
Design No. FS 569 W

FIRE PENETRATION SEAL

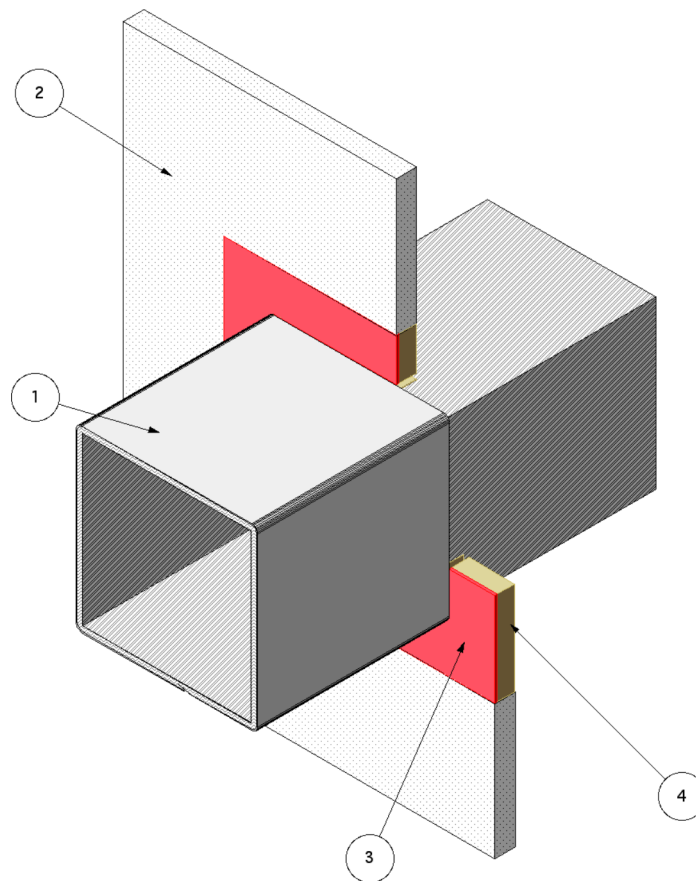
Penetrating Item Steel Duct

ISO 6944

Integrity, Stability, Insulation – 2 Hr.*

T-Rating - 2 hr*

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, VAD 531 F, or VAD 542 F. Where the duct penetrates into the rated concrete shaft enclosure, the insulation abutts the firestop system (3&4) on the external side of the shaft wall. The duct is not required to be insulated internal to the shaft.
2. **SHAFT WALL ASSEMBLY:** The two-hour fire-rated shaft wall assembly consists of min. 4-1/2 in. thick normal weight (100-150 pcf) reinforced concrete or concrete blocks. Create an opening in the wall 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 in. on one side to max. 2 in. on the other.
3. **FILL, VOID OR CAVITY MATERIAL:** Min. 1/4-in. depth of sealant fill material is to be applied over the recess of the packing material

Through-Penetration Fire Stop Systems

(4) on one side of the wall through-penetration opening (external to the shaft). 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 -

Firestopping

Firestopping Sealants

3M Fire Barrier™ CP 25WB+ Caulk

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. Recess

the surface of packing material a min. 1/4 in. from one side of the wall (external to the shaft) 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

*This system depicts penetration into a rated shaft enclosure and the firestop system is asymmetric. For this reason, the fire protective characteristic of this system is relevant only to fires existing external to the shaft construction. It does not apply to fires internal to the shaft enclosure.

Max. Duct Area (in ²)	Max. Duct Dimension (in)	Min. Duct Gage Thickness	Max Area of Opening (in ²)	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