Dryer Duct Rated Assembly
Membrane Penetrations


2021 International Building and Mechanical Code and Commentaries

The requirements of 2021 IBC 714 Penetrations will be met. Dryer ducts may be addressed per the guidance below with a detail signed and sealed by the engineer of record.

1. The duct can be wrapped with rated duct wrap from the point that the duct enters the rated assembly to the point where it leaves the rated assembly (see Section A). The duct wrap must be listed and labeled for the specific intended use. The duct wrap must be rated the same as the floor/ceiling assembly, roof/ceiling, or wall assembly. The penetration must be sealed to prevent the passage of smoke or flame.

2. If the rated floor/ceiling, roof/ceiling, or wall assembly test report indicates that penetrations of the assembly membrane by ducts is acceptable, then the dryer duct may pass through the assembly membrane as prescribed in the test report unless the report requires dampers. Dampers are never allowed.

3. A letter of engineering judgment from a Utah state registered engineer with expertise in the area of passive fire protection or from an International Accreditation Service (IAS) approved testing agency is an acceptable method for penetrating the membrane.

4. Relocate the membrane of the rated floor/ceiling, roof/ceiling, or wall assembly such that the duct is not within the assembly (see Section B).

5. Enclose dryer duct in a chase/soffit enclosed in final wall finish that is completely outside the rated floor ceiling assembly and all dryer duct is within the same residential unit and terminates to the outside at least 3 feet away from any operable openings or air inlet.

6. Dryer ducts shall meet the requirements in IMC Section 504 Clothes Dryer Exhaust.

Keywords:
Horizontal assembly, horizontal assemblies, fire-resistance-rated, fire resistant-rated