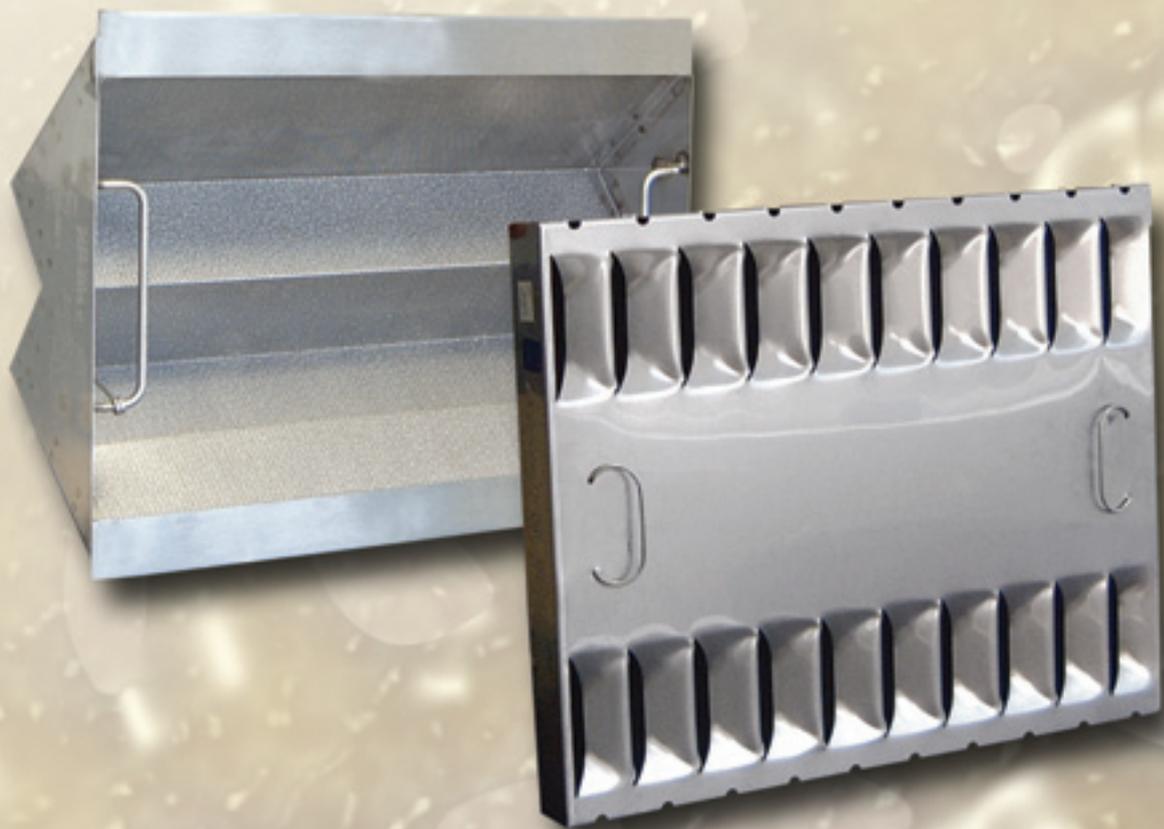


GREASE GRABBER

patented filter system for kitchens



- ~ *A major advance in grease filter technology*
- ~ *80% grease removal*
- ~ *Greatly reduced cleaning costs and fire risk*
- ~ *Full installation service for existing systems*



Ventilation for the nation

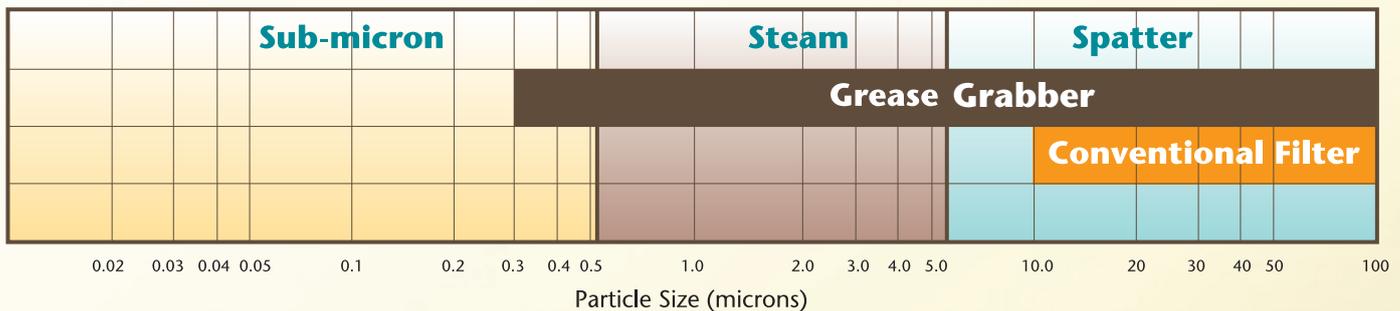
GREASE GRABBER

To help reduce the maintenance costs and the constant threat of a fire in the ductwork, it is necessary to prevent airborne particles of grease from entering the ductwork system.

The problem is the size of the grease particles. The exhaust contains vapour and particles which vary in size from 0.03 sub-micron (smoke) to 150 microns.

Conventional mesh and baffle grease filters are effective at removing the larger particles in the 10 to 150 micron range, but allow the smaller particles to pass through. These condense and collect in the duct, the fan and on the roof, and are a potential fire hazard.

Effective Range of Grease Grabber/Conventional Filter



Sub-micron:

Sub-micron particles are produced when a drop of grease or water comes into contact with a hot surface and immediately burns off. Particle size range from 0.03 to 0.55 microns (smoke).

Steam:

Steam is a grease covered moisture and air mixture which is produced by the long burning of cold or frozen food on a hot cooking surface. Particle size range from 0.55 to 6.2 microns.

Spatter:

Spatter is the larger more visible effluent that is produced during the cooking process. Particle size range from 6.2 to 250 microns.

The Grease Grabber is a unique two stage filter that has an overall efficiency of 80%, compared to 31% for other types of grease filter.

The front filter contains individual vortex chambers with inlets at the top and bottom of the filter. The air travels through the chambers in a helical pattern with the larger grease particles collecting on the filter walls by centrifugal force, before draining into the hood grease trough and grease cups. This front filter is strongly built in stainless steel, and is an excellent fire barrier.

The secondary filter is packed with beads which remove the small grease particles.

The combined effect is to remove 100% of grease particles larger than 9 microns, and 80% of particles larger than 1 micron. (Human hair = 100 microns.)

The smallest sub-micron particles will pass through the Grease Grabber, i.e. smoke.

Hamburgers, chicken etc produce high quantities of smoke when cooked on a char-grill, which is similar to a barbeque. This smoke does contain extremely fine particles of grease, which does not normally constitute a problem if exhausted at roof level.

Smoke does not cause significant grease build up in the ductwork system. The Grease Grabber also will not stop cooking odours.

The Grease Grabber requires regular cleaning, preferably in a commercial dishwasher.

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Comparison with Conventional Baffle Filter

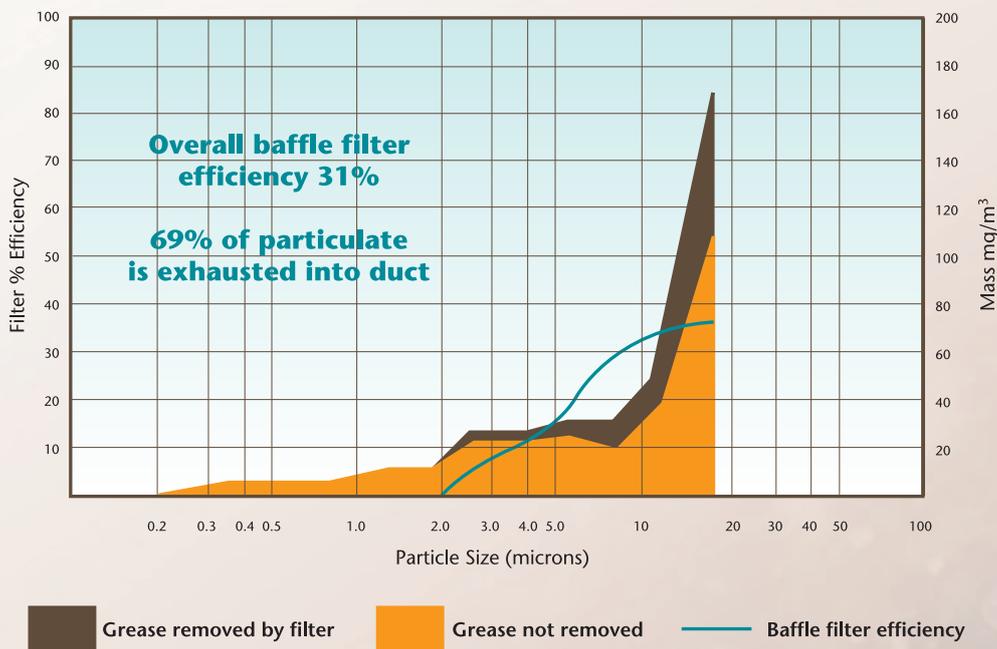
These two charts show the amount of grease extracted by a standard baffle filter and the Grease Grabber filter, and the amount of grease that passes through the filter into the hood and ductwork beyond.

This test was done by a third party testing agency over a griddle while cooking hamburgers. These produce grease particles in the range of 0.2 microns to 18 microns.

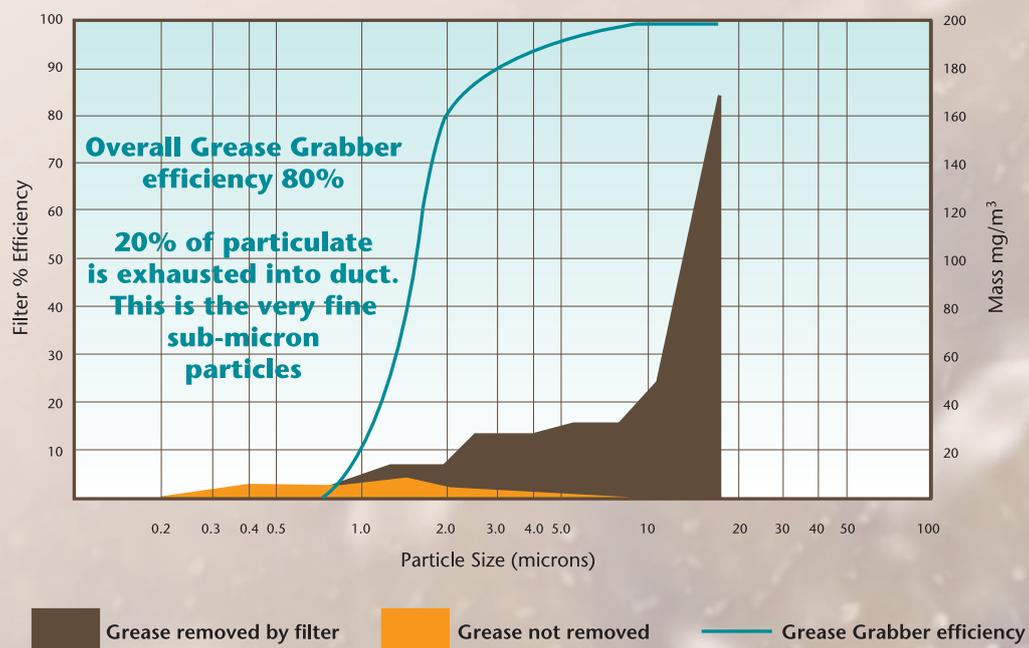
The orange area represents the amount of grease that passes through the filter. The brown area represents the amount of grease extracted by the filter. The more brown area the more grease is extracted at the filter.

The green efficiency line shows the efficiency of the filter for a specific particle size. Follow a point on the green line over to the efficiency axis, that is the filter efficiency at that particle size.

Baffle Filter Performance over griddle with hamburger



Grease Grabber Performance over griddle with hamburger





GREASE GRABBER

NEW LEGISLATION

New legislation - the Regulatory Reform (Fire Safety) Order 2005 - applies to all non-domestic premises from 1st October 2006.

It will become an offence if injury or death results from a poorly maintained system, and charges of corporate liability or manslaughter could be brought against a kitchen operator. To comply with the new legislation a named individual must be appointed to take responsibility for fire safety, and must carry out a fire risk assessment of the premises, and decide how to address the risks identified.

This would include among other things an investigation and plan of action of how to prevent a fire occurring in the first place, by removing or reducing the hazards and risks (ignition sources), with the emphasis on fire prevention and the elimination of risks. The identified individual is to take full corporate responsibility, and must keep records of inspections and cleaning procedures.

The scope of the Order includes property safety, the environment around the site, and all occupants including visitors, contractors and passers by. Clearly, the fire risks in the commercial kitchen will have to be very carefully considered by the individual responsible.

The installation of Grease Grabber filters is a major contribution to fire prevention. As well as considerably reducing the amount of grease entering the hood and duct system, the filter is a guard against fire spread, and reduces the frequency of duct and hood cleaning required beyond the filter.

GREASE GRABBER

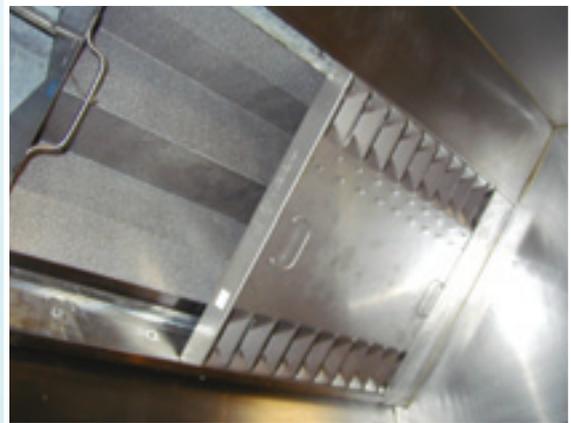
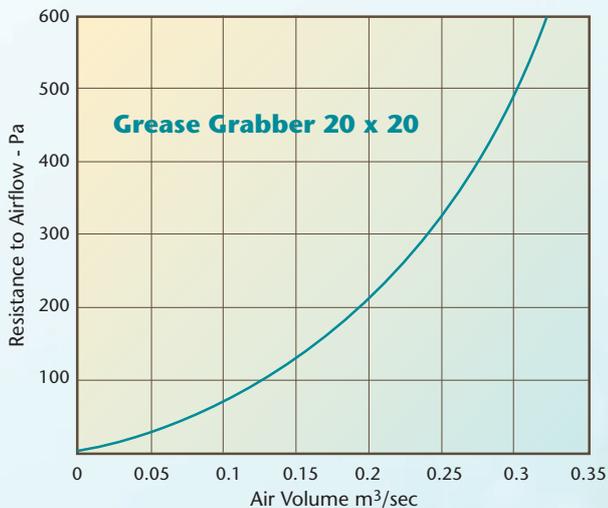
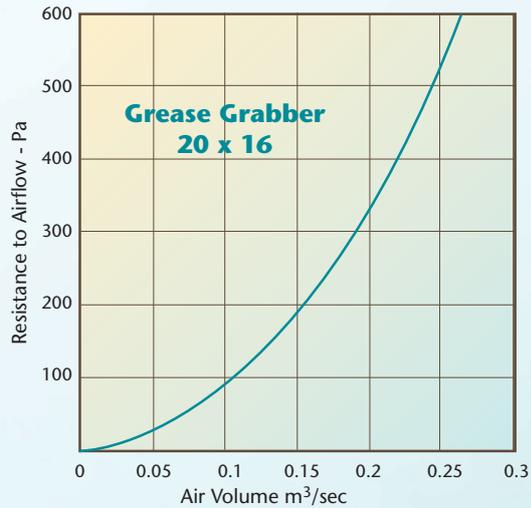
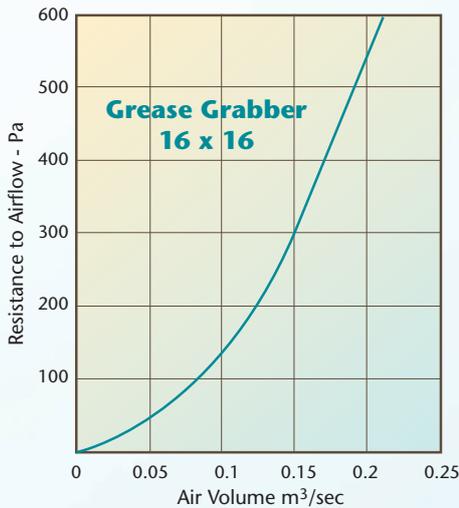
Filter Sizing and Installation

Grease Grabber filters are generally of similar face size to the standard mesh or baffle filter.

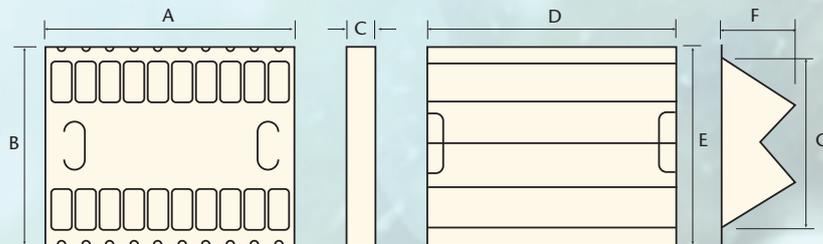
For new systems this is a straight forward selection and design procedure. However, they are not a direct filter replacement in existing hoods, these will require some modification.

Because of the high efficiency of these filters, and the relatively high resistance to airflow, it is essential that they are a tight fit in the hood frame, with minimal bypass airways around the filters and at the grease collection points.

Selection ~ Volume / Pressure curves / Per filter set



Dimensions



Grease Grabber Model	Prefilter			Secondary Filter			
	A	B	C	D	E	F	G
16 x 16	397	397	45	397	375	130	340
20 x 16	497	397	45	497	375	140	340
20 x 20	497	497	45	497	482	140	432

The filters to be mounted in the same frame.

The grease drain channels at the base should have regularly spaced collection pots.

These must be fitted in close contact with the base of the hood to prevent air ingress.

GREASE GRABBER



Supply only or complete installation - the choice is yours.

The Specialist Site Services division of VES Andover can undertake the complete project to upgrade your kitchen extract system to the highest specification.

This includes site survey with report, proposals and quotation; project plan to suit business objectives; detail design; site liaison with all parties involved; risk assessments; installation by VES skilled employees; commissioning by VES engineers.

In addition to the remarkable Grease Grabber filters, VES Andover have specialist fan products especially for kitchen extract. These include the Workhorse and Centrifume ranges, both designed for high temperature polluted extract air.

VES Specialist Site Services are able to undertake all electrical and controls work, ducting, manufacture of stainless steel hoods, air treatment including carbon filters, electro-static and air deodourising treatments, noise control measures. We willingly co-operate with all other trades on site to ensure the project is completed on schedule.

VES Andover is a long established company with a wealth of technical expertise, operating under a BSI registered ISO 9001 quality system.



Hood showing prefilters



Two prefilters removed



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VES reserve the right to amend product specifications and details without notice.



ISO 9001-2000
Cert. No. Q5375

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