

---

Design No. FS 576 F

**FIRE PENETRATION SEAL**

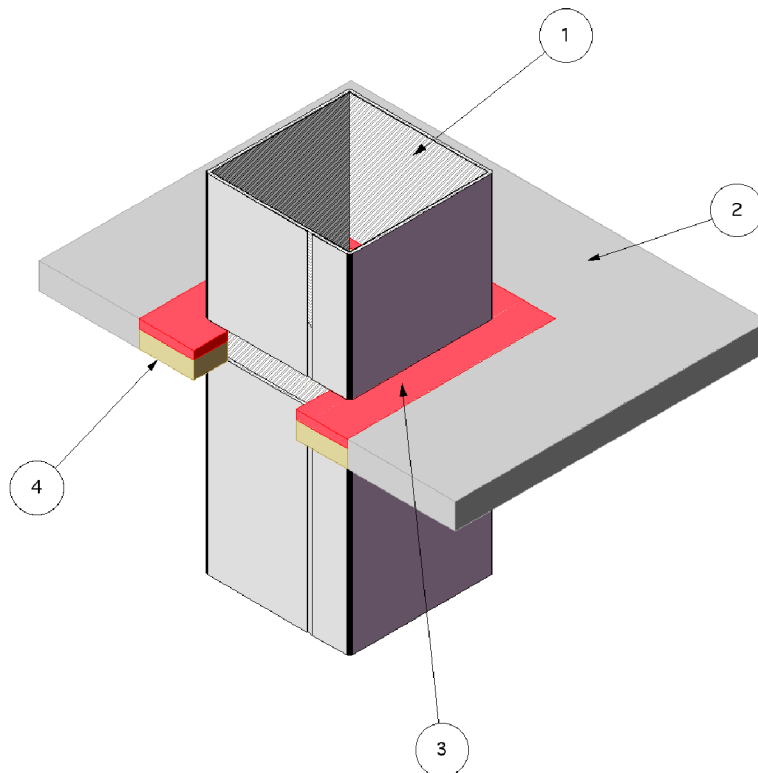
**Penetrating Item Steel Duct**

**ASTM E 814**

**T-Rating - 79 min**

**F-Rating - 2 hr**

---



1. **PENETRATING ITEM:** An airtight round or rectangular steel duct system constructed with the limiting specifications in the table below. Protect duct with two layers of 3M Fire Barrier Duct Wrap 15A or 20A as detailed in systems VAD 529 F, VAD 530 F, or VAD 531 F, VAD 542 F. The insulation abutts the firestop system (3&4) on both sides of the floor/ceiling.
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 in accordance with the applicable specifications in the table below. Position the duct assembly concentrically or eccentrically in the opening so that the annular space ranges from min. 1/2 in. on one side to max. 2-1/2 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 over the packing material (4) on the top side of the floor through-penetration opening. The fill material is in direct contact with the steel duct or the insulation. The sealant material overlapped the concrete a nom. 1/4-in.

**Listed Manufacturer:**

3M -

## Through-Penetration Fire Stop Systems

### Firestopping

#### Firestopping Sealants

3M Fire Barrier™ 2000+ Silicone Joint Sealant

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

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

4. PACKING MATERIAL: Fill the annular space with scrap 3M Fire Barrier Duct Wrap 15A, 20A, or 4 pcf mineral wool\*\*. Cut the mineral wool into strips. Then compress it 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. 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)

#### Listed Manufacturer:

3M -

Insulation

Mineral Wool Blanket

3M Fire Barrier Duct Wrap 15A

3M Fire Barrier Duct Wrap 20A

Max. Duct Area (in <sup>2</sup> )	Max. Duct Dimension (in)	Min. Duct Gage Thickness	Max Area of Opening (in <sup>2</sup> )	Max Dimension of Opening (in)
1440	60	20 GA	2432	70-1/2
400	40	24 GA	1035	50-1/2
144	12	26 GA	506	22-1/2