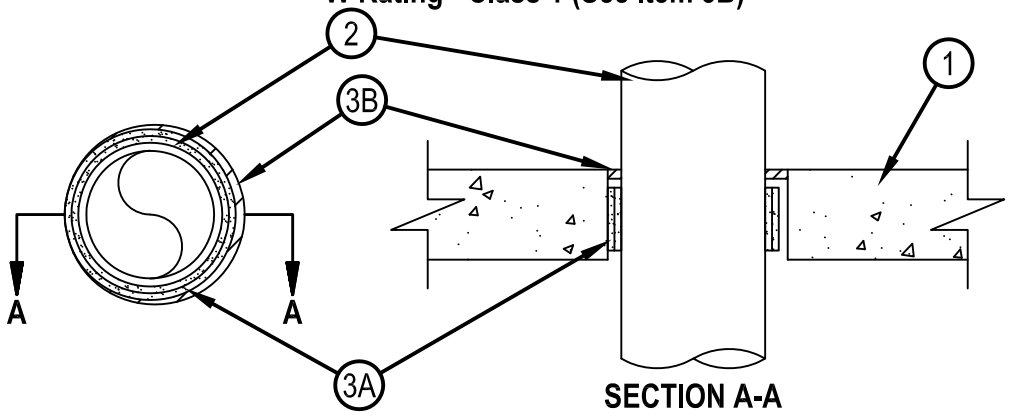
Classified by
Underwriters Laboratories, Inc.
to UL 1479

System No. F-A-2089

F Rating — 3 Hr
T Rating — 0 Hr
W Rating - Class 1 (See Item 3B)



SECTION A-A

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. Max diameter of opening is 5 in. (127 mm).

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 Fire Resistance Directory and as summarizes 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 max 3 in. (76 mm) deep galv steel fluted units as specified in the individual Floor-Ceiling Design.

2. Through Penetrants — One nonmetallic pipe to be installed concentrically or eccentrically within the firestop system. Annular space within the firestop system is dependent upon the diam and type of penetrant used as tabulated in Item 3A. Pipe to be rigidly supported on both sides of floor or wall assembly. The following types and sizes of nonmetallic pipes may be used:

A. Polyvinyl Chloride (PVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

B. Chlorinated Polyvinyl Chloride (CPVC) Pipe — Nom 3 in. (76 mm) diam (or smaller) SDR13.5 CPVC for use in closed (process or supply) piping systems.

C. Acrylonitrile Butadiene Styrene (ABS) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 solid or cellular core PVC for use in closed (process or supply) or vented (drain, waste or vent) piping systems.

D. Flame Retardant Polypropylene (FRPP) Pipe — Nom 3 in. (76 mm) diam (or smaller) Schedule 40 FRPP pipe for use in closed (process or supply) or vented (drain, waste or vent) piping system.

3. Firestop System — The firestop system shall consist of the following:

A. Fill, Void or Cavity Material* —Wrap Strip — Nom 3/16 in. (5 mm) thick by 1-3/4 in. (44 mm) wide intumescent wrap strip. The layers of wrap strip are continuously wrapped tightly around pipe with ends held in place with tape. Wrap strip installed recessed ¼ in. (6 mm) from bottom surface of concrete cover. The max diam of opening, max diam and type of penetrant, annular space within the firestop system and layers of wrap strip required are tabulated below:

Max diam of Opening - In.	Max diam of Penetrant -In.	Type of Penetrant	Annular Space - In.	Layers of Wrap Stip
3 1/2	2	PVC, CPVC or ABS Pipe	Min 3/16 in. to Max 15/16 in.	1
5	3	PVC, CPVC or ABS Pipe	Min 3/8 in. to Max 1-1/8 in.	2

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — CP648-E W45/1-3/4" Wrap Strip

B. Fill, Void or Cavity Materials*-Sealant — Min 1/4 in. (6 mm) thickness of fill material applied within the annulus directly on top of wrap strip, flush with top surface of floor. W Rating applies only when CP 601S or CFS-S SIL GG Sealant is used.
HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant, FS-ONE MAX Intumescent Sealant, CFS-S SIL GG or CP 601S Sealant

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