

# Black Diamond Fire Protection System



Designed with:  
KUK Protect™

## Black Diamond

One of the main hazards for industrial kitchens is fire. According to 2010 figures from insurance companies, five industrial kitchens suffer a fire per day. Their annual financial losses are over millions of dollars.

The owner of industrial kitchens is responsible of evaluating risks and implementing prevention measures against fire. They are the most interested people in protecting their own business.

Installing BLACK DIAMOND system is lower than 5% of overall investment and, in the case of a fire, BLACK DIAMOND lets you to save money and to keep running your business immediately after discharge.

## Operation

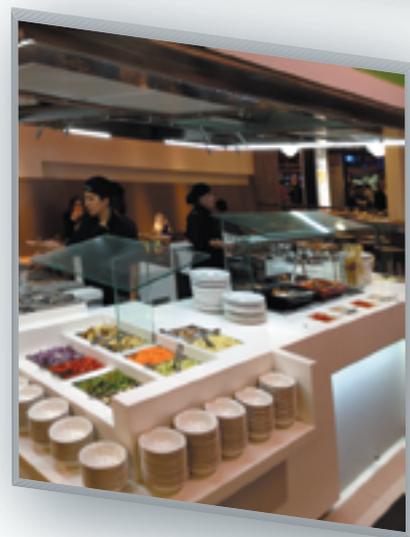
BLACK DIAMOND Fire Protection System has a detection system and an extinguishing system which actuate as complementary system one of each other.

Detection system is checking status of kitchen continuously, when safety thresholds are exceeded extinguishing system is actuated (pneumatically or electrically) with the result of extinguishment of fire attempt.

On the other hand, extinguishing system is actuated, as detailed above, discharging wet agent in exhausting ducts, hoods and cooking equipment.

## Standards

BLACK DIAMOND is designed according to UL300 and NFPA 17A and fulfills all European recommendation documents.



# Black Diamond Fire Protection System



Designed with:  
KUK Protect™

## Black Diamond

### Detection System

BLACK DIAMOND is set in two different detection ways which will be used depending on client requirements. Both of them comply with standards and are suitable to be installed in any kind of industrial kitchen.

#### Pneumatic Actuation

This way of actuating extinguishing system is composed by pressurized flexible tubing which releases pressure when a particular temperature is reached: 120°C (248°F) or 180°C (356 °F).

When rated temperature is reached in tubing vicinity, pressure inside tubing is released which **actuates extinguishing system without electricity**.

#### Electrical Actuation

It's composed by two different parts: linear heat detector (in crossed on simple configuration) rated temperature can be set depending the protected zone; and a control panel which checks fire status of kitchen and, in the case is required, activates electrically system by solenoid valve.

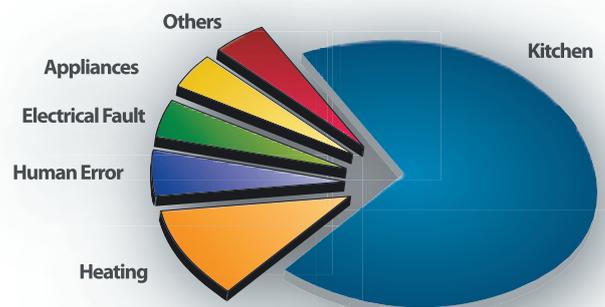
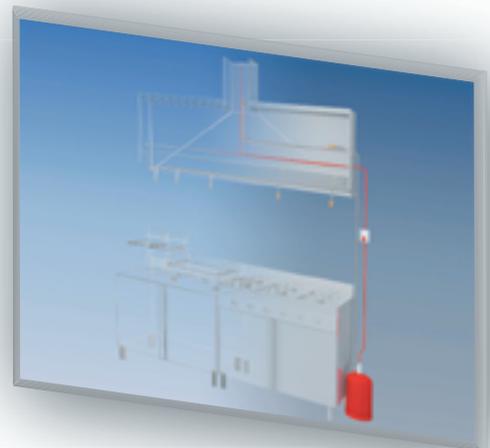
### Extinguishing System

After system is actuated, electrically or pneumatically, wet agent will be discharged through each nozzle.

Each nozzle is specifically designed for any kind of hazard you can find in industrial kitchens. The main characteristics of nozzles are: flow rate, discharge angle and drop size.

Apart from its extinguishing capability, the best advantages of this wet agent are: non corrosive, easy to clean up (allowing clients to keep working in less than 1 hour after discharge\*) and without adverse effects against people or environment.

\* Measured time from real tests on real industrial kitchens.



Causes of Fire in United States Restaurants  
National Fire Incident Reporting System (NFIRS) - 2007 to 2009