

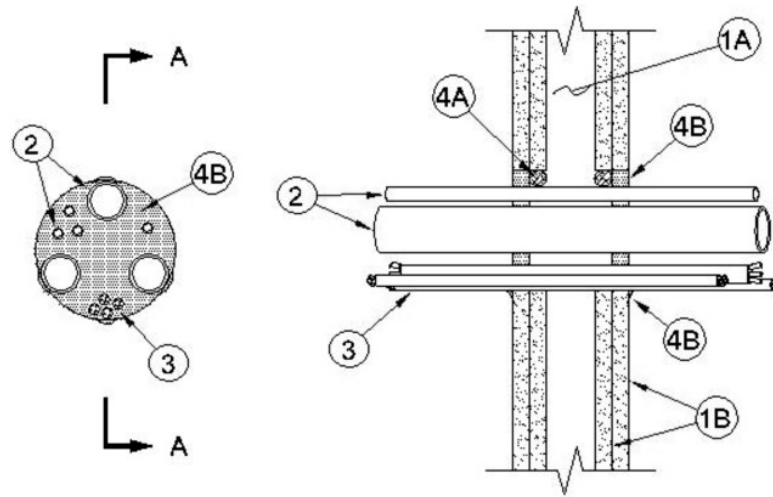
Through-penetration Firestop Systems

System No. W-L-8083

October 02, 2008

F Ratings — 1 and 2 Hr (See Item 1)

T Ratings — 0, 1/2 and 1 Hr (See Items 2 and 3)



SECTION 'A-A'

1. **Wall Assembly** — The 1 or 2 hr fire rated gypsum board/stud wall assembly shall be constructed of the materials and in the manner specified in the individual U300 or U400 Series Wall or Partition Design in the UL Fire Resistance Directory and shall include the following construction features:

A. **Studs** — Wall framing may consist of either wood studs or steel channel studs. Wood studs to consist of nom 2 by 4 in. lumber spaced 16 in. OC. Steel studs to be min 3-5/8 in. wide and spaced max 24 in.

B. **Gypsum Board*** — Thickness, type, number of layers and fasteners as specified in the individual Wall and Partition Design. Max diam of opening is 10 in.

The hourly F Rating of the firestop system is equal to the hourly fire rating of the wall assembly in which it is installed.

2. **Through Penetrants** — A max of four 1 in. diam and three 4 in. diam (or smaller) metallic pipes, conduits or tubing to be installed within the firestop system. The annular space between the pipes, conduits or tubing and the periphery of the opening shall be min 0 in. (point contact) to max 1-1/2 in. Separation between pipes, conduits or tubing shall be min 1/2 in. to max 1-5/8 in. Pipes, conduits or tubing to be rigidly supported on both sides of the wall assembly. The following types and sizes of pipes, conduits and tubes may be used:

A. **Steel Pipe** — Nom 4 in. diam (or smaller) Schedule 5 (or heavier) steel pipe.

B. **Iron Pipe** — Nom 4 in. diam (or smaller) cast or ductile iron pipe.

C. **Conduit** — Nom 4 in. diam (or smaller) rigid steel conduit or nom 4 in. diam (or smaller) steel electrical metallic tubing (EMT).

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

E. **Copper Tube** — Nom 4 in. diam (or smaller) Type L (or heavier) copper tube.

F. **Copper Pipe** — Nom 1 in. diam Type K copper pipe.

When any metallic penetrant is used the T Rating is 0 hr.

3. **Cables** — Nom 3 in. diam (or smaller) tight bundle of cables. Cable bundle spaced min 1 in. from other penetrants. Annular space between cable bundle and periphery of opening to be min 0 in. (point contact) to max 1-1/2 in. Cable bundle to be rigidly supported on both sides of wall assembly. Any combination of the following types and sizes of cables may be used:

- A. Max 400 pairs, 24 AWG telephone communication cable with PVC insulation and jacket.
- B. 4/C No. 14 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TEK cable with XLPE insulation.
- C. Max 7/C No. 12 AWG copper conductor power and control cables; XLPE or PVC insulation with XLPE or PVC jacket.
- D. Max RG59/U (or smaller) coaxial cable with fluorinated ethylene insulation and jacketing.
- E. Type RG 59/U coaxial cable with polyethylene (PE) insulation and PVC jacket.

When cable bundle is used without any metallic penetrant the T rating is 1/2 hr and 1 hr for 1 hr and 2hr fire rated wall assemblies, respectively.

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

A. **Packing Material** — Foam plastic backer material or backer rod or mineral wool batt insulation firmly packed into opening as a permanent form. Packing material to be recessed from both surfaces of wall as required to accommodate the required thickness of fill material. When annular space between penetrants and/or between penetrants and edge of opening is 3/4 in. or less packing material is optional.

B. **Fill, Void or Cavity Material*** — **Sealant** — Min 5/8 in. thickness of fill material applied within annulus, flush with both surfaces of wall assembly. At point contact locations, min 1/2 in diam bead of fill material applied at through penetrant/gypsum board interface on both surfaces of wall.

ACCUMETRIC L L C — Boss 816

*Bearing the UL Classification Mark