



Kerrville Fire Marshal

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Section 4

Commercial Kitchen Fire Suppression Systems

All commercial cooking operations shall conform to the *International Fire Code* as adopted by the City of Kerrville, TX

These guidelines identifies fire suppression system and fire extinguisher protection requirements for cooking operations that involve the production of grease-laden vapors or smoke including deep fat fryers, griddles, upright broilers, char broilers, range tops, grills, open face ovens, salamanders, cheese melters, woks, open face pizza ovens, barbecue smokers and other similar equipment. The plenum space within the hood, above the filters, and exhaust ducts servicing the hood shall also be protected.

This guide does not replace, nor supersede any City adopted codes or ordinances.

General Requirements

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.
4. A minimum of one manual activation pull station per system shall be provided in the path of egress, and shall be located no more than 48-inches not less than 42-inches above the floor.
5. The manual actuation device shall be located a minimum of 10-feet and a maximum of 30-feet from the kitchen exhaust system.
6. Where multiple manual actuators are installed for protection of separate extinguishing systems, they shall be clearly identified as to the hood being protected.
7. A distinctive audible and visual alarm shall be provided to indicate the kitchen hood fire suppression system activation. The A/V device must be equipped with a locking means of disconnecting the A/V device.
8. The kitchen hood fire suppression system shall be interconnected to the building central fire alarm system, where available. Activation of the kitchen hood fire suppression system shall cause the building central fire alarm to activate throughout the building.
9. Activation of the fire suppression system shall automatically shut-off the fuel supply, all electricity (lighting under the hood and to appliances), 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.

Fire Extinguisher Requirements

10. A fire extinguisher shall be installed within 30 feet of commercial food heat-processing equipment, as measured along an unobstructed path of travel.
 - a. Fire extinguishers provided for the protection of cooking appliances that use combustible cooking media (vegetable or animal oils and fats) shall be listed and labeled for Class K fires.
11. A placard shall be conspicuously placed near the extinguisher that states that the fire protection system shall be activated prior to using the fire extinguisher.

Submittal Requirements

12. Plans and specifications/cut sheets shall be submitted in PDF Format into the online platform. A second set of plans shall be submitted on paper at the request of AHJ if needed. Plans shall contain sufficient detail to enable the plan reviewer to accomplish a complete review.

13. Each submittal shall have a:
 - a. A completed Kerrville Fire Marshal Fire Protection Permit Application;
 - b. A copy of State of Texas Fire Extinguisher ECR license is required for the installing company;
 - c. A copy of the fire suppression system designer's license, Type PL, A, or K;
 - d. A copy of company's State liability insurance.
14. The following information shall be provided on the plans:
 - a. The title block shall contain the following:
 1. Location of the installation
 2. Name and complete address of the business
 3. Name and complete address of the installing company
 4. Licensing information
 - b. Indicate compliance with UL 300, NFPA 17 and NFPA 96
 - c. Scale or suitable dimensions
 - d. Hood dimensions
 - e. Exhaust duct size (diameter)
 - f. Piping schematic
 - g. A floor plan shall be provided and shall indicate the location of the kitchen hood itself, electrical panel, manual pull station, K Class fire extinguisher, suppression system cabinet, location and type of local fire suppression system activation A/V device and its disconnect.
 - h. A minimum of one drawing shall be provided in 3D/Isometric view of the hood, ductwork and protected appliances
 - i. Nozzle type, number, and location
 - j. Location and temperature of the fusible links
 - k. Interconnection to the building fire alarm system, if fire alarm system is available on premise
 - l. Interconnection to the fuel supply shut-off and indicate the type of fuel supply
 - m. Interconnection to shunt-trip breakers supplying power to electrical equipment, lighting and/or receptacles in or under the hood area. Exception: cooking hood exhaust fan motor(s) must remain operational.
15. A minimum of one (1) set of specifications shall be provided that include the following:
 - a. Scope of Work
 - b. Indication that only equipment that is referenced in the manufacturer's listed installation and maintenance manual or alternate suppliers' components that are listed for use with the specific extinguishing system shall be used
 - c. Performance specifications of discharge nozzle types listed on plans.
 - d. Identification of special auxiliary devices acceptable to the system manufacturer
 - e. List of any special acceptance tests that are required by the manufacturer
 - f. Identification of the hazard to be protected and including such information as physical dimensions, cooking appliances, energy sources for each appliance, and air-handling equipment
 - g. Cooking equipment list and specifications sheets

Additional Information

16. Plans approved by the City of Kerrville, Fire Marshal give authorization for construction and/or operation. Final approvals are subject to field verification. Any approval issued by the Fire Marshal does not release the contractor or property owner from the responsibility of full compliance with all applicable codes and ordinances relating to the construction project.
17. Installation, fabrication or otherwise construction of the system is prohibited without approved plans and permit.
18. All installations and/or operations must concur with the approved plans. Any deviation from the approved plans requires a re-submittal to the Fire Marshal.
19. All fire marshal inspection forms and permits shall be kept in a permit packet on the job site until final inspection.

Inspection Requirements

20. Before calling to set up an inspection, the contractor must complete a pre-test on the system to verify its proper operation.

21. Schedule inspection w/Fire Marshal's Office at least one business day after the pre-test.
22. Air Test: Check nozzle operation by air blow-out test. An extra cartridge bottle (CO₂ or Nitrogen) will be required on systems with this type firing. CO₂ blow test are allowed on Power-Chem Systems. Blow tests are subject to Fire Marshal's approval. Observe activation of system through fuse link cutting.
23. Fuse links are required to be dated links. Dated links must be changed every year
24. Utility Shut-off Test: All utilities connected to the protected cooking devices, shall have automatic shut-off valves. Gas shut off valve visible and accessible. Make up air shut off and exhaust stayed on upon activation
25. Hood, duct and ventilation installed properly. Hood, duct and ventilation clean. Fire suppression mechanisms must be clean.
26. Manual Pull Station Test: Operation of the manual pull station shall bring about full system operation. Manual pull in path of exit.
27. Class K extinguisher and sign within 30 feet of system
28. Audible/Visual Notification: Audible and/or visual notification devices shall be tested.
29. Fire Alarm Connection: Automatic fire-extinguishing systems shall be monitored by the building fire alarm system in accordance with *NFPA 72*.
30. Final: Final inspection. System was reset and tagged properly.
31. Provide a certificate of inspection on the fire suppression system.