



COMMERCIAL KITCHEN REQUIREMENTS AND DESIGN CRITERIA - 2018

IBC 2018 Section 904 - Alternative Automatic Fire-Extinguishing Systems

IMC 2018 Sections 506, 507, 508 - Commercial Kitchen Hoods

IMC 2018 Section 509 - Fire Suppression Systems

IMC 509.1 Requires Fire Suppression for Type 1 Hoods as Per IBC 904.12 Requirements for Commercial Cooking

SEQUENCE OF REQUIRED EVENTS FOR FIRE SYSTEM TEST AND INITIAL INSPECTION -

When pull station is pulled or the fusible link is broken, the microswitch is triggered:

1. Mechanical gas valve is shut stopping the flow of gas, or the electrical power supply is cut, to the cooking equipment (IBC 904.12.2)
2. The building fire alarm is triggered (IBC 904.3.5)
3. Makeup air unit is shut off (IBC 904.12.3.1)
4. Exhaust fan will stay ON
5. Electrical outlets under the hood controlling cooking equipment are shut off (IBC 904.12.2)
6. Suppression agent is released from tanks

OTHER REQUIREMENTS –

- A. A remote manual pull station shall be located at least 10' from hood but no more than 20' and located within easy reach (42" - 48" high) of the path of egress and clearly labeled as such. (IBC, IFC 904.12.1)
- B. The system shall be monitored by the Building Fire Alarm System where one is installed (IBC 904.3.5)
- C. Automatic Start up, hood systems shall be designed and installed to automatically activate the exhaust fan AND makeup air systems whenever cooking operations occur (IMC 507.1.1, IMC 508.1, IMC 508.1.1)
- D. Fire suppressions shall meet all NFPA 17A (Wet) and 17 (Dry) and all UL300 requirements (IBC 904.12)
- E. Portable fire extinguishers for commercial cooking equipment. Portable Fire Extinguishers shall be provided *within* a 30-foot travel distance from commercial cooking equipment. Cooking equipment involving solid fuels, vegetable or animal oils and fats must be protected by a Class K portable extinguisher. (IFC 904.12.5, IBC 906.4)
 - a. All solid fuel cooking appliances, whether or not under a hood, with fire boxes 5 cubic feet or less in volume shall have a minimum of one 2.5-gallon or two 1.5-gallon Class K wet-chemical portable fire extinguishers located within a 30-foot travel distance of appliance.
 - b. When hazard areas include deep fat fryers, listed Class K 1.5 Gal. portable fire extinguishers shall be provided at a minimum of one (1) Extinguisher for every four (4) fryers.
- F. Provide 18" clearance to combustibles as per IMC 507.9 and IMC 308.6, OR provide Non-Combustible construction for walls and ceiling, i.e. steel, metal studs, block. This applies to walls, ceilings, and wood framing.
- G. Exhaust shall terminate 40" minimum above roof surface, 10' from buildings and lot lines, 10' from or 3' above air intake openings. (IMC 506.3.13)
- H. Make up air shall be supplied during operation of the commercial kitchen exhaust systems that are provided for commercial cooking appliances. (IMC 508.1, IMC 508.1.1)