

greater than 2,000 cfm (0.9 m³/s) and will be shut down by activation of one of the following:

1. Smoke detectors required by Sections 606.2.1 and 606.2.3.
2. An approved area smoke detector system located in the return air plenum serving such units.
3. An area smoke detector system as prescribed in the exception to Section 606.2.1.

In all cases, the smoke detectors shall comply with Sections 606.4 and 606.4.1.

606.2.3 Return air risers. Where return air risers serve two or more stories and serve any portion of a return air system having a design capacity greater than 15,000 cfm (7.1 m³/s), smoke detectors shall be installed at each story. Such smoke detectors shall be located up stream of the connection between the return air riser and any air ducts or plenums.

606.2.4 Supply air systems. Smoke detectors listed for use in air distribution systems shall be installed downstream of the air filters and ahead of any branch connections in air supply systems having a capacity greater than 2,000 cfm (0.9 m³/s).

606.3 Installation. Smoke detectors required by this section shall be installed in accordance with the *New York City Electrical Code*. The required smoke detectors shall be installed to monitor the entire airflow conveyed by the system including supply air, return air and exhaust or relief air. Access shall be provided to smoke detectors for inspection and maintenance.

606.4 Controls operation. Upon activation, the smoke detectors shall automatically shut down their respective air distribution system(s). Air distribution systems that are part of a smoke control system shall switch to the smoke control mode upon activation of a detector.

606.4.1 Supervision. The duct smoke detectors shall be connected to a fire alarm system. The actuation of a duct smoke detector shall activate a visible and audible supervisory signal at a constantly attended location.

Exceptions:

1. The supervisory signal at a constantly attended location is not required where the duct smoke detector activates the building's alarm-indicating appliances.
2. In occupancies not required to be equipped with a fire alarm system, actuation of either area or duct smoke detector shall activate a visible and an audible signal in an approved location. Additionally, duct smoke detector trouble conditions shall activate a visible or audible signal in an approved location and shall be identified as air duct detector trouble.

606.4.2 Fan shutdown. When any building or floor is provided with an air system utilizing recirculated air and is protected by an automatic sprinkler system or an automatic fire alarm system, provisions shall be made to automatically stop the fans serving the affected area when the sprinkler system or fire alarm system are installed in the area, it shall

be required to have only one of these systems arranged to stop the fans.

Exceptions:

1. Activation of a manual pull station shall not be required to automatically stop the fans.
2. Systems having a capacity of 2,000 cfm (0.2 m³/s) or less or serving not more than one floor.

606.4.3 Manual restart of fans after automatic fire detecting device or fire alarm system shut down. Fans or fan systems which have been automatically shut down on activation of an automatic fire detecting device or fire alarm system shall be arranged and equipped so that they do not automatically restart when either the automatic fire detecting device or fire alarm system is reset. The manual means of restarting the fans or fan system shall function independently from the manual resetting of either the automatic fire detecting device or fire alarm system.

SECTION MC 607 DUCTS AND AIR TRANSFER OPENINGS

607.1 General. The provisions of this section shall govern the protection of duct penetrations and air transfer openings in fire-resistance-rated assemblies.

607.1.1 Ducts and air transfer openings without dampers. Ducts and air transfer openings that penetrate fire-resistance-rated assemblies and are not required to have dampers by this section shall comply with the requirements of Section 712 of the *New York City Building Code*.

607.2 Installation. Fire dampers, smoke dampers, combination fire/smoke dampers and ceiling dampers located within air distribution and smoke control systems shall be installed in accordance with the requirements of this section, and the manufacturer's installation instructions and listing.

607.2.1 Smoke control system. Where the installation of a fire damper will interfere with the operation of a required smoke control system in accordance with Section 513, approved alternative protection shall be utilized.

607.2.1.1 Remote operation. Combination fire and smoke dampers shall be operable by remote controls where necessary for smoke removal. Such dampers shall have provisions that allow them to reclose automatically upon reaching the damper's maximum degradation test temperature in accordance with UL 555S.

607.2.2 Hazardous exhaust ducts. Fire dampers for hazardous exhaust duct systems shall comply with Section 510.

607.2.3 Supply air systems. Smoke dampers listed for use in air distribution systems shall be installed both upstream and downstream of filters and ahead of any branch connections in supply air-handling apparatus and systems having a capacity equal to or greater than 15,000 cfm (7.1 m³/s).

Exceptions:

1. Where the air-handling unit is located on the floor that it serves and serves only that floor.