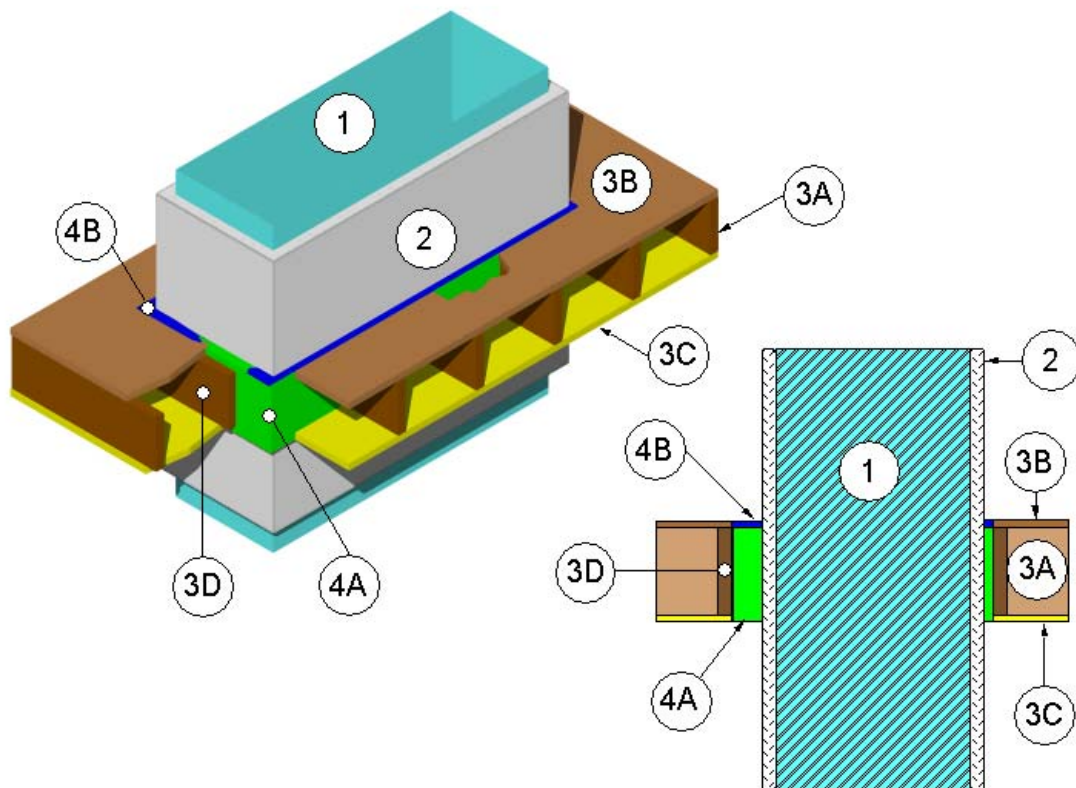


Design No. 3MU/PV 60-01
OPL Design Number: FS 558 F

PENETRATION FIRESTOP THROUGH FLOOR/CEILING ASSEMBLY

3M Company
3M Fire Barrier™ Duct Wrap 15A or 20A
3M Fire Barrier™ Duct Wrap 615
3M Fire Barrier™ 2000+ Silicone Joint Sealant
3M Fire Barrier™ Water Tight 1000-NS Silicone Joint Sealant
3M Fire Barrier™ Water Tight 1003 SL Silicone Joint Sealant
ASTM E 814-06
T Rating – 1 hr
F Rating – 1 hr



1. PENETRATING ITEM: Rectangular or round steel duct constructed of minimum 24 GA sheet steel with maximum 720 inch² area with a maximum 30 inch dimension or 30 inch diameter.
2. CERTIFIED MANUFACTURER: 3M Company

CERTIFIED PRODUCT: 3M Fire Barrier™ Duct Wrap
MODEL: 15A, 20A
MODEL: 615: Option for FRD Ventilation Ducts (Old Designation VAD)

INSULATION: Before the packing material (Item 4A) and fill material (Item 4B) of the penetration firestop (Item 4) is installed, protect the penetrating item (Item 1) with at least one layer of minimum 24-inch-wide certified insulation. Minimum 8 pcf density required for grease duct applications. Wrap penetrating item (Item 1) with a one layer of certified insulation, overlap the ends of certified insulation and secure certified insulation to penetrating item (Item 1) in accord with any 1-hour-rated 3M FRD design listing.

3. FLOOR ASSEMBLY – Install penetrating item (Item 1) through a framed hole created in an ASTM E 119 (UL 263 or NFPA 251) one-hour fire-rated floor assembly having the following components as part of its construction:
 - A. Joists – Minimum 2 x 10 wood joists spaced a maximum 18-½ inches on center (O.C.).
 - B. Flooring – Minimum ¾-inch-thick plywood attached to the top of wood joists.
 - C. Gypsum Board – Minimum one layer of ½-inch-thick, Type X, gypsum wallboard attached to the bottom of wood joists.
 - D. Reinforcement – When the hole penetrates the joists, additional 2 x 10 wood perimeter framing is required to maintain the floor assembly's strength at that location.
 - E. Opening – Create an opening in the floor/ceiling assembly having a cross-sectional area of maximum 1083 inch² and a maximum dimension of 35.5 inches. Frame opening with joists (Item 3A) and reinforcement (Item 3D). Position the penetrating item (Item 1) concentrically or eccentrically in the opening so that the annular space ranges from minimum 1 inch to maximum 2-½ inches.
4. PENETRATION FIRESTOP: Asymmetrical penetration firestop constructed of the following components:

A. CERTIFIED MANUFACTURER: 3M Company

CERTIFIED PRODUCT: 3M Fire Barrier™ Duct Wrap

MODEL: 15A, 20A, 615

PACKING MATERIAL: Fill the annular space with minimum 4-pcf mineral wool or certified insulation without the encapsulation (foil scrim). Cut the packing material into strips. Compress packing material nominally 25% and insert packing material into the annular space. Fill the entire annular space. Recess the surface of packing material nominally ¾ inches from both surfaces of the face layers of the gypsum board of the wall assembly (Item 3).

B. CERTIFIED MANUFACTURER: 3M Company

CERTIFIED PRODUCT: 3M Fire Barrier™ Joint Sealant

MODEL: Water Tight 1000-NS Silicone or 2000+ Silicone or Water Tight 1003 SL Silicone

FILL, VOID OR CAVITY MATERIAL: Install minimum ¾-inch depth of certified fill material into the recess over the packing material (Item 4A) on top sides of the floor assembly (Item 3). Screed certified fill material flush with the surface of the floor assembly (Item 3).