

Efficiency of the TeppanFilt for indoor use

When cooking without a proper ventilation system, air becomes a **complex mixture of vapour**, smoke, mineral and vegetable particles, etc. The variety of shapes and sizes of these elements is very wide, ranging from particles smaller than 0.01 microns to the biggest oily condensed particles of 0.1 mm. The high temperatures used in the cooking process are capable of evaporating considerably big amounts of water and grease which **will spread in the air returning to liquid or solid state when cooling down**.

At this point, most of the extremely odorous liquid and **solid particles will fall by action of gravity as a very fine rain which is the main reason for smelly clothes, walls, etc.** The relatively large particles (5 microns and up) are deposited on horizontal surfaces while the smallest particles tend to stick to clothes, walls, ceilings and furniture.

Only by means of the dust spot method can one find out the efficiency of a filter to separate particles smaller than 5 microns, which account, numerically speaking, for 99% of the total pollutant particles.

TEPANFILT filters measured with this method **reach efficiency values in the order of 95%**, depending on the speed of air through the electronic cells. The efficiency of electronic air filters in retaining large particles, less problematic, is greater than 95%, measured by weight analysis.

This very high filtration capacity is the core of the TEPANFILT ability to prevent smell from spreading into the room.

Applications

Teppan Yaki restaurants.

Ever been to a teppanyaki restaurant? Did you notice you smell like food? With TeppanFilt most of the particles that carry the odor and stick to your clothes will be removed from the air and filtered while you enjoy your teppanyaki experience. No hood system installation required.

Adding new equipment to the existing kitchen.

When you need more production, but your aspiration system cannot handle an extra griddle, TepanFilt will do the job. TepanFilt does not need any hood system and will push your production without further investment nor installation annoyances.

Show cooking : Adding new equipment into a lunch hall.

Cooking in front of the customers in a lunch hall involve a complicated installation, sometimes it is not only expensive, but not possible due to architectural restrictions. TeppanFilt will keep smoke and odors away from your customers, while they enjoy the show and their meal.

Architecturally complicated buildings.

Ideal for Historical buildings, Airports, Shopping Malls, Hotels, etc... Nobody thought there could be a kitchen here before... Maybe it is an historical building, it is not possible to install a traditional aspiration system, or it is just far too expensive to rip down the building for the ventilation exhaust. Tepanfilt will do the job. TepanFilt can be installed anywhere with minimum effort.

The TeppanFilt Griddle

CHARACTERISTICS

- No Installation required. Built in the griddle.
- Ductless - Hoodless system.
- Takes the smoke right from the surface of the griddle.
- Electronic filtration system.
- High and constant efficiency.
- Ergonomical Aspiration Entry point.
- Low maintenance costs. Easy to clean.
- Reduced noise.

- Oversized Grease drawer
- 3 Programmable working temperature modes
- Electronic Thermostat with inertia compensation system
- Embebed heating elements.
- Full stainless steel body.
- Grill Surface welded to the body

Full Stainless steel.

All the elements in the griddle and aspiration system are Stainless steel AISI 340,

Grill Surface welded to the body.

Having the grill plate welded to the body will avoid oil leakage to the inside.

Electronic thermostat.

A computer system control the temperature of the griddle. It has a time temperature program that compensates the inertia of the heating elements and the griddle material.

Safety thermostat.

All models come with a redundant high limit safety thermostat. Should the main thermostat fail, it would cut the current to the heating elements to prevent possible accidents.

Embebed heating Elements.

Using a 18mm thick plate gives the griddle resistance and endurance. It is barely impossible to bend and in good hands will last for a long period. However this thickness makes heat transfer more difficult. The surface underneath the heating elements has been reduced to increase the heat transfer. An aluminium casting plate covers the heating elements facilitating the diffusion and distribution of heat evenly on the plate surface.

Reduced Aspiration entry point.

The (patent pending) tepan filt aspiration system has been ergonomically designed to make the use of the griddle as comfortable as possible. Both heads can be removed from the griddle and easily cleaned.

Oversized grease drawer.

A 3lit grease drawer is installed in the griddle. A convenient 30 x 60 mm hole has been done in the top of the griddle to facilitate access to the grease drawer.

Programmable working temperatures.

The electronic system can work with 3 different temperatures. They can be easily programmed by the user, or used manually. Stand by temperature to keep the griddle heated and ready to work.

Reduced noise operation.

In some installations, like the teppanyaki talbe, the tepanfilt will be right in front of your customers. The (patent pending) Tepanfilt technology allows to reduce the noise emission of the filtering system lower than a traditional hood system with equivalent results.

How this work

The TEPANFILT electronic filter takes the smoke right where it is produced, sucks the air, cleans it, and exhausts it clean and odor-less. It has 3 filtering stages:

STAGE 1: MECHANICAL FILTRATION Filters particles as small as 3 microns.

The mechanical filtration is done by a set of baffle filters similar to those used in kitchen exhaust hoods which are able to filtrate the biggest particles (above 3 microns) by means of centrifugation of the smoke flow.

STAGE 2: ELECTRONIC FILTRATION Filters particles as small as 0.01 microns.

The electronic air filter is a particle pick-up device based on the principle of electrostatic precipitation.

Only electronic air filters and certain specially-designed dry filters are capable of separating particles which are smaller than 5 microns. The efficiency threshold of this electronic filter places it in the order of magnitude of 0.01 microns.

STAGE 3: ACTIVE CARBON FILTRATION Eliminates odours.

The active carbon ability to remove smell of air (absortion) is well known. With a surface area in excess of 500m²/g active carbon retains odorous gases from the previously filtered air.

