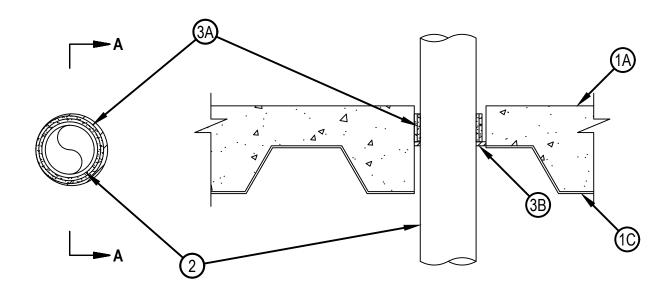


System No. F-A-2068

F Rating - 2 Hr T Rating - 0 Hr



SECTION A-A

- 1. Floor Assembly The fire-rated unprotected concrete and steel floor assembly shall be constructed of the material 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. Welded Wire Fabric (Not Shown) 6 x 6 W1.4 x W1.4
 - C. Steel Floor and Form Units* Composite or noncomposite max 3 in. (76 mm) deep fluted galv units as specified in the individual Floor-Ceiling design. Max diam of opening core-drilled through floor assembly is 4-1/2 in. (114 mm).
- 2. Through Penetrants One nonmetallic pipe to be centered within the firestop system. Pipe to be rigidly supported on both sides of floor 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 cellular or solid core PVC pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - B. Acrylonitrile Butadiene Styrene (ABS) Pipe Nom 3 in. (76 mm) diam (or smaller) Schedule 40 cellular or solid core ABS pipe for use in closed (process or supply) or vented (drain, waste or vent) piping systems.
 - C. Chlorinated Polyvinyl Chloride (CPVC) Pipe Nom 3 in. (76 mm) diam (or smaller) SDR 13.5 CPVC pipe for use in closed (process or supply) 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.



System No. F-A-2068

3. Firestop System — The details of the firestop systems shall be as follows:

A. Fill, Void or Cavity Materials* - 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 around pipe with ends held in place with tape. The bottom edge of the wrap strip shall be positioned 1/4 in. (6 mm) above crests of the steel floor units. The max diam of opening, 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.)	Min. Annular Space	Max. Annular Space	Layers of Wrap Strip
3	2	3/16 in.	7/16 in.	1
4-1/2	3	3/8 in.	5/8 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, flush with bottom surface of floor.

HILTI CONSTRUCTION CHEMICALS, DIV OF HILTI INC — FS-ONE Sealant or FS-ONE MAX Intumescent Sealant.

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

