

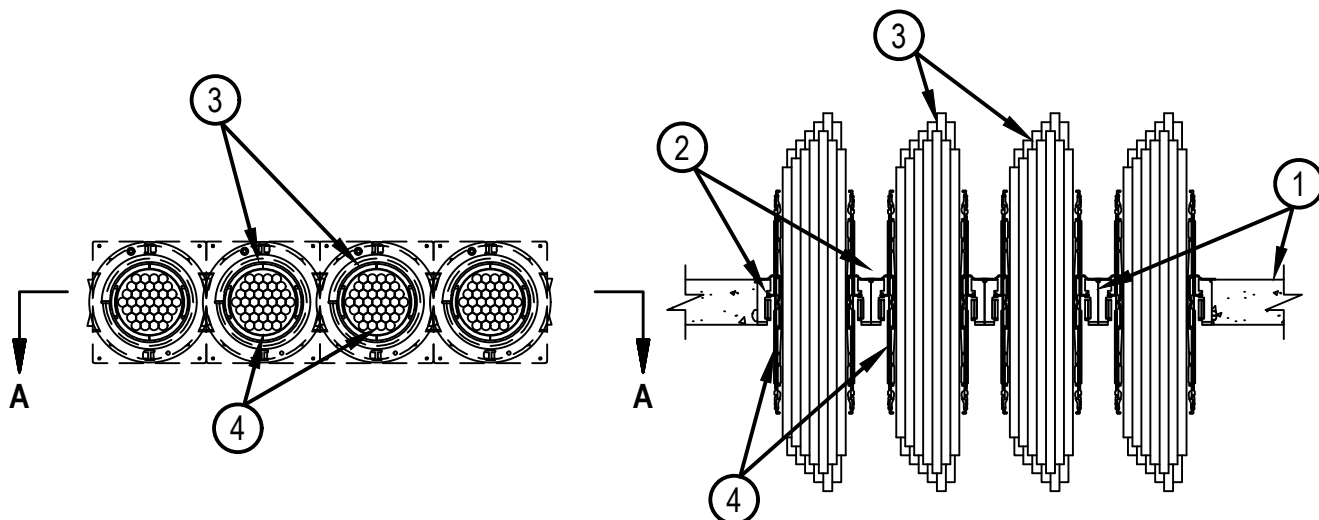


Classified by
Underwriters Laboratories, Inc.
to UL 1479 and CAN/ULC-S115

System No. F-A-3060

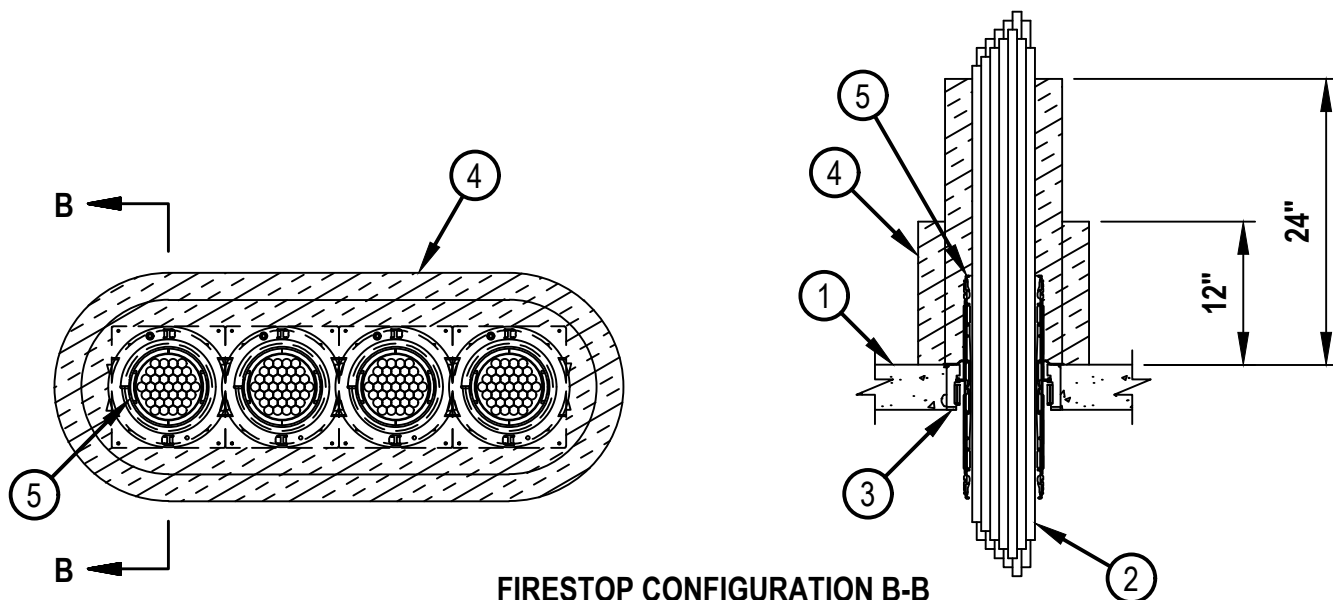
FA 3060

| ANSI/UL1479 (ASTM E814) | CAN/ULC S115 |
|--|--|
| F rating - 2 Hr | F Rating - 2 Hr |
| T Rating - 0, 3/4 and 2 Hr (See Item 3) | FT Rating - 0, 3/4 and 2 Hr (See Item 3) |
| L Rating At Ambient - Less Than 1 CFM Per Device | FH Rating - 2 Hr |
| L Rating At 400F - Less Than 1 CFM Per Device | FTH Rating - 0, 3/4 and 2 Hr (See Item 3) |
| | L Rating At Ambient - Less Than 1 CFM Per Device |
| | L Rating At 400F - Less Than 1 CFM Per Device |



SECTION A-A

FIRESTOP CONFIGURATION A-A



FIRESTOP CONFIGURATION B-B

1. Floor Assembly — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
 - 1A. Floor Assembly — (Optional, Not Shown) — The fire rated unprotected concrete and steel floor assembly shall be constructed of the materials and in the manner specified in the individual D900 Series designs in the UL Fire Resistance Directory and as summarized below:
 - A. Concrete — Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m³) concrete.
 - B. Steel Floor and Form Units* — Composite or non-composite min 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.
2. Firestop Device* — Maximum four cast in place firestop devices of same size are snap fit together and permanently embedded during concrete placement in accordance with accompanying installation instructions. Concrete is placed within annular space between and around devices during embedment. Device sleeves are cut to be flush with top surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 680-M 4", CP 680-P 4", CP 680-M 2", CP 680-P 2", CP 680-PX 2"

 - 2A. Firestop Device* — When steel floor and form Units are used, cast in place firestop device platform shall be installed prior to concrete placement in floor assembly. The CFS-CID MD PLT firestop device platform is screwed to the fluted deck with one fastener at each corner in accordance with manufacturer installation instructions. The firestop device platform is sized for nominal 2 and 3 in. (51 and 76 mm) deep fluted decks.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CID MD PLT W2" and W3"

 - 2A1. As an alternative to Item 2A, for devices except the CFS-CID MD PX device, HILTI Metal Deck Adapter may be installed in accordance with the manufacturer's instructions. When Metal Deck Adapter is used CFS-CID MD PLT is not to be installed.
 - 2A2. Firestop Device* — Metal Deck Adapter - As an alternative to Item 2, the CFS-CID MD cast in place firestop device may be installed with a firestop device platform (Item 2A) or Metal Deck Adapter (Item 2A1) prior to concrete placement in floor assembly. The CFS-CID MD Firestop Device is to be installed in accordance with manufacturer's installation instructions and may be a maximum of four devices of the same size snap fit together and permanently embedded in the concrete. The firestop device is sized for the diameter of the through penetrant and for the height of the concrete topping over the fluted deck. The 2.5 in. height devices are intended for a 2.5 in. (64 mm) concrete topping and the 4" height devices for concrete toppings greater than 2.5 in. (64 mm) thick. The firestop device may extend a max of 2 in. (51 mm) above the top surface of the concrete.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-CID MD M 2"/2.5" and 4"/2.5"; CFS-CID MD P 2"/2.5" and 4"/2.5"; CFS-CID MD M 2"/4" and 4"/4"; and CFS-CID MD P 2"/4" and 4"/4", CFS-CID MD PX 2"/2.5" and 4"/2.5" and CFS-CID MD PX 2"/4" and 4"/4"
3. Cables — Within the loading area for each CP 653 firestop device (Item 4), the cables may represent a 0 to 100 percent visual fill. Cables to be tightly bundled and centered within the device and rigidly supported on both sides of floor assembly. Any combination of the following types and sizes of copper conductor cables may be used:
 - A. Max 7/C No. 12 AWG with polyvinyl chloride (PVC) insulation and jacket.
 - B. Max 100 pair No. 24 AWG telephone cable with PVC insulation and jacket.
 - C. Multiple fiber optical communication cable jacketed with PVC and having a max OD of 1/2 in. (13 mm).
 - D. Max 4 pr No. 22 AWG Cat 5 or Cat 6 computer cables.
 - E. Max 4/0 AWG Type RHH ground cable.
 - F. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.
 - G. Through-Penetrating Product* — Two copper conductors No. 18 AWG (or smaller) Power or Non Power Limited Fire Alarm Cable with or without a jacket under a metal armor.

AFC CABLE SYSTEMS INC
 - H. Through Penetrating Product* — Any Cables, Metal-Clad Cable+ or Armored Cable+ currently Classified under the Through Penetrating Products category.

See Through Penetrating Product (XHLY) category in the Fire Resistance Directory for names of manufacturers.
 - I. Max 3/C No 12 AWG MC Cable.

The T, FT and FTH Ratings for the firestop system are 3/4 hr except that when cable types 3H or 3I are used, the T, FT and FTH Ratings are 0 hr, when Firestop Configuration A-A is used.

The T, FT and FTH Ratings for the firestop system are 2 hr, when Firestop Configuration B-B is used.

FIRESTOP CONFIGURATION A-A

4. Firestop Device* — Firestop device consists of a corrugated steel tube with an inner plastic housing, intumescent material rings, inner fabric smoke seal, flanges and gasket material (not shown). One firestop device to be installed around the penetrant and slid into each CP 680 firestop device (Item 2), centered within the floor such that ends project an equal distance from the approximate centerline of the assembly. The inner fabric smoke seal is to be tightly twisted to close off the device. Device provided with flange(s) that are spun clockwise onto device threads, over gasket material butting tightly to top side of floor. Each device flange to be secured to concrete floor with min one 1-1/4 in. (32 mm) long masonry screw or anchor. Size of Speed Sleeve firestop device shall be same size as the device (Item 2) through which it is installed.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 and CP 653 BA 2" Speed Sleeve, CP 653 and CP 653 BA 4" Speed Sleeve, CP 653 4" BA ILS and CFS-SL GA L ILS Speed Sleeve

FIRESTOP CONFIGURATION B-B

(When a 2 hr T, FT and FTH Ratings are required)

4. Duct Wrap Material* — When a 2 hr T Rating is required, min 1-1/2 in. (38 mm) thick duct wrap tightly wrapped around devices (Item 5) and penetrants (Item 3) to extend 24 in. (610 mm) above floor. An additional layer of min 1-1/2 in. (38 mm) thick duct wrap tightly wrapped around the first layer of duct wrap to extend 12 in. (305 mm) above floor. The spaces between penetrants at the top of the duct wrap are to be tightly-packed with a nominal 2 in. (51 mm) depth of duct wrap material, flush with the top of the inner layer of duct wrap. All longitudinal seams of both layers of duct wrap are sealed with foil tape.

THERMAL CERAMICS INC — FireMaster FastWrap+, FireMaster FastWrap XL or Pyroscat Duct Wrap XL

UNIFRAX I L L C — FyreWrap Duct Insulation or FyreWrap Duct 1.5 Insulation

5. Firestop Device* — Firestop device consists of a corrugated steel tube with an inner plastic housing, intumescent material rings, inner fabric smoke seal, flanges and gasket material (not shown). One firestop device to be installed around the penetrant and slid into each CP 680 firestop device (Item 2), centered within the floor such that ends project an equal distance from the approximate centerline of the assembly. The inner fabric smoke seal is to be tightly twisted to close off the device. Device provided with flange(s) that are spun clockwise onto device threads, over gasket material butting tightly to top side of floor. Each device flange to be secured to concrete floor with min one 1-1/4 in. (32 mm) long masonry screw or anchor. Size of Speed Sleeve firestop device shall be same size as the device (Item 2) through which it is installed.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 653 and CP 653 BA 2" Speed Sleeve, CP 653 and CP 653 BA 4" Speed Sleeve, CP 653 4" BA ILS and CFS-SL GA L ILS Speed Sleeve

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

