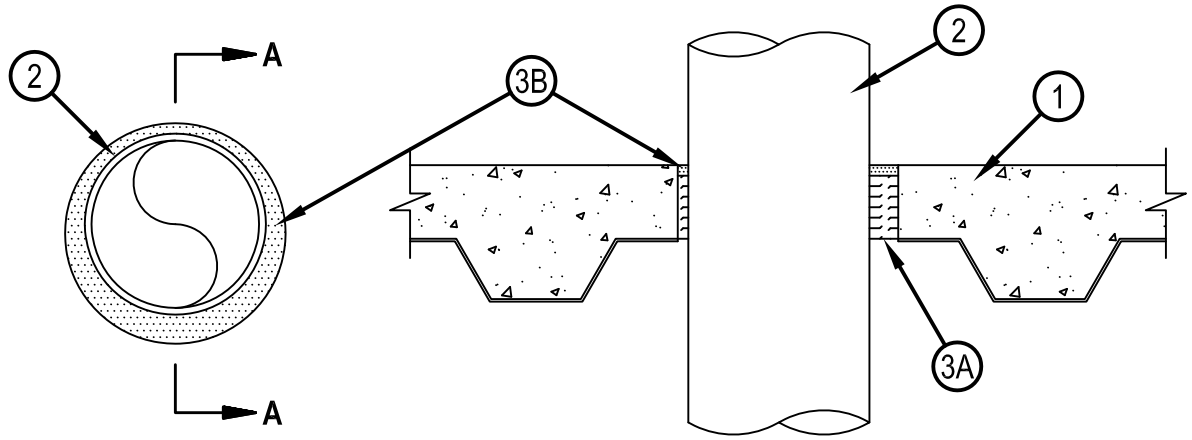
System No. F-A-1136

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

ANSI/UL1479 (ASTM E814)	CAN/ULC S115
F Ratings — 2 & 3 Hr (See Item 3B)	F Ratings — 2 & 3 Hr (See Item 3B)
T Rating — 0 Hr	FT Rating — 0 Hr
L Rating At Ambient — Less Than 1 CFM/sq ft	FH Ratings — 2 & 3 Hr (See Item 3B)
L Rating At 400 F — Less Than 1 CFM/sq ft	FTH Rating — 0 Hr
W Rating — Class 1	L Rating At Ambient — Less Than 1 CFM/sq ft
	L Rating At 400 F — Less Than 1 CFM/sq ft



SECTION A-A

1. Floor Assembly — 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 3-1/2 in. (89 mm) thickness of reinforced lightweight or normal weight concrete (100-150 pcf or 1600-2400 kg/m³), as measured from the top plane of the floor units.
   B. Steel Floor and Form Units* — Composite or noncomposite 2 to 3 in. (51 to 76 mm) deep fluted galv units as specified in the individual Floor-Ceiling design. Max diam of opening cored-drilled through floor assembly is 10-1/2 in. (267 mm).
2. Through Penetrants — One metallic pipe, conduit or tubing to be installed either concentrically or eccentrically within the firestop system. Pipe, conduit or tubing to be rigidly supported on both sides of floor assembly. The following types and sizes of metallic pipes, conduits or tubing may be used:
   A. Steel Pipe — Nom 8 in. (203 mm) diam (or smaller) Schedule 40 (or heavier) steel pipe. The annular space shall be min 1/4 in. (6 mm) to max 1-5/8 in. (41 mm).
   B. Iron Pipe — Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe. The annular space shall be min 1/4 in. (6 mm) to max 1-5/8 in. (41 mm).
   C. Conduit — Nom 4 in. (102 mm) diam (or smaller) steel electrical metallic tubing or steel conduit. The annular space shall be min 1/4 in. (6 mm) to max 1-5/8 in. (41 mm).
   D. Copper Tubing — Nom 4 in. (102 mm) diam (or smaller) Type L (or heavier) copper tubing. The annular space shall be min 1/4 in. (6 mm) to max 1-5/8 in. (41 mm).
   E. Copper Pipe — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe. The annular space shall be min 1/4 in. (6 mm) to max 1-5/8 in. (41 mm).
3. Firestop System — The firestop system shall consist of the following:
   A. Packing Material — Min 4 in. (102 mm) thickness of min 4.0 pcf (64 kg/cu meter) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor as required to accommodate the required thickness of fill material.
   B. Fill, Void or Cavity Material* — Caulk — Min 1/2 in. (13 mm) thickness of fill material applied within the annulus, flush with top surface of floor. HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CFS-S SIL GG, CFS-S SIL SL

*Bearing the UL Classification Mark