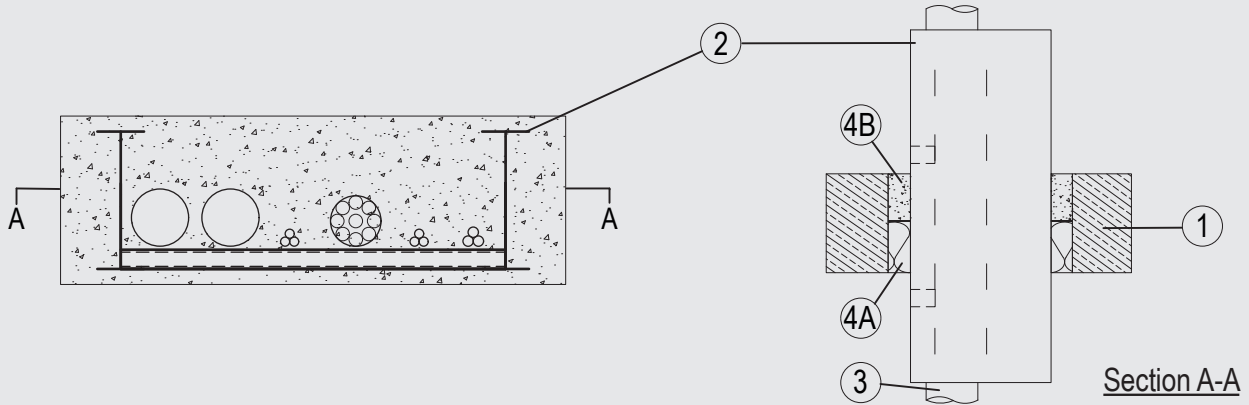


# Through-penetration Firestop Systems

## System No. F-A-4017

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



### 1. Floor Assembly

Min 4-1/2 in. (115 mm) thick lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Opening shall be rectangular with max dimensions of 23-1/2 in. (600 mm) by 7-7/8 in. (200 mm).

### 2. Cable Tray\*

Nom 19-5/8 in. (500 mm) wide by max 6-3/8 in. (163 mm) deep open-perforated or solid sheet cable tray with side rails formed of min 1/8 in. (2.3 mm) thick aluminium. The annular space between the cables trays and the periphery of the opening to be a min 3/4 in. (18 mm) to a max 2 in. (50 mm). Cable trays to be rigidly supported on both sides of the floor assembly.

### 3. Cables

Aggregate cross-sectional area of cables in cable tray not to exceed 13 percent of the cross-sectional area of the cable tray based on a max 2-3/4 in. (68 mm) cable loading depth within the tray. Cable bundles of different types shall be separated by min 1 in. (25 mm). Any combination of the following types and sizes of cables may be used:

- A. Max 3/C 185 mm diam (or smaller), copper conductor cable with PVC insulation and PVC jacket.
- B. Max 5/C No. 15 AWG (1.5 mm) diam (or smaller), copper conductor cable with EPR insulation and Rubber jacket.
- C. Max 5/C No. 15 AWG (1.5 mm) diam (or smaller), copper conductor cable with XPLE insulation and EVA jacket.
- D. Max 20/C No. 19 AWG (0.6 mm) diam (or smaller), copper conductor telecommunication cables PE jacket.
- E. Max 5/C No. 15 AWG (1.5 mm) diam (or smaller), copper conductor cable with PVC insulation and PVC jacket.

### 4. Fill, Void or Cavity Material\*

The Firestop System shall consist of the following:

- A. Packing Material – 1 layers of nom 2-3/8 in. (60 mm) thick mineral wool board min 9.3 pcf (150 kg/m<sup>3</sup>) firmly packed into the opening of the floor as a permanent form, flush to the bottom surface of the floor.
- B. Fill, Void or Cavity Material\* – Min 2-1/8 in. (55 mm) cast into the annular space between the cables/tray and periphery of the opening, flush with the top surface of the floor. Mortar to be mixed with water in accordance with the manufacturer's installation instructions.

**Flamro Brandschutz-Systeme GmbH – GFM**

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