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ROSA'S THAI CAFE

ROSA'S THAI EARLHAM STREET

As Fitted Manuals and Drawings

VENTILATION AND COMFORT COOLING SYSTEMS

Date of handover:

Project Manager: Michael DeSouza

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Contents.

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Section 1 – Introduction.

General

The works carried out by Chapman Ventilation and covered by this manual consist of: **ventilation to the kitchen area; supply ventilation to the restaurant area; extract ventilation to the toilet and bin areas; and air conditioning to the restaurant area.**

For the layout of the installation in each section, please refer to the **As Installed** record drawings.

For further information and technical data relating to the various items of equipment installed, please refer to the schedule of equipment in **Section 6** and the manufacturers' information in **Section 8.**

Introduction

This manual is a compilation of the design and engineering data for the plant and ancillary equipment installed at:

Rosa's Thai Earlham Street

It is intended that this manual will be used to assist a skilled engineer experienced in the operation and maintenance of HVAC plant and associated systems, and to provide a working knowledge of the various systems installed within the building.

The information, procedures and maintenance instructions contained herein appertain to the time of project completion and handover.

Changes arising in building function, operating hours, legislation etc. will necessitate revisions to be made in order to maintain the manual's validity.

It shall be noted that this manual is not intended to supersede or conflict with any standard maintenance/inspection routines already in use by the building owner or occupier, nor is it intended to provide detailed planned maintenance activities.

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Section 2 – Maintenance and Servicing.

Please note: The maintenance and servicing of equipment detailed within this manual should be carried out only by approved and appropriately qualified personnel.

Supply Fans, Extract Fans and Air Handling Units

Maintenance of the plant and equipment should be carried out to the manufacturers' recommendations detailed later in this manual.

The first maintenance visit is required after three months of operation, and thereafter at 12-month intervals.

1. Isolate the electrical supply using the local isolator provided.
2. Clean and inspect the exterior of the units including any adjacent attenuators, resilient mounting support brackets and flexible connections.
3. Remove the unit cover/access panel. Inspect and clean the fan/motor assembly as described in the manufacturer's instructions.
4. Check that any anti-vibration mountings fitted are secure and in good condition.
5. Rotate the impellor/when by hand to ensure no contact is made between the wheel and fan housing when running.
6. If necessary, re-lubricate the motor bearings as per the manufacturer's instructions.
7. Replace the fan/motor and any shutter assembly access covers ensuring these are thoroughly airtight. Set the local isolator to its ON position.

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Equipment/Filters.

The equipment/filters in this unit should be serviced in accordance with your maintenance schedule.

Description	Type	Quantity	Size
AHU			
BELTS			
PRES	G4 PLEATED PANEL		
PRES	G4 PLEATED PANEL		
HEPAS	BAG – METAL FRAME		
CARBONS	CARBON PANEL		
KITCHEN EXTRACT			
BELTS			
PRES	PLEATED PANEL		
BAGS	BAG – METAL FRAME		
HEPAS	BAG – METAL FRAME		
CARBONS	CARBON PANEL		
CANOPY FILTERS			
BAFFIE FILTER	CVL STANDARD		450X300X50
BAFFLE FILTER	CVL HALF		225X300X50
BAFFLE FILTER	CVL SECONDARY MESH BAFFLE		450X300X50
CYCLONIC	KSA STANDARD		500X330X50
CYCLONIC	KSA HALF		250X330X50
CYCLONIC	KSA UV		500X330X50
CYCLONIC	KSA UV HALF		250X330X50
UV			
UV			
ESP			
ESP 12	ONE ESP 12		N/A
ESP 24	TWO ESP 12		N/A
Extechnology	RY5000B – UV03		
CVEQ/POLLUSTOP			
CODE VERTICAL/HORIZONAL			
FILTERS G4	PLEATED PANEL		
FILTERS F8	BAG – METAL FRAME		
FILTERS F9	BAG – METAL FRAME		
FILTERS CARBON	CARBON PANEL		
AC			
DRAIN PUMP	Aspen		
ANSUL	Flamefast/Global		
MISC			

PM name: Michael DeSouza

PM signature:

TL name:

TL signature:

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Overhead Door Fan Convector

The first maintenance visit is required after three months of operation, and thereafter at 12 month intervals.

The following should be completed quarterly:

1. Check the condition of the air filter. Wash and replace as necessary.

The following should be completed annually:

1. Remove unit casing and inspect the heating coil for leaks, fouling or mechanical damage.
2. Clean the coils and carefully straighten any bent fins.
3. Clean the fan impellor blades and check impellor hub nuts for security.
4. Vent the heating coil.
5. Clean the motor casings.
6. Check wiring connections for cleanliness, security and continuity. Check all mountings, fasteners and security.
7. Check the operation of the fan speed control switch and the operation of the thermostat control to the fan motor.

Kitchen Canopy

The following should be completed daily:

1. Grease filters should be removed and cleaned. **The canopies must not be used without the filters in place as this constitutes a fire hazard.**

The following should be completed quarterly:

1. De-grease the internal hood enclosure.
2. Inspect the exhaust duct for signs of grease carry over and clean if required.
3. Inspect the main kitchen fan impellor and remove any signs of grease.

The following should be completed annually:

1. Arrange for the complete extract system between the duct connection to the cooker hood(s) and the point of discharge (including the extract fan) to be internally de-greased and cleaned.

Electric Heater Batteries

Warning: Make sure you isolate the electrical supply before any maintenance work or checks are carried out. This includes both the main source of supply and the local isolator.

The following should be completed annually:

1. Test the heating elements to ensure that the insulation and continuity readings are satisfactory. Record all readings.

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2. Measure the temperature rise across each heater and compare with the design values. If high, investigate.
3. Override the interlock that prevents the heater running without airflow. Observe the rise in temperature and ensure that the high-temperature cut-out isolates the heater elements.
4. Check all terminals in the local isolator and heater connections for security.

Air Conditioning Units – Comfort Cooling/Heat Pump Operation

Indoor units require the following maintenance:

1. The first maintenance visit is required after three months of operation and thereafter at six monthly intervals dependent on the level of pollution within the restaurant. The service company will determine a precise interval following an initial trial period.
2. Isolate the electrical supply using the isolator provided.
3. Clean and inspect the exterior of the unit.
4. Remove the unit cover. Inspect and clean the fan assembly as described in the manufacturer's instructions.
5. Remove and clean the integral filter by removing the filter and vacuuming. Alternatively, filters can be cleaned by washing under running water using a mild detergent.
6. Replace filter and housing if damaged.
7. Rotate impellor wheel by hand to ensure no contact is made between the wheel and fan housing.
8. Set the local isolator to its ON position.

External condensing units require the following maintenance:

1. The first maintenance is required after three months of operation and thereafter at six monthly intervals. The service company will determine the precise intervals following an initial trial period.
2. Isolate the electrical supply using the isolator provided.
3. Clean and inspect the exterior of the unit, including any drain trays and pipework.
4. Pressure wash the heat exchange coil, taking care not to damage any fins.
5. Check the condition of the coil, fan motors and fan drivers.
6. Check the operation and condition of the compressor along with the oil pump pressure and oil level.
7. Check for leaks the charge of the refrigeration.
8. Follow the recommended service schedule from the manufacturer.

General

These units should be serviced quarterly. The filters to the internal units should be cleaned every week in soapy water or by vacuum cleaner.

1. Once a week, **check** and **clean** the **filters**, either wash or vacuum them and replace. More service calls are received for dirty filters than for any other reason, and bear in mind that they are chargeable calls.
2. **Never** set the temperature to lower than 20C. Your air conditioning unit is for comfort cooling and is not designed to provide cold room conditions. The unit will freeze up and leak water over the floor when it defrosts.
3. **Never** set the temperature above 26C in the heating season. This is not a comfortable condition for you, your customers or the air conditioning unit and can cause damage if used for prolonged periods.

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4. **Always** turn your air conditioning unit off by the controller and not the mains switch. Some units contain a condensate removal pump to remove excess water made by your unit when cooling. If you turn off the mains power you will turn off the pump and your unit will leak water over the floor or over a customer.

If your unit fails to operate:

1. Turn off the mains switch. Wait for thirty seconds, then turn it back on.
2. Make sure the controls are set as you require – either heating or cooling – and at the temperature you require.
3. Wait for a further five minutes. If it still does not work, check points 1-3 under **General**.
4. If everything is correct and it still will not work, switch it off and call a maintenance engineer to service the unit.

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Section 3 – Health and Safety.

General Precautions, Duty and Care.

It is the prudent duty of the maintenance authority to ensure the health and safety of all maintenance staff and other people using the premises as far as is reasonably practical.

It is the duty of every member of the maintenance staff to take reasonable care for their own health and safety, and the health and safety of all other people who may be affected by his/her acts or omissions whilst at work.

Statutory Regulations

This section of the manual is a guide to some of the precautions to be taken by both management and staff.

The equipment and materials referred to in this manual should be used, operated and maintained strictly in accordance with these operating instructions, or the manufacturers' instructions, if provided.

This section contains a guide to good practical safety measures to be adopted in order to reduce the hazard of accidents, and the recommendations must be considered to be complimentary to statutory safety requirements.

All persons involved in the operation and maintenance of the building services installations must be aware of the requirements of: the **HEALTH AND SAFETY AT WORK ACT** and subsequent amendments; the **GAS AUTHORITY REGULATIONS;** regulations governing the **USE OF ELECTRICAL EQUIPMENT IN BUILDINGS;** and all relevant **BRITISH STANDARD CODES OF PRACTICE.**

Management and maintenance personnel should be familiar with the current legal requirements of the above acts and regulations, and must incorporate any practices defined therein into daily work routines notwithstanding the guidance provided in this manual.

As British Standards and Codes of Practice are continually being updated, any reference to Standards or Codes within this manual are for guidance only. The operator must be fully acquainted with the latest relevant British Standard and Code of Practice at all times.

Management and Supervision

Management and supervisors must ensure that all authorised personnel comply with the rules and procedures stated above and are aware of their responsibilities.

Working Conditions

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Work should not be carried out under conditions where there is an element of danger if it is reasonably practical to eliminate the risk.

Safe working conditions should be provided to give protection and both safe access and egress where necessary.

Access doors and panels to all areas containing mechanical or electrical plant such as plant rooms, electrical panels, fan chambers should be suitably identified and where appropriate carry warning notices.

Adequate ventilation should be provided. Special precautions should be taken where steam, smoke or any other unhealthy or dangerous contaminants are present, particularly in confined spaces.

Periodic inspection of all escape routes and exits should be made to confirm that doors open freely and routes are clear of obstructions.

Lighting should be maintained at high level in all plant rooms and service areas to enable inspections to be carried out and to reduce the risk of accidents.

Cleanliness

It is not always possible to carry out maintenance work under ideal conditions. For example, working above ground or in confined spaces. It is therefore essential that a tidy area, clear from obstructions and loose tools, is kept during the maintenance task.

A high degree of cleanliness both of rotating machinery and static equipment is of the utmost importance. Floors and machinery should be protected from spilt lubricant oil and fuel oil, and all loose materials, containers and papers should not be allowed to accumulate.

Should oil be spilt on the floor, the area should be thoroughly cleaned without delay.

All drains should be cleared of silt or any other refuse to ensure that these are free and unobstructed at all times. Sumps should be inspected, drained regularly and cleaned to ensure that no extraneous matter enters the sump pumps.

Keys

Access to all plant rooms and equipment contained therein which require a key to open for access should be controlled and restricted to authorised personnel only.

First Aid Boxes

First Aid boxes should be provided in accessible positions. These should be kept clean and in good repair. Contents of the boxes should be regularly checked and any items used replaced.

Replacement Parts

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All safety precautions are to be observed when using replacement products. All electric circuit diagrams and manufacturer's spares lists should be checked against the existing equipment to determine it is the correct arrangement or equipment for the specific application.

Any item used should comply with the correct standard specification and where tests are carried out on these, they should be in compliance with relevant specifications or Code of Practice.

Starting Equipment

When starting up plant, follow the instructions in this manual, or where provided, plant manufacturer's commissioning and starting up manuals, so that the correct setting of switches, valves and their sequence of operation is in the correct order for each individual piece of equipment.

Warning and Safety Notices

Warning and safety notices should be maintained and properly displayed at all times, and worded in such a manner as to provide clear and unambiguous instructions.

Notices covering first aid, resuscitation from electrical shock, electrical regulations, and the Factories Act (as relevant) should be displayed in all plant rooms.

Proper fire precautions should be observed within the plant rooms and buildings.

Smoking should not be permitted in any plant room or service space. Notices should be displayed stating **NO SMOKING** or **SMOKING PROHIBITED IN THIS AREA.**

All firefighting equipment should be clearly marked and available for use.

Fire Doors

Ensure that all doors to plant rooms are kept shut and that all fire doors are allowed to swing closed when not in use. **Do not wedge or prop open.**

Fire Dampers

Fire damper linkages should be checked on a regular basis and a record kept of inspections.

Moving Machinery

Whenever possible, the maintenance task must be performed on stationary machinery. In the exceptional circumstances that this is not possible, great care must be taken to avoid hand injuries.

Exercise caution if working on the stationary parts of operating machinery. Ensure that moving parts are protected by suitable guards. Always allow moving plant to roll to a stop normally. Do not hand assist.

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To gain access to equipment it is often necessary for maintenance personnel to remove guards, screens, shields, covers and lids. The maintenance engineer should be aware of all the dangers and take due care when working on exposed equipment.

All screws or nuts and bolts must be kept safe. All live electrical terminals must be identified with warning notices stating: **DANGER - LIVE ELECTRICAL PARTS**

Drive Guards

It is important that after maintenance has been carried out on any piece of equipment on which drive guards or housings, shields, covers or lids have been removed that these are replaced immediately the work has been completed.

Any temporary warning notices should be removed.

At all times, when drive guards and housings are removed, the electrical supply to the unit should be isolated and fuses removed.

Starting up of plant, replacing of guards and housings, any further disconnection and restarting of plant into full service should be done by authorised personnel only.

Remotely Controlled Plant

Take extreme care with remotely controlled plant.

Ensure that control circuits are isolated and, if dual motors are fitted, that both motors are isolated.

If it is necessary to work with the control circuit live do not put hands or objects on any item of stationary rotating machinery as the equipment may start automatically and cause injury or damage.

Machinery Isolation

Before any machinery is worked on, it is essential that it is isolated and cannot accidentally be set in motion. Procedures to ensure this are:

1. All isolation switches or circuit breakers should be locked in the OFF position.
2. Warning notices must be displayed at the machine stating: **MACHING UNDER INSPECTION. DO NOT SWITCH ON.**
3. For major test and inspection, the power supply must be disconnected.

Safety Precautions

All persons should be aware of the following items:

1. The circumstances in which authorised personnel may work on live equipment.
2. Procedures for isolating or making a system dead.

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3. The safety precautions to be taken in relation to testing.
4. Methods of preventing an inadvertent restoration of power e.g. locking switchgear in the OFF position, retention of fuses, display of warning notices and implementation of a Permit to Work system.

Above all, do not take risks. Treat electricity with respect.

Instruments

Do not work on any circuit until it has been checked with a voltmeter, or similar approved means, to prove that it is not live.

All voltage indicators and instruments should be tested on a known live source immediately before and after use. Improvised indicators must not be used.

Filament lamps in series (test lamps) employed as portable voltage indicators, should be adequately guarded by insulating material. Both leads should terminate in well-guarded test probes and be provided with high-breaking-capacity fuses.

Isolating Procedures

The following recommendations are for work which, of necessity, has to be carried out on or in close proximity to live electrical equipment or electrically driven plant.

1. Obtain permission for the equipment to be isolated or taken out of service.
2. Witness the locking off of the equipment.
3. Test to ensure that not part remains live.
4. Bond the current carrying part to earth.

Remove the safety earth referred to above upon completion of the work and prior to the restoration of the power supply.

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Section 4 – Fault Finding and Remedial Action.

Air Handling Units

Warning: Disconnect electrical power supply before inspecting or servicing the unit, and allow all rotating equipment to stop completely. Failure to do so may result in personal injury or death from electrical shock or moving parts.

Symptom	Probable Cause	Recommended Action
Motor fails to start	• Mechanical failure • Control panel requires resetting • Electrical	• Determine that the motor and drive turn freely, and that the fan blades are not obstructed by the fan housing. • Reset the control panel. • Check fuses and control panel.
High air flow	• Low system resistance	• Filters may have been left out or damaged. Investigate cause and replace filters if necessary.
No air flow	• Fan not running	• See symptom no. 1.

Extract Fans

Warning: Disconnect electrical power supply before inspecting or servicing the unit, and allow all rotating equipment to stop completely. Failure to do so may result in personal injury or death from electrical shock or moving parts.

Symptom	Probable Cause	Recommended Action
Motor fails to start	• Mechanical failure • Control panel requires resetting • Electrical	• Determine that the motor and drive turn freely, and that the fan blades are not obstructed by the fan housing. • Reset the control panel. • Check fuses and control panel.
Vibration and noise	• Foreign material in fan housing. • Wheel unbalanced. • Isolation system not functioning properly.	• Inspect fan housing and clean as necessary. • Return to manufacturer for repair or renewal. • Check security of AV mounts and adjust/replace as necessary.
No air flow	• Fan not running	• See symptom no. 1.

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Ductwork Systems

Symptom	Probable Cause	Recommended Action
No air flow	• Mechanical failure • Local regulating damper closed.	• Refer to air handling fault finding table. • Check regulating damper and reset if required.
Low air flow.	• Local regulating damper partially closed. • Collapsed flexible ducting. • Abnormally high air leakage.	• Check regulating damper and reset if required. • Visually inspect and renew if required. Straighten if kinked. • Inspect all hatches and doors, flexible joints, and flexible ducting for tightness and seals.
Unusual noise	• Restriction in ductwork.	• Visually inspect ductwork for blockages where possible. Alternatively, use a monometer to look for a high static drop over a short distance.

Control Panel and Control Equipment

Symptom	Probable Cause	Recommended Action
Panel 'dead'. All panel lights de-energised.	• Mains supply failure.	• Inform local electricity board.

For all other symptoms refer to manufacturers guidelines.

Air Conditioning

Please refer to manufacturer's literature for further details.

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Section 5 – Emergency Procedures

Emergency Telephone Numbers

Police, Fire Brigade and Ambulance	999
Water Authority	0345 200 898
Gas Authority	0800 111 999
Electricity Authority	0345 708 090

Emergency Procedures

Under this particular heading, only general guidance can be given. It is assumed that the plant operator will fully use all of the skills and resources at his/her disposal, including a study of the manufacturers' literature.

If a fault or breakdown occurs, and the reason for it is not immediately apparent, consider the following:

1. Is the breakdown due to plant or supply failure?
2. If it is due to plant breakdown, identify the plant.
3. Determine the cause of the plant failure.
4. Decide if the plant failure can be rectified with the labour and materials available at the site.
5. If the breakdown is due to supply failure, identify which supply. Is it water, gas or electricity?
6. Can the supply be restored?

Negative answers to the above will probably necessitate obtaining outside assistance, the kind being determined by the cause of the fault, which should be known broadly, even if not in detail. For instance:

- An electrical fault requires an electrician, or possibly the Electricity Authority.
- A mechanical fault requires the manufacturer's service engineer.

Certain faults may not clearly fall into either of the above categories, or may not have been identified. In these cases, a specialist maintenance service should in the first instance be called in.

Other breakdowns or faults may need to be dealt with by the Water Authority, Gas Authority or Fire Brigade.

It is always helpful to give as much information as possible at the time when calling outside help. For instance, if a spare part is known to be required, this can be brought on the first visit to site with consequent saving of cost and time. In some cases, temporary repairs may have to be made in order to quickly restore the plant to a workable condition. It is essential that this is followed by proper and lasting repairs at the earliest convenient time.

Depending on the type of breakdown, a decision must be taken on whether the matter is urgent or not. For instance, a radiator may be leaking and the valves can be closed. In all the above cases, the faults need attention but they are not urgent.

When a breakdown occurs, action may need to be taken immediately to render the plant safe. In such cases, the procedure as outlined elsewhere for shutting down the boiler plant and switching off pumps etc. must be followed before any other action necessitated by the breakdown is carried out.

The latter heading includes such actions as: work on the boiler or pumps; isolation of plant and circuits because of leaks; emptying down; lubrication of moving parts; cleaning strainers; replacing fuses; and other similar jobs.

Finally, always try to establish the cause of a breakdown as distinct from merely rectifying the effect. Although the immediate need may be to restore the plant to working order without delay and by whatever means are possible, never be satisfied with any action which only repairs the defect or replaces the part.
Investigation in depth may reveal some underlying faults which, if not corrected, may result in re-occurrence of the trouble or even perhaps later development of other or more serious faults which are not yet apparent.

Careful and complete details of all breakdowns should be recorded in the logbook. Date of occurrence, which item of equipment, details of breakdown, any immediate previous maintenance work carried out, previous warnings or evidence of trouble which may have gone un-heeded (or acted upon), how the plant generally was operating, and any special circumstances or relevant details should all be accurately and fully recorded, together with full details of action taken, including both temporary and/or permanent repairs or replacement.

Such records are not only useful to the operating staff, but often provide invaluable clues to outside specialists and service engineers. From the information given, they may be able to offer an improved operating technique to prevent or minimise re-occurrence of the breakdown.

Burst Pipes and Leaks

It is important to deal with burst water pipes and major leaks as soon as a leak is discovered in order to prevent damage to the building or equipment and to prevent water wastage.

As soon as the source of a water leak is discovered, the following action should be taken:

1. Isolate the section of pipe which is fractured or damaged by shutting down the valve upstream of the leak point.
2. Disconnect and remove any portable electrical equipment in the vicinity of the flooded area.
3. Electrically disconnect any permanent fixed electrical equipment, including motors etc. in the vicinity of the flooded area, and provide protection to prevent entry of water.
4. Repair all leaks to mains water systems as a matter of urgency, so that the water supply systems to the affected area of the building may be restored.
5. Repair leaks to other systems as soon as possible.
6. Any electrical equipment which has been affected by the leak must be thoroughly dried out and checked to ensure that it is electrically safe before restoring it to use.

Gas Escapes

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The immediate action to be taken is detailed below:

1. Turn off the meter/emergency control immediately and leave off until escape has been repaired.
2. Extinguish all naked flames.
3. Ventilate the premises by opening doors and windows.
4. Do not operate any electrical switches, either ON or OFF.
5. Phone British Gas' emergency service. Please refer to your local telephone directory under 'Gas' or on your meter label for the correct telephone number.
6. Be aware that British Gas will require immediate access to the premises.

You should report the following information:

1. Customer's name, address or premises, and telephone number.
2. Account address, if different from above.
3. Name of person reporting escape.
4. Where the smell of gas is most noticeable.
5. When the smell of gas was first noticed.
6. Whether the meter/emergency control has been turned off, and if there is still a smell of gas.
7. Is there the smell of gas outside?
8. Are any adjoining premises affected?
9. Any special circumstances or instruction for access.

IN THE EVENT OF AN EQUIPMENT FAILURE OR IF IN ANY DOUBT ISOLATE THE ELECTRICITY AND CONTACT CHAPMAN VENTILATION:

TELEPHONE: +44 (0) 1707 372858
FAX: +44 (0) 1707 325001
EMAIL:
helpdesk@chapmanventilation.co.uk

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Section 6 – Schedule of Equipment.

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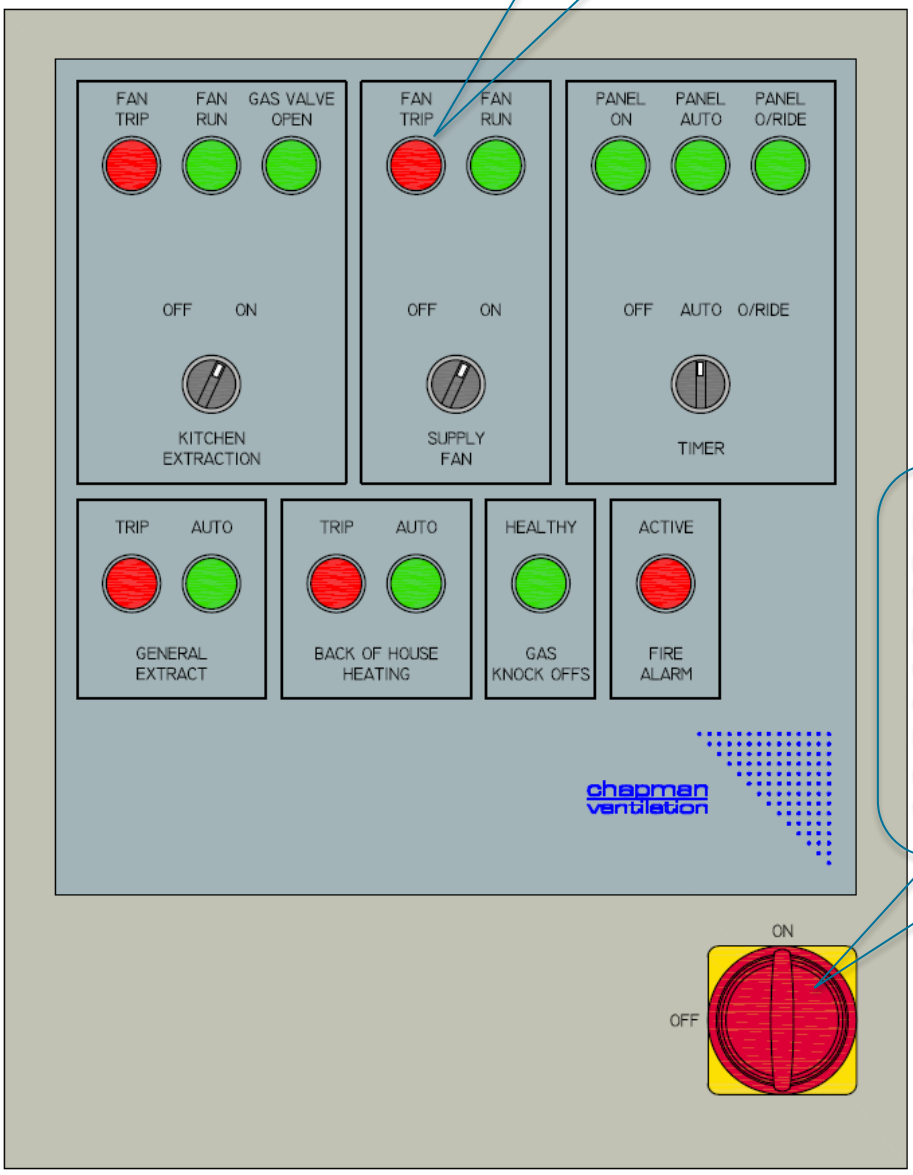
Section 7 – Control Panels.

VENTILATION CONTROL PANEL OPERATING INSTRUCTIONS



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Control panel on site.

Auto: The system will run as dictated by the time clock within the panel. If you want the time clock adjusted, please call Chapman Ventilation.

Off: This will shut down the system; turning the switch to this point will shut down the system in a safe and controlled manner. (Use this if you wish to shut down the system before the scheduled time clock finish time)

Hand: This setting will allow the system to run on beyond the time set on the time clock.

Always remember to set the panel back to "Auto" at the end of the day's trade

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AL7 1JQ

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Section 8 – Manufacturers' Literature

UV-O Range

Unlike other UV-C systems, our UV-O units are located outside of the kitchen extract duct and are connected via a spigot and spiral ducting.

KEY FEATURES

- Easy to install
- Can be retro-fitted into existing duct
- Virtually no pressure loss
- No monthly maintenance needed

Our UV-O range includes:-

- **UV-O 500 which handles up to 1.5 m^3/sec of air flow**
- **UV-O 1000 which handles up to 2.5 m^3/sec of air flow**

The UV-O 500 has been designed for smaller capacity commercial kitchens.

The UV-O range uses UV-C technology to produce ozone and hydroxyl free radicals to oxidise cooking odours through a process of ozonolysis.

Unlike other UV-C systems, our UV-O units are located outside of the kitchen extract duct and are connected via a spigot and small diameter ducting.

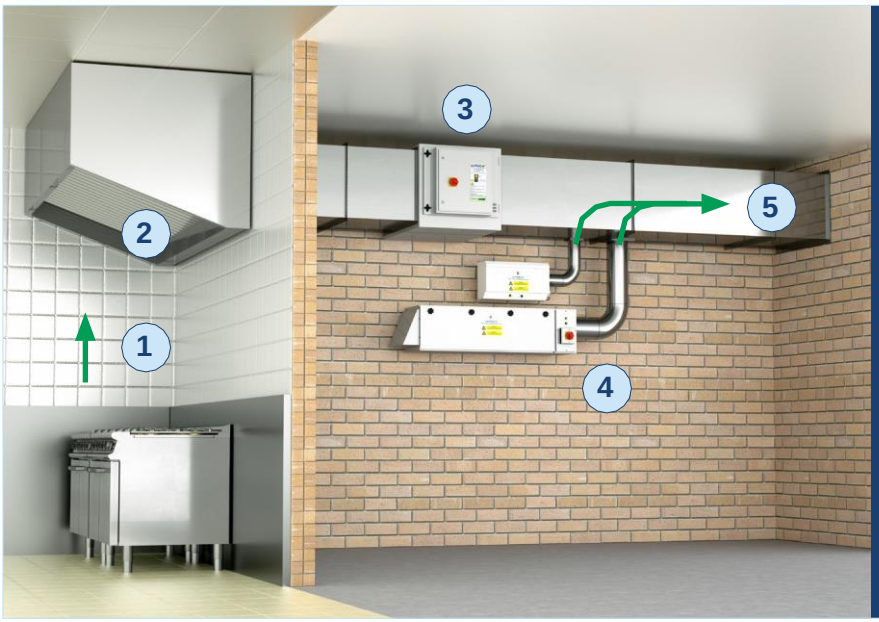
Although it is widely accepted that the best way to apply UV-C light is directly in-line with the air stream itself, performance will be impacted as the lamps get dirty.

With our UV-O units the air flow does not come from the exhaust duct but from the ambient air around the unit, which is filtered on entry. This means that it is able to provide a uniform supply of ozone and hydroxyl free radicals into the extract system with an extremely low pressure loss.

For optimum performance we would recommend between 2 & 6 seconds of dwell time to allow the ozone to work effectively upon the malodorous gasses within the duct.

UV-O 500 Unit

UV-O 1000 Unit



1. Cooking particulates and odours
2. Canopy Grease Filter
3. ESP - Particulate Control Unit
4. UV-O 500 (above)
   UV-O 1000 (below)
   Odour Control Units
5. Ozone joins airflow

Technical Specification

	UV-O 500	UV-O 1000
Electrical Supply	220/240V 50Hz	220/240V 50Hz
Power Consumption	120 Watts	700 Watts
Max Air Volume	up to 1.5m³/sec	up to 2.5m³/sec
Dimensions	W 605mm H 300mm D 200mm	W 1568mm H 350mm D 363mm
Weight	10.5Kg	50Kg

This unit's tried and tested UV-C technology allows for the siting of commercial kitchens in locations such as residential areas and shopping centres, where previously planning permission may not have been granted. After extensive research and development Purified Air are able to devise the best combination of lamps to provide the most effective odour control.

Safety

Ultra-Violet band C light is the most powerful of the three bands, it is a very strong oxidant and as such exposure to UV-C light is dangerous. To ensure safety the UV-C lamps are secured behind locked panels and the system has been engineered to shut down automatically when these panels are unlocked. However, since the lamps typically have a minimum life of twelve months and with the system able to operate at optimum efficiency even if one lamp fails it is unlikely that, apart from routine servicing by experienced engineers, that the system will ever need to be opened.

purified air® since 1984

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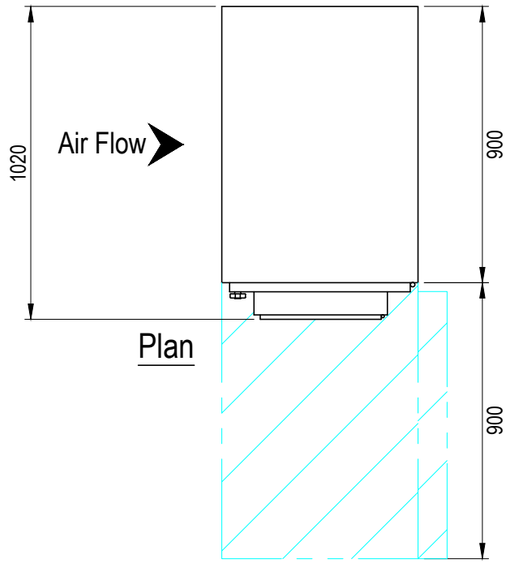
T: 01708 755 414 | F: 01708 721 488
enq@purifiedair.com | www.purifiedair.com

All dimensions in millimeters
Do Not Scale

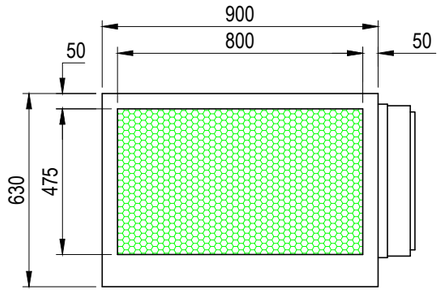
Note
The system can be reconfigured if air flow direction is different to that shown.
Transition and ducting sections in between units drawn for indication purposes only. All transition pieces and ducts to be designed, supplied and installed by others.

Service Space
Note: If access equipment is necessary service requirements may vary.

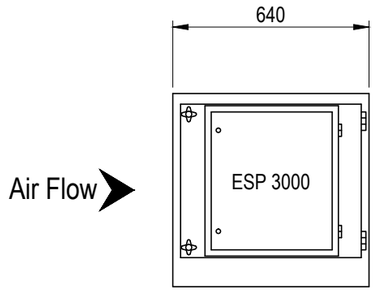
Max. Air Volume through system 1.4m³/s



Plan



Side Elevation on ESP



Front Elevation

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FAX:01708 721488
e-mail : info@purifiedair.co.uk

PURPOSE OF ISSUE:-

Overall Dimensions of ESP3000

CLIENT
-

LOCATION
-

DATE	DRAWN
20.01.15	MDK
SCALE	CHECKED
1:20 @ A3	
DRAWING NO.	REV.
E2	-

Fläkt Woods Limited

Technical Data Sheet

Estoc Targe - Powerbox GF

Quotation Number	: Q00023581	Project Code	: BO-22170-1
Project Name	: Rocca's Earlham Street	Customer	:
Item Reference:	:	Date:	: Thursday, October 1, 2020

Fan Code	Estoc Targe (PowerBox) 102-630-3
Fan Diameter / Size	630
Velocity	9.6 m/s
Form of Running	B (Horizontal)
Requested Duty (46.9 Hz)	3m³/s @ 900 Pa (static)
Control Adjustment	46.9 Hz
Outlet Dynamic Pressure	56 Pa
Duty Shaft Power	4.77 kW
Max Shaft Power	6.00 kW
Motor Frame	Integral [Class F]
Motor Rating	6.00 kW
Full Load Current	10.8 A
Starting Current	62.64 A
Electrical Supply	380-420 Volts 50 Hz 3 Phase
Start Type	Enquire
Motor Winding	Standard
ErP [FMEG] Rating	Not in Scope
SFP value	1.59 W/(l/s) @ Requested Duty
Power from mains	4.77 kW
Energy Consumption	14314 kWh (3000 h/year)
Running Cost / Year	£1718
Air Density	1.2 kg/m³ / 68 °F / 0 m / 50% RH
Smoke Venting	Non Smoke Venting
Product Number	GF106303

Acoustic figures for adjusted running speeds have been interpolated and are for reference only.

This Offer is made subject to the latest version of our A100-19 Terms and Conditions, a copy of which can be made available on request.

	Sound Spectrum (Hz)								Overall	
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m**
Inlet*	114	80	84	80	81	83	78	70	114	70
Outlet*	117	88	87	86	85	84	80	70	117	73
Breakout*	100	80	77	68	68	62	55	48	100	56

* Lw dB re 10^{-12} W ** dBA re $2x10^{-5}$ Pa

Sound data at requested duty.

Description	Qty
Fan	
GF106303 - Estoc Targe (PowerBox) 102-630-3	1
Accessories	
BI101080 - SFC - Flexible Connection Inlet / Outlet	1
BI101079 - SFC - Flexible Connection Outlet	1

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Colchester
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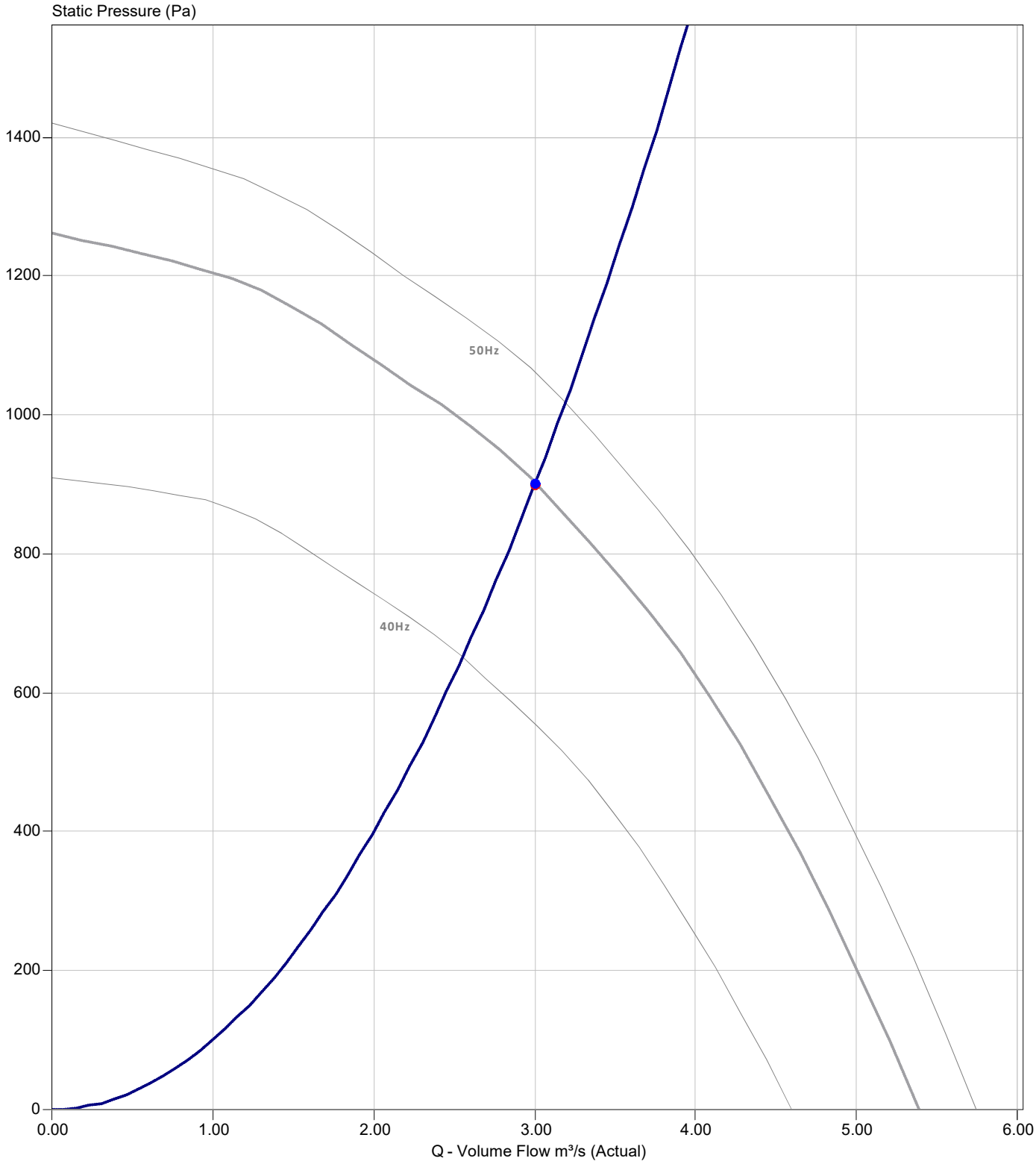
Website: www.flaktwoods.co.uk/woods
Email: bruno.giesteira@flaktgroup.com

Fläkt Woods Limited

Performance Chart

Estoc Targe - Powerbox GF

Quotation Number	:	Q00023581	Project Code	:	BO-22170-1
Project Name	:	Rocca's Earlham Street	Customer	:	
Item Reference:	:		Date:	:	Thursday, October 1, 2020
			Fan Code	:	Estoc Targe (PowerBox) 102-630-3



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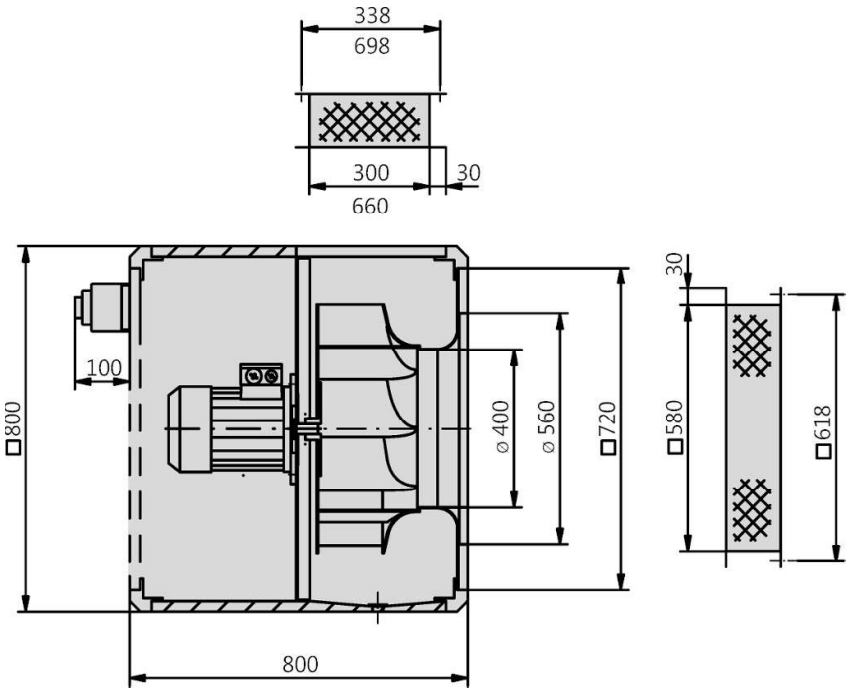
Printed on 01 October 2020

Selection Engine: EDI WS 20.01.27(1)(UK.3.6.0)

Fläkt Woods Limited
Drawing and Dimensions
Estoc Targe - Powerbox GF

Quotation Number	:	Q00023581	Fan Code	:	Estoc Targe (PowerBox) 102-630-3
Project Name	:	Rocca's Earlham Street	Customer	:	
Item Reference:	:		Date:	:	Thursday, October 1, 2020

Max Weight (kg) 165



Notes : Dim in mm / Weight in kg / * Outlet dim

Reference :Catalogue drawing

This drawing shows dimensions that should be used as a guide only and are subject to change. Certified drawings are available on request.

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Section 9 – Commissioning Certificates

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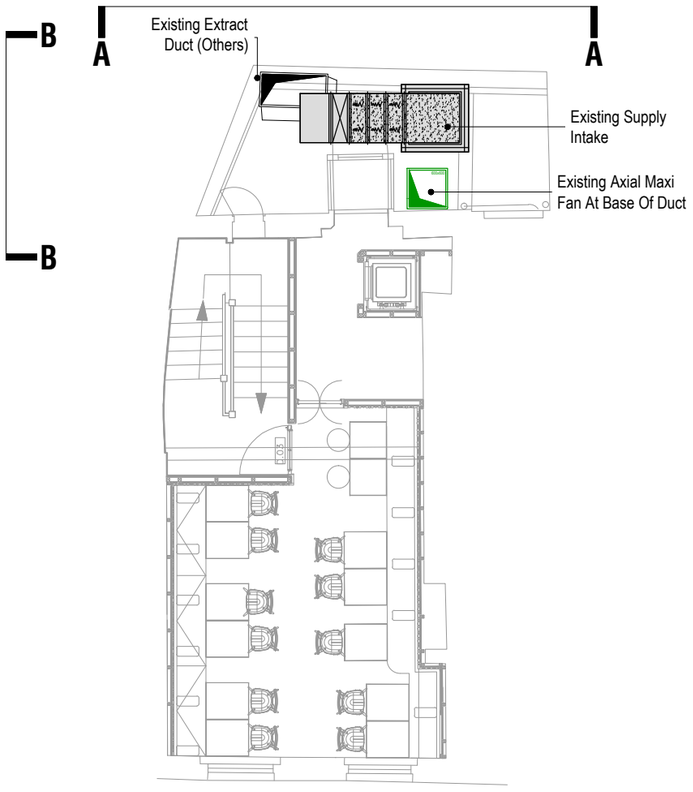
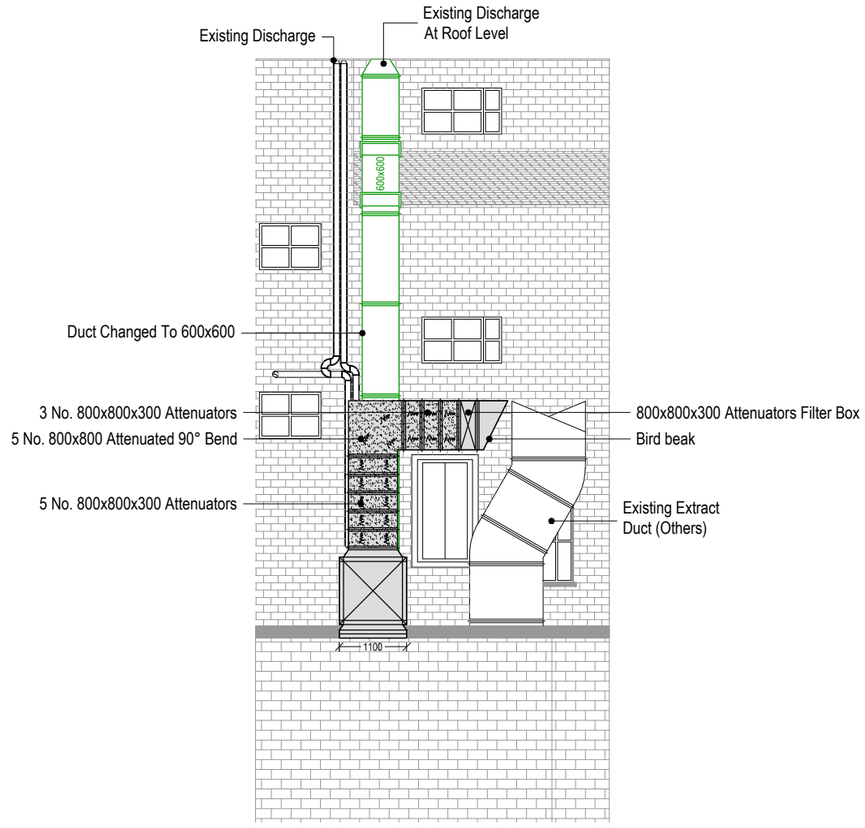
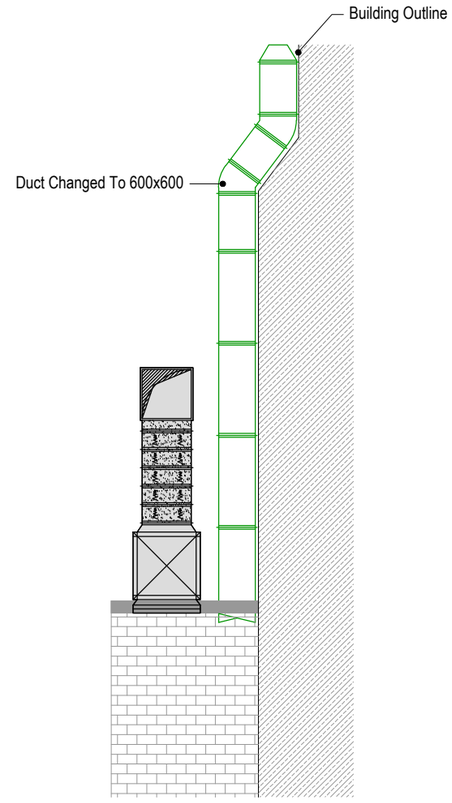
Section 10 – As Fitted Record Drawings



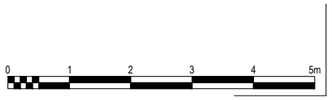
PLANT AREA



A-A ELEVATION



B-B ELEVATION



General notes:

1. Positions of all equipment, ductwork and fittings are indicative only.
2. Contractors shall confirm the sequence of installation works to ensure safe access is maintained.
3. Attention is drawn to health & Safety issues. Liaise with the main contractor to ensure that installation works are programmed to minimise H&S risks and optimise co-ordination.
4. All dimensions / duct sizes are in millimetres unless otherwise stated.
5. This drawing was produced using CAD and should not be amended by hand.
6. All dimensions shown are for reference and should be checked on site prior to commencement of work.

Specific notes:

1. This drawing should be read in conjunction with all architectural, structural and drawings from other services (incl. mechanical, catering, electrical, sprinklers), along with contract documentation and specification for the works.
2. Ensure all method statements, sign offs and approvals are in place before proceeding with any works.
3. All works to be carried out in accordance with the current British Standards, B.S. codes of practice and building regulations.
4. The HVAC services works shall be carried out in full accordance with the client specification and brief, together with any landlord technical guide and specification.
5. Ductwork shall be installed in accordance with all current industry standard guidelines / regulations.
6. Galvanised ductwork to be manufactured to DW144.
7. Ductwork sized in accordance with all current industry standard guidelines / regulations. Duct dimensions shown on drawing are clear internal dimensions (not including flanges and fixings).
8. Access doors required on kitchen extract duct every 1500mm for cleaning and before / after every change of direction & should be accessible at all locations via ceiling access panels or gridded ceiling etc. Access panels to be provided by main contractor in any solid ceilings where final requirements indicated by HVAC installation contractor.
9. Duct connections with fans and other equipment to be a manufactured canvas connection to prevent duct breakout noise and transmission of vibrations.
10. Volume control dampers shall be installed on all branch legs and diffuser / grille terminals to facilitate commissioning.
11. Supply and secondary fan coil unit ductwork to be fully insulated.
12. Fresh air intakes and exhausts locations are shown indicatively on these drawings. The exact positions shall be agreed with the client, architect and the main contractor and shall be shown accurately on the working / co-ordinated drawings.
13. Position of all grilles / air valves shown are in optimum positions for air flow. The grilles to be positioned as close as practicable to location shown and coordinated with other services and fabric constraints.
14. Fire dampers are to be shown on ductwork (excluding kitchen extract ducts) penetrating fire compartment divides and shall incorporate certified fire dampers to match the barrier rating, together with access panels. Reference to be made to architects' fire strategy drawing to establish locations. Fire dampers are shown indicatively on these drawings.
15. All transfer grilles and ductwork where fire rated, shall match the fire rating of the wall in which it is installed.
16. Attenuation and anti-vibration measures shall be incorporated on all plant and ductwork supports in full accordance with acoustic consultant's specification.
17. Access required to all plant equipment for maintenance and cleaning.
18. Refer to catering specialist layout to determine confirmed canopy sizes and location.
19. Condensate drain from AC condensers to be run to the nearest waste connection or to rooftop drain. Condensate drains from the FCU's to be run to the nearest drain (25mm), subject to manufacturer and their requirements. Both shall be the equivalent plastic or copper sizes.
20. Install all mechanical equipment in accordance with manufacturers guidelines.
21. Catering condensers are not CVL equipment. However, they are indicatively shown on CVL drawings to allow for provisioned space and access within the HVAC plant area.
22. Locations of all required floor, wall and roof openings shall be co-ordinated with all other trades involved.
23. No others load(s) (other services or man loading) shall be hung from ductwork supports.

METERAGE

SUPPLY DUCTWORK	0.0m
WC EXTRACT DUCTWORK	0.0m
AC PIPEWORK	0.0m

Quantities are for this sheet only

No.	Date	Rev. By	Revision Description
C	22/10/20	PR	KE attenuator removed. Updated supply intake attenuation.
B	09/09/20	PR	Revised GA layout added.
A	16/06/20	JJ	Existing fan removed

Client:

ROSA'S
THAI CAFE

Project :

Rosa's Thai Cafe
Earlham Street
London

Drawing Title :

Proposed Ventilation Layout
Plant Deck & Elevation

Drawing No.:	Rev:
001-612-02	C

Scale: 1:50 @ A1 1:100 @ A3

Drawn By: JJ	Checked By: -	Date: 07/04/20

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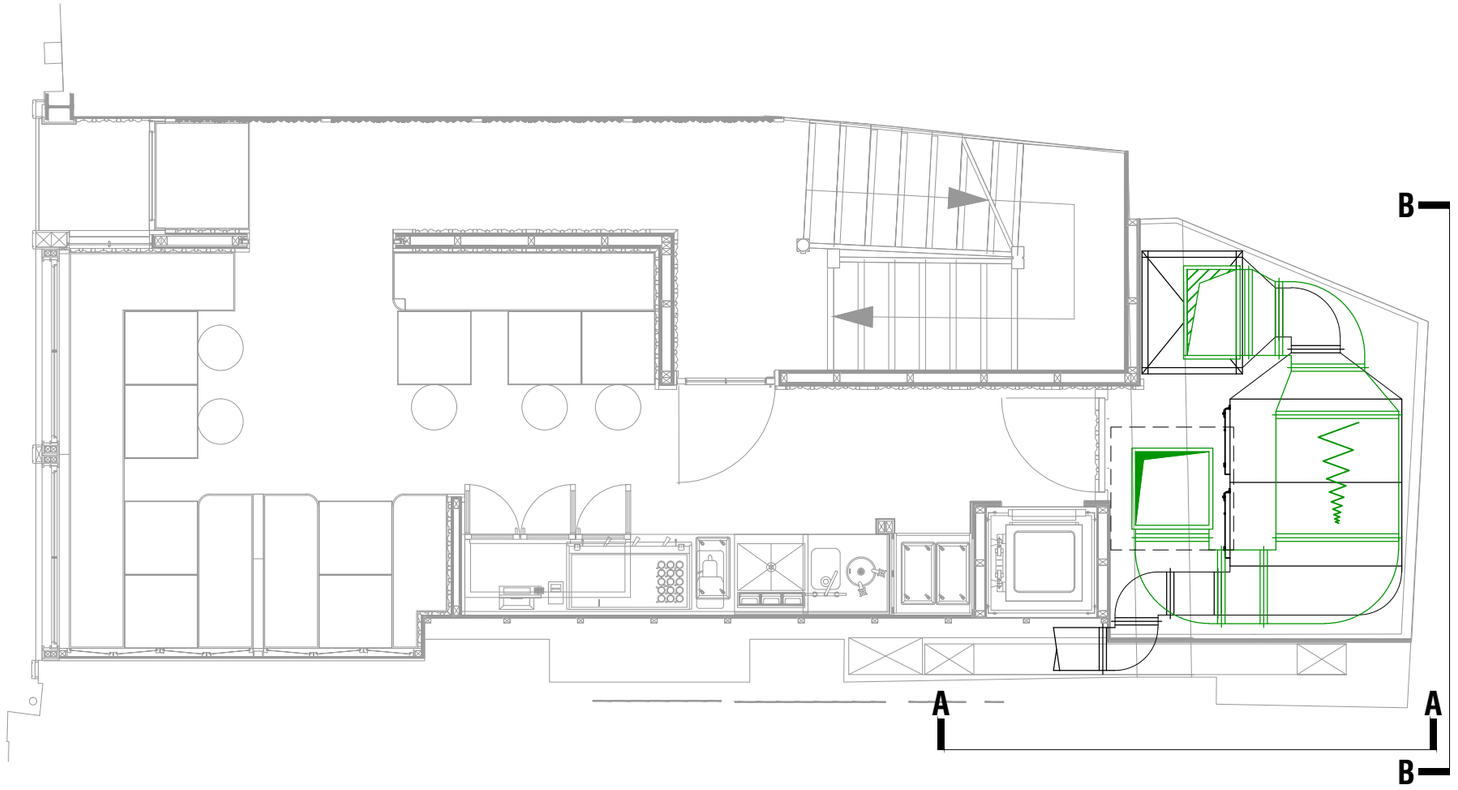
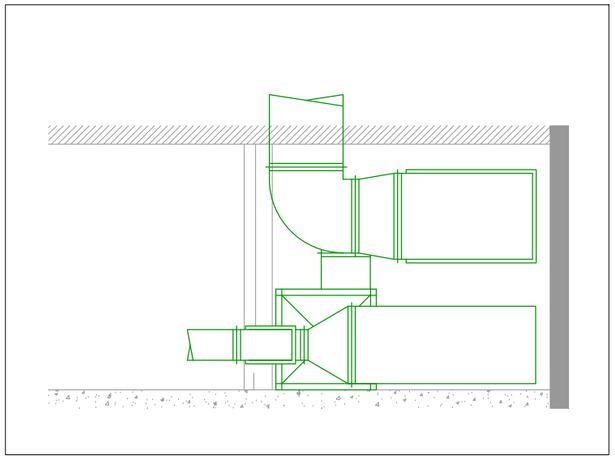
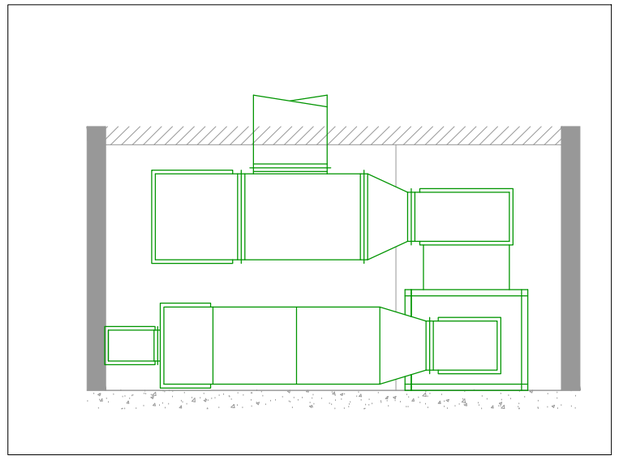


PROPOSED GROUND FLOOR



A-A ELEVATION



B-B ELEVATION

Note:
-All plant will be installed on anti-vibration mounts

0 1 2 3 4 5m

N

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WC EXTRACT DUCTWORK	0.0m
AC PIPEWORK	0.0m

Quantities are for this sheet only

No.	Date	Rev. By	Revision Description
B	22-10-20	PR	Revised plant layout.
A	09-09-20	PR	Updated GA layout.

Client:

ROSA'S
THAI CAFE

Project :

Rosa's Thai Cafe
Earlham Street
London

Drawing Title :

Ground Floor Ventilation Layout Elevations

Drawing No.:	Rev:
001-612-04	B

Scale: 1:25 @ A1 1:50 @ A3

Drawn By: JJ	Checked By: -	Date: 10/06/20

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Section 11 – PPM and Call Outs.