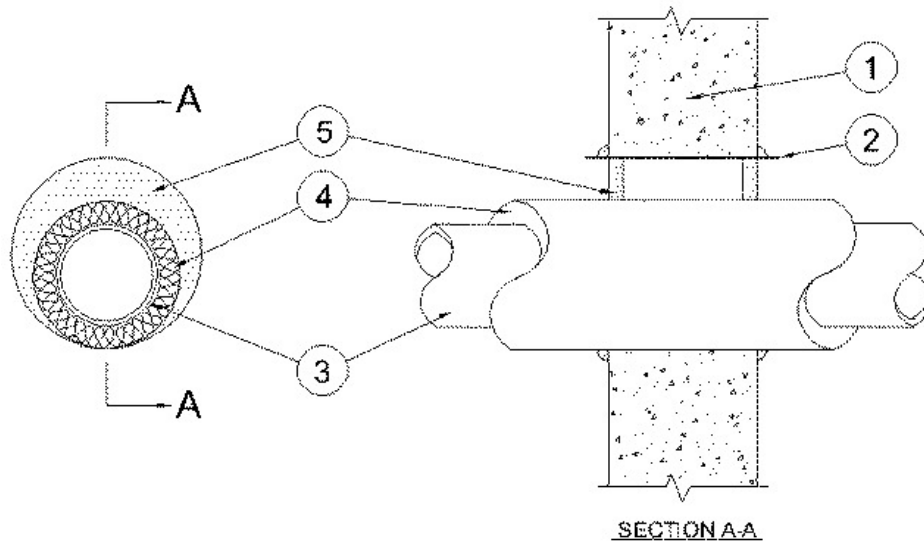


F Rating — 2 Hr
T Ratings — 1 and 1-3/4 Hr (See Item 3)



1. **Wall Assembly** — Min 6 in. thick reinforced lightweight or normal weight (100-150 pcf) concrete. Wall may also be constructed of any UL Classified **Concrete Blocks***. Max diam of opening is 13 in.

See **Concrete Blocks** (CAZT) category in the Fire Resistance Directory for names of manufacturers.

2. **Metallic Sleeve** — (Optional) — Cylindrical sleeve fabricated from min No. 26 gauge galv sheet steel and having a min 1 in. overlap along the longitudinal seam. Ends of sleeve to be flush with or extend a max 1 in. beyond each surface of wall.

3. **Through Penetrant** — One metallic pipe or tube to be installed either concentrically or eccentrically within the firestop system. Pipe or tube to be rigidly supported on both sides of wall assembly. The following types and sizes of metallic pipes or tubes may be used:

A. **Steel Pipe** — Nom 6 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 6 in. diam (or smaller) cast or ductile iron pipe.

C. **Copper Tubing** — Nom 6 in. diam (or smaller) Type L (or heavier) copper tube.

D. **Copper Pipe** — Nom 6 in. diam (or smaller) Regular (or heavier) copper pipe.

When penetrant is 4 in. diam (or smaller), T Rating is 1-3/4 hr. Otherwise, T Rating is 1 hr.

4. **Pipe Covering*** — Nom 2 in. thick hollow cylindrical heavy density (min 3.5 pcf) glass fiber units jacketed on the outside with an all service jacket. Longitudinal joints sealed with metal fasteners or factory-applied self-sealing lap tape. Transverse joints secured with metal fasteners or with butt tape supplied with the product. The annular space shall be min 0 in. (point contact) to max 2-1/2 in.

See **Pipe and Equipment Covering — Materials** (BRGU) category in the Building Materials Directory for names of manufacturers. Any pipe covering material meeting the above specifications and bearing the UL Classification Marking with a Flame Spread Index of 25 or less and a Smoke Developed Index of 50 or less may be used.

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

A. **Packing Material** — (Not Shown) — Foam backer rod firmly packed into opening as a permanent form. Packing material to be recessed from wall surfaces as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Materials* - Caulk** — For penetrants greater than 4 in. in diam, min 5/8 in. thickness of caulk applied to backer rod within annular space flush with each surface of wall. For penetrants 4 in. diameter or smaller, min 1/2 in. thickness of caulk applied to backer rod within annular space flush with each surface of wall. When steel sleeve is not used or when steel sleeve is flush with the wall surfaces, a min 1/2 in. diam bead of caulk shall be applied to the pipe insulation/concrete interface at the point contact location on both sides of wall. When steel sleeve is used, a bead of caulk is applied to the steel sleeve/concrete interface on both sides of wall.

RECTORSEAL — [Metacaulk 1000](#)

*,+ 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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