

- Floor or Wall Assembly Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m3) concrete. Wall
  may also be constructed of any UL Classified Concrete Blocks\*. Max diam of opening is 31-7/8 in. (810 mm).
  See Concrete Blocks (CAZT) in the Fire Resistance Directory for names of manufacturers.
- 2. Metallic Sleeve (Optional) Nom 32 in. (813 mm) diam (or smaller) Schedule 40 steel pipe cast or grouted into floor or wall assembly, flush with floor or wall surfaces.
- 3. Through-Penetrant One metallic pipe or conduit to be installed either concentrically or eccentrically within the firestop system. Pipe or conduit to be rigidly supported on both sides of floor assembly. The annular space between pipe or conduit and periphery of opening shall be min 0 in. (point contact) to max 1-7/8 in. (48 mm). The following types and sizes of metallic pipes or conduits may be used:
  - A. Steel Pipe Nom 30 in.(762 mm) diam (or smaller) Schedule 10 (or heavier) steel pipe.
  - B. Cast Iron Pipe Nom 30 in. (762 mm) diam (or smaller) cast or ductile iron pipe.
  - C. Copper Pipe Nom 6 in. (152 mm) diam (or smaller) Regular (or heavier) copper pipe.
  - D. Copper Tubing Nom 6 in. (152 mm) diam (or smaller) Type L (or heavier) copper tubing.
  - E. Conduit Nom 6 in. (152 mm) diam (or smaller) steel conduit.
  - F. Conduit Nom 4 in. (102 mm) (or smaller) steel electrical metallic tubing (EMT).
- 4. Firestop System The firestop system shall consist of the following:

A. Packing Materials — Min 2 in. (51 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 1/2 in. (13 mm) thickness of fill material applied within annulus, flush with top surface of floor. At point contact, a min 1/2 in. (13 mm) diam bead of fill material shall be applied at the concrete/sleeve/pipe interface on the top surface of the floor and both surfaces of wall.

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.



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