



Hurst Fire Department

"Making the Difference"

Commercial Hood Suppression Systems

Scope:

This guideline identifies protection for cooking surfaces which include; deep fat fryers, griddles, upright broilers, char broilers, range tops and grills, open face ovens, salamanders, cheese melters, woks, open face pizza ovens, mobile food trucks and other similar equipment. The plenum space within the hood, above the filters, and exhaust ducts servicing the hood shall also be protected.

All commercial cooking operations for the purposes of this guideline and any other guidelines or requirements shall conform to the 2015 International Fire Code and International Mechanical Code as amended and adopted by the City of Hurst and the most current edition of NFPA 96.

Required:

Type I hoods are required for cooking appliances that produce grease or smoke as a result of the cooking process.

507.1 [M] A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors, including but not limited to cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, or any form of roofed enclosure, as required by the fire code official.

507.1 [M] Type II hoods are required above dishwashers and appliances that produce heat or moisture and do not produce grease or smoke.

609.2 Where Required. A Type I hood shall be installed at or above all commercial cooking appliances and domestic cooking appliances used for commercial purposes that produce grease vapors, including but not limited to cooking equipment used in fixed, mobile, or temporary concessions, such as trucks, buses, trailers, pavilions, or any form of roofed enclosure, as required by the fire code official.

Additionally, fuel gas and power provided for such cooking appliances shall be interlocked with the extinguishing system, as required by Section 904.12.2. Fuel gas containers and piping/hose shall be properly maintained in good working order and in accordance with all applicable regulations.

507.1 [M] Operation:

The hood system must operate whenever cooking operations are taking place. In order to perform the intended function, a Type I hood shall automatically operate when cooking operations occur or must be activated in an arrangement that prevents cooking without hood exhaust system operation.

Manual activation of the exhaust system is allowed, if there is a means to prevent cooking appliance operation when the exhaust system is not operating.

If an automatically activated (smart hood) system is used, the system must begin operation within 15 minutes of the first cooking appliance(s) being turned on. To have the hood system activate so quickly will require sensitive and sophisticated controls.



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506.3.7 [M] Prevention of grease accumulation in grease ducts. Duct systems serving a Type I hood shall be constructed and installed so that grease cannot collect in any portion thereof, and the system shall slope not less than one fourth unit vertical in 12 unit's horizontal (2-percent slope) toward the hood or toward a grease reservoir designed and installed in accordance with Section 506.3.7.1.

506.3.9 [M] Grease duct horizontal cleanouts. Cleanouts serving horizontal sections of grease ducts shall:

1. Be spaced not more than 20 feet (6096 mm) apart.
2. Be located not more than 10 feet (3048 mm) from changes in direction that are greater than 45 degrees (0.79 rad).
3. Be located on the bottom only where other locations are not available and shall be provided with internal damming of the opening such that grease will flow past the opening without pooling. Bottom cleanouts and openings shall be approved for the application and installed liquid-tight.
4. Not be closer than 1 inch (25 mm) from the edges of the duct.
5. Have opening dimensions of not less than 12 inches by 12 inches (305 mm by 305 mm). Where such dimensions preclude installation, the opening shall be not less than 12 inches (305 mm) on one side and shall be large enough to provide access for cleaning and maintenance.
6. Shall be located at grease reservoirs.

506.5.4 [M] Clearances. Exhaust *equipment* serving a Type I hood shall have a *clearance* to combustible construction of not less than 18 inches (457 mm).



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Guidelines:

1. The piping shall be rigidly supported to prevent excessive movement and shall be protected from mechanical or other damage.
2. All systems shall meet UL 300.
3. Both a manual and automatic means of activation shall be provided. A minimum of one manual activation pull station shall be provided in the path of egress, and shall be located no more the five feet above the floor. The manual actuation device shall be located a minimum of 10 feet and a maximum of 20 feet from the kitchen exhaust system.
4. Where multiple manual actuators are installed for protection of separate extinguishing systems, they shall be clearly identified as to the hood being protected.
5. Distinctive audible and/or visual alarms shall be provided to indicate system operation and activation.
6. Specifically, an audible/visual notification device shall be provided to indicate system operation, requiring personnel attention and system recharge.
7. The fire suppression system shall be interconnected to the building fire alarm system. Activation of the Kitchen Hood Fire Suppression System shall cause the fire alarm to activate throughout the building.
8. Activation of the fire suppression system shall automatically shut-off the fuel supply, ventilation controls if required, fans, and any other equipment necessary. Shut-off valves and switches shall be of the types that require a manual action to reset.
9. When a building fire alarm system is provided, activation of the fire suppression system shall transmit full addressable information in accordance with the Fire Alarm Operational Guidelines.
10. A "K" Class fire extinguisher having a minimum rating of 40-B shall be installed at an approved location, and within 30 feet of commercial food heat-processing equipment, as measured along an unobstructed path of travel.
11. Pre-engineered fire suppression systems shall be installed only by companies and individuals licensed by the State of Texas State Fire Marshal's Office.