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Казахстан +7(7172)727-132

# Odor Control System

Россия +7(495)268-04-70

Customized units designed do remove soot, grease and odor



### **TECHNICAL FEATURES/DESCRIPTION**

Foods systematically generate considerable amounts of foul-smelling fumes and vapours when cooking. These substances must be removed at the time of their production in order to guarantee conditions of well-being and environmental health, not only for the operators of an industrial kitchen but also for the consumers who benefit from this service.

In most cases, this is achieved with the simple localized aspiration of fumes through filtering elements placed inside a hood, and expulsion by means of a direct metal duct or flue.

Sometimes however, it is necessary to purify odor, grease and soot from the aspirated fumes before they are ejected into the atmosphere. In these cases, the only feasible solution is the installation of a filtering and deodorizing system. This system uses a combined technology that might include water plus other filtering elements.

Our filtering systems are specifically designed to solve different problems:

# **1.** Aspiration problems in kitchens of restaurants where it is not possible to install a flue, for the expulsion of fumes or polluted and flawed air.

(however, only the local Health Service can allow the installation of a filtering system without a chimney that runs up to the roof, as the law states that exhaust smokes should be taken to the roof);

2. Restaurants fitted with a flue that equally need to filter soot, grease and odor, grease and odor or simply odor due to neighborhood complaints, for example in situations where the restaurant building is lower than the surrounding buildings or any other situation where the fumes escaping from the flue are disturbing.

In the filtering system, each element has its own specific function, however each component can be added or removed depending on the issue the customer needs to solve : odor? Odor and grease? Soot, odor and grease?

## **OPERATING PRINCIPLE:**

#### **1 - WATER SCRUBBER SECTION:**

Water filtering system for smoke and grease. The system is based on water, the most simple and efficient element in nature. A combination of fresh and recycled water from a tank, runs through a recirculation pump, and uses nozzles to spray water under high pressure to wash the gasses. It then filtrates and purifies the smoke, eliminating grease particles produced by cooking and combustion. Water consumption is low using our new technique. This new washing system uses air crossing in a horizontal direction which provides considerably higher air flow rates, and allows the unit to be more compact and efficient.

The unit is equipped with stainless steel mechanical filters which, when hit by the jet of water caused by the nozzles, distribute the air over the entire surface. A further barrier of mesh stainless steel filters is used to filter the particles that may have escaped the first filtration. Then, a water separator filter, also made of stainless steel, has the purpose of reducing as much as possible the humidity produced by washing. All the filters are easily accessible for maintenance thanks to the inspection door located conveniently on the front of the machine.

#### 2 - PLEATED METAL FILTERS (replaceable)

These metal filters guarantee a further decrease of greases and oily residual, constituting an excellent solution in fire prevention.

These filters must be washed with water and detergent every 30 days.

#### 3 - VILEDON FILTERS (replaceable)

Galvanized sheet containment frame, with corrugated protective mesh on both sides with rectangular mesh. Filtering sieve in synthetic fibers (Politex type A30), 80% filtration efficiency (method ASHRAE STANDARD 52/76). The filter cells of this series have the mattress arranged in a 'wavy' way to increase the surface.

Operating temperature: 100 ° C; in continuous service: 80 ° C.

To be washed with water and detergent every 30 days. replace after 3/4 washes.

#### 4 - UV LAMP FILTERS

The high-efficiency UV lamps have been designed to disintegrate the residual fat particles, and are sized based on the air flow and the velocity of the fumes passing through ,firstly treated by the water scrubber Maxi Grill and the other filters before them. These lamps, produce ozone, and are therefore positioned before active carbon filters as the ozone regenerates the active carbon filters. The life of a UV lamp is 12,000 hours, after this period, it slowly declines over the next 7/8000 additional hours.

The lamps must be cleaned every three months, using a damp cloth.

#### **5 - ACTIVE CARBON FILTER**

Cylindrical active carbon filters cartridges with high adsorption power. The quantity of active carbon cartridges varies according to the airflow required by the filtering unit ,their average life cycle is around 1,800-2,000 working hours (normally they are replaced annually).

Operating temperature 40  $^\circ$  C.

#### **6 - ELECTROSTATIC FILTERS**

Electrostatic filters are one of the most sophisticated air purification systems.

The operating principle of electrostatic filters relies on the electrostatic attraction of the particles flowing through, which are positively charged when passing through the ionizer, by means of deposit plates in the collection zone which form a uniform electric field with negative charge.

Cells are cleaned monthly with water and detergent.gativa.

La pulizia delle celle si effettua mensilmente con acqua e detersivo.

#### 7 - FAN ASSEMBLY

The incoming air is driven in via an electric centrifugal fan that can have different characteristics depending on the needs of the installation being studied.

#### CARATTERISTICHE TECNICO COSTRUTTIVE DELLA STRUTTURA PORTANTE:

Structure in aluminum section; double paneling in zinc, magnesium sheet or stainless steel depending on the requirements, internal acoustic insulation with high density sound absorbing mat. 25 mm

Can be supplied on supporting feet structure and in an "outdoor" version.

The maximum burdensome work is with an environmental condition of 45 degrees Celsius with 50% relative humidity. The only factor that can considerably limit the proper functioning of the system is poor maintenance of the various filtering sections.

All the products we manufacture comply with CE requirements.

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