

resistance-rated floor/ceiling or roof/ceiling assembly in accordance with ATSTM E119 or UL 263.

716.3.2 Damper rating. *Damper* ratings shall be in accordance with Sections 716.3.2.1 through 716.3.2.3.

716.3.2.1 Fire damper ratings. *Fire dampers* shall have the minimum *fire protection rating* specified in Table 716.3.2.1 for the type of penetration.

TABLE 716.3.2.1 FIRE DAMPER RATING

TYPE OF PENETRATION	MINIMUM DAMPER RATING (hours)
Less than 3-hour fire-resistance-rated assemblies	1.5
3-hour or greater fire-resistance-rated assemblies	3

716.3.2.2 Smoke damper ratings. *Smoke damper* leakage ratings shall not be less than Class II. Elevated temperature ratings shall not be less than 250°F (121°C).

716.3.2.3 Combination fire/smoke damper ratings. *Combination fire/smoke dampers* shall have the minimum *fire protection rating* specified for *fire dampers* in Table 716.3.2.1 for the type of penetration and shall also have a minimum Class II leakage rating and a minimum elevated temperature rating of 250°F (121°C).

716.3.3 Damper actuation. *Damper* actuation shall be in accordance with Sections 716.3.3.1 through 716.3.3.4 as applicable.

716.3.3.1 Fire damper actuation device. The *fire damper* actuation device shall meet one of the following requirements:

1. The operating temperature shall be approximately 50°F (10°C) above the normal temperature within the duct system, but not less than 160°F (71°C).
2. The operating temperature shall be not more than 350°F (177°C) where located in a smoke control system complying with Section 909.

716.3.3.2 Smoke damper actuation. The *smoke damper* shall close upon actuation of a *listed* smoke detector or detectors installed in accordance with Section 907.3 and one of the following methods, as applicable:

1. Where a *smoke damper* is installed within a duct, a smoke detector shall be installed in the duct within 5 feet (1524 mm) of the *damper* with no air outlets or inlets between the detector and the *damper*. The detector shall be *listed* for the air velocity, temperature and humidity anticipated at the point where it is installed. Other than in mechanical smoke control systems, *dampers* shall be closed upon fan shutdown where local smoke detectors require a minimum velocity to operate.
2. Where a *smoke damper* is installed above *smoke barrier* doors in a *smoke barrier*, a spot-type detector *listed* for releasing service shall be installed on either side of the *smoke barrier* door opening.
3. Where a *smoke damper* is installed within an air transfer opening in a wall, a spot-type detector *listed* for releasing service shall be installed within 5 feet (1524 mm) horizontally of the *damper*.