

2009 IBC Nonstructural Question and Answer

708.11 Enclosure at the bottom. Shafts that do not extend to the bottom of the building or structure shall comply with one of the following:

1. They shall be enclosed at the lowest level with construction of the same fire-resistance rating as the lowest floor through which the shaft passes, but not less than the rating required for the shaft enclosure.
2. They shall terminate in a room having a use related to the purpose of the shaft. The room shall be separated from the remainder of the building by fire barriers constructed in accordance with Section 707 or horizontal assemblies constructed in accordance with Section 712, or both. The fire-resistance rating and opening protective shall be at least equal to the protection required for the shaft enclosure.
3. They shall be protected by approved fire dampers installed in accordance with their listing at the lowest floor level within the shaft enclosure.

Exceptions:

1. The fire-resistance-rated room separation is not required, provided there are no openings in or penetrations of the shaft enclosure to the interior of the building except at the bottom. The bottom of the shaft shall be closed off around the penetrating items with materials permitted by Section 717.3.1 for draftstopping, or the room shall be provided with an approved automatic fire suppression system.
2. A shaft enclosure containing a refuse chute or laundry chute shall not be used for any other purpose and shall terminate in a room protected in accordance with Section 708.13.4.
3. The fire-resistance-rated room separation and the protection at the bottom of the shaft are not required, provided there are no combustibles in the shaft and there are no openings or other penetrations through the shaft enclosure to the interior of the building.

Q: Is it necessary to install dampers at the bottom of shafts as illustrated in Figure 7-46?

A: Essentially, you are asking whether the schemes indicated in Figure 7-46 meet the intent of Exception 1 of Section 708.11 without providing fire and smoke dampers. The figure shows a three-story building with the air-conditioning units for each of the floor levels located on the roof. The shaft construction for each air-conditioning unit runs down to the floor level served by the air-conditioner without any openings in the shaft from any floor level except the floor level that it is supplying. Because intercommunication between the various floor levels would not be created by this method, there would not be any need for the installation of dampers in the individual air-conditioning shafts. [7-46]

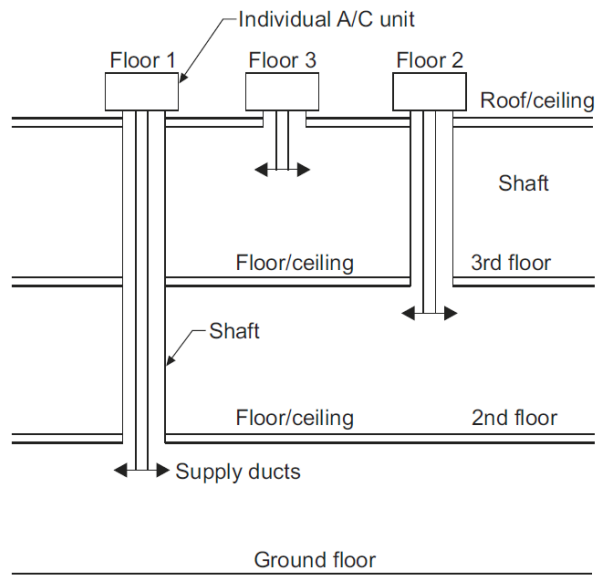


Figure 7-46