

# UL® Classified Through-penetration Firestop System

## the dryerbox®

## System No. W-L-7129

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March 26, 2008

F Ratings — 1/2 and 1 Hr  
(See Items 1, 1A and 4)

T Ratings — 1/2 and 1 Hr  
(See Items 1 and 1A)



Cabinets  
For Use in Penetration Firestop Systems  
See UL Directory of Products Certified for  
Canada and UL Fire Resistance Directory  
<25XC>

### 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.

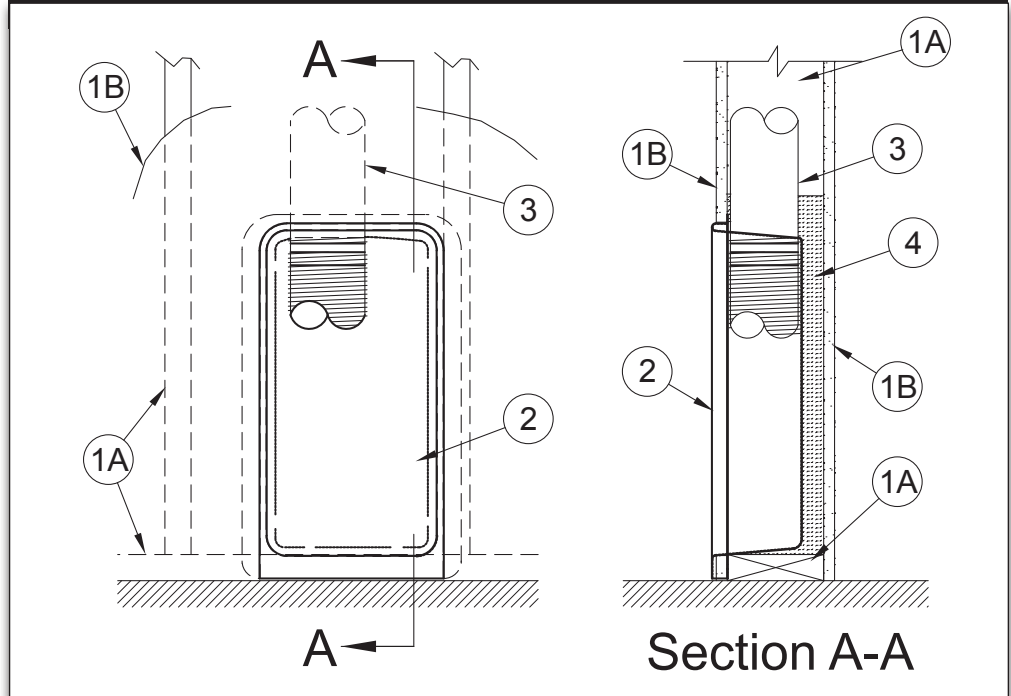
Authorities Having Jurisdiction should be consulted before construction.

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.

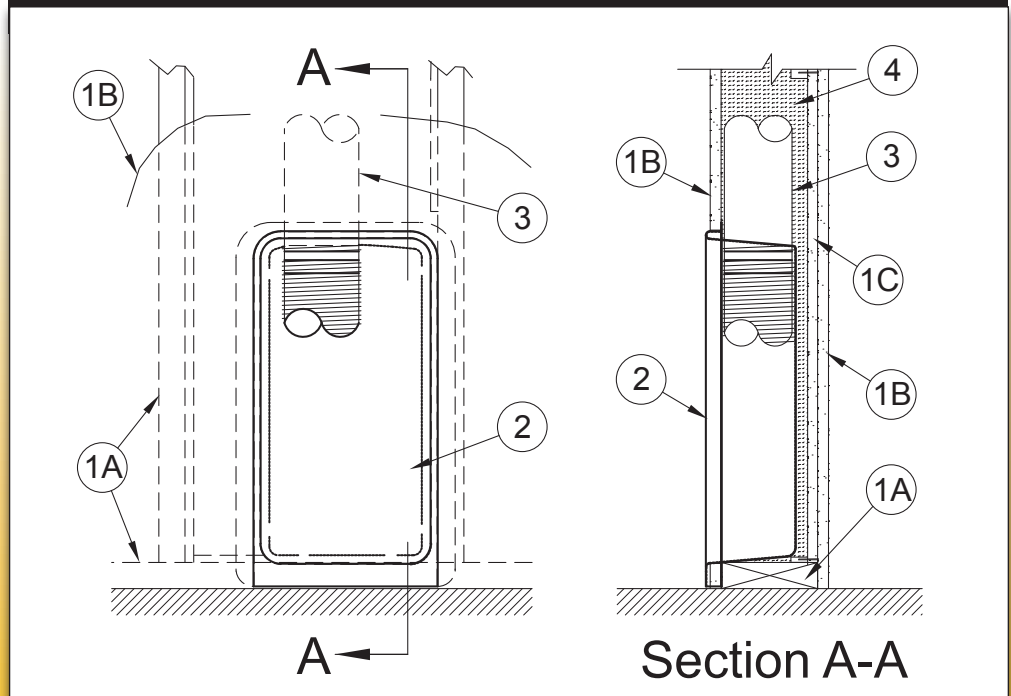
When field issues arise, it is recommended the first contact for assistance be the technical service staff provided by the product manufacturer noted for the design. Users of fire resistance assemblies are advised to consult the general Guide Information for each product category and each group of assemblies. The Guide Information includes specifics concerning alternate materials and alternate methods of construction.

Only products which bear UL's Mark are considered Certified.

### CONFIGURATION A



### CONFIGURATION B



## INOVATE

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1. **Wall Assembly — Configuration A** — The fire-rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified 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 min nom 2 by 6 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC. Steel studs to be min 6 in. (152.4 mm) wide and spaced max 24 in. (610 mm) OC.

B. **Gypsum Board\*** — One layer of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design.

**The hourly F and T Rating of the firestop system for Configuration A is 1/2 Hr.**

1A. **Wall Assembly — Configuration B** — The fire-rated gypsum board/stud wall assembly 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** — Wall framing to consist of wood studs. Wood studs to consist of min nom 2 by 6 in. (51 by 102 mm) lumber spaced 16 in. (406 mm) OC.

B. **Gypsum Board\*** — One layer of nom 5/8 in. (16 mm) thick gypsum board, as specified in the individual Wall and Partition Design.

C. **Gypsum Board\*** — An additional layer of gypsum board shall be cut to fit ID of stud cavity and installed flush with edge of studs on non-penetrated face of wall. Additional layer of gypsum board to be attached to min 1 by 2 in. (25 by 51 mm) wood nailing strips with fasteners spaced max 18 in. (457 mm) OC around periphery of board. Nailing strips to be secured to wood studs and plates with fasteners spaced max 18 in. (457 mm) OC. Nailing strips may be discontinuous and terminate max 1 in. (25 mm) from vent duct and cabinet interfaces with plates and studs.

**The hourly F and T Rating of the firestop system for Configuration B is equal to 1 Hr.**

2. **Cabinet\*** — Recessed fixture intended for dryer appliance exhaust duct installed per manufacturer's installation instructions in one side of wall assembly. Cutout in gypsum board for top exhaust device is 18-1/4 by 9-1/2 in. (464 by 241 mm). Cutout in gypsum board for bottom exhaust duct is 16 by 14 in. (406 by 356 mm). Max gap between cabinet and gypsum board around periphery of cutout shall be 1/8 in. (3.2 mm). As an option, gap may be sealed with UL Classified sealant or caulk (see Fill, Void or Cavity Material (XHHW) category in the Fire Resistance Directory for names of manufacturers) or drywall compound.

**IN-O-VATE TECHNOLOGIES** — Dryerbox Model 350, 425, 3D or 4D.

3. **Steel Vent Duct** — Nom 4 in. (102 mm) diam by min 26 gauge rigid steel dryer duct friction fitted into top or bottom opening of the cabinet (Item 2) for purposes of venting to the exterior. Vent duct to be routed entirely within fire rated construction from the cabinet to the exterior of the building. Vent duct to be firestopped in accordance with an appropriate F-A-7000, F-C-7000 or F-E-7000 Series firestop system where it passes through the top plate or sole plate of the chase wall in which it is routed.

4. **Insulation** — The spaces between the sides of the cabinet and the studs and the space immediately above the cabinet are to be tightly packed with glass fiber batt or mineral wool batt insulation. For firestop systems with 1 Hr F Rating, the entire stud cavity containing the cabinet shall be filled with min R19 glass fiber batt insulation or mineral wool insulation with additional pieces of insulation applied as needed to completely fill all voids around the cabinet and vent duct to the full depth of the stud cavity.

\*Bearing the UL Classification Mark

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# System W-L-7129 Summary & Code Information

## Quick One-Hour Wall Firestop Instruction Summary

These key components are noted on the instruction sheet that comes with every Dryerbox. The following are highlights to comply with the UL Classification for through-penetration firestop systems.

To achieve a fire resistance rating (one-hour F & T) 2X6 wood framing is required. The Dryerbox unit must be installed in accordance with the UL Cabinet System listing.

1. An extra layer of type-X drywall must be installed in the ID of the stud cavity in which the Dryerbox is located. Drywall must be attached to nailers (minimum 1" X 2") located on the inside of the cavity wall studs. Secure nailers to wall framing at max 18 in. OC. The screws used to attach the inner layer of drywall shall be spaced a maximum of 18" apart.
2. The entire depth of stud cavity with Dryerbox® must be filled with R19 fiberglass batt insulation. Additional insulation shall be added within the cavity as necessary to completely fill all voids around the periphery of the Dryerbox and around the dryer vent pipe.
3. Use a Roto-zip-bit tool to cut the drywall leaving a caulk joint for the painter. This void must be caulked or mudded.

## IBC 708.3 (709.3 in prior code) - Requirements When Sprinkler Systems are Included

Current building code only requires a 1/2 hour rating for Dryerbox® installation when used in conjunction with a sprinkler system. You may find the full, relevant code excerpt below. To achieve a half hour rating, you only need to build out using Firestop System Configuration A Wall Assembly Components which are even simpler.

(1 Hour Rating Requires Configuration B as outlined above)

708.3 Fire-resistance rating. Fire partitions shall have a fire-resistance rating of not less than 1 hour.

Exceptions:

1. Corridor walls permitted to have a 1/2 hour fire-resistance rating by Table 1018.1.
2. Dwelling unit and sleeping unit separations in buildings of Type IIB, IIIB and VB construction shall have fire-resistance ratings of not less than 1/2 hour in buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1.

## SECTION 1018 CORRIDORS

### 1018.1 Construction.

Corridors shall be fire-resistance rated in accordance with Table 1018.1. The corridor walls required to be fire-resistance rated shall comply with Section 708 for fire partitions.

Exceptions:

1. A fire-resistance rating is not required for corridors in an occupancy in Group E where each room that is used for instruction has at least one door opening directly to the exterior and rooms for assembly purposes have at least one-half of the required means of egress doors opening directly to the exterior. Exterior doors specified in this exception are required to be at ground level.
2. A fire-resistance rating is not required for corridors contained within a dwelling or sleeping unit in an occupancy in Group R.
3. A fire-resistance rating is not required for corridors in open parking garages.
4. A fire-resistance rating is not required for corridors in an occupancy in Group B which is a space requiring only a single means of egress complying with Section 1015.1.
5. Corridors adjacent to the exterior walls of buildings shall be permitted to have unprotected openings on unrated exterior walls where unrated walls are permitted by Table 602 and unprotected openings are permitted by Table 705.8.

**TABLE 1018.1 CORRIDOR FIRE-RESISTANCE RATING**

OCCUPANCY	OCCUPANT LOAD SERVED BY CORRIDOR	REQUIRED FIRE-RESISTANCE RATING (hours)	
		Without sprinkler system	With sprinkler system <sup>c</sup>
H-1, H-2, H-3	All	Not Permitted	1
H-4, H-5	Greater than 30	Not Permitted	1
A, B, E, F, M, S, U	Greater than 30	1	0
R	Greater than 10	Not Permitted	0.5
I-2 <sup>a</sup> , I-4	All	Not Permitted	0
I-1, I-3	All	Not Permitted	1 <sup>b</sup>

a. For requirements for occupancies in Group I-2, see Sections 407.2 and 407.3.

b. For a reduction in the fire-resistance rating for occupancies in Group I-3, see Section 408.8.

c. Buildings equipped throughout with an automatic sprinkler system in accordance with Section 903.3.1.1 or 903.3.1.2 where allowed.