

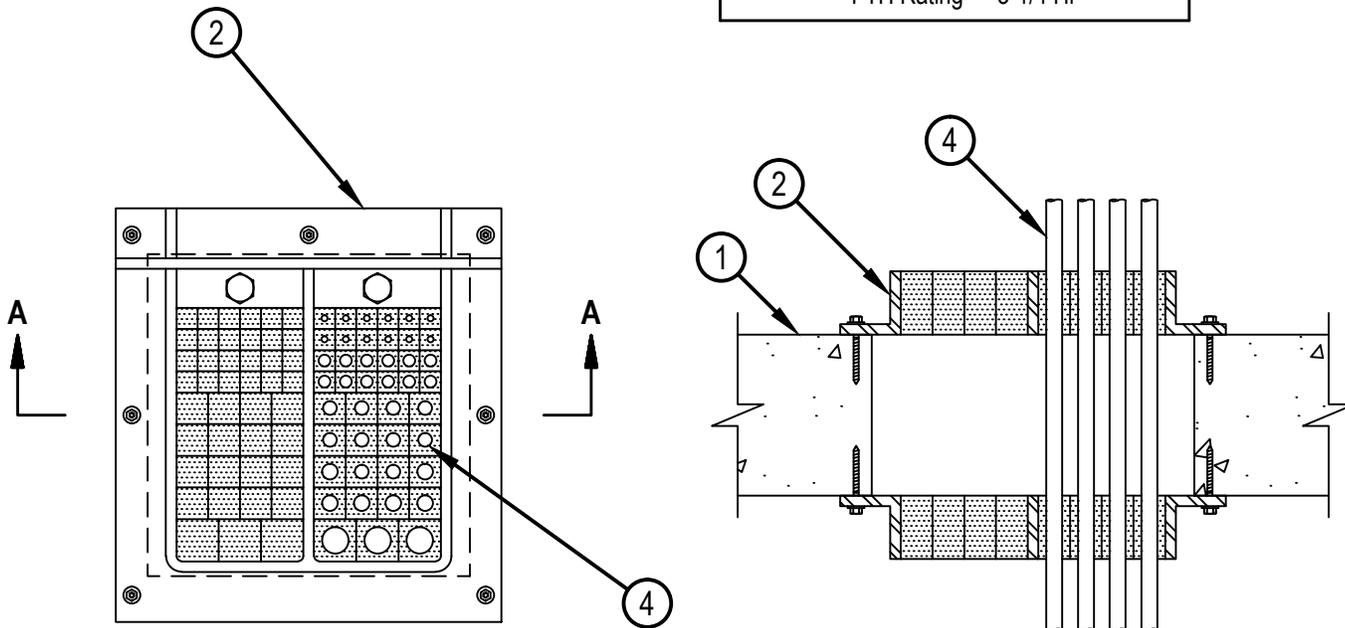


Classified by  
Underwriters Laboratories, Inc.  
to UL 1479 and CAN/ULC-S115

## System No. C-BJ-3031

CBJ 3031

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Rating — 4 Hr	F Rating — 4 Hr
T Rating — 3-1/4 Hr	FT Rating — 3-1/4 Hr
	FH Rating — 4 Hr
	FTH Rating — 3-1/4 Hr



### SECTION A-A

1. Floor or Wall Assembly — Min 6 in. (152 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Wall may also be constructed of any UL Classified solid core Concrete Blocks\*. Max area of opening is 126 in<sup>2</sup> (813 cm<sup>2</sup>) for multiple opening firestop device frame, or 66 in<sup>2</sup> (426 cm<sup>2</sup>) for single opening firestop device frame, with max dimension of 12 in. (305 mm). Opening size in wall or floor shall be same as the clear opening size of device frame ( $\pm$  1 in. or 25 mm).

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

2. Firestop Device\* — The firestop devices consist of a frame, elastomeric cable and filler modules, anchor plates, lubricant and wedge seal(s) compression unit. The firestop devices shall be surface mounted on top and bottom surface of floor or both surfaces of wall. The devices shall be installed in accordance with the accompanying installation instructions and each device shall include the components as described below.

A. CFS-T SB (or SBO) GS MSP or GS Transit Frame — Frame sizes of 8 x 2 or smaller (ie, 6 x 2, 4 x 2 etc) for single row multiple frames and 8 x 1 or smaller (ie, 6 x 1, 4 x 1 etc) for single frames. The steel frame of the firestop device shall be placed over the fill, void or cavity material (Item 3) and secured to the top and bottom surface of floor or both surfaces of wall with one fastener in each corner and an additional fastener centered along each frame flange on the sides of the opening exceeding 10-1/2 in. (267 mm). For SBO frames, the two piece frame shall be secured together with one bolt/nut (3/8 in. dia x 1-1/4 in. or M10 x 30 mm) at each corner; and an additional fastener shall be used to secure the top SBO frame piece to the floor or wall assembly. The following fasteners may be used to secure the frame to floor or wall: min 1/4 in. (6 mm) diam by min 1-1/4 in. (32 mm) long steel expansion bolts or min 0.145 in. (3.7 mm) diam by 1-1/4 in. (32 mm) long powder actuated fasteners utilizing a 1-7/16 in. (37 mm) diam by 1/16 in. (1.6 mm) thick steel washer or Hilti 1/4 in. (6 mm) diam by 1-1/4 in. (32 mm) long KWIK-CON II+ concrete screw anchors or Hilti 1/4 in. (6 mm) diam by 1-3/4 in. (45 mm) long KWIK-BOLT 3 steel expansion anchors or Hilti X-DNI 27 P8 S15 powder actuated floor pins with integral nom 9/16 in. (15 mm) diam washer.



**Hilti Firestop Systems**

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- B. CFS-T Cable Modules — The annular space within each firestop device frame is filled with elastomeric cable modules, one specifically sized for the outer diameter of each cable penetrant. In areas within the opening with no penetrants, solid cable modules (solid cylindrical core of the unpenetrated module left in place) or filler modules can be used. The cable modules are installed in uniform rows within the frame with anchor plates (Item 2D) used to separate each row to retain the modules within the frame. A fixing anchor plate (Item 2D) and a wedge compression kit (Item 2E) are then installed to completely fill the opening and compress the modules in place to form an effective seal around the cables and elastomeric insert blocks. The total number of modules required within each device is specified by Hilti based on the frame size.
- C. CFS-T LUB — Lubricant is applied to each cable module (Item 2B) prior to installation within the device frame.
- D. CFS-T AP GS Anchor Plates and CFS-T FAP GS Fixing Anchor Plate — The steel anchor plates are installed between each layer of cable modules (Item 2B) and the fixing anchor plate is installed below the final layer to hold the modules in place within each device. The Hilti Module Squeezer tool is then used to compress the layers of cable modules / anchor plates to allow room for installation of the wedge seal (Item 2E). Once compression is attained, the integral fasteners on the anchor fixing plate are engaged to hold the layers in compressed position and the wedge seal is then installed.
- E. CFS-T WD120 GS Wedge Seal — Installed as the final component within each firestop device frame to close off the unused opening above the fixing anchor plate.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-T Cable Transit System

- 3. Fill, Void or Cavity Material\* — (Not Shown) — Prior to the installation of the firestop device frames (Item 2A), a min 1/8 in. (3 mm) thick by 1 in. (25 mm) wide strip of putty or a min 1/2 in. (13 mm) diam bead of sealant is installed on the top and bottom surface of the floor, or both surfaces of wall, around the periphery of the opening to seal the frame flanges to the floor or wall.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP 619T Putty Roll, FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.

- 4. Cables — Cables to be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of copper conductor (unless otherwise noted) cables may be used, except that the total number of cables of types E, F and G below shall not exceed eight (8). Within each firestop device, cables can be used for a total visual cable fill of min 0 percent to max 100 percent (one cable in each cable module within the device).
  - A. Max RG 6/U coaxial cable with fluorinated ethylene insulation and jacketing.
  - B. Max 7/C No. 12 AWG copper conductor control cable with PVC or XLPE jacket and insulation.
  - C. Max 24 fiber fiber optic cable with polyvinyl chloride (PVC) or polyethylene (PE) jacket and insulation having a max diam of 1/2 in. (13 mm).
  - D. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable (Romex) with PVC insulation and jacket.
  - E. Max 4/0 AWG 600V aluminum Type XHHW-2 ground cable with XLPE jacket and insulation.
  - F. Max 150 pair No. 24 AWG (or smaller) copper conductor telecommunication cable with polyvinyl chloride (PVC) jacketing and insulation.
  - G. Max 7/C with ground, 600 V, No. 10 AWG (or smaller) copper conductor, aluminum armor TECK 90 cable with XLPE insulation and PVC inner/outer jacket.

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



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