

*Report compiled by*

**BOATMAN MECHANICAL SERVICES**

Unit 10 & 11a,  
ABBAY TRADING ESTATE,  
BELL GREEN LANE,  
SYDENHAM,  
LONDON  
SE26 5TW

## **MECHANICAL SERVICES**

# **KITCHEN PREP AREA VENTILATION ODOUR ASSESSMENT**

For

**ZAMBRERO**

**59 CROSS ST**

**MANCHESTER**

**M2 4JW**

**J586**

**BOATMAN MECHANICAL SERVICES**

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Proposed:- **Zambrero 59 Cross St, Manchester, M2 4JW**

Mechanical Services including Odour Assessment

SEPTEMBER 2024 REV 0

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## **SECTION 1 INTRODUCTION**

This report sets out the ventilation strategy for the proposals For Zambrero

A complete new mechanical extract ventilation system will be installed serving the new food preparation area.

The main plant area & fan assembly will be suspended within the internal ceiling void and back of house to minimise the noise disturbance to close neighbouring receptors.

The Prep Area and general extract system will route from the food preparation area through the back of house ceiling void and discharge to atmosphere via ventilation louvres.

The air will be exhausted via a plenum box with low face velocity to atmosphere keeping noise turbulence levels within design guidelines.

A detailed kitchen equipment layout has been developed and therefore ventilation rates have been calculated in accordance with BESA document DW172 Second Edition- Specification for Kitchen Ventilation Systems.

The recommendations of the DEFRA Document Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems 2005 has been followed to develop a robust solution for dealing with odour control. A risk assessment has been carried out following the guidance of Annex C of the above document.

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**SECTION 2 GREASE & ODOUR CONTROL****Annex C: Risk Assessment for Odour**

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

| Impact Risk   | Odour Control Requirement     | Significance Score* |
|---------------|-------------------------------|---------------------|
| Low to Medium | Low level odour control       | Less than 20        |
| High          | High level odour control      | 20 to 35            |
| Very high     | Very high level odour control | more than 35        |

\* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:

| Criteria                                | Score     | Score | Details                                                                 |
|-----------------------------------------|-----------|-------|-------------------------------------------------------------------------|
| Dispersion                              | Very poor | 20    | Low level discharge, discharge into courtyard or restriction on stack.  |
|                                         | Poor      | 15    | Not low level but below eaves, or discharge at below 10 m/s.            |
|                                         | Moderate  | 10    | Discharging 1m above eaves at 10 -15 m/s.                               |
|                                         | Good      | 5     | Discharging 1m above ridge at 15 m/s.                                   |
| Proximity of receptors                  | Close     | 10    | Closest sensitive receptor less than 20m from kitchen discharge.        |
|                                         | Medium    | 5     | Closest sensitive receptor between 20 and 100m from kitchen discharge.  |
|                                         | Far       | 1     | Closest sensitive receptor more than 100m from kitchen discharge.       |
| Size of kitchen                         | Large     | 5     | More than 100 covers or large sized take away.                          |
|                                         | Medium    | 3     | Between 30 and 100 covers or medium sized take away.                    |
|                                         | Small     | 1     | Less than 30 covers or small take away.                                 |
| Cooking type (odour and grease loading) | Very high | 10    | Pub (high level of fried food), fried chicken, burgers or fish & chips. |
|                                         | High      | 7     | Kebab, Vietnamese, Thai or Indian.                                      |
|                                         | Medium    | 4     | Cantonese, Japanese or Chinese.                                         |
|                                         | Low       | 1     | Most pubs, Italian, French, Pizza or steakhouse.                        |

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**Risk assessment score:**

|                               |              |           |
|-------------------------------|--------------|-----------|
| <b>Dispersion</b>             | <b>Poor</b>  | <b>15</b> |
| <b>Proximity of receptors</b> | <b>Close</b> | <b>10</b> |
| <b>Size of Kitchen</b>        | <b>Small</b> | <b>1</b>  |
| <b>Cooking type</b>           | <b>Low</b>   | <b>1</b>  |
|                               | <b>Total</b> | <b>27</b> |

The risk assessment indicates that a high level of odour control is required in addition to grease removal

**ODOUR ARRESTMENT PLANT PERFORMANCE**

**Low to medium level plant performance**

1. Fine filtration or ESP followed by carbon filtration ( carbon filters rated with a 0.1 Second residence time).
2. Fine filtration followed by counteractant/neutralising system to achieve the same Level of control as 1.

High Level odour control may include.

1. Fine filtration or ESP followed by carbon filtration ( carbon filters rated to achieve 0.2-0.4 Residence time).
2. Fine filtration or ESP followed by UV ozone system to achieve the same level as 1.

Very high level odour control may include.

1. Fine filtration or ESP followed by carbon filtration (carbon filters to achieve 0.4-0.8 residence time).
2. Fine filtration or ESP followed by counteractant/neutralising system to achieve the same Level of control as 1.
3. Fine filtration or ESP followed by UV ozone system to achieve the same level as 1.
4. Fine filtration or ESP followed by wet scrubbing to achieve the same level as 1.

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**Proposed performance Specification.**

1. High performance Cascade filters (in excess of 90% grease removal) fitted within canopy.
2. UV ozone system ( injected into main header ductwork) above prep servery area (100% by volume)

**Level achieved (High)**

**Reasoning:-**

1. Carbon Impregnated filtration for the removal of odours, greases and gasses. Which reduces the level of grease entering the ductwork which has a beneficial effect on maintenance and the other odour control plant.
2. UV ozone system can be easily incorporated to header duct above source of cooking and has an immediate effect on neutralising residual grease and odour, only sized to 100 % by air volume

**Maintenance:-**

1. Cascade filters can be cleaned daily by placing within dish washer or opened and manual scrub in sink.
2. UV system annual bulb change, 3monthly fine air filter replacement.

**Conclusion**

Very effective, relatively low maintenance (mostly carried out by restaurant staff after training).  
Annual operating costs low by alternative systems.

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### **Stage 1.- Ozone Injection**

The bespoke energy efficient ozone injection system sits externally on the ductwork system. The system is located upstream (negative side) of the fan, ambient air is drawn through the unit where the oxygen in the air (O<sub>2</sub>) is electrically charged to produce ozone (O<sub>3</sub>) and a highly reactive concentration of ions, which are then injected into the system ozone chamber.

These are highly reactive and oxidize the odours, the ozone itself is converted back to oxygen during this process.

There is no requirement for spate neutralizing chemicals / masking agents, as the ozone and ions generated by the system are produced from ambient air.

### **Stage 2. – Carbon Impregnated Filtration**

Carbon Filtration for the removal of odours, greases and gasses.

Grade F7 pre-filter with pleated media which is heavily impregnated with carbon granules to readily absorb the odours & smells from the air as it passes.

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### **SECTION 3 DESIGN SPECIFICATIONS**

The systems for the above site have been designed with regard to the following publications:-

The guidance on the control of Odour and Noise from commercial kitchen extract systems.  
(Jan 2005) as prepared by Nectcon for Defra:-

- BESA Standard DW/172 Second Edition
- Cleaning Access and Hygiene:-  
**BESA TR19 Grease**
- Ductwork Specification  
**DW/144**
- Attenuation Specification to:-  
**BS 4141**

Ventilation to:-

- Approved Document F  
Appendix A  
Performance based ventilation.
- Compliance with approved documents:-  
AD L2B:- EXISTING BUILDINGS OTHER THAN DWELLINGS

#### **BOATMAN MECHANICAL SERVICES**

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Mechanical Services including Odour Assessment

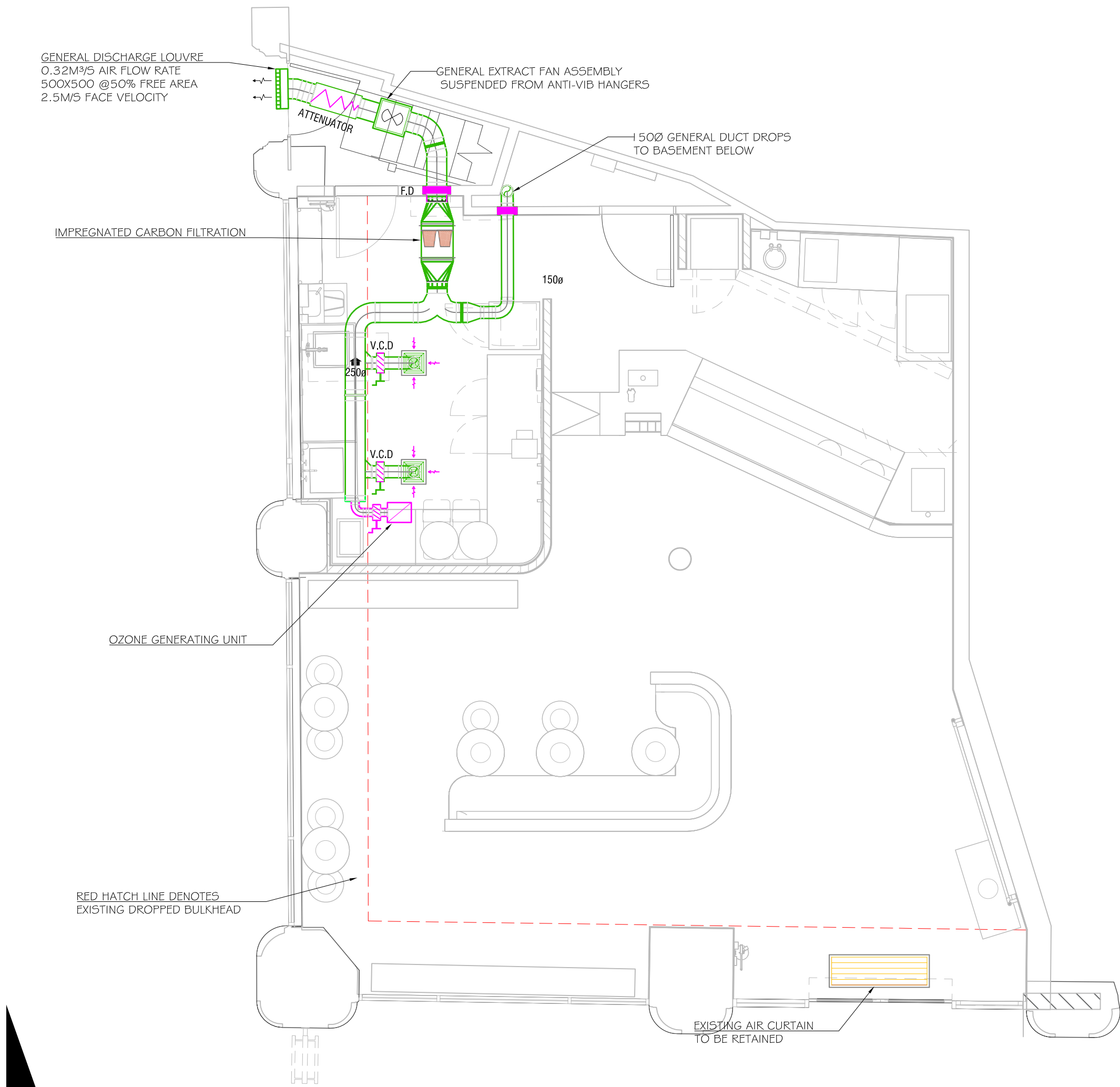
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## **SECTION 4 Design Drawings**

6366-03D      Plan View – Mechanical services

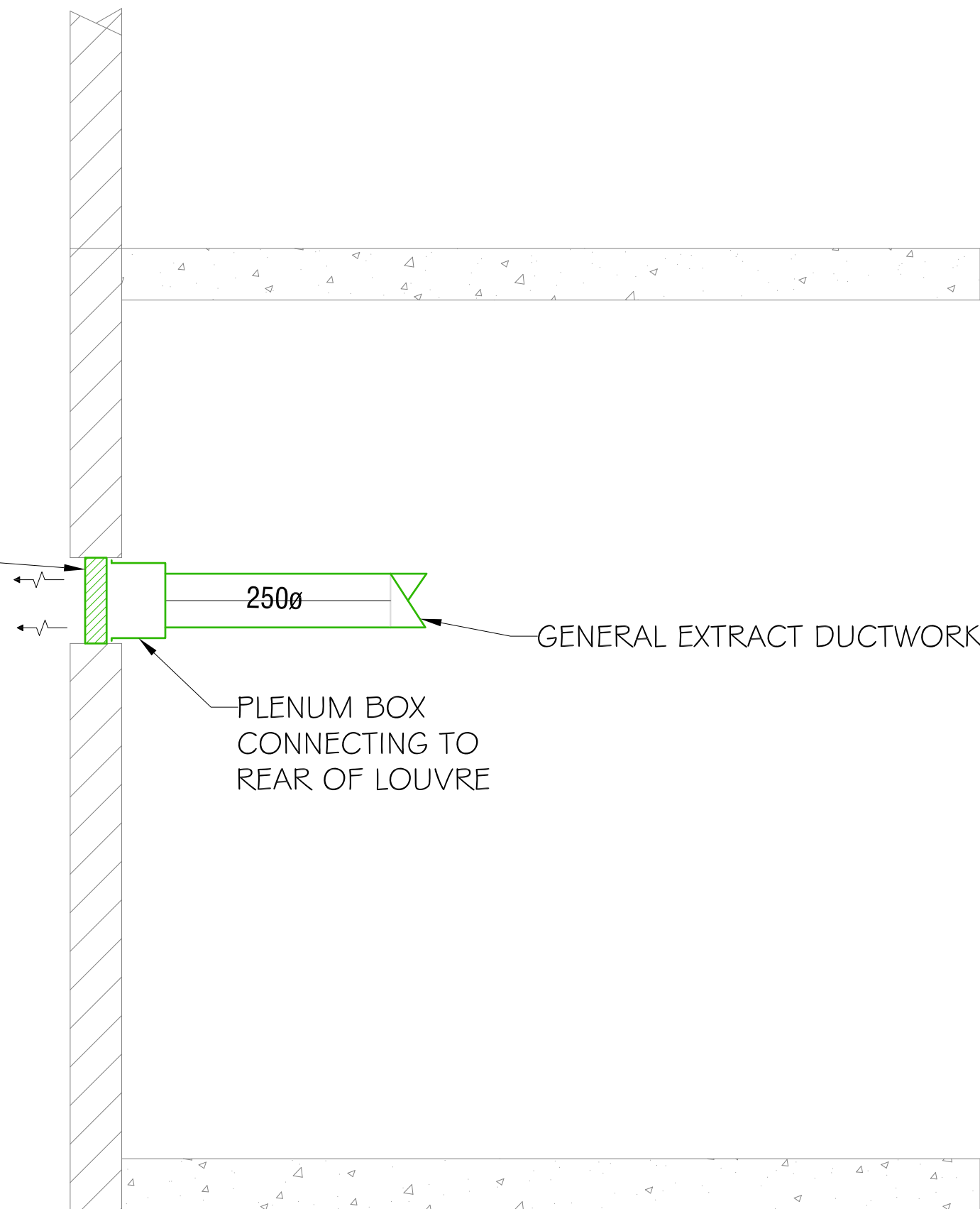
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**GROUND FLOOR PLAN VIEW**  
Scale: 1:50

GENERAL DISCHARGE LOUVRE  
0.32M³/S AIR FLOW RATE  
500X500 @50% FREE AREA  
2.5M/S FACE VELOCITY



**SECTION A-A**  
Scale: 1:25

**GENERAL NOTES**

- DO NOT SCALE FROM THIS DRAWING, WORK TO MEASURED DIMENSIONS ONLY. ALL DIMENSIONS AND LEVELS ARE TO BE CHECKED ON SITE.
- ALL DIMENSIONS ARE IN MM UNLESS OTHERWISE STATED
- ALL KITCHEN EXTRACT DUCTWORK INSTALLED WITH ACCESS DOORS AT 1200MM CENTERS. BRACKETS INSTALLED NO GREATER THAN 1500MM APART.

**LEGEND**

- VCD = VOLUME CONTROL DAMPER  
SP = SUPPLY DIFFUSER  
EG = EXTRACT GRILLE  
FD = FIRE DAMPER  
AD = ACCESS DOOR  
PH = ELECTRIC PANEL HEATER

- AC GT = AIR CONDITIONING SUPPLY GRILLE  
AC RA = AIR CONDITIONING RETURN AIR

|     |                                                        |          |
|-----|--------------------------------------------------------|----------|
| D   | Odour Control Included                                 | 16/09/24 |
| C   | Internal Section included                              | 11/09/24 |
| B   | Re-Position grilles and omit Fresh air intake          | 24/06/24 |
| A   | Re-Routed General Extract Discharge to above rear door | 21/06/24 |
| Rev | Description                                            | Date     |

**Boatman**  
Mechanical Services  
Limited

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**PROJECT:**  
Zambrero Manchester

**DESCRIPTION:**  
Proposed Mechanical Services  
General Extract Detail

|                     |                    |
|---------------------|--------------------|
| SCALE: 1:50         | REVISION: D        |
| PAPER SIZE: A1      | DRAWN BY: Justin.B |
| DRAWING No: 6366-03 | DATE: 11.09.2024   |
| Rev                 | A B C D            |

## **SECTION 5 ACOUSTIC DETAIL**

Kitchen Extract Systems usually operate at sensitive times such as early morning through to late at night. The amount of noise generated by plant should always be kept to a minimum. To achieve a sensible range of noise migration, we have followed the codes of practice set out in the Defra guidance, and detailed these recommendations and methods we have adhered to in the following table.

**Table 1:- Summary of noise reduction methods for varied noise sources and transmission paths**

| <b>Path</b> | <b>Description</b>                                                                                                                             | <b>Noise Reduction Method</b>                                                                                                                                                  | <b>Applied Solution</b>                                                                                                                                                                                                                                                                                                                                     |
|-------------|------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| a           | Direct sound radiated from sound source to ear.<br><br>Reflected sound from walls, ceiling, and walls                                          | Direct sound can be controlled only by selecting quiet equipment. Reflected sound is controlled by adding sound absorption to room and to location of equipment                | <b>Plant selection based on lowest db. rating achieved @1m</b>                                                                                                                                                                                                                                                                                              |
| b           | Air and structure borne sound radiated from casings and through walls of ducts and plenums is transmitted through walls and ceiling into room. | Design ducts and fittings for low turbulence; locate high velocity ducts in non-critical areas; isolate ducts and sound plenums from structure with neoprene or spring hangers | <b>Ductwork designed to give a maximum duct velocity of 7m/sec<br/>Installed anti-vibration mounts to all fans, supported on unistrut framework.<br/>Installed canvass connect breaks to all fans to restrict the fan casing coming into contact with the ductwork removing vibration noise from entering the ductwork and travelling along the system.</b> |
| c           | Airborne sound radiated through supply and return air ducts to diffusers in room and then to listener by path (a)                              | Select fans for minimum sound power; use ducts lagged with sound absorbing material; use duct silencers or sound plenums in supply and return air ducts.                       | <b>Silencer / attenuators installed to outlet of all fans<br/><br/>Refer to NSL Acoustic Report for specification</b>                                                                                                                                                                                                                                       |
| d           | Noise is transmitted through plant / equipment room walls and floors to adjacent rooms.                                                        | Locate equipment rooms away from critical areas; use masonry blocks or concrete for equipment room walls and floor                                                             | <b>Plant location dictated by building layout , steel support structure designed to separate plant from building<br/>Refer to NSL Acoustic Report for specification</b>                                                                                                                                                                                     |
| e           | Building structure transmits vibration to Adjacent walls and ceilings                                                                          | Mount all machines on properly designed vibration isolators; design equipment                                                                                                  | <b>All plant installed to proprietary vibration isolators.</b>                                                                                                                                                                                                                                                                                              |

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|  |                                                          |                                                                                  |                                                       |
|--|----------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------|
|  | from which it is radiated as noise into room by path (a) | Room for mechanical dynamic loads; balance rotating and reciprocating equipment. | <b>Refer to NSL Acoustic Report for specification</b> |
|--|----------------------------------------------------------|----------------------------------------------------------------------------------|-------------------------------------------------------|

|   |                                                                                                     |                                                                                                                                                 |                                                       |
|---|-----------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------|
| f | Vibration transmission along pipe and duct walls.                                                   | Isolate pipe and ducts from structure with neoprene or spring hangers; install flexible connectors between pipes, ducts and vibrating machines. | <b>Refer to NSL Acoustic Report for specification</b> |
| g | Noise radiated to outside enters adjacent room windows.                                             | Locate equipment away from critical areas; use barriers and covers to interrupt noise paths; select quiet equipment                             | <b>Refer to NSL Acoustic Report for specification</b> |
| h | Inside noise follows path (a).                                                                      | Select quiet equipment.                                                                                                                         | <b>Refer to NSL Acoustic Report for specification</b> |
| i | Noise transmitted to diffuser in a room into ducts and out through an air diffuser in another room. | Design and install duct attenuation to match transmission loss of wall between rooms.                                                           | <b>Refer to NSL Acoustic Report for specification</b> |
| j | Sound transmission through, over, and around room partitions.                                       | Extend partition to ceiling slab and tightly seal all around; seal all pipe, conduit, and duct penetrations                                     | <b>Refer to NSL Acoustic Report for specification</b> |

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## **SECTION 6 EQUIPMENT SCHEDULE AND INFORMATION.**

- |      |                           |
|------|---------------------------|
| 6.01 | General Extract Fan Unit  |
| 6.02 | Carbon Impregnated Filter |
| 6.03 | Ozone Generating Unit     |

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# HIDEAWAY SH

Low Profile Box Fan

ELTA

>> **Select** models available for next day delivery



# HIDEAWAY SH

## Product Overview

- 6 standard sizes from 100mm to 315mm
- Air volume flow rates up to 0.832 m³/s
- Static pressures up to 451 Pa
- Suitable for operating temperatures up to +60°C
- Redesigned casing to improve airflow and reduce specific fan powers.
- Acoustically lined internally to reduce breakout noise levels.
- Low Specific Fan Powers
- Available in **EC**

**The Hideaway SH low profile box fan is perfect for applications where space is a premium. The Hideaway incorporates a high efficiency jet design double mixed flow impeller.**

### Low Noise

Each unit is acoustically lined internally with Class O rated (BS 476 Parts 6 and 7) fire resistant acoustic foam lining minimising breakout noise levels.

### Easy Commissioning

Integrated commissioning control allowing single speed selection and also limiting maximum speed if used with an external potentiometer.

### Space saving

Ideal for very shallow ceiling voids or where space is at a premium.

### Efficient Performance

Low power consumption at high performance resulting in Low Specific Fan Powers for Building Regulation Compliance.

### Controllability

EC motors providing precise speed control via potentiometer, 0-10VDC or PWM Circuit. A potentiometer controller is available for manual control. Reduced fan speed can provide significant cost-savings through lower energy consumption in both mechanical energy of motors and also on the conditioning of replacement air.

### Construction

A robust 1.2mm galvanised mild steel sheet casing. Each casing provides spigots to suit standard circular ducting. A removable lid is provided as standard to allow easy maintenance and cleaning.

### Motor

A brushless EC motor is fitted as standard. The IPX4 motor contains sealed for life bearings. All motors are suitable for use in ambient air conditions up to +60°C.

### Impeller

High efficiency jet design double mixed flow impeller, directly driven by the motor to provide a smooth airflow through the unit.

### Typical Applications

- Bathroom and Kitchen Extract in Apartments
- Hotels
- Residential Properties
- Libraries
- Offices

### Warranty

Each SH has a 12 month warranty.



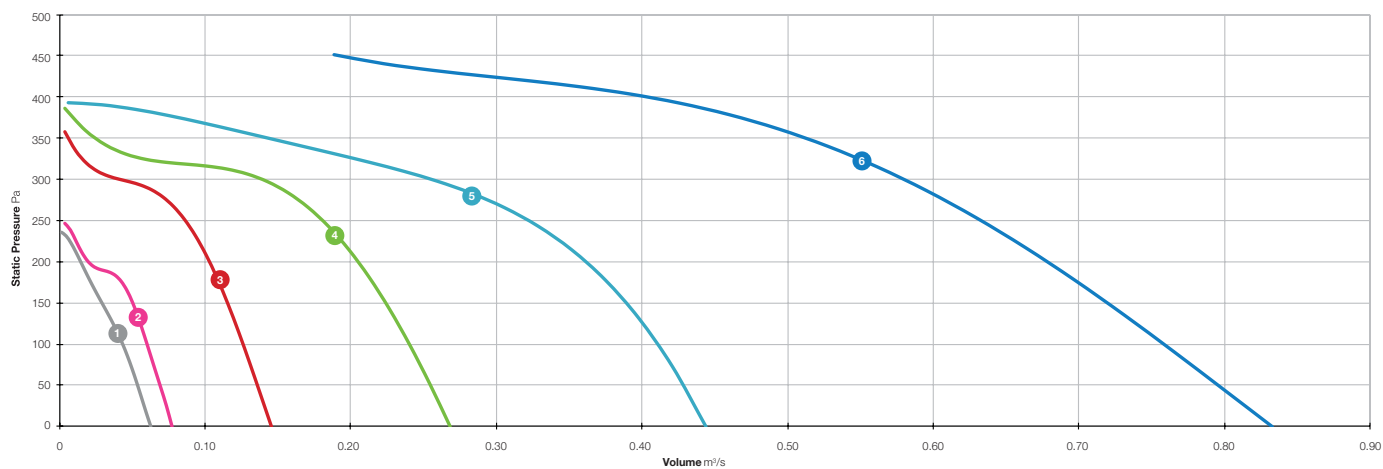
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| <a href="#">7</a>  | Dimensional Data                   |
| <a href="#">8</a>  | Accessories                        |
| <a href="#">14</a> | Notes                              |

### Product Coding

| Code                | Reference                                   |
|---------------------|---------------------------------------------|
| <a href="#">SH</a>  | Product Range                               |
| <a href="#">125</a> | Duct Connection (diameter mm)               |
| <a href="#">-</a>   |                                             |
| <a href="#">1</a>   | Voltage Supply (Single Phase / Three Phase) |
| <a href="#">L</a>   | Acoustically Lined                          |
| <a href="#">C</a>   | Model Release                               |
| e.g.                | <a href="#">SH125-1LC</a>                   |

## Performance Range Curves



1 SH100-1LC  
2 SH125-1LC

3 SH150-1LC  
4 SH200-1LC

5 SH250-1LC  
6 SH315-1LC

## Performance, SFP & Electrical Data

Single Phase 220V to 240V / 50Hz or 60Hz

| Product Code | Control Voltage V | Speed r/min | Airflow SFP | Airflow m³/s @ Static Pressure Pa |       |       |       |       |       |       |       |       |       |     | At Best Efficiency Point |          | Electrical Data Peak Amps | dBA @ 3m |    |
|--------------|-------------------|-------------|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----|--------------------------|----------|---------------------------|----------|----|
|              |                   |             |             | 0                                 | 25    | 50    | 75    | 100   | 150   | 200   | 250   | 300   | 350   | 400 | Overall Eff %            | Input kW |                           |          |    |
| SH100-1LC    | 10                | 5000        | m³/s        | 0.063                             | 0.058 | 0.053 | 0.049 | 0.043 | 0.029 | 0.014 | -     | -     | -     | -   | 29.4                     | 0.021    | 0.30                      | Inlet    | 46 |
|              |                   |             | W/(L/s)     | 0.34                              | 0.36  | 0.40  | 0.44  | 0.50  | 0.68  | 1.39  | -     | -     | -     | -   |                          |          |                           | Outlet   | 47 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 45 |
|              | 7.5               | 3750        | m³/s        | 0.054                             | 0.049 | 0.043 | 0.037 | 0.029 | 0.012 | -     | -     | -     | -     | -   | 27.8                     | 0.014    | 0.15                      | Inlet    | 42 |
|              |                   |             | W/(L/s)     | 0.27                              | 0.30  | 0.34  | 0.39  | 0.48  | 1.08  | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 43 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 41 |
|              | 5                 | 2500        | m³/s        | 0.040                             | 0.032 | 0.023 | 0.012 | 0.002 | -     | -     | -     | -     | -     | -   | 23.0                     | 0.007    | 0.08                      | Inlet    | 36 |
|              |                   |             | W/(L/s)     | 0.17                              | 0.22  | 0.30  | 0.54  | 2.71  | -     | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 36 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 35 |
| SH125-1LC    | 10                | 5000        | m³/s        | 0.077                             | 0.073 | 0.068 | 0.064 | 0.060 | 0.050 | 0.020 | -     | -     | -     | -   | 30.1                     | 0.027    | 0.25                      | Inlet    | 47 |
|              |                   |             | W/(L/s)     | 0.31                              | 0.33  | 0.36  | 0.39  | 0.44  | 0.54  | 1.10  | -     | -     | -     | -   |                          |          |                           | Outlet   | 48 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 36 |
|              | 7.5               | 3750        | m³/s        | 0.064                             | 0.060 | 0.056 | 0.051 | 0.045 | 0.012 | -     | -     | -     | -     | -   | 33.5                     | 0.018    | 0.18                      | Inlet    | 43 |
|              |                   |             | W/(L/s)     | 0.23                              | 0.26  | 0.30  | 0.34  | 0.40  | 1.13  | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 44 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 34 |
|              | 5                 | 2500        | m³/s        | 0.048                             | 0.042 | 0.035 | 0.023 | 0.001 | -     | -     | -     | -     | -     | -   | 28.9                     | 0.009    | 0.09                      | Inlet    | 37 |
|              |                   |             | W/(L/s)     | 0.16                              | 0.20  | 0.25  | 0.35  | 5.18  | -     | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 37 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 28 |
| SH150-1LC    | 10                | 4980        | m³/s        | 0.145                             | 0.140 | 0.135 | 0.130 | 0.125 | 0.115 | 0.102 | 0.086 | 0.040 | 0.005 | -   | 53.7                     | 0.051    | 0.42                      | Inlet    | 50 |
|              |                   |             | W/(L/s)     | 0.28                              | 0.30  | 0.32  | 0.35  | 0.37  | 0.43  | 0.49  | 0.59  | 1.01  | 7.46  | -   |                          |          |                           | Outlet   | 51 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 39 |
|              | 7.5               | 3735        | m³/s        | 0.127                             | 0.120 | 0.113 | 0.106 | 0.099 | 0.083 | 0.057 | 0.010 | -     | -     | -   | 50.4                     | 0.032    | 0.27                      | Inlet    | 46 |
|              |                   |             | W/(L/s)     | 0.22                              | 0.24  | 0.26  | 0.29  | 0.32  | 0.39  | 0.53  | 2.44  | -     | -     | -   |                          |          |                           | Outlet   | 47 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 36 |
|              | 5                 | 2490        | m³/s        | 0.095                             | 0.082 | 0.071 | 0.061 | 0.049 | -     | -     | -     | -     | -     | -   | 42.9                     | 0.015    | 0.14                      | Inlet    | 40 |
|              |                   |             | W/(L/s)     | 0.14                              | 0.17  | 0.21  | 0.24  | 0.30  | -     | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 40 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 30 |
| SH200-1LC    | 10                | 3770        | m³/s        | 0.268                             | 0.261 | 0.254 | 0.247 | 0.240 | 0.224 | 0.205 | 0.180 | 0.138 | 0.024 | -   | 56.8                     | 0.099    | 0.76                      | Inlet    | 51 |
|              |                   |             | W/(L/s)     | 0.28                              | 0.30  | 0.32  | 0.34  | 0.36  | 0.42  | 0.48  | 0.55  | 0.67  | 3.02  | -   |                          |          |                           | Outlet   | 52 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 35 |
|              | 7.5               | 3225        | m³/s        | 0.229                             | 0.222 | 0.215 | 0.207 | 0.198 | 0.178 | 0.149 | 0.025 | -     | -     | -   | 56.0                     | 0.063    | 0.59                      | Inlet    | 48 |
|              |                   |             | W/(L/s)     | 0.20                              | 0.22  | 0.24  | 0.27  | 0.29  | 0.34  | 0.42  | 1.78  | -     | -     | -   |                          |          |                           | Outlet   | 49 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 33 |
|              | 5                 | 2505        | m³/s        | 0.174                             | 0.166 | 0.156 | 0.144 | 0.127 | -     | -     | -     | -     | -     | -   | 57.2                     | 0.029    | 0.25                      | Inlet    | 43 |
|              |                   |             | W/(L/s)     | 0.13                              | 0.15  | 0.17  | 0.20  | 0.23  | -     | -     | -     | -     | -     | -   |                          |          |                           | Outlet   | 43 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |     |                          |          |                           | Breakout | 28 |

Data provided is at standard air density of 1.2 kg/m³.

ErP data in accordance with Regulation (EU) 1253/2014. Product category is NRVU. Measurement category used to determine energy efficiency: D.

A variable speed drive is integrated within the fan.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

## Performance, SFP & Electrical Data

**Single Phase** 220V to 240V / 50Hz or 60Hz

| Product Code | Control Voltage V | Speed r/min | Airflow SFP | Airflow m³/s @ Static Pressure Pa |       |       |       |       |       |       |       |       |       |       | At Best Efficiency Point |          | Electrical Data | dBA @ 3m |    |
|--------------|-------------------|-------------|-------------|-----------------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------------------------|----------|-----------------|----------|----|
|              |                   |             |             | 0                                 | 25    | 50    | 75    | 100   | 150   | 200   | 250   | 300   | 350   | 400   | Overall Eff %            | Input kW | Peak Amps       |          |    |
| SH250-1LC    | 10                | 3200        | m³/s        | 0.443                             | 0.436 | 0.428 | 0.420 | 0.410 | 0.389 | 0.361 | 0.322 | 0.255 | 0.144 | -     | 56.9                     | 0.178    | 1.31            | Inlet    | 55 |
|              |                   |             | W/(L/s)     | 0.30                              | 0.31  | 0.33  | 0.34  | 0.36  | 0.41  | 0.47  | 0.55  | 0.66  | 0.96  | -     |                          |          |                 | Outlet   | 56 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 40 |
|              | 7.5               | 2725        | m³/s        | 0.383                             | 0.373 | 0.363 | 0.352 | 0.340 | 0.313 | 0.276 | 0.186 | -     | -     | -     | 59.3                     | 0.108    | 1.00            | Inlet    | 51 |
|              |                   |             | W/(L/s)     | 0.21                              | 0.23  | 0.24  | 0.26  | 0.28  | 0.34  | 0.40  | 0.52  | -     | -     | -     |                          |          |                 | Outlet   | 52 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 39 |
|              | 5                 | 2040        | m³/s        | 0.285                             | 0.269 | 0.253 | 0.234 | 0.212 | 0.028 | -     | -     | -     | -     | -     | 61.9                     | 0.046    | 0.37            | Inlet    | 45 |
|              |                   |             | W/(L/s)     | 0.13                              | 0.14  | 0.16  | 0.19  | 0.22  | 1.38  | -     | -     | -     | -     | -     |                          |          |                 | Outlet   | 45 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 32 |
| SH315-1LC    | 10                | 3000        | m³/s        | 0.832                             | 0.814 | 0.795 | 0.777 | 0.758 | 0.719 | 0.678 | 0.632 | 0.579 | 0.512 | 0.403 | 55.9                     | 0.389    | 2.72            | Inlet    | 62 |
|              |                   |             | W/(L/s)     | 0.38                              | 0.40  | 0.42  | 0.44  | 0.46  | 0.50  | 0.55  | 0.61  | 0.67  | 0.75  | 0.90  |                          |          |                 | Outlet   | 62 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 63 |
|              | 7.5               | 2250        | m³/s        | 0.721                             | 0.697 | 0.674 | 0.651 | 0.628 | 0.580 | 0.528 | 0.464 | 0.365 | -     | -     | 55.8                     | 0.255    | 1.82            | Inlet    | 58 |
|              |                   |             | W/(L/s)     | 0.30                              | 0.31  | 0.33  | 0.35  | 0.38  | 0.42  | 0.48  | 0.55  | 0.67  | -     | -     |                          |          |                 | Outlet   | 58 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 60 |
|              | 5                 | 1500        | m³/s        | 0.538                             | 0.503 | 0.469 | 0.435 | 0.402 | 0.331 | -     | -     | -     | -     | -     | 56.1                     | 0.110    | 0.89            | Inlet    | 52 |
|              |                   |             | W/(L/s)     | 0.18                              | 0.20  | 0.22  | 0.24  | 0.27  | 0.33  | -     | -     | -     | -     | -     |                          |          |                 | Outlet   | 52 |
|              |                   |             |             |                                   |       |       |       |       |       |       |       |       |       |       |                          |          |                 | Breakout | 53 |

Data provided is at standard air density of 1.2 kg/m³.

ErP data in accordance with Regulation (EU) 1253/2014. Product category is NRVU. Measurement category used to determine energy efficiency: D.

A variable speed drive is integrated within the fan.

Peak Amps @ 230V / 1PH / 50Hz.

The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20µPa and is presented for comparative purposes only.

Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

## Sound Data

**Single Phase** 220V to 240V / 50Hz or 60Hz

| Product Code | Control Voltage V | Speed r/min |          | Sound Power Level dBW @ Octave Band Hz |       |       |       |      |      |      |      | Total dB |
|--------------|-------------------|-------------|----------|----------------------------------------|-------|-------|-------|------|------|------|------|----------|
|              |                   |             |          | 63Hz                                   | 125Hz | 250Hz | 500Hz | 1kHz | 2kHz | 4kHz | 8kHz |          |
| SH100-1LC    | 10                | 5000        | Inlet    | 50                                     | 47    | 53    | 62    | 59   | 60   | 58   | 57   | 67       |
|              |                   |             | Outlet   | 47                                     | 47    | 55    | 63    | 60   | 60   | 60   | 58   | 68       |
|              |                   |             | Breakout | 28                                     | 29    | 41    | 53    | 56   | 59   | 60   | 60   | 65       |
|              | 7.5               | 3750        | Inlet    | 43                                     | 44    | 51    | 58    | 55   | 57   | 54   | 53   | 63       |
|              |                   |             | Outlet   | 47                                     | 44    | 52    | 59    | 55   | 57   | 56   | 53   | 64       |
|              |                   |             | Breakout | 24                                     | 26    | 39    | 49    | 51   | 56   | 56   | 55   | 61       |
|              | 5                 | 2500        | Inlet    | 49                                     | 42    | 49    | 52    | 49   | 52   | 48   | 47   | 58       |
|              |                   |             | Outlet   | 45                                     | 41    | 48    | 52    | 49   | 51   | 50   | 47   | 58       |
|              |                   |             | Breakout | 26                                     | 24    | 36    | 42    | 45   | 51   | 50   | 49   | 56       |
| SH125-1LC    | 10                | 5000        | Inlet    | 51                                     | 48    | 54    | 63    | 60   | 61   | 59   | 58   | 68       |
|              |                   |             | Outlet   | 48                                     | 48    | 56    | 64    | 61   | 61   | 61   | 59   | 69       |
|              |                   |             | Breakout | 33                                     | 28    | 33    | 50    | 50   | 48   | 49   | 51   | 57       |
|              | 7.5               | 3750        | Inlet    | 44                                     | 45    | 52    | 59    | 56   | 58   | 55   | 54   | 64       |
|              |                   |             | Outlet   | 48                                     | 45    | 53    | 60    | 56   | 58   | 57   | 54   | 65       |
|              |                   |             | Breakout | 28                                     | 25    | 32    | 47    | 48   | 47   | 48   | 47   | 54       |
|              | 5                 | 2500        | Inlet    | 50                                     | 43    | 50    | 53    | 50   | 53   | 49   | 48   | 59       |
|              |                   |             | Outlet   | 46                                     | 42    | 49    | 53    | 50   | 52   | 51   | 48   | 59       |
|              |                   |             | Breakout | 30                                     | 23    | 29    | 40    | 42   | 42   | 42   | 41   | 49       |
| SH150-1LC    | 10                | 4980        | Inlet    | 54                                     | 51    | 57    | 66    | 63   | 64   | 62   | 61   | 71       |
|              |                   |             | Outlet   | 51                                     | 51    | 59    | 67    | 64   | 64   | 64   | 62   | 72       |
|              |                   |             | Breakout | 34                                     | 30    | 37    | 52    | 50   | 52   | 54   | 52   | 59       |
|              | 7.5               | 3735        | Inlet    | 47                                     | 48    | 55    | 62    | 59   | 61   | 58   | 57   | 67       |
|              |                   |             | Outlet   | 51                                     | 48    | 56    | 63    | 59   | 61   | 60   | 57   | 68       |
|              |                   |             | Breakout | 28                                     | 29    | 36    | 49    | 49   | 50   | 51   | 49   | 57       |
|              | 5                 | 2490        | Inlet    | 53                                     | 46    | 53    | 56    | 53   | 56   | 52   | 51   | 62       |
|              |                   |             | Outlet   | 49                                     | 45    | 52    | 56    | 53   | 55   | 54   | 51   | 62       |
|              |                   |             | Breakout | 30                                     | 27    | 33    | 42    | 43   | 45   | 45   | 43   | 51       |
| SH200-1LC    | 10                | 3770        | Inlet    | 73                                     | 56    | 57    | 66    | 65   | 66   | 65   | 62   | 76       |
|              |                   |             | Outlet   | 58                                     | 55    | 61    | 67    | 65   | 67   | 66   | 63   | 73       |
|              |                   |             | Breakout | 42                                     | 29    | 40    | 51    | 49   | 50   | 48   | 47   | 56       |
|              | 7.5               | 3225        | Inlet    | 57                                     | 50    | 57    | 61    | 62   | 63   | 61   | 57   | 69       |
|              |                   |             | Outlet   | 52                                     | 53    | 60    | 64    | 62   | 64   | 62   | 59   | 70       |
|              |                   |             | Breakout | 33                                     | 29    | 42    | 51    | 47   | 47   | 44   | 43   | 55       |
|              | 5                 | 2505        | Inlet    | 46                                     | 47    | 56    | 55    | 58   | 59   | 55   | 52   | 64       |
|              |                   |             | Outlet   | 48                                     | 48    | 58    | 58    | 57   | 59   | 56   | 52   | 65       |
|              |                   |             | Breakout | 25                                     | 25    | 40    | 45    | 43   | 42   | 38   | 37   | 50       |
| SH250-1LC    | 10                | 3200        | Inlet    | 72                                     | 58    | 65    | 72    | 70   | 69   | 48   | 65   | 78       |
|              |                   |             | Outlet   | 77                                     | 60    | 67    | 72    | 70   | 70   | 49   | 67   | 80       |
|              |                   |             | Breakout | 57                                     | 35    | 45    | 58    | 57   | 52   | 50   | 51   | 63       |
|              | 7.5               | 2725        | Inlet    | 54                                     | 57    | 64    | 66    | 66   | 66   | 64   | 60   | 73       |
|              |                   |             | Outlet   | 53                                     | 58    | 70    | 66    | 66   | 67   | 65   | 62   | 75       |
|              |                   |             | Breakout | 32                                     | 37    | 47    | 53    | 55   | 53   | 50   | 49   | 60       |
|              | 5                 | 2040        | Inlet    | 48                                     | 51    | 60    | 59    | 60   | 60   | 56   | 52   | 67       |
|              |                   |             | Outlet   | 51                                     | 53    | 61    | 59    | 60   | 61   | 57   | 53   | 67       |
|              |                   |             | Breakout | 28                                     | 31    | 41    | 46    | 49   | 47   | 42   | 41   | 53       |
| SH315-1LC    | 10                | 3000        | Inlet    | 82                                     | 88    | 86    | 78    | 76   | 73   | 69   | 63   | 91       |
|              |                   |             | Outlet   | 84                                     | 88    | 86    | 79    | 76   | 75   | 69   | 63   | 92       |
|              |                   |             | Breakout | 70                                     | 77    | 84    | 82    | 79   | 75   | 65   | 59   | 88       |
|              | 7.5               | 2250        | Inlet    | 80                                     | 87    | 79    | 74    | 74   | 69   | 65   | 59   | 89       |
|              |                   |             | Outlet   | 81                                     | 87    | 79    | 74    | 73   | 71   | 65   | 59   | 89       |
|              |                   |             | Breakout | 67                                     | 76    | 76    | 78    | 77   | 71   | 61   | 54   | 83       |
|              | 5                 | 1500        | Inlet    | 75                                     | 84    | 75    | 67    | 66   | 61   | 57   | 50   | 85       |
|              |                   |             | Outlet   | 76                                     | 82    | 75    | 68    | 65   | 63   | 56   | 49   | 84       |
|              |                   |             | Breakout | 62                                     | 72    | 72    | 72    | 69   | 63   | 53   | 45   | 78       |

Data provided at standard air density of 1.2 kg/m<sup>3</sup>.

Tests and preparation of the sound data have been carried out in accordance with BS 848 Part 2:1985 at 50% peak pressure.

The Sound Power Level Spectra are in dB re-1pW.

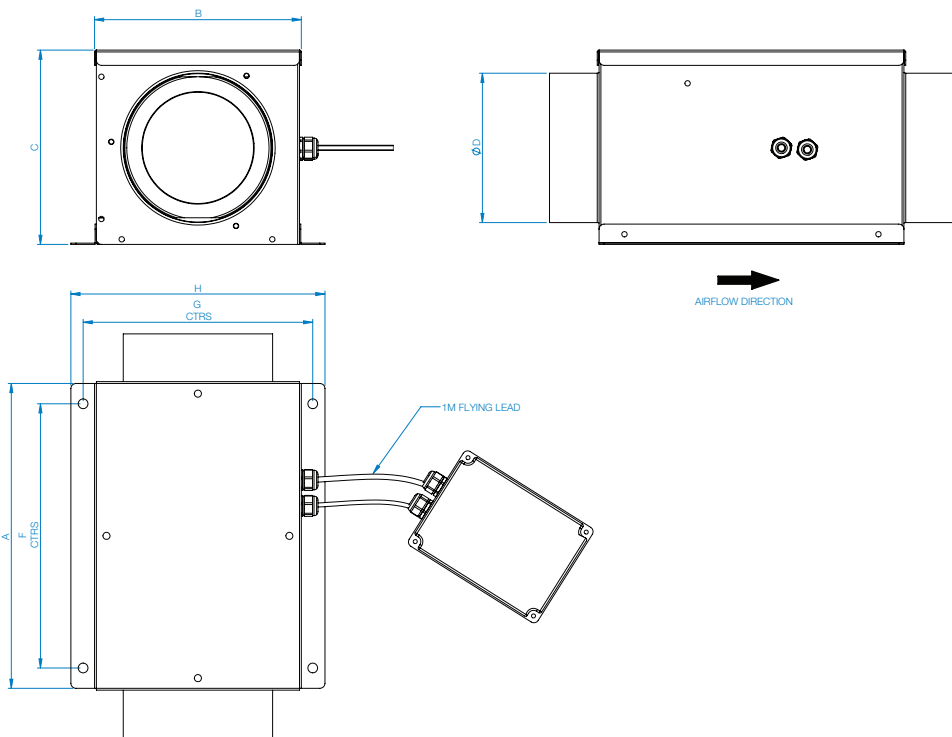
The overall A-weighted sound pressure level is at a distance of 3m with spherical free-field propagation. It is expressed in dB re-20μPa and is presented for comparative purposes only.

Breakout levels are calculated from the tested inlet and outlet sound power levels using the ASHRAE breakout sound transmission calculation procedure.

## Dimensional Data

### Single Phase

| Product Code | A   | B   | C   | D   | E   | F   | G   | H   | Weight kg |
|--------------|-----|-----|-----|-----|-----|-----|-----|-----|-----------|
| SH100-1LC    | 304 | 204 | 180 | 97  | 398 | 260 | 226 | 250 | 5         |
| SH125-1LC    | 304 | 204 | 180 | 122 | 398 | 260 | 226 | 250 | 5         |
| SH150-1LC    | 304 | 204 | 191 | 147 | 398 | 260 | 226 | 250 | 6         |
| SH200-1LC    | 404 | 255 | 236 | 197 | 498 | 306 | 277 | 301 | 9         |
| SH250-1LC    | 404 | 304 | 301 | 247 | 498 | 360 | 326 | 350 | 9         |
| SH315-1LC    | 404 | 369 | 361 | 312 | 498 | 360 | 391 | 415 | 19        |



Dimensions are in mm.

### Single Phase

| Product Code     | EC Electronic Controller | Fast Clamps (each) | Damper         | Panel Filter    | Electric Heater Battery | Wiring Diagram |
|------------------|--------------------------|--------------------|----------------|-----------------|-------------------------|----------------|
| <b>SH100-1LC</b> | 149-POT-10-MI            | 018-100-CLAMP      | 018-100-DAMPER | 018-0100-FILT-P | 018-CV10-06-1M          | 152-554        |
| <b>SH125-1LC</b> | 149-POT-10-MI            | 018-125-CLAMP      | 018-125-DAMPER | 018-0125-FILT-P | 018-CV12-12-1M          | 152-554        |
| <b>SH150-1LC</b> | 149-POT-10-MI            | 018-150-CLAMP      | 018-150-DAMPER | 018-0150-FILT-P | 018-CV15-27-1M          | 152-554        |
| <b>SH200-1LC</b> | 149-POT-10-MI            | 018-200-CLAMP      | 018-200-DAMPER | 018-0200-FILT-P | 018-CV20-30-1M          | 152-554        |
| <b>SH250-1LC</b> | 149-POT-10-MI            | 018-250-CLAMP      | 018-250-DAMPER | 018-0250-FILT-P | 018-CV25-30-1M          | 152-554        |
| <b>SH315-1LC</b> | 149-POT-10-MI            | 018-315-CLAMP      | 018-315-DAMPER | 018-0315-FILT-P | 018-CV31-30-1M          | 152-554        |
|                  |                          |                    |                |                 | 018-CV31-45-1M          |                |
|                  |                          |                    |                |                 | 018-CV31-90-3M          |                |

# HIDEAWAY SH

## Notes

This image shows a single sheet of white paper with horizontal blue ruling lines. The lines are evenly spaced and run across the width of the page. There are no margins, text, or other markings on the paper.

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**eltauk.com**

SHLC-07-2022 Issue B



BS EN ISO 9001:2015 FM 556465



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GROUP



# ACE Filtration

## CLEAN AIR FOR ALL

### TECHNICAL DATA SHEET: AF124

#### ODORSORB CARBON IMPREGNATED RIGID BAG FILTERS

##### Construction

**Frame:** Polypropylene, 25mm header as standard  
**Media Pack:** Active carbon granules, pleated within synthetic micro fibres  
With an efficiency of F7 to BS EN779  
**Sealant:** Polyurethane

##### Technical Data

**Operating Temperature:** 50°C  
**Maximum Humidity:** 70%  
**Rated Volume:** See table  
**BS EN 779 Classification:** F7

##### Standard Sizes & Rated Volumes

| Nominal Size    | Rated Volume           | Surface Area       | Initial Res. | Final Res** |
|-----------------|------------------------|--------------------|--------------|-------------|
| 600 x 600 x 300 | 0.89 m <sup>3</sup> /s | 9 m <sup>2</sup>   | 100 Pa       | 450 Pa      |
| 600 x 500 x 300 | 0.67 m <sup>3</sup> /s | 6 m <sup>2</sup>   | 100 Pa       | 450 Pa      |
| 600 x 300 x 300 | 0.44 m <sup>3</sup> /s | 4.5 m <sup>2</sup> | 100 Pa       | 450 Pa      |

##### Servicing

Filters should be changed when the resistance has reached 450 Pa (Final resistance/economic change point\*\*).  
These filters are only as efficient as the installation. Please check that all holding frame seals are intact and replace as necessary

**Notes:** Standard sizes only are available. For specific performance data, please contact the Sales Office on 01474 325666

## Remove smells with a single unit

Short of space? Our small-footprint Xtract system releases ozone directly into the kitchen ventilation system.



\*Plasma Clean Air is continuously improving its products and services and reserves the right to alter designs without prior notice

Chlorine bleach is powerful at removing odour and infection. But ozone is more powerful still.

Some competitor units simply mask smells with a chemical perfume. But our Xtract system releases natural ozone directly into the kitchen ventilation system.

Ozone is a superb disinfectant and odour neutraliser that eliminates cooking smells at source, using ozonolysis. And it works around the clock – just change the filters every few months.

Safety when working with Ozone:

If the extract duct discharges at low level or there are receptors within 5 meter radius of the discharge point activated carbon (minimum 0.1 second dwell/residence time) is required to absorb residual ozone before reaching atmosphere.

The Xtract 2100 series is designed to remove cooking odours from the kitchen extract system before reaching atmosphere.

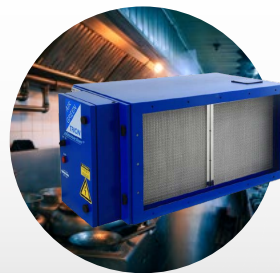
If grease and smoke removal equipment are also required then the following products are available to provide a full odour control solution.



### Coil Filters

Grease removal at the canopy

[Find out more](#)



### ESPs

Grease and smoke control

[Find out more](#)

## Benefits

- Affordable, space-efficient and robust
- Easy to install – no disruption to business
- Chemical-free
- Quiet
- Environmentally friendly and tested to EN13725:2003

**Consult with a Plasma Clean Air representative to find out the most suitable odour control solution for your application.**

**plasma-cleanair.com** • [ask@plasma-cleanair.com](mailto:ask@plasma-cleanair.com) | 0800 652 3325  
Earl Business Centre, Dowry Street, Oldham, OL8 2PF

## Introduction to Kitchen Ventilation from Plasma Clean

Grease, odour and smoke emissions produced by commercial kitchens are an increasing concern both for existing establishments and for new build projects. Therefore, it is essential to implement a suitable grease and odour control strategy - as a matter of urgency - to ensure that the kitchen emissions comply with DW/172 and DEFRA guidance. This is not just about protecting the environment from nuisance emissions, but also reducing grease build up in the ductwork, which could present a fire risk if left untreated.

Plasma Clean's Kitchen Ventilation range consists of a range of modular solutions for grease, smoke and odour control which can be used alone or can be combined to provide a site-specific solution. For example, a pizza restaurant will not require the same level of grease, odour and smoke control equipment as a char-grill steak house.

Starting at the canopy, our [Coil Filters](#) are designed to capture 95% of grease particles; between 55-70% more than traditional baffle-type filters. Our [Xtract](#) range releases natural ozone - a superb disinfectant and odour neutraliser - directly into kitchen ventilation systems. Our [Techniclean](#) range includes the canopy mounted [Techniclean CM](#), combining high intensity UV-C light with ozone technology to break down odour and grease in the air, as well as the [Techniclean Mini](#), [5000](#) and [7500](#) models; perfect for new projects or retrofitting into existing ductwork. High levels of grease and smoke particulate are treated by the [Electrostatix](#) and combining Electrostatic Precipitation with UV-c, are our [ESP UV](#) units, provide highly efficient removal of grease, smoke and odour from a compact unit.

For a final polish - removing residual ozone - [Activated Carbon](#) filters are the ideal choice for low level extraction. Our Carbon Housing allows Activated Carbon filters to sit in 3, 6 or 9 easily mountable Sitesafe Discarb units.

When it comes to Control Panels, our [Air Flow Interlock](#) range is used to synchronise the operation of all of our Kitchen Ventilation products with detected air flow. The equipment is automatically turned off when the system is shut down, preventing accidental exposure to UV-C light and ozone, whilst ensuring energy efficiency for the system. Options are available for Lamp Life Indicators, Lamp Fault and BMS interface.

## Treatment with Ozone from Plasma Clean

Oxidation using ozone and activated oxygen ions is used to treat odour emissions from commercial and industrial kitchen processes (DW/172: Specification for Kitchen Ventilation Systems and DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems). The unit has been specifically designed for use in commercial kitchens. The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours.

It is recommended to locate the units with an injection point located closest to the source of odours in order to maximize dwell time. In any case the dwell time must be no less than 2 seconds. The system is powered via a fused spur which is to be interconnected to air flow or the main extraction fan control to ensure that the unit(s) only operate when the main fan is operating.

## Installation

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## Accessories

Installation kit  
Remote monitor

## Maintenance

A Plasma Clean service contract is available (please enquire) and in any case Plasma Clean would recommend:

- Routine cleaning of the housing and exchange of the prefilter when spent
- A yearly service is recommended

## Warranty

1 year Manufacturer's Warranty (subject to terms and conditions)  
Extended 3 year Warranty (care plan available)

## Terms

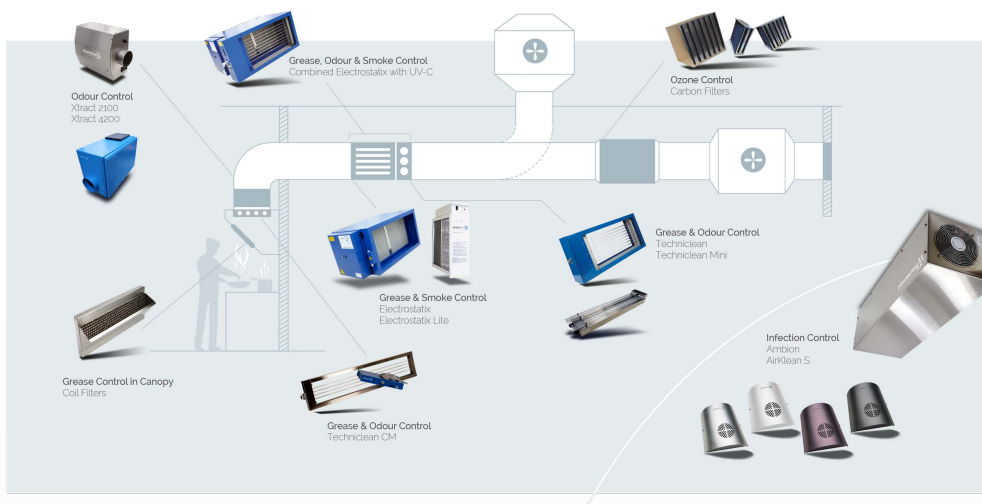
In accordance with our standard terms of business.

## Technical Specifications & Data

|                                           |                                                                                                                         |
|-------------------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| <b>Dimensions</b><br>(H/W/D)              | 400 x 600 x 250 mm                                                                                                      |
| <b>Control lights</b>                     | Air Flow and Service LED indicators                                                                                     |
| <b>Capacity max.</b>                      | Up to 1.5 m³/s                                                                                                          |
| <b>Volume flow rate</b><br>(through unit) | 200 m³/hr                                                                                                               |
| <b>Pre-filtration grade</b>               | G3                                                                                                                      |
| <b>Supply</b>                             | 230Vac/ 1 phase / 50Hz                                                                                                  |
| <b>Power</b>                              | 190W                                                                                                                    |
| <b>Weight</b>                             | 20k                                                                                                                     |
| <b>Pressure drop</b>                      | N/A (ozone injection)                                                                                                   |
| <b>Safety</b>                             | Internal flow switch<br>Recommended interlock to fan control                                                            |
| <b>General</b>                            | Multiple units can be used together for increased volume or efficiency                                                  |
| <b>Finish</b>                             | Powder coated                                                                                                           |
| <b>Approvals</b>                          | Plasma Clean air cleaners comply with current CE requirements and EMC standards. Certificates are available on request. |
|                                           | IP65 rated option available upon request                                                                                |



## Overview of Products in Commercial Kitchen Ventilation



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## Technical Specifications & Data

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| <b>Control lights</b>                     | Air Flow and Service LED indicators                                                                                     |
| <b>Capacity max.</b>                      | Up to 2.0 m³/s                                                                                                          |
| <b>Volume flow rate</b><br>(through unit) | 200m³/hr                                                                                                                |
| <b>Pre-filtration grade</b>               | G3                                                                                                                      |
| <b>Supply</b>                             | 220V / 1 phase / 50Hz                                                                                                   |
| <b>Power</b>                              | 380 W                                                                                                                   |
| <b>Weight</b>                             | 20kg                                                                                                                    |
| <b>Pressure drop</b>                      | N/A (ozone injection)                                                                                                   |
| <b>Safety</b>                             | Internal flow switch<br>Recommended interlock to fan control                                                            |
| <b>General</b>                            | Multiple units can be used together for increased volume or efficiency                                                  |
| <b>Finish</b>                             | Powder coated                                                                                                           |
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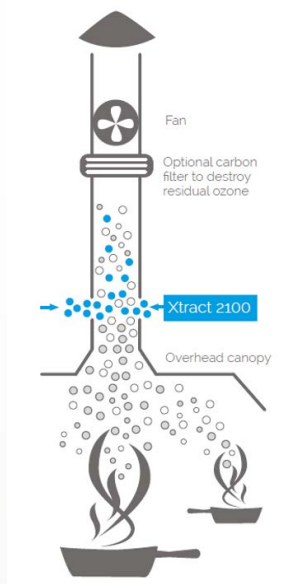
IP65 rated option available upon request



## How it works:

The system injects ozone into the kitchen extraction canopy or ductwork where it reacts with odours. The ozone itself is consumed during the process and is converted back into oxygen.

The system is powered via a fused spur, which is interconnected to the air flow or the main extraction fan, ensuring that the unit(s) only operate when the main fan is operating.



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## Terms

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## Technical Specifications & Data

|                                 |                                                                                                                         |
|---------------------------------|-------------------------------------------------------------------------------------------------------------------------|
| Dimensions (H/W/D)              | 400 x 600 x 300mm                                                                                                       |
| Control lights                  | Air Flow LED indicators                                                                                                 |
| Capacity max.                   | Up to 3.0 m³/s                                                                                                          |
| Volume flow rate (through unit) | 0.066 m³/s                                                                                                              |
| Pre-filtration grade            | G4                                                                                                                      |
| Supply                          | 230Vac/ 1 phase / 50Hz                                                                                                  |
| Power                           | 570W                                                                                                                    |
| Weight                          | 25kg                                                                                                                    |
| Pressure drop                   | N/A (ozone injection)<br>Internal flow switch                                                                           |
| Safety                          | Recommended interlock to fan control                                                                                    |
| Finish                          | Powder coated mild steel                                                                                                |
| Approvals                       | Plasma Clean air cleaners comply with current CE requirements and EMC standards. Certificates are available on request. |

