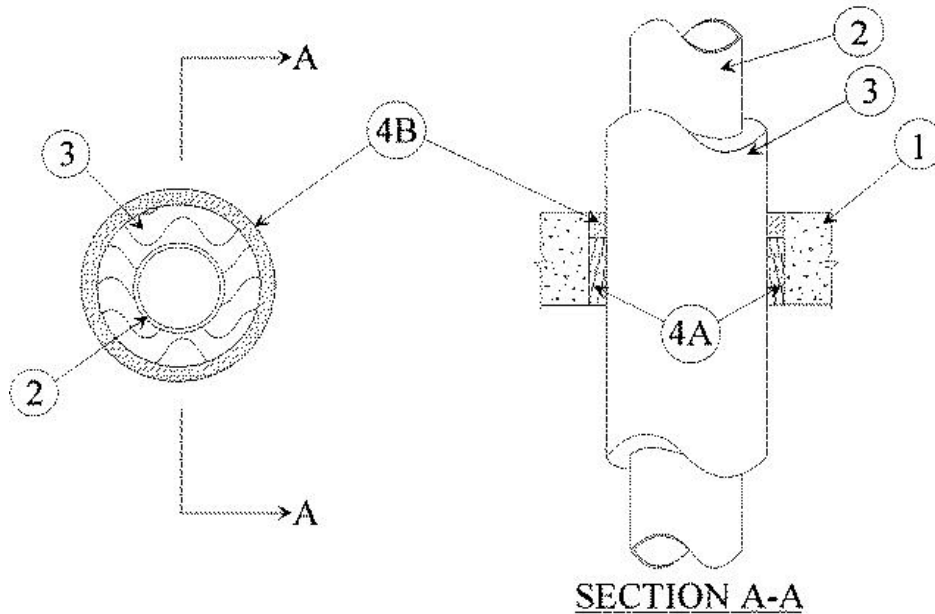


F Rating — 2 Hr  
T Ratings — 1 & 1-1/2 Hr (SEE ITEM 4)



**1. Floor or Wall Assembly** — Reinforced lightweight or normal weight (100-150 pcf) concrete floor having a min thickness as specified in the table below (Item 4). Wall may also be constructed of any UL Classified **Concrete Blocks\***. Floor may also be constructed of any min 6 in. thick UL Classified hollow-core **Precast Concrete Units\***. Max diam of opening in solid lightweight or normal weight concrete floor or wall is 16 in. Max diam of opening in hollow-core precast concrete unit floor is 7 in. See **Concrete Blocks** (CAZT) and Precast Concrete Units (CFTV) categories in the Fire Resistance Directory for names of manufacturers.

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

- A. **Steel Pipe** — Nom 10 in. diam (or smaller) Schedule 10 (or heavier) steel pipe.
- B. **Iron Pipe** — Nom 10 in. diam (or smaller) cast on ductile iron pipe.
- C. **Copper Tube** — Nom 4 in. diam (or smaller) Type 6 (or heavier) copper tube.
- D. **Copper Pipe** — Nom 4 in. diam (or smaller) Regular (or heavier) copper pipe.

**3. 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 as specified in the table below (Item 4).

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.

**4. Firestop System** — The T Ratings of the system are dependent upon the type of assemblies being penetrated, thickness of assembly, annular space, forming material thickness and fill material thickness as shown in the table below:

Floor or Wall	Min Floor or Wall Thkns In.	Annular Space In.	Min Forming Mtl Thkns In.	Min Fill Mtl Thkns In.	T Rating Hr
F	4-1/2	1/2 to 3/4	3-1/2	1	1-1/2
W	5-1/2	1/2 to 3/4	3-1/2	1	1-1/2
F	4-1/2	5/8 to 7/8	0	1-1/2	1
W	4-1/2	5/8 to 7/8	0	1-1/2	1

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A. **Packing Material** — Min 4.0 pcf mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from top surface of solid concrete floor or from both surfaces of wall or hollow-core floor as required to accommodate the required thickness of fill material.

B. **Fill, Void or Cavity Material\*** — **Caulk** — Min thickness of fill material applied within the annulus, flush with top surface of solid concrete floor or with both surfaces of wall or hollow-core floor.

**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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