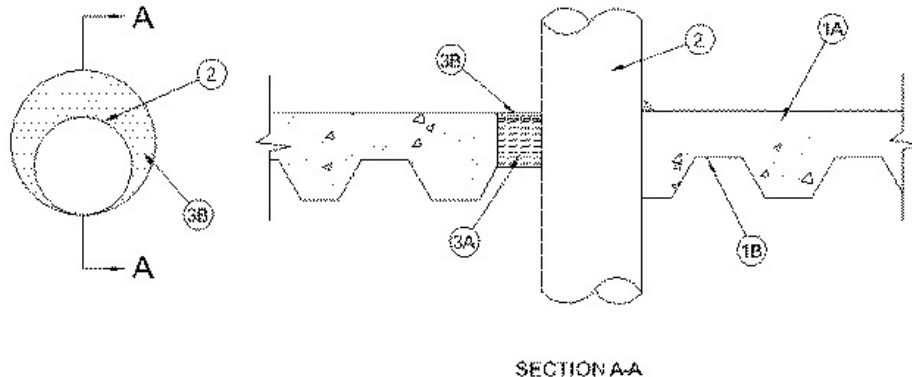


F Rating — 2 Hr
T Rating — 0 Hr



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 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 fluted units as specified in the individual Floor -Ceiling Design. Max diam of opening is 11 in. (279 mm).

2. Through-Penetrants — One metallic pipe, conduit or tubing installed either concentrically or eccentrically within the firestop system. The annular space between penetrant and periphery of opening shall be min of 0 in. (point contact) to max 1-7/8 in. (48 mm). Penetrant 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 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 8 in. (203 mm) diam (or smaller) cast or ductile iron pipe.

C. **Conduit** — Nom 6 in. (152 mm) diam (or smaller) steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing.

D. **Copper Tubing** — Nom 4 in. (102 mm) diam (or smaller) Type M (or heavier) copper tubing.

E. **Copper Pipe** — Nom 4 in. (102 mm) diam (or smaller) Regular (or heavier) copper pipe.

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

A. **Packing Material** — Min 2-1/4 in. (57 mm) thickness of min 4 pcf (64 kg/m³) mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of floor to accommodate the required thickness of fill material.

B. **Fill Void or Cavity Materials* - Sealant** — Min 1/4 in. (6 mm) thickness of sealant applied within the annulus, flush with top surface of floor. Min 1/2 in. (13 mm) diam bead of sealant applied at penetrant/concrete interface at point contact location on top surface of floor.

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*,+ 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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