

147 Parrock Street

DA12 1EY

Filtration Assessment



GOYA WORKS

15th NOV 2022
Project No: G0095



GOYA WORKS

Filtration Report and Calculation for proposed System at 147 Parrock Street :

Kebab restaurants are catering establishments which extract air with high level odour emission alongside grease content. Further to this, the 'Risk Assessment Score' obtained **23/45** at the 147 Parrock Street The risk assessment score demonstrates that the risk to be considered as '**High**' according to table given below.

High level odour control may include:

1. Fine filtration or ESP followed by carbon filtration (carbon filters rated with a 0.2 – 0.4 second residence time).
2. Fine filtration or ESP followed by UV ozone system to achieve the same level of control as point 1.

Table 1. Defra Guide Risk Assessment for Odour

To sum up the system, the canopy has an internal extraction unit composed with grease filters which will collect all fumes and contaminants into an internally placed and secure container at the base of the range. It will issue an audible alert, if the extraction unit experiences any problems.

Grease filters are removable and to be cleaned in intervals. Extraction duct that has connected to the canopy has run above roof on the kitchen area. And new Extracted air ducting will pass through the air purification system and then to the fan. After fan the termination will be with jet cowl.

The system required 2 m³/s air, for this reason carbon filters to be used in this system.

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Table 2. High Level Odour Control ways

The DEFRA Guide Risk Assessment for Odour confirms that the odour and grease level loading for Turkish Restaurant is the highest of four levels. The cuisine will be offered at 147 Parrock Street will be very specific (Kebab). Consequently, the appropriate airflow rate recommended is **2 m³/s**; therefore, carbon filters are to be utilized to achieve a **2 m³/s** air flow rate. Recommended system will be efficient enough to reduce any type of odour emission alongside reduced grease within the system.

Will require two people plus lifting equipment to carry and install.

Safe for one person to carry.

No special lifting equipment required.



WARNING

Lifting hazard.
Single person lift could cause injury. Use assistance when moving or lifting.



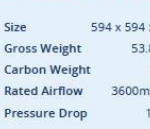
Carbon PA242424

Size	594 x 594 x 597
Gross Weight	68.2Kg
Carbon Weight	50Kg
Rated Airflow	3600m³/hr*
Pressure Drop	120Pa



Sitesafe PA240824

Size	594 x 196 x 597
Gross Weight	17.95Kg
Carbon Weight	16.6Kg
Rated Airflow	1200m³/hr*
Pressure Drop	120Pa

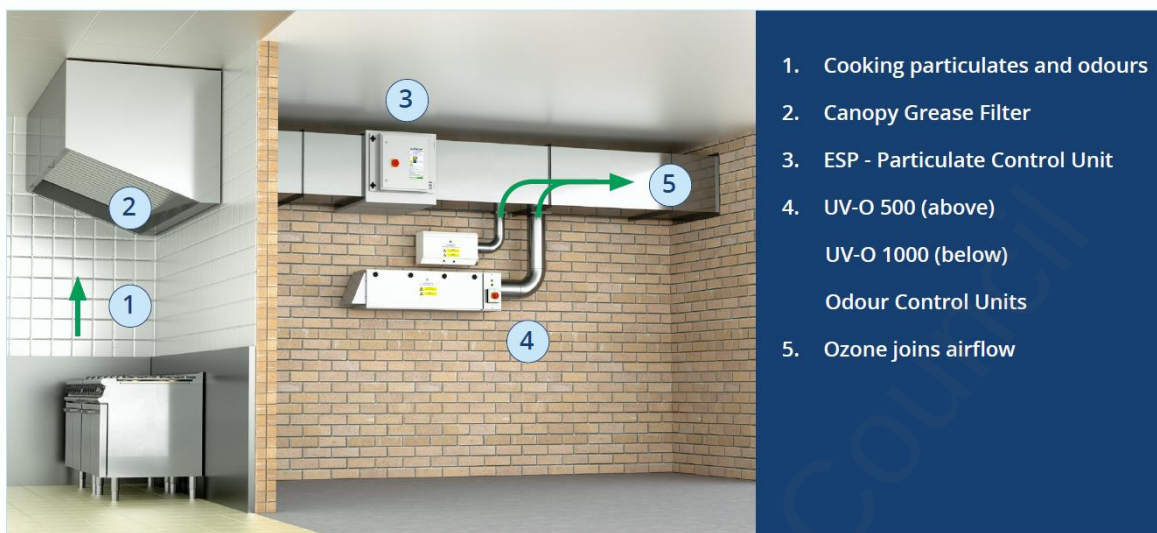


Sitesafe 3 x PA240824

Size	594 x 594 x 597
Gross Weight	53.85Kg
Carbon Weight	50Kg
Rated Airflow	3600m³/hr*
Pressure Drop	120Pa

*Rated Airflow based on a dwell time of 0.1 seconds. Available in all sizes to retrofit carbon cells

Table 4. Carbon Filter technical Spec Sheet



Picture 1: Example System View

MAINTENANCE FOR UVO:

All maintenance should be carried out in accordance with the planned maintenance set by the installation contractor as set out below and by the Technical and Operations Manual for the UVO at section 7 (Maintenance and Cleaning).

All maintenance should be carried out by a trained operative.

When handling any components suitable PPE should be used - gloves, eye protection and access equipment.

Basic Maintenance Activities	Frequency
Clean the inside of the Unit and remove dust and grease from the filter compartment	From once a week to once every 3 months depending on the degree of pollution.
Clean the Mesh Pre-filter, with particular attention to the ESP Collector Cell and the Mesh Post-filter and check for damage	From once a week to once every 3 months depending on the degree of pollution.
Clean the outside of the Unit with mild detergent	Every 6 months
Check the door sealing material	Every 12 months

Table 5. ESP's Cleaning Schedule.

MAINTENANCE FOR CARBON CELLS:

All maintenance should be carried out in accordance with the planned maintenance set by the installation contractor as set out below and by the Technical and Operations Manual for the Carbon filter.

Example	Up to 6 hrs per day	6 to 12 hrs	12 to 16 hrs	16+hrs	Max inspection interval
No significant production of grease	1	1	2	2	2
Moderate production of grease laden aerosols during normal daily food production	1	2	3	4	2
Heavy significant production of grease during normal food production	2	4	4	4	2

Note: Other activities are strictly reserved for qualified personnel.

Table 6. Carbon filter changing Schedule for a year period

DUCTINGS:

Intervals between kitchen extract cleaning depend on usage. These are minimum recommended intervals according to the HVCA's TR/19 best practice guidance.

A new table provides clear guidance to assist in assessing the requirements for cleaning particularly where cooking methods produce high volumes of airborne grease contaminants.

Example	Up to 6 hrs per day	6 to 12 hrs	12 to 16 hrs	16+hrs	Max inspection interval
No significant production of grease	12 months	12 months	6 months	6 months	6 months
Moderate production of grease laden aerosols during normal daily food production	12 months	6 months	4 months	3 months	6 months
Heavy significant production of grease during normal food production	6 months	3 months	3 months	2 months	6 months

Table 7. Ducting Cleaning Schedule