
Design No. FS 578 F

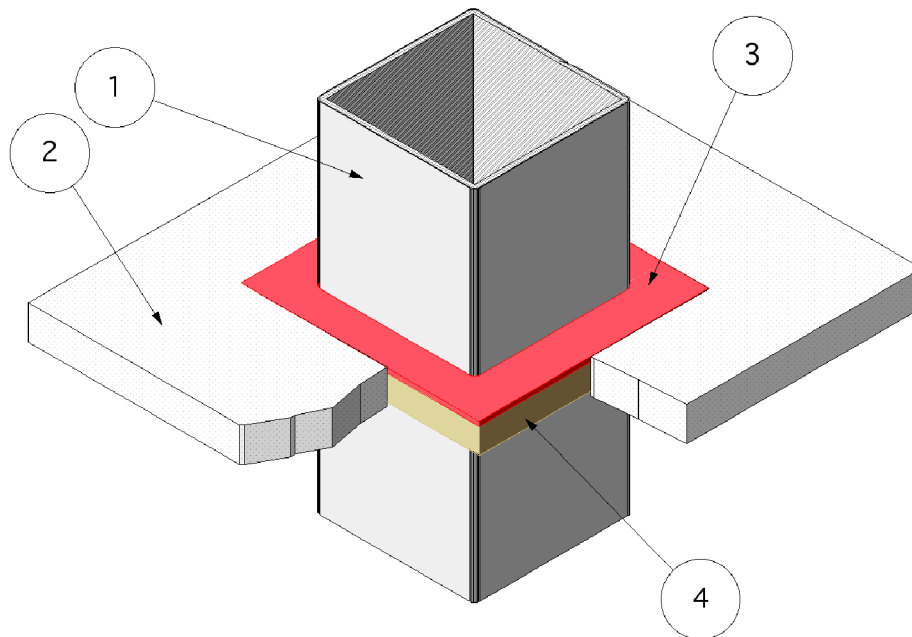
FIRE PENETRATION SEAL

Penetrating Item Steel Duct

ASTM E-814

T-Rating - 2 hr

F-Rating - 2 hr



1. **PENETRATING ITEM:** A round or rectangular steel duct system constructed of min. 16 GA sheet steel with max. 2500 in² area and max. 50-in. width (max. dim. 50-in. x max. 50-in. or max. 56-3/8 in. diameter) and protected with a one layer of 3M Fire Barrier Duct Wrap 15A, such as detailed in GD 538 F or GD 549 F.
2. **FLOOR ASSEMBLY:** The two-hour fire-rated floor assembly consists of min. 4-1/2 in. thick normal weight (100-150 pcf) reinforced concrete. Create an opening in the floor assembly having a max. cross-sectional area of 3220 in² and a max. dimension of 57-1/2-in. Position the duct assembly concentrically or eccentrically in the opening so that the annular space ranges from min. 1 in. on one side to max. 4-1/2 in. on the other.
3. **FILL, VOID OR CAVITY MATERIAL:** Min. 1/4-in. depth of sealant fill material is to be applied to the recess around the top surface of the floor through-penetration opening. The sealant material overlapped the concrete and duct assembly a nom. 1/4-in.

Listed Manufacturer:

3M -

Firestopping

Firestopping Sealants

3M Fire Barrier™ 2000+ Silicone Joint Sealant

Through-Penetration Fire Stop Systems

3M Fire Barrier™ 1000 N/S Silicone
Joint Sealant

3M Fire Barrier™ 1003 S/L Silicone
Joint Sealant

1/4 in. from the top surface of the floor, as required to accommodate the necessary depth of caulk fill material. (** Listed with Omega Point Laboratories)

4. PACKING MATERIAL: Fill the annular space with scrap 3M Fire Barrier Duct Wrap 15A, 20A, or 4 pcf mineral wool**, or unfaced 1-1/2-in. thick 8 pcf insulation**. Cut the insulation into strips. Then compress the strips approximately 50% and insert it into the opening to fill the entire annular space. Fill the slab depth with packing material and recess the surface of packing material a min.

Listed Manufacturer:

3M -

Insulation

Mineral Wool Blanket

3M Fire Barrier Duct Wrap 15A

3M Fire Barrier Duct Wrap 20A