



CITY OF PERRIS

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Automatic Shut-Off For HVAC (Commercial/Industrial Projects) 2022 California Mechanical Code (CMC)

Section 609.0, 2022 CMC - Automatic Shutoffs

Section 609.1 Air-Moving, Systems and Smoke Detectors. Air-moving systems supplying air in excess of 2,000 cubic feet per minute (CFM) to enclosed spaces within a building shall be equipped with an automatic shutoff. Automatic shutoff shall be accomplished by interrupting the power source of the air-moving equipment upon detection of smoke in the main supply-air duct served by such equipment. Duct smoke detectors shall comply with UL 268A, shall be labeled by an approved agency, approved and listed by California State Fire Marshal, and shall be installed in accordance with the manufacturer's installation instructions. Such devices shall be compatible with the operating velocities, pressures, temperatures, and humidities of the system. Where sire-detection or alarm systems are provided for the building, the smoke detectors shall be supervised by such systems in an approved manner and installed in accordance with NFPA 72 and the California Building and Fire Codes 2022 Editions.

Definition: Air-moving system. A system designed to provide heating, cooling, or ventilation in which one or more air-handling units are used to supply air to a common space or are drawing air from a common plenum or space.

Code Interpretation: All commercial/industrial buildings having one tenant are considered to be one common enclosed space.

In multi-tenant commercial/industrial buildings, each tenant space may be considered one common enclosed space if no openings are provided in the demising walls between such tenants.

If multiple air-moving systems are provided for one common enclosed space, and the aggregate cfm exceeds 2,000 cfm, shutoff for smoke control is required. For the purpose of calculating the total aggregate cfm, air moving systems which serve only a designated area or room may at the discretion of the administrative authority not be required to be equipped with shut offs for smoke control.

Duct smoke detectors required in air-moving systems shall transmit an alarm signal to either (1) the fire alarm panel which is supervising the building fire sprinkler system and valve tamper

or (2) to a separate stand-alone remote indicator panel (*second fire alarm panel*) supervising the duct detectors exclusively.

Activation of any duct detectors shall cause a visual and an audible signal in a normally occupied area.

Plan Checks: Plan check and approval of the fire alarm system, if connected to the building fire sprinkler system, is regulated by the Fire Marshal. If a stand-alone remote system, the Building Division will plan check the system. The plans submitted to the Building Division for a building permit to construct the tenant improvements to the building shall indicate how the automatic shut-down is performed. The location of panels and annunciation shall be shown on the electrical plans. If a remote system, a sign shall be placed next to the horn and light stating, "When horn and light are on, the smoke detectors in HVAC systems have activated".

Inspections: An inspection to determine that the air-moving system is shut off by the smoke detector is regulated by the building inspector. Inspection of the building fire sprinkler and alarm system is regulated by the fire inspector. In some cases, the building and fire inspectors may conduct a joint inspection.

Note: All five exceptions to section 609.1 are applicable.