

FLEX DUCTS AND AIR CONNECTORS

2024 IMC 603.6.2.2 and 607.7 | Two independent crossing rules

Identify the UL 181 listed product as a flexible air duct or flexible air connector before checking the boundary. A smoke designation is not by itself the fire-resistance rating test.

1 Connector rule - any wall, floor or ceiling

- Section 603.6.2.2 prohibits a flexible air connector from passing through any wall, floor or ceiling, including an unrated one. Do not treat a short connector or a damper as an exception.

2 Rated-assembly rule - ducts and connectors

- Section 607.7 prohibits both flexible ducts and air connectors through any fire-resistance-rated assembly. Confirm the actual rating and boundary on the architectural life-safety plan.
- Stop the flex before a prohibited crossing. Detail any eligible rigid-duct penetration with the specific damper, sleeve, firestop or shaft protection required for that assembly under 607.5-607.6.

3 Keep smoke classification separate

- A smoke barrier and smoke partition are different designations; determine whether the specific assembly is also fire-resistance-rated. Smoke-damper and air-transfer-opening rules remain independent even when 607.7 is not triggered by a rating.

Bring: UL 181 product label, reflected ceiling plan, wall/floor/ceiling and smoke classifications, life-safety ratings, and proposed flex-to-rigid transition and penetration detail.

Source: ICC 2024 IMC 603.6.2.2 and 607.7, checked 2026-10-15. Educational model-code guide; not a product approval, project design or locally adopted-code determination.