



Kitchen Ventilation SPECIFICATION INFORMATION

Requirements for the installation of a complete kitchen ventilation system. Document includes canopy, ventilation and other associated specifics



thespringfieldgroup.net - info@thespringfieldgroup.net

Papa Noodle New Oxford Street

Information Provided By –



UNIT C1 OYO BUSINESS PARK
CASTLE VALE
BIRMINGHAM
B35 6AN

01675 430 490

info@thespringfieldgroup.net

Property Details

PAPA NOODLES RESTAURANT

UNIT 4A 1 NEW OXFORD STREET

LONDON

WC1A 1NU

Site Requirements

Brief description of site requirement

High level discharge with large weather louvre in the side of pitched roof complete with bird mesh guard. Limited space to discharge with high velocity or ninety degree discharge cowl.

This proposed system to be mounted or hung on anti-vibration mountings to reduce any reverberation type vibration from the extraction system, travelling through the building.

Access doors installed in ducting system for cleaning and maintenance.

We can confirm that the design and specification for the extraction system at the above address is in accordance with DW172 specification.

Summary of detailed information attached in this specification

Extraction:

<i>Volume M3/second</i>	<i>Resistance</i>	<i>Discharge Velocity</i>	<i>Filtration</i>	<i>Noise level</i>
<i>2.73 M3/sec</i>	<i>410 pa</i>	<i>5.70 M3/sec</i>	<i>Coil filters Activated carbon Ozone filters</i>	<i>46 dba</i>

Supply:

<i>Volume m3/second</i>	<i>Resistance</i>	<i>Replacement Percentage</i>	<i>Air Filter</i>	<i>Noise level</i>
<i>2.16 m3/sec</i>	<i>150 pa</i>	<i>80%</i>	<i>EU4</i>	<i>53 dba</i>

Introduction

Canopy design

With the canopy supplied we have based the extraction airflow duty on the cooking type appliances underneath and calculated the volume required to capture the grease-laden air and heat removal over the appliances used.

Our Kitchen extraction Canopies are manufactured out of 430 or 304 grade stainless Steel. Stainless steel baffle filters within the canopy housing fully welded drain channel and complete with grease tap or grease pot.



Grease Tap

A stainless-steel ball valve with plastic lever handle, threaded if want to make a permanent grease run off to grease pack.

These are installed at one or each end of the canopy, where the grease runs down the welded drain channel, turn the tap Anti-clockwise and drain off any excess grease or oil and wash with hot soapy water and turn lever clockwise to shut off.



Grease Pot

Installed in bottom plenum a removable pot at one or each end of the canopy, where the grease runs through hole above into the drain pot, remove the pot and dispose of the grease appropriately, wash out with hot soapy water and re-fit by pushing back into the slides, wash drain channel with hot soapy water and drain off any excess grease or oil.

This is for good housekeeping for cleaning grease daily and is easily accessible

Our canopies are installed at a working height of 2000mm to 2100mm underneath the canopy. 300mm overhang on front and sides of appliances.

Proposed system specification

Brief description of site requirement

Discharge through side roof soffit through a 2400mm x 300mm weather louvre transposing to 600mm square galvanised ducting dropping down to a mixed flow fan and silencer.

Due to the nature of the building with low ceilings and limited roof void space, the fan would be hung on anti-vibration mountings and the ducting would run at high ceiling level to the canopy. This minimises noise breakout and is easier for pre-filter changes and maintenance.

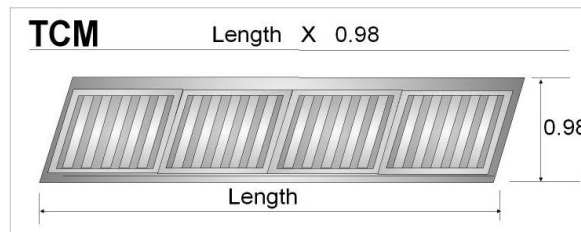
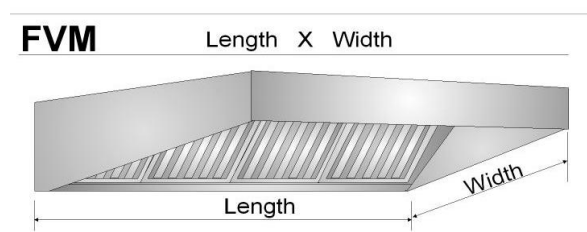
Access doors installed in ducting system 2-3 metre centres for cleaning and maintenance.

We can confirm that the design and specification for the extraction system at the above address is in accordance to DW172 specification.

Canopy Information

Main cookline wall canopy 4000mm (long) x 1200mm (wide) 304 grade brushed stainless steel, complete with stainless steel convolute coil filters. Incorporated within the main canopy, would be a full-length plenum, built filter housing to accommodate 6off, Coil filters. Linked to an Island style canopy, above the noodle and stock pot cooking, 2300mm x 2300mm complete with stainless steel baffle filters.

Length Metre	Width Metre	Type	Grade Satin	No: of filters	Filter Size	Filter Type	Canopy Style
4.00	1.20	Wall	304	6	500x500	Coil	Box
2.30	2.30	Low level	304	6	500x500	Baffle	Island



TCM Canopy volume based on face velocity required extraction through sloping filter plenum

Length		Width		M ²		Velocity		Volume m3/second
3.00 (Both sides area)	X	0.98		2.94	X	0.35	=	1.02 M3/sec
3.50	X	0.98	=	3.43	X	0.50	=	1.71 M3/sec
TOTAL VOLUME								= 2.73 M3/sec

Minimum Requirements for Canopy

Velocity requirements:

Light loading – 0.25 m/s (applies to steaming ovens, boiling pans, stock-pot stoves) Pizza shop, bakery


Medium loading – 0.35 m/s (applies to deep fat fryers, solid and open top ranges and griddles) cafes, pubs.

Heavy loading – 0.5 m/s (applies to char grills, specialist broiler units) Indian, Chinese, kebab shops.

Canopy Filter

Coil filters information

This style of filter is designed to remove 95% of the grease to avoid grease carry over and by removing the grease from the ducting, it keeps the inline filters cleaner longer and is a good prevention of any fire risk, by keeping the system clean.



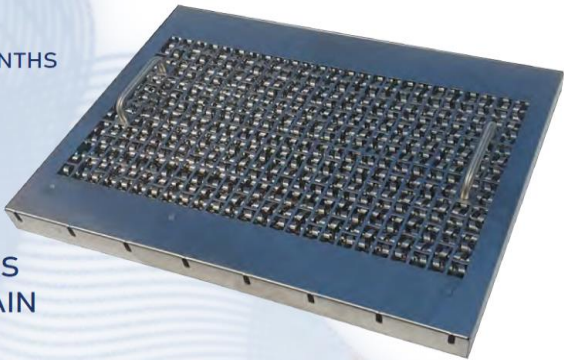
CONVOLUTE FILTERS

SPRINGFIELD GROUP PRODUCTS HIGH EFFICIENCY GREASE FILTERS

The convolute coil type filter is the ultimate high efficiency primary grease filter for your kitchen. The filters are proven to remove up to 90% of grease before it enters the extraction system. They are available in all standard sizes.

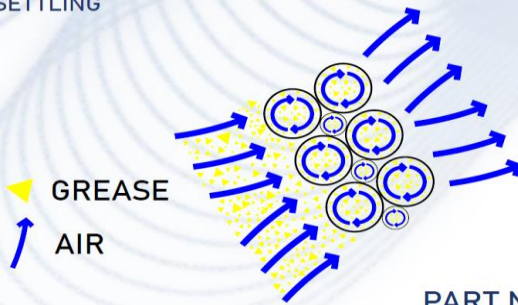
BENEFITS INCLUDE

- RETURN ON INVESTMENT AS SHORT AS 12 MONTHS
- REDUCES DUCT CLEANING REQUIREMENTS
- EXCEPTIONAL FIRE BARRIER
- GREASE CAPTURE UP TO 90%
- REDUCTION IN INSURANCE PREMIUMS
- ASSISTS TR19 COMPLIANCE



THE PATENTED FILTER MATRIX WAS DESIGNED TO APPLY THE FOUR MAIN PRINCIPLES OF FILTRATION

- CONDENSATION
- INERTIAL SEPARATION
- IMPINGEMENT
- SETTLING




TECHNICAL SPECIFICATION


- VOLUME FLOW RATE UP TO 0.28M³/S PER FILTER
- 4.2 M²/S FACE VELOCITY OPTIMUM
- 195 Pa PRESSURE DROP
- UP TO 3KG WEIGHT
- FULL STAINLESS STEEL CONSTRUCTION
- 50dB NOISE

PART NUMBERS

CONV-2020S SINGLE CONVOLUTE FILTER 495X495X47
CONV-1620S SINGLE CONVOLUTE FILTER 395X495X47


CONV-2020T TWIN CONVOLUTE FILTER 495X495X47
CONV-1620T TWIN CONVOLUTE FILTER 395X495X47





CONVOLUTE FILTERS

The Springfield Group
Unit C1 OYO Business Park, Castle Vale, Birmingham, B35 6AN
www.the-springfieldgroup.net
info@the-springfieldgroup.net
01675 430 490



Springfield Group PRODUCTS

Extraction System Information

Galvanised mild steel sheet of lock-formed ducting in accordance with DW144. Constructed from hot-dip galvanized steel sheet. Joints and spigots sealed with High-pressure ducting sealant, which complies with HVCA specification DW144.

Off the top of the canopies with rectangular galvanised ducting linking the two canopies together, ducting rising up through ceiling to high level platform where the fan and filtration mounted, ducting first transforms to a treble activated carbon filter complete with synthetic pre-filters, transposing to a 560mm Acoustic cabinet fan with a 600mm x 600mm x 600mm splitter silencer with 100mm baffles, turning to split into two discharge ducts with a ozone filter on each branch before discharging through weather louvre, with the carbon and ozone filters it will neutralise odour before discharging to atmosphere, Ozone monitors mounted next to the weather louvres to control the level of ozone and automatically control to avoid carry over going to outside, working on the guidelines permitted.

Criteria: which our design is based on regarding airflow velocities.

Weather cowl: $-5=8$ M/sec maximum velocity through weather louvre, to disperse into atmosphere. Duct velocities should be as follows: Extract (m/s) Main runs 6-8 M/sec with the branch and spigots 5-7 M/sec.

Type of discharge weather louvre

800mm x 600mm with free area of 800mm x 300mm due to angle weather blades giving a 50% free area = $0.24 \text{ M2 area} \times 2 = 0.48 \text{ M2}$ Louvre with bird guard discharging @ 7.50 M/sec. Volume 2.73 M3/sec divided by $0.48 \text{ M2} = 5.70 \text{ M/sec}$ which discharges equally and minimises noise across the blades.

Extraction fan details

Located Internally 4 pole, single-phase mixed flow fan at the designed Duty: 2.70 m3/sec @ 410 Pascal's resistance.

Grease filter resistance

Coil filters	Quantity	System Volume	Model	Resistance in Pascal's
2020T	6	1.71 M3/sec	CF475	105

Baffle filters	Quantity	System Volume	Model	Resistance in Pascal's
500x500	6	1.02 M3/sec	BF500	35

System resistance calculations

	Extraction system	Pascal's
1	Ducting system	145 pa
1	Baffle filters in Island canopy	35 pa
8	Coil filters & 2 Baffle filters in low level canopy	105 pa
1	Activated carbon filter and pre-filter	125 pa
Total static resistance on the system		410 pa

Selected Fan Details

Fan Model	Type	Volume m ³ /sec	Resistance	Speed rpm	Phase	Noise level
560 CVAT	Mixed flow	2.73	410 Pascal's	1470	3/1	71 dba @ 3 Mtrs
With the fan mounted internally and splitter silencer after the fan reducing induct noise by 19 decibels, high discharge, distance reduction of 6 decibels. Noise level will be greatly reduced and is estimated to be 46 dba @ 3 metres distance from the Louvres.						

560 CVAT Acoustic cabinet fan with inverter from 3ph to 1ph installation

Voltage	Frequency	Watts	Amps	S/C	Temp	Class	Enc	Spl @ 3mtrs	KG
400 V	50Hz	1470	7.30 A	27.00 A	50 C	F	55	71 db(A)	82

Soler & Palau CVAT Acoustic cabinet fan description details

ACOUSTIC CABINET FANS CVAB-N / CVAT-N Series



Range of direct drive backward curved centrifugal cabinet fans designed for ventilation of commercial kitchens and industrial applications. Cabinet fan manufactured from aluminium profiles and double thickness side panels internally lined with 25 mm thickness of fireproof fiberglass acoustic insulation. Circular duct connection flange on the inlet and outlet. CVAB-N/CVAT-N incorporates direct drive backward curved centrifugal impeller, manufactured from aluminium (CVAB-N) or steel (CVAT-N) sheet, with motor fitted inside the air stream.

Motors

CVAB-N
Single-phase external rotor motors 230V 50Hz, IP55, class F, with thermal protection, speed controllable by tension. Working temperature from -40°C to 60°C.

CVAT-N
Three-phase 4 and 6 pole motors 230/400V 50Hz, IP55, class F, with thermal protection (PTC), speed controllable by inverter. Working temperature from -20°C to 40°C.

ATEX versions

On request, explosion proof versions in accordance to ATEX Directive, for three phase models.

Working temperature from -20°C to +40°C.

- ATEX Flameproof - Gas

In standard ATEX version flameproof motors are without thermal protection.

If used with frequency inverter, flameproof motors with a PTC-type thermal protection must be specified at order.

Ⓜ II 2G Exd IIB T4
Ⓜ II 2G Exd IIB+H2 T4 (with motor Exd IIC T4)

- ATEX Increased safety - Gas

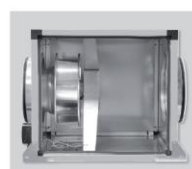
Ⓜ II 2G Exe IIC T3

To select CVAT-N ATEX refer to performance curves, or Easyvent. Note electrical data may vary for ATEX motors.

Specific applications

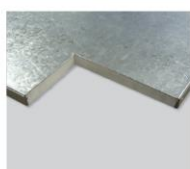


Versions



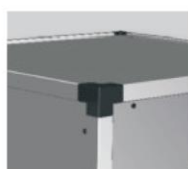
Backward curved centrifugal impellers

To prevent accumulation of dirtiness. Dynamically balanced.



Low noise level

Double thickness side panels lined with 25 mm thickness of fireproof fiberglass acoustic insulation.



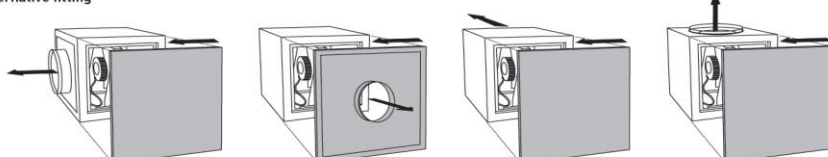
Robustness

Quality finished aluminium profiles and plastic corners providing a great robustness.



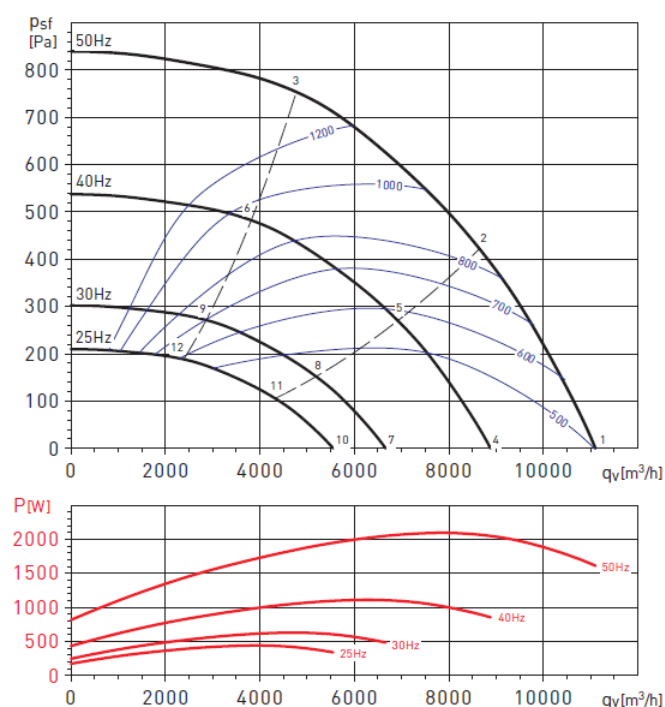
IP55 external terminal box
To ease electrical connection. Only available for CVAB single-phase models. For three-phase models, connection to the motor terminal box.

Alternative fitting



Extraction fan curve

CVAT/4-12000/560N D 2,2kW



2.73 M3/sec (9750 M3/Hr)

TECHNICAL CHARACTERISTICS

Before installation check that the product electrical characteristics listed on the data plate label (voltage, power, frequency, etc.) match those of the intended electrical supply.

Model	Speed (rpm)	Maximum absorbed power (W)	Maximum absorbed current (A)		Maximum airflow (m³/h)	Sound pressure level* (dB(A))			Weight (kg)
			230V	400V		Inlet	Radiated	Outlet	
			THREE-PHASE 4 POLES						
CVAT/4-1400/250N D 0,18	1480	116	0,9	0,5	1.230	50	37	48	13,0
CVAT/4-2000/315N D 0,18	1460	169	0,9	0,5	1.830	54	41	53	13,0
CVAT/4-3000/355N D 0,18	1430	251	0,9	0,5	2.660	56	43	56	30,0
CVAT/4-4000/400N D 0,37	1445	438	1,6	0,9	3.850	60	47	60	32,0
CVAT/4-6000/450N D 0,75	1465	747	3,0	1,7	5.620	63	50	64	46,0
CVAT/4-9000/500N D 1,1	1480	1347	4,4	2,5	7.900	67	53	68	58,0
CVAT/4-12000/560N D 2,2	1470	2093	7,3	4,2	11.100	69	56	71	82,0

Splitter attenuator

Splitter silencer baffle pods on the sides and radiused centre pod, flange each side for installation.



600mm X 600mm X 900mm Long Radius baffles							
63	125	250	500	1K	2K	4K	8K
4	8	12	23	26	26	17	12

ODOUR ABATEMENT

Dispersion of the discharge cowl risk assessment

Low-level discharge, discharging to courtyard or restriction on stack	Very poor	20	
Not low-level but below eaves, or discharge of below 10 M/S	Poor	15	15
Discharging 1m above eaves 10 to 15 M/S	Moderate	10	
Discharging 1M above ridge 15 M/S	Good	5	

Proximity of receptors

Close sensitive receptor less than 20metres kitchen discharge	Close	10	10
Close sensitive receptor between 20 to 100 metres from kitchen discharge	Medium	5	
Close sensitive receptor more than 100metres from kitchen discharge	Far	1	

Kitchen size

More than 100 covers a large size takeaway	Large	5	
Between 30 and 100 covers or medium sized takeaway	Medium	3	3
Less than 30 covers or small takeaway	Small	1	

Type of Cooking Odour & grease loading

Pub (high level of fried food), fried chicken, burgers or fish and chips	Very high	10	
Kebab, Vietnamese, Thai or Indian	High	7	
Cantonese, Japanese or Chinese	Medium	4	4
Most pubs, Italian, French, pizza or steakhouse	Low	1	

Based on	Total Score	High	32
----------	-------------	------	----

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	32
Very High	Very high level odour control	more than 35	

Very High-level control may include:

Carbon filtration (carbon filters rated with a 0.2 second residence time). Fine filtration, ozone, or Odour neutralisers.

First stage filtration

Convolute grease filters in canopy as specification sheet

This takes out smoke and initial 90% of the grease droplets before entering the ducting system. Grease runs into grease pots and drain channel for easy access and regular cleaning.

Second filtration

Treble activated carbon filter box 1800mm x 600mm complete with three 600mm cubed activated carbon filters and four pre filters this is to remove the odour element of the system

Carbon filtration unit

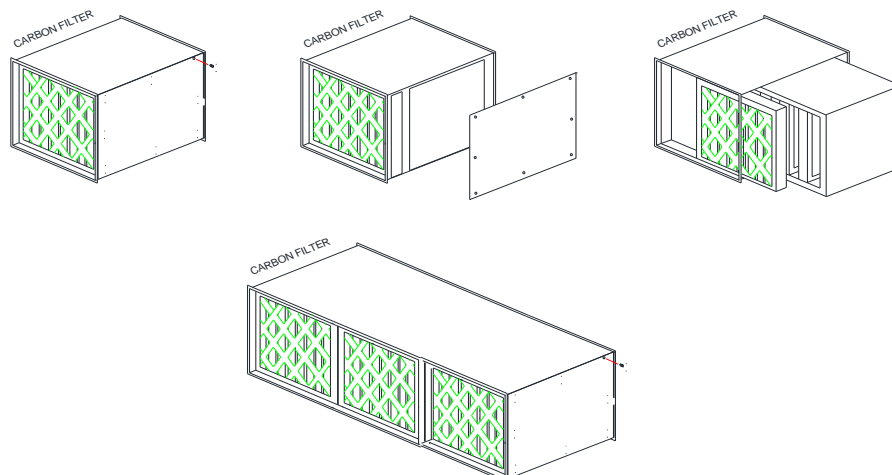
Second stage

Type	Width	Height	Length	M2 Area	Pre-filters fitted
Activated carbon	1800	600	900	1.08	V Pleat Synthetic

Odour control method

Area M2	Multiply	Length	Divided	Volume m3/sec	Equals	Seconds dwell Time
1.08	x	0.90	÷	2.73	=	0.36
Mesh pre-filters / Synthetic fitted to take out any large particulates each						0.06

Achieving a Total dwell time (seconds)	0.42
--	------



Carbon Filtration

Activated Carbon filter information. Second stage



The carbon filter is the ideal solution for a modular approach to fume removal. Activated carbon dates back many years. In the First World War, gas masks were filled with activated carbon to remove chlorine gas.

Today a wide range of carbon filters to deal with many noxious fumes and gases, whilst maintaining high levels of strength and low-pressure loss.

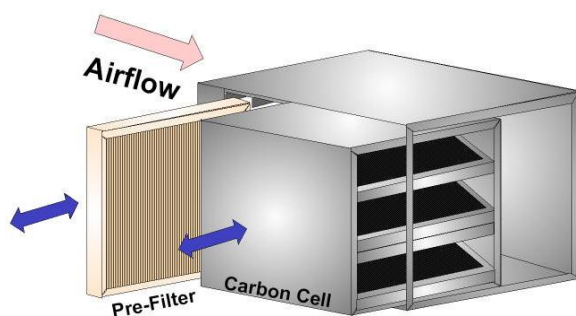
Manufactured from a number of carbon biscuits held in a vee formation within a corrosion-proof metal casing, these are sealed into the frames of our filters using polymer, which eliminates the possibility of any air bypass around the carbon.

Type 8 carbon filter features: High quality carbon – all grades available

Robust modular construction: Low-pressure losses: High carbon content.

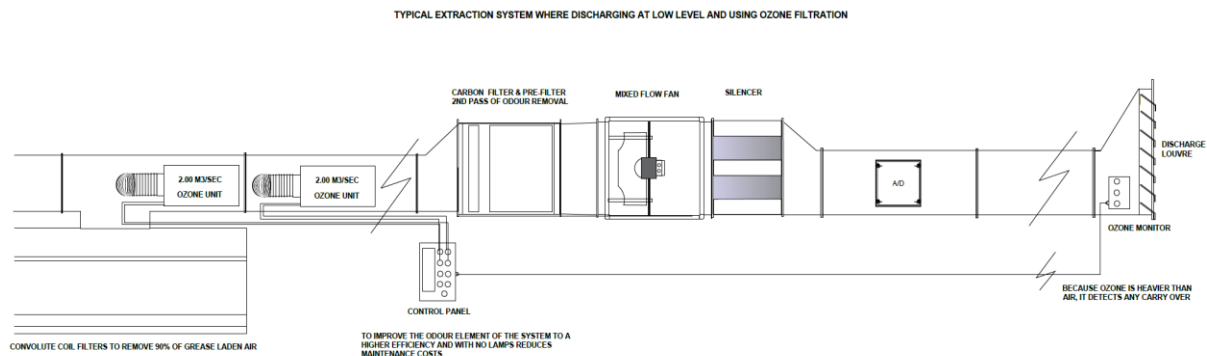
Typical required residence dwell times for various cooking Premises

Cooking Establishment	Capacity Required	Residence Time (seconds)
Canteen, Cafes, English style normal kitchen and restaurants, pizza and bread shops	Normal'	0.1 – 0.15
Kitchens producing large amounts of fried foods or Concentrated cooking of burgers	2 times 'normal'	0.2 – 0.35
Indian restaurants, Chinese, Kebabs etc. (spices etc.)	3 times 'normal'	0.4 – 0.6



Third and final filtration

Ozone Injector System



This is the ozone levels which comply to council and H&S standards

Ozone Injector System

The CMS/400VM consists of 2x 200VM ozone injector units which will produce up to 40 grams of gaseous ozone to break down and neutralise the organic particulate that cause cooking odours. The Control Panel reads the air volumes within the extraction ducts and adjusts the ozone production levels to ensure the optimum concentration of ozone for the process.

Co515 Monitor

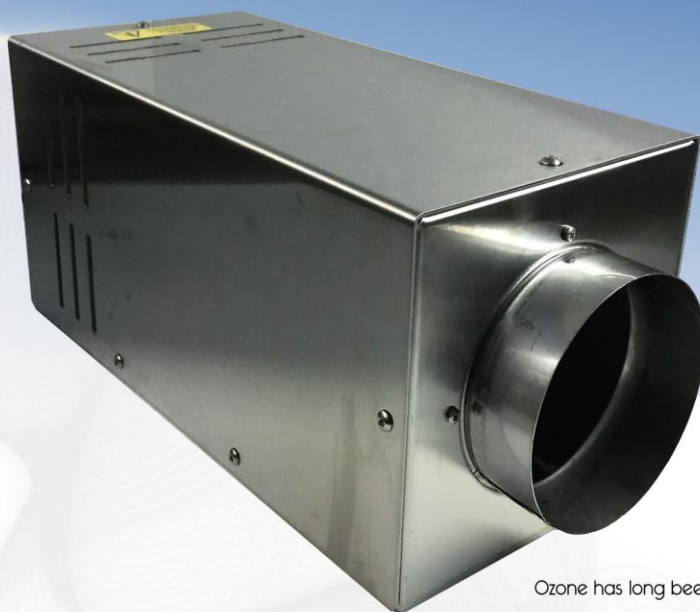
We recommend a Co515 Monitor is fitted to the system. This will ensure the ozone emission does not exceed 0.27 ppm, to comply with safe use guidelines. The monitor will cut the ozone production by 10g of ozone at a time until the monitor registers the desired ppm concentration of ozone at discharge.

This is why you would require an ozone monitor at the discharge grille as shown on the pdf, this has been designed for low level and horizontal discharge, where there is no way of a vertical discharge, it turns up and down the ozone manufacture units and reduces automatically if the sensor detects ozone discharging to atmosphere, also with the carbon filters being 3-5 metres down the line, from the units and 4 metres to the louvres, these will neutralise ozone carry over, the monitor is a secondary back up when the carbon filters become less active and requires changing. Because these stab into the ducting, they do not add any extra system resistance.

This design starts with the convolute filters in the canopy, to be cleaned every 2-3 days, these capture the grease laden air, giving a longer working life to the electrostatic and activated carbon filters, giving longer efficiency.

The filters mounted on bespoke mezzanine floor for easy maintenance and filter replacement and no visual impact to the building, and with the fan mounted on anti-vibration feet and attenuator the noise will be greatly reduced to avoid break out to the surrounding area.





C3 CONTROLLED
OZONE
PRODUCTS
OZONE INJECTOR UNIT

The Safe Intelligent Way to Harness the Benefits of Ozone to Control Cooking Odours

Ozone has long been recognised as a very effective medium for the neutralising of cooking odours and injection into the kitchen extraction system has proven to be effective in the control of odour

emissions, however, ozone emissions must be within safe levels. Working within the accepted industry guidelines of 1 gram per 0.09 m³ of air volume @ 15 seconds of dwell time within the ducts, to achieve neutralisation of 80% of cooking odours and maximum

discharge levels of 0.3 ppm ozone concentration, the Controlled Ozone products are designed to be the first fully controllable, energy efficient, future proof units developed to reduce cooking odour emissions.

The monitoring processes of the CoRange start with the production levels of ozone being controlled via an electronic air-pressure sensor within the control panel, which controls the concentration ratio of air/ozone in the extract ducts. To ensure the correct concentration the CoRange Injector will increase its output of ozone by 10 grams per every 1 m³ of air volume within the duct.

Should ozone emissions from the extract system exceed permitted levels a second stage of control via a discharge monitor situated at the end of the extract duct is an optional addition, this monitor is factory set at 0.3 ppm of ozone to comply with HSE guidelines for discharge to atmosphere within 10 metres of the closest habituated premise.



The Springfield Group
Unit C1 OYO Business Park, Castle Vale, Birmingham, B35 6AN
www.thespringfieldgroup.net
info@thespringfieldgroup.net
01675 430 490



Air supply system



C3 CONTROLLED
OZONE
PRODUCTS

SYSTEM BENEFITS

- ③ Fully controllable by information gathered from both electronic air pressure switch and if required by ozone monitor
- ③ Will deliver correct concentration of ozone from 0.8 to 8 m³s of air flow
- ③ Delivers low dwell times as it can inject active ozone into the system at the earliest possible opportunity
- ③ Will not exceed permitted ozone discharge levels
- ③ Can deliver ozone to multiple points within the extraction system to suit requirements ie. Plenum, ducts either before or after fans and inline filtration
- ③ Easy to install
- ③ Additional injectors can be added to the system easily
- ③ Only uses power when it is required
- ③ Control Panel can be sited away from injectors - in a position that is easy to view
- ③ Outputs for Building Management Systems and Data loggers
- ③ Two years warranty



C3 CONTROLLED
OZONE
PRODUCTS

The Springfield Group
Unit C1 OYO Business Park, Castle Vale, Birmingham, B35 6AN
www.thespringfieldgroup.net
info@thespringfieldgroup.net
01675 430 490

Springfield  Group
PRODUCTS

TYPICAL SYSTEM & ORDER CODES

The BMS System comprises of 1 off BMS\VM Control Panel and between 1 and 4 BMS Injectors to match the demands of the extraction system.

The level of Ozone being called off is indicated by the LED bulbs illuminated on the control panel.

for example, with LED A and B on Injector 1 delivery is 20grams; LEDs up to A on Injectors 3 = 50grams etc.

To ensure that the levels of ozone being discharged are within guidelines the Co515 Monitor will cut the ozone production by 10g of ozone at a time until the monitor registers the desired ppm concentration of ozone at discharge.

Injector 1 on its own

A) Up to 1 m /s the ozone delivery is 10 Grams
B) Up to 2 m /s the ozone delivery is 20 Grams

Injectors 1 and 2 on

A) Up to 3 m /s the ozone delivery is 30 Grams
B) Up to 4 m /s the ozone delivery is 40 Grams

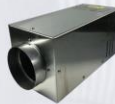
Injectors 1, 2 and 3 on

A) Up to 5 m /s the ozone delivery is 50 Grams
B) Up to 6 m /s the ozone delivery is 60 Grams

Injectors 1, 2, 3 and 4 on

A) Up to 7 m /s the ozone delivery is 70 Grams
B) Up to 8 m /s the ozone delivery is 80 Grams

BMS-OZINJ



BMS Ozone Injector
150 x 150 x 330 mm Stainless Steel Case
2 x 10 Gram per Hour Gaseous Ozone Reactors 1 x 5 Pin
1 x Power on Indicator Lamp
1 x Ozone Production Lamp

BMS-OM



Ozone Monitor
155 x 200 x 95 mm
1 x Power on Indicator Lamp
1 x Monitoring Indicator Lamp
1 x Dwell Indicator Lamp

BMS-CP



BMS / VM Control Panel
155 x 200 x 95 mm
LED Indicator Lamps
Electronic Air Pressure Sensor
4 x 5 pin Monitor Output Sockets
1 x 5 Pin BMS Output Socket
1 x 5 Pin Data Logger Output Socket

Replacement air

Due to low level ceiling in basement, low level ducting to run around the Island and in front of the wall canopy, supplying fresh ambient air into the kitchen area through adjustable air valves, this helps with extraction efficiency and a better working environment for staff.

It is advisable to install an air supply system with the fan and ducting mounted at high level within the unit and pulling through the weather louvre on the top floor level with a 800x600 weather louver with bird mesh.

Fan system already supplying fresh ambient air into the kitchen.

The requirement is to supply fresh ambient air to replace approximately 80% of the extract flow rate volume of the extracted air.

Extraction Duty: 2.73 M3/sec 80% of extraction volume = 2.16 M3/sec (7750 M3/Hr)

System resistance calculations

	Supply system	Pascal's
	Ducting, weather louver	150
Total system resistance		150

Selected Fan Details

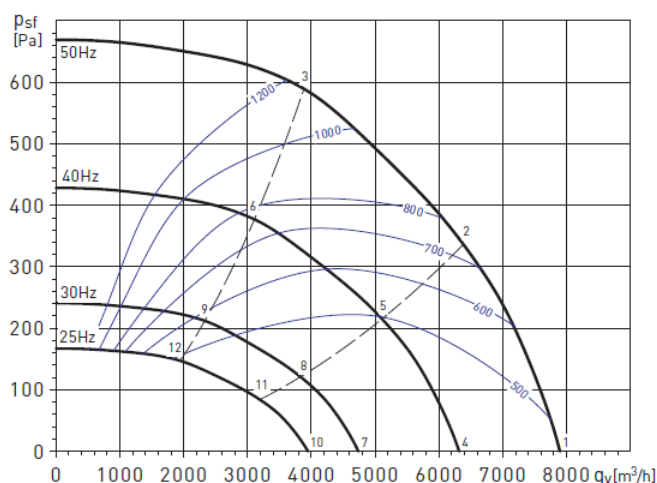
Fan Model	Type	Volume m3/sec	Resistance	Speed rpm	Phase	Noise level @ 3 metres
500 CVAT	Mixed flow	2.16	150 Pascal's	1470	3/1	68 dba
With the fan mounted internally approximately 5 metres from outside wall the fan noise level will be greatly reduced and is estimated to be 53 dba @ 3 metres distance from the Weather Louvre						

500 CVAT Acoustic cabinet fan with inverter from 3ph to 1ph installation

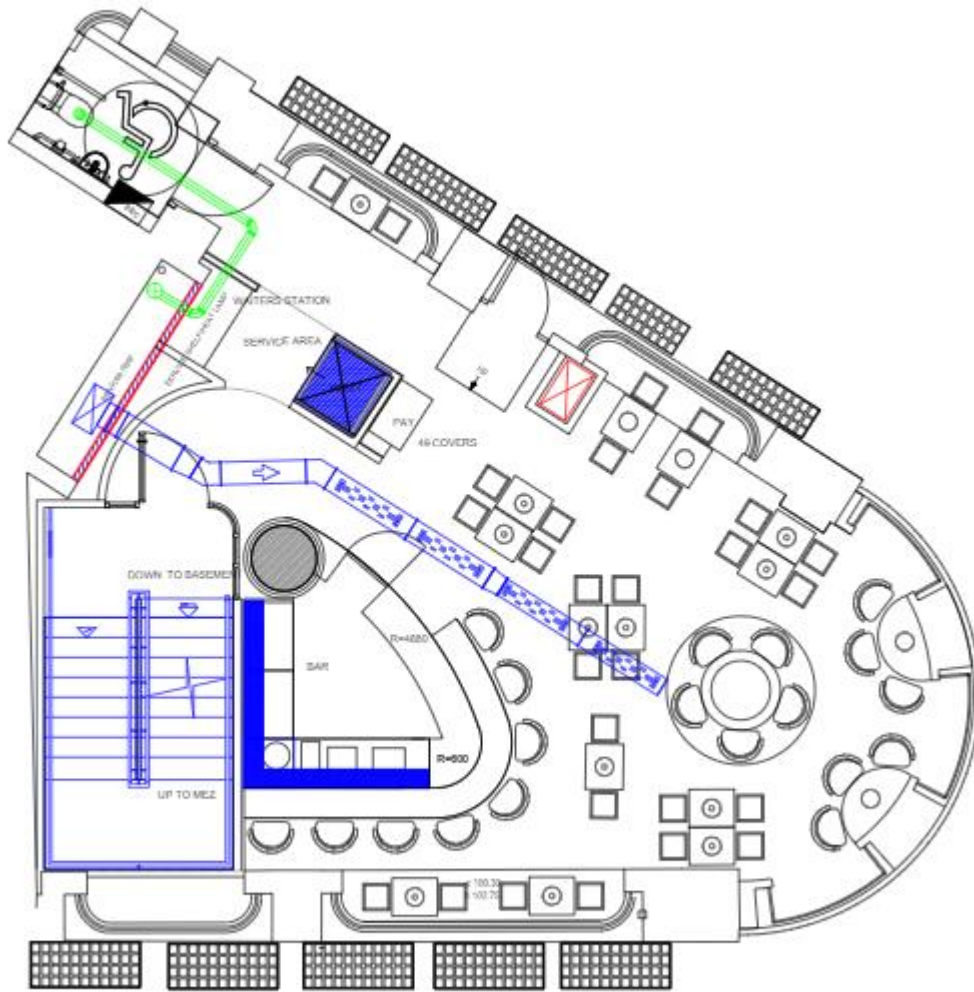
Voltage	Frequency	Watts	Amps	S/C	Temp	Class	Enc	Spl @ 3mtrs	KG
400 V	50Hz	1470	7.30 A	27.00	50 C	F	55	68 db(A)	58

Air supply fan curve

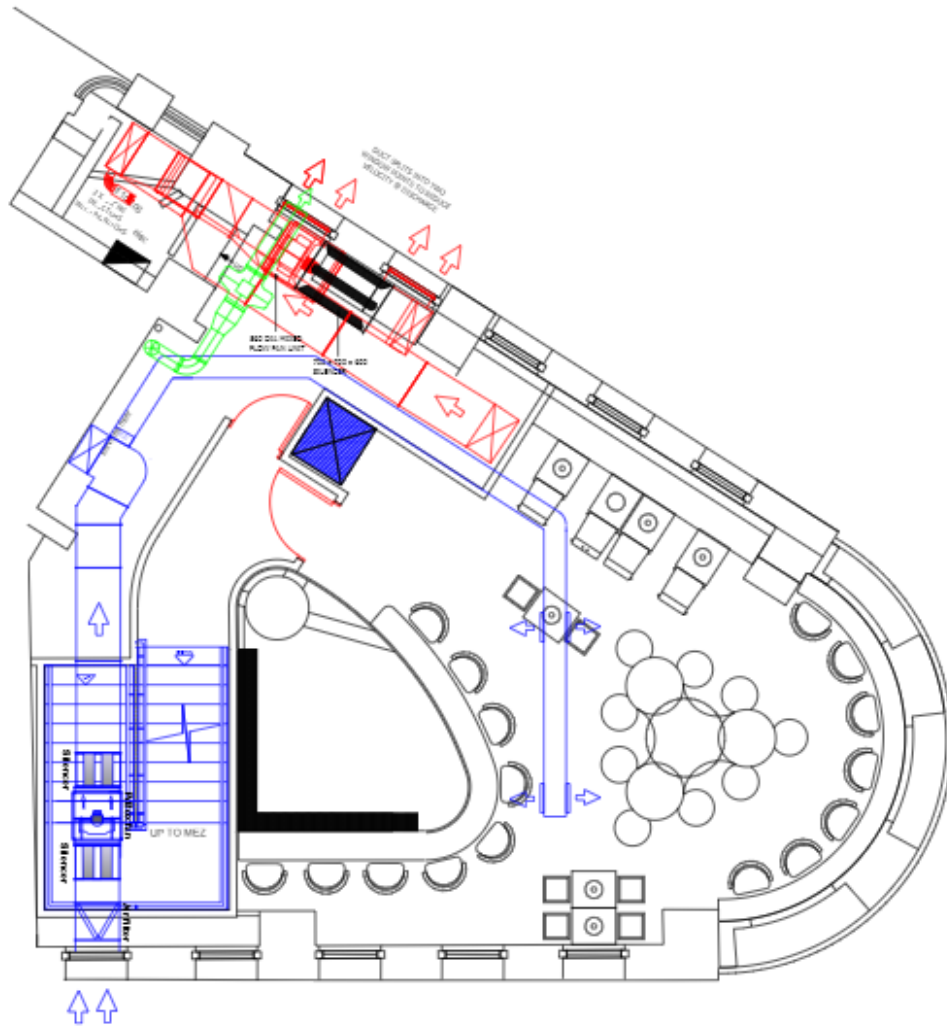
CVAT/4-9000/500N D 1,1kW







Proposed Ground Floor



Proposed Mezzanine Floor

Cleaning and maintenance of extraction system:

1 Canopy

Wash down weekly with hot soapy water ensure all fat channels are clear and clean.

2 Grease Filters

Clean at least three times a week using hot soapy water, water must be hot enough that rubber gloves are worn.

Ensure oil and fat outlets are clear and clean.

Replace filters with the drainage slots at the bottom facing down.

3 Carbon Filters

Inspect for signs off grease build up monthly. Change- manufactures Recommendation every eight - twelve months depending on hours used and type of deposits left on the filters.

Removal of grease filters and grease pots for cleaning

