

Ventilation & Odour Control - Revision 1.0

Extraction duct, odour control and brick slips information.

Site address: Red Cow, 50 Crown Street Reading, RG1 2SE

The kitchen will be a grille type food restaurant that will carry out medium to heavy duty cooking within the premises. The system will comply with current standards, DW172 and BS6173. The system will comprise of ductwork, high velocity vertical cowl, fan, canopy, odour control and smoke/grease control system. An intake fan to replace 85% of the extracted air will be fitted.

Type of cooking

Grilling, Frying, Boiling - medium/heavy duty cooking.

Hours of cooking

TBC.

Plans, Drawings and Calculations

- Extraction fan 01 - Exact details TBC once layout confirmed.
- ESP unit 02 - provided.
- Ozone generation 03 - provided.
- Intake fan 04 - Exact details TBC once layout confirmed.
- Rough layout 05 - TBC following comments from local authority.

Duct Outlet

Vertical high velocity cowl termination approx 6,000mm from the roof line.

Outlet Velocity

10m/s

Efflux will be achieved via high velocity cowl.

Size of cowl = 700mm X 400mm.

Extraction Flow Rate

Cooker canopy hood is fitted over the cooking equipment to comply with DW172 and current ventilation regulations.

Canopy:

Canopy size = 3,000mm wide X 1,400mm deep

Canopy height = 2,000mm from floor.

Forward overhang = 300mm / 600mm.

Side overhang = the canopy is fitted between two walls one to the right hand side and one to the left hand side.

Baffle grease filters in hood

Type = baffle filters to comply with DW172.

Extraction Fan Unit Capacity

This extraction fan is manufactured by a recognised manufacturer and is suitable for kitchen extract installations.

Extract fan 1

Make = Recognised manufacturer woods or similar

Type = duct mounted.

Dimensions = 600mm X 600mm X 600mm

Air flow capacity 1.94m³/s at 500Pa

Existing fan installation.

ESP Unit - Smoke and Grease Reduction

Make = Rydair

Model = RY5000

Dimensions = H:540 x W:1243 x L:620 mm

Weight = 90Kg

Location = within the kitchen.

Industrial grade Electrostatic Air Cleaners for collection of dry and wet particulates like dust, oil mist, cooking fumes and various pollutants Typical application include commercial kitchen exhausts, Air Handling Units (AHUs), factories, workshops, CNC machine shops and many other premises.

Data sheets: 02

Odour Control – Ozone Generation Unit

This system breaks down odour particles. It does not just cover the odour particles it destroys them on contact.

Make = ECE

Model = 16g unit x 2 (1 to each side)

Dimensions = 400mm X 300mm X 100mm

Pressure drop = 0Pa

Dwell time = 1.5s

This will be mounted within the kitchen.

The Ozone Extract improves the efficiency of your kitchen extraction system by increasing performance, removing cooking odours, reducing grease deposits which reduce fire risk and it will lower the cost of system maintenance.

Data sheets: 03

14muct run ÷ 7m/s air speed in duct = 2.0s equivalent dwell time
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Extract Ductwork

Ducting Type

The ductwork is a combination of square and rectangular duct.

Duct Velocity

The extract duct velocity for this system is 7.0m/s > 9m/s.

Duct Size

A combination of 700mm X 400mm > 500mm X 200mm.

Intake System

This intake fan is manufactured by a recognised manufacturer and is suitable for kitchen extract installations.

Intake fan

Make = Recognised manufacturer woods or similar

Type = wall & duct mounted.

Location = this fan unit will be fitted externally.

Dimensions = 600mm X 600mm X 600mm

Air flow capacity 1.6m³/s at 200Pa

Existing fan installation.

Intake Duct & Internal Grilles

The ductwork will extend into the kitchen and be fitted to the rear wall.

Intake grilles will be fitted within the kitchen to deposit air into the work area.

Ducting Type

The ductwork is a combination of square and rectangular duct.

Duct Velocity

The extract duct velocity for this system is 7.0m/s > 9m/s.

Duct Size

A combination of 400mm X 400mm and others TBC.

Maintenance

Item	Frequency	Responsibility
<u>Canopy clean</u> By staff once a day or dependant on use.	6 Monthly	Site + Maintenance Company
<u>Baffle filters</u> Baffle filters can be cleaned by hand or by dishwasher.	Weekly	Site + Maintenance Company
<u>Ozone</u> Cleaned and cleaned by cleaning contractor or specialist.	Quarterly	Maintenance Company
<u>Ducting</u> Cleaned and cleaned by cleaning contractor or specialist.	6 Monthly	Maintenance Company
<u>Fan clean</u> Cleaned and cleaned by cleaning contractor or specialist.	6 Monthly	Maintenance Company

DATE - 02 May 2019
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