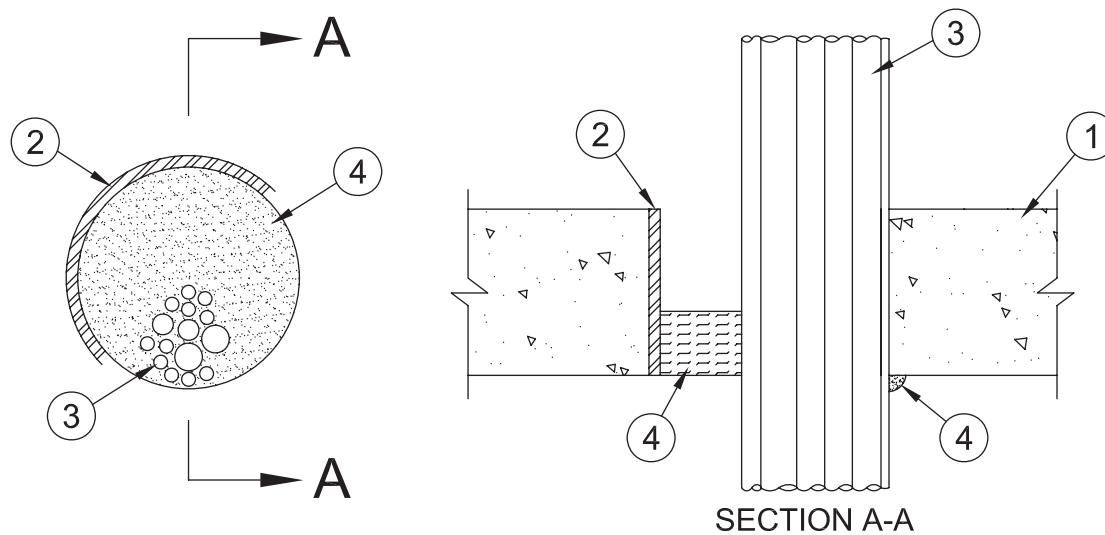


## System No. C-AJ-3263

June 12, 2006  
F Rating – 3 Hr  
T Rating – 1/4 Hr



1. **Floor or Wall Assembly** – Min 2-1/2 in. (64 mm) thick reinforced lightweight or normal weight (100-150 pcf or 1600-2400 kg/m<sup>3</sup>) concrete. Floor assembly may also be constructed of any min 6 in. (152 mm) thick UL Classified hollow-core **Precast Concrete Units\***. Wall may also be constructed of any UL Classified **Concrete Blocks\***. Max diam of opening 6 in. (152 mm).  
See **Concrete Blocks (CAZT)** and **Precast Concrete Units (CFTV)** categories in Fire Resistance Directory for names of manufacturers.
2. **Steel Sleeve** – (Optional) – Nom 6 in. (152 mm) diam (or smaller) Schedule 10 (or heavier) steel sleeve cast or grouted into floor or wall assembly. Steel sleeve may be installed flush or may project max 2 in. (51 mm) beyond the floor or wall surfaces.
3. **Cables** – Aggregate cross-sectional area of cables in opening to be max 44 percent of the cross-sectional area inside the sleeve or opening. Annular space between cables and periphery of opening or sleeve shall be min of 0 in. (0 mm, point contact) to max 2 in. (51 mm). Cables to be rigidly supported on both sides of floor or wall assembly. Any combination of the following types and sizes of cable may be used;
  - A. Max 200 pair No. 22 AWG (or smaller) copper conductor with polyvinyl chloride (PVC) insulation and jacketing material.
  - B. Max 1/C No. 750 kcmil (or smaller) copper conductor cable with cross-linked polyethylene (XLPE) jacket.
  - C. Max 7/C No. 12 AWG (or smaller) copper conductor power and control cables with XLPE or PVC insulation with XLPE or PVC jacket.
  - D. Max 3/C No. 4/0 AWG (or smaller) copper or aluminum conductor SER cables with PVC insulation and jacket.
  - E. Max 3/C No. 2/0 AWG (or smaller) copper conductor PVC jacketed aluminum clad or steel clad TECK 90 cable.
  - F. Max 110/125 fiber optic (F.O.) cable with PVC insulation and jacket.
  - G. Max 3/C with ground No. 8 AWG (or smaller) copper conductor NM cable with PVC insulation and jacket.
  - H. RG/U coaxial cable with fluorinated ethylene (FE) or PVC insulation and jacket.
  - I. Max 4 pair No. 24 AWG (or smaller) copper conductor data cable with Hylar jacket and insulation.
  - J. Max three conductor No. 12 AWG (or smaller) MC (BX) copper cable with polyvinyl chloride insulation and jacket materials.
  - K. **Through Penetrating Product\*** – Any aluminum or steel jacketed **Armored Cable+** or **Metal Clad Cable+** currently Classified under the **Through Penetrating Product** category.  
See **Through Penetrating Product (XHLY)** category in the Fire Resistance Directory for names of manufacturers.
4. **Fill, Void or Cavity Materials\* – Caulk or Sealant** – Min 1-1/2 in. (38 mm) thickness of caulk applied within the annulus, flush with bottom or top surface of floor or with both surfaces of wall. Min 1/4 in. (6 mm) diam bead of caulk applied to the penetrant/concrete or penetrant/sleeve interface at the point contact location on the bottom or top surface of floor or both surfaces of wall.

**3M COMPANY** – IC 15WB+ Caulk, CP 25WB+ Caulk or FB-3000 WT Sealant

Bearing the UL Listing Mark

\*Bearing the UL Classification Mark

Through Penetrations

Cables

3000 Series

Concrete

**CAJ**

This material was extracted and drawn by 3M Fire Protection Products from the 2006 edition of the UL Fire Resistance Directory. cULus