on both past and anticipated performance criteria. Tremco shall not be liable for any damages, direct or consequential, resulting from use of this material or design. Tremco shall only be responsible for replacing material found to be defective.

**Classification System**  
UL System

**1 or 2 Hour Fire Rated Through Penetration Firestop for Single Metal Pipe through Gypsum walls using TREMstop WBM.**

**WL1147** F-rating = 1 and 2 Hr. T-rating = 0 and 1/2 Hr.

- 1) 1 or 2-hour fire rated gypsum wallboard/stud assembly
- 2) A) Steel Pipe — 6" diam (or smaller) Sch. 40 (or heavier) steel
- B) Conduit — 4" diam (or smaller) EMT or rigid steel
- 3) TREMstop WBM — fill Max. 3/4" annulus at a thickness of 1 1/4" (2 Hr. F-rating) or 3/4" (1 Hr. F-rating).

**Classification System**  
UL System

**2 Hour Fire Rated Through Penetration Firestop for Multiple Metal Pipe through Concrete floors or walls using FYRE-SHIELD.**

**CAJ-1304** F-rating = 2 Hr. T-rating = 0 Hr.

- 1) Floor or Wall assembly = 4" thick concrete, Max. area of opening is 288 sq. in.
- 2) -Copper Pipe: 4" dia. (or smaller) regular (or heavier) copper.
- Steel Pipe: 8" dia. (or smaller) Sch. 40 (or heavier) steel.
- Conduit: 4" dia. (or smaller) EMT or 6" dia. (or smaller) steel conduit.
- Copper Tubing: 4" dia. (or smaller) Type L (or heavier) copper.
- Iron Pipe: 8" dia. (or smaller) cast or ductile iron.
- Max. number of pipes with opening is three (3).
- 3) A) Forming Material — (Not shown) — Nom. 1" thick polyurethane backer rod friction fitted into opening.
- B) Nom. 1/2" FYRE-SHIELD thickness installed within opening.

NOTE: For wall apply FYRE-SHIELD to both surfaces of wall.

**Classification System**  
UL System

**2 Hour Fire Rated Through Penetration Firestop for Single Plastic Pipe through Concrete Floors or Walls using BlazeMaster Caulk & Walk**

**CAJ 2221** F-Rating = 2 Hr. T-Rating = 1-1/2 Hr.

- 1) Fire-Rated Concrete Floors or Block Walls = Min. 4-1/2" thickness
- 2) Plastic Pipe — A) Nom. 2" diam. (or smaller) Sch. 40 PVC pipe.
- B) Nom. 2" diam. (or smaller) CPVC pipe
- The annular space range shall be min 1/4" to max 3/8"
- NOTE: For use in closed (process or supply) piping systems.
- 3) Forming Material — Foam backer rod firmly packed into the opening as a permanent form.
- 4) BlazeMaster Caulk & walk — min 1/2" thickness of sealant applied within opening, flush top surface of floor or both surfaces of wall assembly

**Classification System**  
UL System

**1 or 2 Hour Fire Rated Through Penetration Firestop for Plastic Pipe through Gypsum Walls using FYRE-CAN SLEEVE**

**WL2151** F-rating = 2 Hr. T-rating = 1 Hr.

- 1) Pre-rated gypsum wallboard/stud assembly.
- 2) Plastic Pipe — 3" dia. or 2" dia. Sch. 40 PVC for use in closed or vented piping systems.
- 3) FYRE-CAN SLEEVE/intumescent device:

Nom. Pipe Diam. (in.)	Device Size	Diam. of Opening (in.)	Annular Space (in.)
2	T52	3-1/2	1/4 to 7/8
3	T53	4-3/4	1/2 to 3/4

- 4) TREMstop WBM — Min. 1/4" thick sealant applied at sleeve/pipe and sleeve/wall interfaces.

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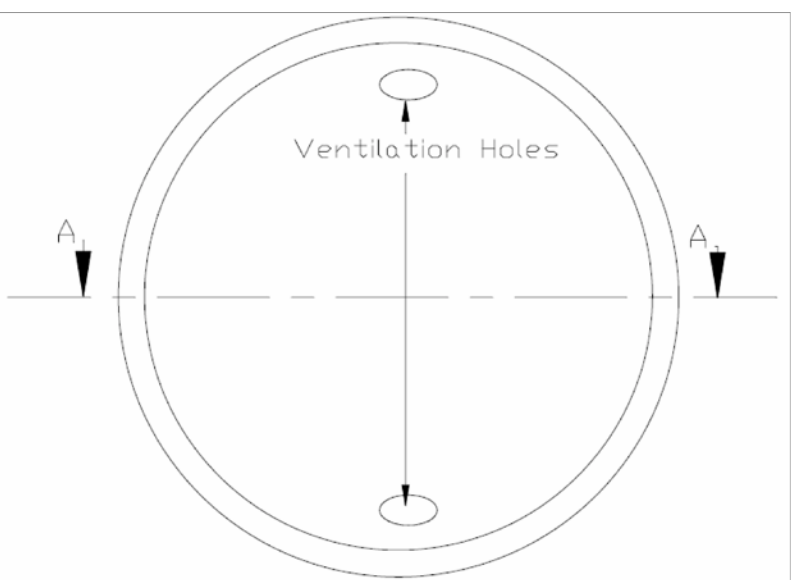
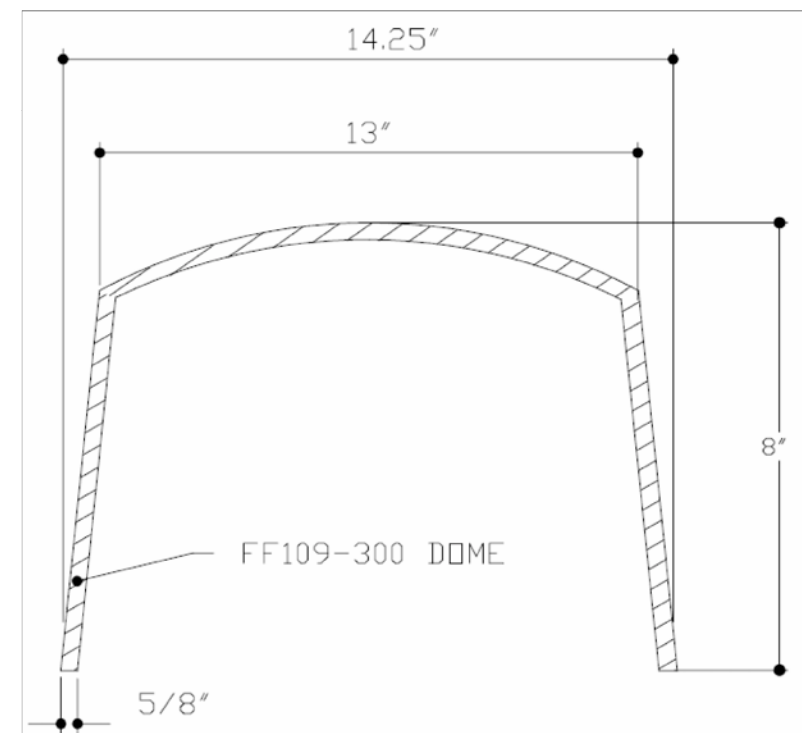
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Technical Product Specifications

MODEL FF109-300




Model Number	Inside Height	Inside Diameter
FF109-300	7 3/8"	13"

**Performance Data**

**For Use:**

- UL Classified to maintain the fire rating (1 hour) for the following fire-rated floor/ceiling assemblies: L500 series



**General Information**

**Benefits:**

- 60 minute protection.
- Fits most popular IC rated fixtures.
- Can be used in L500 floor/ceiling assemblies.
- Lightweight (approx. 1.5 lbs).
- Easy Installation - can be fitted in seconds - no screws, drilling or additional sealant required.
- Flexible material enables the cover to be fitted around obstacles or retro-fitted.
- Enhances the acoustic protection of the ceiling.
- Reduces heat loss through the fixture.
- Significant energy cost savings.
- Maintenance free.

**Manufactured By**

**Tenmat Inc**  
 23 Copper Drive  
 Newport, DE 19804  
 Phone: (302) 633-6600  
 Fax: (302) 633-6838  
 Email: info@tenmatusa.com  
 www.tenmatusa.com

9/22/2015 CDHW R25019 - Luminaires, Luminaire Assemblies and Luminaire Enclosures Certified for Fire Resistance  
UL ONLINE CERTIFICATIONS DIRECTORY

CDHW.R25019  
Luminaires, Luminaire Assemblies and Luminaire Enclosures Certified for Fire Resistance

Luminaires, Luminaire Assemblies and Luminaire Enclosures Certified for Fire Resistance

See General Information for Luminaires, Luminaire Assemblies and Luminaire Enclosures Certified for Fire Resistance  
TENMAT INC R25019  
UNIT 3  
23 COPPER DR  
NEWPORT, DE 19804 USA

Type FF109 Fire Rated Recessed Light Cover luminaire enclosure for use over UL Listed IC-rated recessed incandescent, fluorescent or LED luminaires with housing 6-7/8 in. max. diam., 6-7/8 in. max. height (as measured from top of base), made from aluminum or painted or galv steel. Luminaires supported on a base 7-7/8 in. by 10-3/4 in. max., made from painted or galv steel and screw-attached to the fixture with min. three screws. Each luminaire with trim and lens weighs 3.8 lb max. Luminaire enclosure and luminaire installed in accordance with the accompanying instructions. Luminaire enclosure and luminaire for use in 1 hr fire rated L500-Series Floor-Ceiling designs having solid wood joists or open-web wood trusses on max 16 in. centers, wood flooring and a min 1/2 in. thick gypsum board ceiling. Number of luminaires not to exceed the ratio of one per 25 sq ft of total ceiling area with min separation of 3 ft between luminaires.

Type FF109X Fire Rated Recessed Light Cover luminaire enclosure for use over UL Listed IC-rated recessed incandescent, fluorescent or LED luminaires with housing 6-1/2 in. max. diam., 7 in. max. height (as measured from top of base), made from aluminum or painted or galv steel. Luminaires supported on a base 7-1/2 in. by 10 in. max., made from painted or galv steel and screw-attached to the fixture. Each luminaire with trim and lens weighs 3.8 lb max. Luminaire enclosure and luminaire installed in accordance with the accompanying instructions. Luminaire enclosure and luminaire for use in maximum 2 hr fire rated D500-, G500- and L500-Series Floor-Ceiling designs and in maximum 1 hr fire rated P500-Series Roof-Ceiling designs. Number of luminaires not to exceed the ratio one per 25 sq ft of total ceiling area with min separation of 3 ft between luminaires. Luminaire enclosure and luminaire for use in maximum 2 hr fire rated D200-, G200-, J200- and L200-Series Floor-Ceiling designs and in maximum 1 hr fire rated P200-Series Roof-Ceiling designs with nominal 24 by 24 in. or 24 by 48 in. acoustical lay-in ceiling panels. Number of luminaires not to exceed the ratio of one per 25 sq ft of total ceiling area with min separation of 4 ft between luminaires.

Type FF130 Series Fire Rated Troffer Cover luminaire enclosure for use as an alternate Fixture Protection for UL Listed fluorescent recessed troffer light fixtures with steel housings in the following Designs for 1 hr max ratings: D216, D219, G205, G288, G218, G252, G255, G256, G262, G264, J201, J202, L006, L201, L202, L206, L209, L210, P202, P204, P206, P207, P210, P211, P213, P214, P216, P225, P227, P228, P229, P230, P231, P232, P233, P234, P235, P236, P237, P238, P239, P240, P241, P242, P243, P244, P245, P246, P247, P248, P249; The recessed light fixture installation method and spacing requirements shall be as specified in the individual Design. Enclosure shall be installed in accordance with the accompanying instructions. A 1/2 in. clearance shall be maintained between the top, sides and ends of the fixture and the enclosure. For nominal 2 by 2 ft fixtures, a nominal 4 in. by 4 in. piece of mineral wool batt or acoustical material shall be placed on top of the fixture prior to installation. For nominal 2 by 4 ft fixtures, two pieces shall be used, one on top of each end. The height of the fixture housing shall be limited such that it will not cause the bottom of the cover to lose contact with the ceiling tiles. End-to-end or side-by-side installation of fixtures has not been investigated. Type FF130-2'x2' and Type FF130-2'x4' enclosures for use with nominal 2 by 2 ft and 2 by 4 ft recessed light fixtures, respectively. Type FF130-600x600mm and Type FF130-600x1200mm enclosures for use with nominal 600 by 600 mm and 600 by 1200 mm recessed light fixtures, respectively.

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Specifications and Technical Notes

Part #	TEN-FF109X	TEN-FF109-300	TEN-FF109-350
Length Of Protection	Two hour	One hour	One hour
Listed (UL)	R25019	R25019	R25019
OPL / Intertek Listed	No	No	LC101
Weight	2.5 lbs	1.5 lbs	2.5 lbs
Certifications and Testing	ANSI/UL 263, CAN/ULC S104-04, ASTM E119, UBC 7 1, NFPA 251, ASI A2.1	ASTM E119, UBC 7 1, NFPA 251, ASI A2.1	ASTM E119, UL 263, UBC 7 1, NFPA 251, ASI A2.1

- Safety Elements**
- Make sure installation is done according to the manufacturer's instructions per fixture and cover that is bought.
  - Do not place in wet areas.
  - Store in dry areas.
  - Make sure cover is sitting the ceiling flat after installation is complete.

Standards Endorsing this Product

- ANSI/UL 263
- CAN/ULC S104-04
- UBC 7 1
- ASI A2.1
- NFPA 251
- UL R25019 and ETL Listed

PROJECT: **1330 Building**  
1330 15th Street, Miami Beach, FL 33139  
PROJECT OWNER:  
NOTUS LLC  
435 21st Street, Miami Beach, FL 33139

ARCHITECT OF RECORD:



**RD Architects**  
 1800 SW 1st Avenue, Suite 607, Miami, Florida 33129  
 F: 786.762.2679 P: 305.831.9079 C: 305.282.0005  
 Email: rda@rda-archint.com  
 www.rda@rda-archint.com

AA26002510

STRUCTURAL ENGINEER:

CONSULTANT:



SIGNATURE / DATE / SEAL

Victor H. Rodriguez,  
Registered Architect  
State of Florida # AR0094965  
786 . 762 . 2679 vh.rodriguez@rda-archint.com

PERMIT SET

Issue	Issue Date / For
(1)	08.28.2016 / Design Review Board

DDCI Project #: 1615.00  
Drawn by: URB  
Approved by: VHR

SHEET INDEX

SCALE:  
SHEET NO.

A-7.6

E D C B A