

## SYSTEM SPECIFICATION SHEET

Ref: 7 Crown Street, St Ives, PE27 5EB

### Canopy

Canopy dimension are 2300mm length, x 1200mm wide x 500mm back x 300mm front wall mounted canopy with the filter banks running along the back side of the unit, all corners are fully welded, with drain taps fitted to the back drain channel for cleaning purposes. Finish Type Fine grain satin stainless steel finish  
Filters Stainless steel baffle filters for easy cleaning, filter size 400(W)mm x 500(H)mm x 50mm. Canopy face velocity 127ft/min

### Extraction Fan

The fan specified in the extraction system is S&P contra rotating cased axial fan, TCBB/4400, rpm 1420, sound pressure level 60 dBA, air volume 5190 (m3/h), speed control REB 5. The fan will be fitted with anti-vibration mountings and DEC flexible connections between the fan and silencers; this will stop any reverberation noise travelling through the ceiling and walls.

### Odour control system

Two stage odour filter unit. The system will be fitted with two stage carbon filter units to remove any oil or grease, and smells that will come from the kitchen and restaurant canopies that are created in the process. A heavy duty actuated carbon cell will not be used in this system. We install into the system our own purpose built units containing two washed mesh filters 495mm x 495mm x 50mm to remove any grease and any other particles that have passed through the canopy filters, this will prolong the life of the fan. After the air has passes through the canopy filters there will be one x OC2 units that inject ozone into the ductwork to neutralize the smells. Calculation for carbon filter dwell time is (Area x depth divided by volume.)  $1000 \times 500 \times 500 \times \text{deep cell} = 2.5 \text{m}^2 \times 2.5 \text{m}^2 \times 0.8$  divided by  $1.65 \text{m}^3/\text{sec} = 0.2$  seconds dwell time. The carbon filter system is to be mounted above the existing toilet area, for maintenance and servicing so that it doesn't encroach on any other surrounding property or neighbours. There will be a strict maintenance policy on this system.

## **Silencers**

Two silencers will be fitted into the system, on both sides of the fan sizes there will be 500mm long, x 400mm (inside measurement) wall thickness of 75mm. This will lower the sound level to 33 to 35dBA @mid-range frequencies at the termination point Silencer Ref: Acoustical CPO3-C\*P-040-2D

## **Make Up Air Supply**

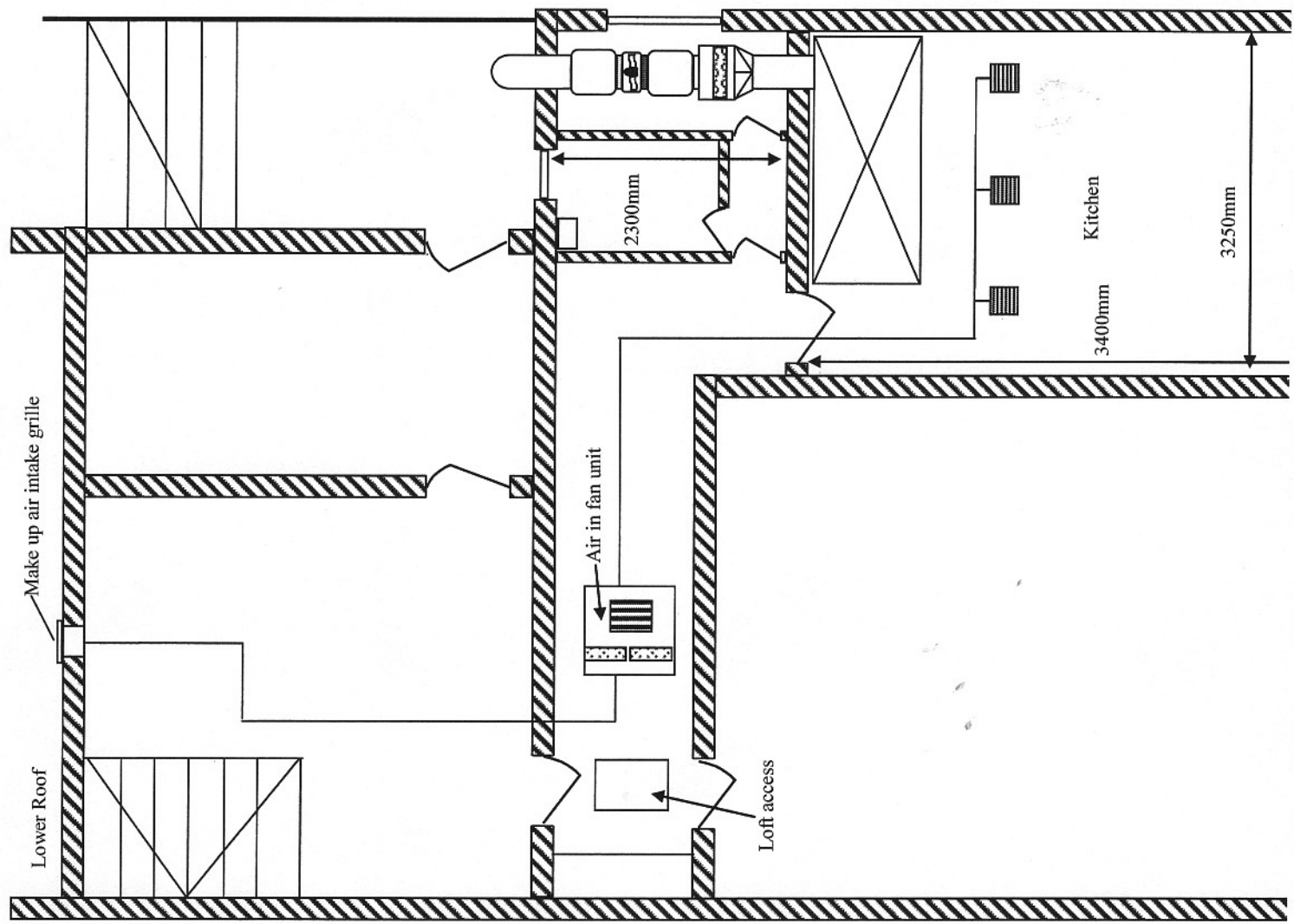
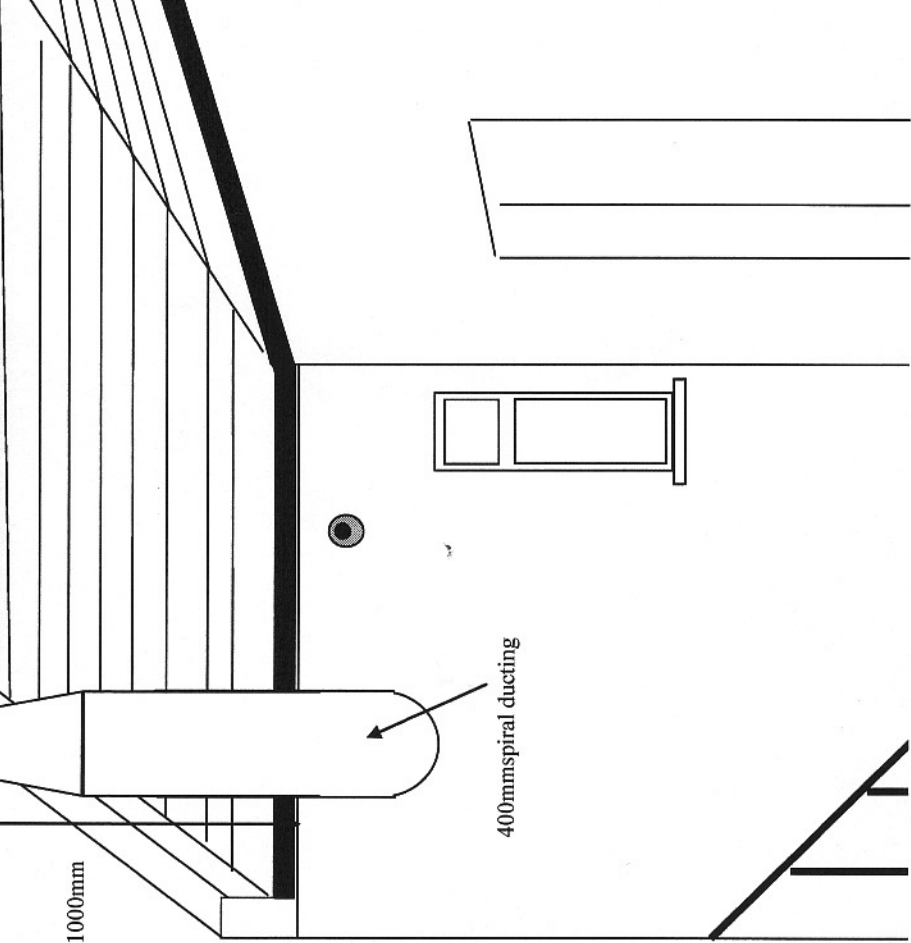
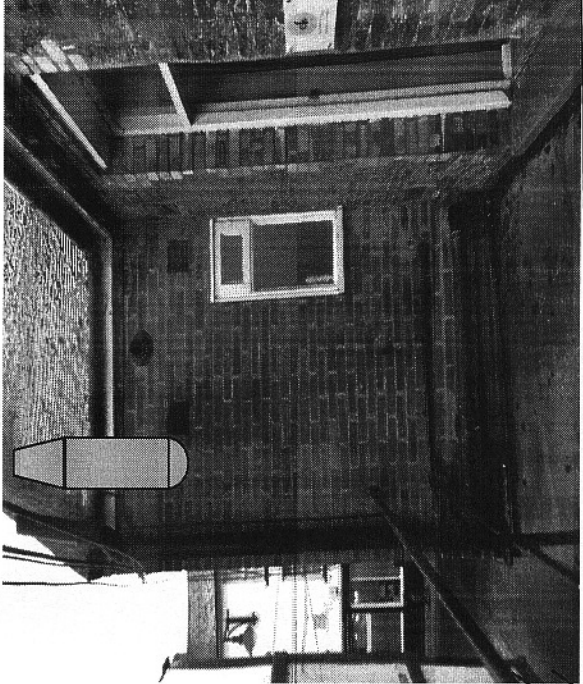
The fan specified in the makeup air system is an S&P CBM fan. CBM-10/10 373W 4PC VR, IP rated 44 class F airflow 4770 m<sup>3</sup>/h dba 53. Our air make up systems are made up of a unit that contains the fan G4 panel filter to remove fine particles and dust from outside with open end manifold. The air supply will be brought into the kitchen through the a 450mm x 450mm weather louver grille and 400 MU flex ducting to the fan unit, and then will be disbursed through the front of the canopy using single deflection grilles size 200mm x 200mm. This system will give 85% volume of the extraction system, 85% volume of the extracted air is required to be replaced by mechanical air supply fan and controller discharging through surface mounted grilles or sufficient free area space i.e.: windows or doors open with fly screens to give air replacement.

## **Duct work**

The ducting systems will exit from the back of the canopy, in 400mm SPT ducting. As shown on plans SPT, 400mm for the extraction. Ducting Colour will be galvanised steel and a galvanised accelerator cowl will be used. Discharge velocity on each cowl 14-15m<sup>3</sup>/s All our systems comply with DW175 regulations and specifications with regards to ducting sizes, heights and fan duties etc. The Commissioning sheet will be issued after the work has been completed showing air flow rate and inventory of the system fitted.

## **Gas Interlocking**

The Ventilation/Gas interlock system for the kitchen area shall be manufactured and supplied by Ideal Catering Solutions, Gas Safety Systems type Merlin CT1250. The panel dimensions are 254mm high x 178mm wide x 62 mm deep. The box shall be rated to IP65 it shall be an ABS enclosure and be CE Approved. The fascia of the panel should be key operated (on/off) and a shrouded emergency shut off button located in the top right hand corner should be fitted (to meet BS6173.2001). The Ventilation/Gas interlock panel shall have a total of 7 L.E.D'S on the fascia, these should be: Power, Gas On, EM Stop, Supply Fan, Extract Fan, Fan Fault and Service). 1 x Merlin CT1250 Panel 1 x Gas Solenoid Valve (Size to be 1 1/2) 2 x Remote Gas Shut-Off Button (where required) to be fitted to the fire exists.



## **THE IDEAL GUIDE TO COMMERCIAL KITCHEN EXTRACTION SYSTEMS**

This guide is an introduction to commercial kitchen extraction and answers these 3 key questions for commercial catering establishments.

- 1. What is a kitchen extraction system?**
- 2. Do I need one in my commercial kitchen?**
- 3. How do I install the right extraction system?**

### **1. WHAT IS A COMMERCIAL KITCHEN EXTRACTION SYSTEM?**

Effective Kitchen Extraction Systems are made of several key elements. Firstly a stainless steel canopy is normally required to extract gases and particles from the kitchen atmosphere. Canopies should have the right filters that are easily removed to be cleaned or replaced regularly.

Secondly ducting is required to discharge fumes. This needs to be installed correctly with care taken on where the ducting is placed. Close proximity to residential areas or offices could result in complaints.

The system will also require fans placed within the ducting to extract fumes from the hood and through the ducting. The correct fan needs to be chosen to ensure adequate ventilation.

Most systems (especially for kitchens frying food) will require carbon and grease filters within the ducting. Access to all parts of the kitchen extraction system is required for maintenance and cleaning.

### **2. DO I NEED ONE IN MY COMMERCIAL KITCHEN?**

The answer for most commercial kitchens is yes. Without one you may not get planning permission from your Local Authority. It is also an offence not to have adequate kitchen extraction and you are required by law to maintain your kitchen extraction system to minimise fire risk and protect your staff and customers.

All catering establishments are regularly inspected by Local Authority and Fire Inspectors to review your kitchen extraction system and your maintenance programme. You will need to keep a Certificate of Cleanliness by a professional kitchen cleaning company for inspections.

## THE IDEAL GUIDE TO COMMERCIAL KITCHEN EXTRACTION SYSTEMS

If a kitchen fire is caused as a result of an inadequate or poorly maintained extraction system your insurance company will dispute any claim you make. Kitchens where a lots of frying takes place are especially vulnerable to fire risk.

Kitchen Extraction Systems in kitchens serve several functions. The first is health and safety i.e. to protect staff and customers. Kitchen Extraction Systems are responsible for extracting Carbon Monoxide and other poisonous fumes from your kitchen. Particles from cooking such as grease and fat also need to be extracted as they can cause respiratory illnesses and be a fire risk.

The second purpose of a kitchen extraction system is to control cooking smells that may be a nuisance to neighbours. Adequate ventilation and filter systems are required to reduce odours from cooking.

### 3. HOW DO I INSTALL THE RIGHT EXTRACTION SYSTEM?

If you are designing a new kitchen or have an old kitchen you will need to check if your existing or planned kitchen extraction system meets the current requirements of the Health & Safety Executive. (Free download available here: <http://www.hse.gov.uk/pubns/cais10.htm>).

You will need to research and buy efficient canopies and extractor fans that suit your requirements. The Local Authorities do have the powers to take action against catering establishments and it is better to seek expert advice in this area to avoid problems that may affect your business.

**Ideal Catering has over 20 years experience of commercial kitchen extraction and design and can provide expert advice and services.**

**TELEPHONE: 01953 851 687**

[www.idealcatering.co.uk](http://www.idealcatering.co.uk)