



UV Filtration system providing secondary grease removal and odour destruction

Over 50 years of great British manufacturing



Vortex GDS UV Light Filtration System

UV Light Technology

A common problem with kitchen extract systems is that grease inevitably gets carried over into the extract ductwork and represents a significant fire risk within the building.

Also the odours from kitchen ventilation systems can be a major nuisance. depending on the location, cuisine and point of extract.

Vortex GDS is an ultra violet filtration system that removes grease and odours from kitchen exhuast, using three stages of advanced filtration.

Using UV light reduces the fire risk by removing any remaining flammable grease from the ductwork. UV also destroys odours from the exhausted air and significantly reduces ductwork cleaning.

Removing odours from commercial cooking operations allow kitchens to be located in sensitive areas where planning conditions can be very strict.

VORTEX-GDS by CORSAIR

- Removes airbourne grease particles
- Reduces fire risk in extract ductwork
- Protects downstream plant
- Makes heat recovery possible
- Easily maintained system
- Safety Automatic shut down
- Destroys nuisance odours







1. Primary baffle filter with coalescent filter stage

2. Secondary UV Pre-filter 3. UV lamp assembly







Vortex GDS canopies are custom designed to DW172 and manufactured in our own factory





Primary & Secondary Filtration

The first stage of filtration in the Vortex GDS canopy is provided by high performance baffle filters, which provide a positive flame barrier. Inside the panels there are secondary UV-C coalescent filters for maximum efficiency and performance.

Tested to: DIN 18869-5 UL 1046 ASTM 2519

Secondary UV Prefilter

A specially designed UV-C Prefilter is the next stage of filtration.

This balances the airflow in the plenum and provides an additional level of filtration to improve the efficiency of the UV lamps and another physical barrier to protect operatives from the UV light.

Ultra Violet Filtration Lamps

Final filtration is by UV-C lamps housed deep within the canopy plenum to eliminate any remaining grease

The system incorporates an intelligent UV-C safety interlock system. Whenever a primary grease filter is removed the system will extinguish the lamps minimising risks to operatives.

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What is the risk?

When designing a new catering facility, the risk of fire due to carried over grease in the extract ductwork is a major problem. Also the odours from commercial catering operations can be a major nuisance,

Both of these problems can be significantly reduced using *Vortex-GDS* canopies from Corsair. *Vortex-GDS* incorporates ultra violet UVC light to provide secondary grease removal and odour destruction.

So how does it work?

The canopies have specially designed baffle filters with additional coalescent elements to provide primary filtration, secondary filtration is provided by the UV prefilter, after which the air is exposed to the UVC reaction chamber.

Intense UVC light breaks down the remining organic matter using a combination of photolysis and ozonolysis, leaving a final dishcharge of cleaned air with a trace of ozone, which is quickly dissapated in the atmosphere. If the discharge point is at low level then additional filtration such as HEPA or carbon filter elements may be required to finally remove the last trace of ozone.

What about maintenance?

Vortex-GDS automatically destroys the organic matter in the airstream and helps to keep the ductwork grease free, extending the period between ductwork cleaning. The maintenance of the system is therefore much lower than conventional systems.

When the grease is exposed to UV light it breaks down into an inert fine ash which adheres to the lamps over time and needs to be removed, approximately every two months. The ash deposits are removed by using a cloth with water and detergent, followed up by a liquid solvent cleaner.

Longer term the lamps will need replacing, after approximately 13,000 hours, which relates to over two years of normal use

How safe is it?

Integral safety interlocks automatically extinguish the lamps as soon as a primary baffle filter is removed therefore minimising the risk to operatives.

If you need help designing your system, Corsair offer free design advice on the selection of *Vortex-GDS* for your next project.

Distributed by:		



Our policy is one of continuous product development and we reserve the right to change size and specifications at any time and without notice.



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