



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

PEPES PIRI PIRI READING

Information Provided By –



UNIT C1 OYO BUSINESS PARK
CASTLE VALE
BIRMINGHAM
B35 6AN

01675 430 490

info@thespringfieldgroup.net

Property Details

PEPES PIRI PIRI

109b OXFORD ROAD

READING

RG1 7UD

Site Requirements

Modifications to the existing canopy to reduce, odour, smoke and noise to a higher level of filtration.

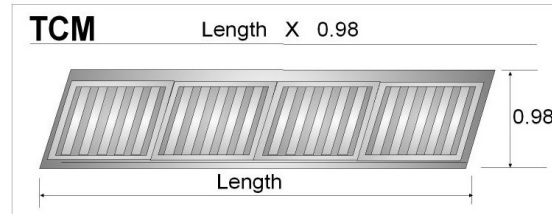
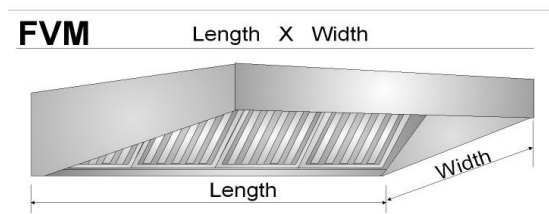
The existing canopy measuring 4900mm x 1200mm in stainless steel, complete with stainless steel baffle filters, 700x300 galvanised ducting running to the rear of the building. This we would modify and remove equipment not required in our proposal.

The baffle filters in the canopy at present remove 50-60% of the grease laden air. We propose to change the first line of filtration with convolute coil filters, these remove 90%-95% of the grease to minimise the ducting and equipment becoming saturated before trying to neutralise the odour.

Canopy Information

4900mm (long) x 1200 mm (wide) brushed stainless steel wall canopy, complete with stainless steel convolute coil filter, built into the filter housing with drain points.

Length Metre	Width Metre	Type	Grade	No: of filters	Filter Size	Filter Type	Canopy Style
4.90	1.20	Wall	403	8	500x500	Convolute	Box



FVM Canopy Calculation volume based on total face velocity

Length		Width		M²		Velocity		Volume M3/second
4.90	X	1.20	=	5.88	X	0.50	=	2.94 M3/sec

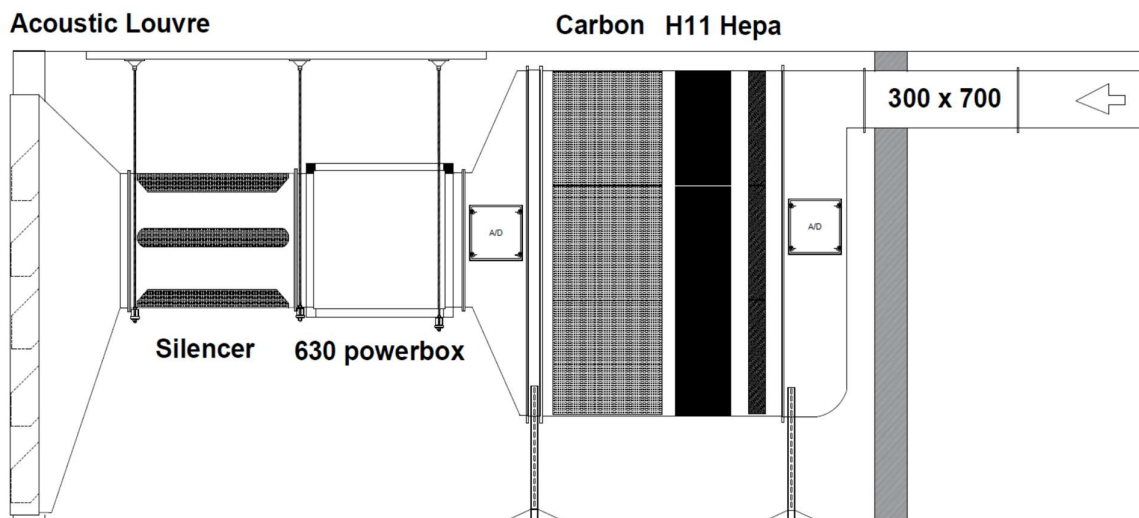
TCM Canopy volume based on face velocity required extraction through sloping filter plenum.

Length		Width		M²		Velocity		Volume M3/second
4.00	X	0.98	=	3.92	X	0.50	=	1.96 M3/sec

Average required 2.45 M3/sec for canopy capture face area at the required velocity to suit cooking type and equipment underneath. Based on the extraction element of the canopy excluding tables and non-cooking equipment underneath.

This fan can work on an extraction rate of 2.45 M3/sec at the pressure resistance calculate.

Side view schematic view of ducting and filtration system, with new fan complete with silencer and acoustic louvre.



Filtration stages mounted in rear kitchen area.

1st stage in the canopy to remove grease and oil and minimise carry over.



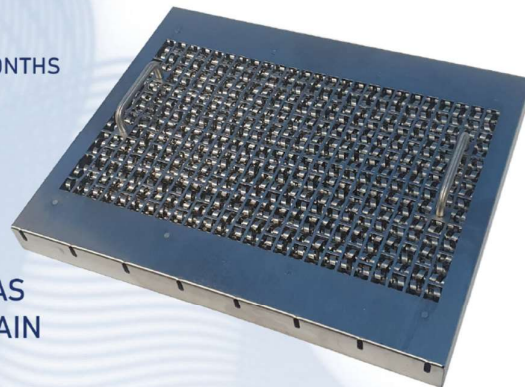
CONVOLUTE FILTERS

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.

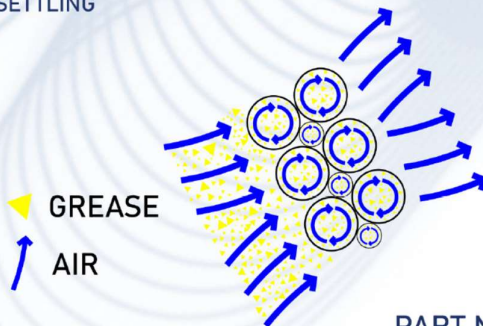
BENEFITS INCLUDE

RETURN ON INVESTMENT AS SHORT AS 12 MONTHS
REDUCES DUCT CLEANING REQUIREMENTS
EXCEPTIONAL FIRE BARRIER
GREASE CAPTURE UP TO 90-95%
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 OVO Business Park, Castle Vale, Birmingham, B35 6AN
www.thisspringfieldgroup.net
info@thisspringfieldgroup.net
01675 430 490

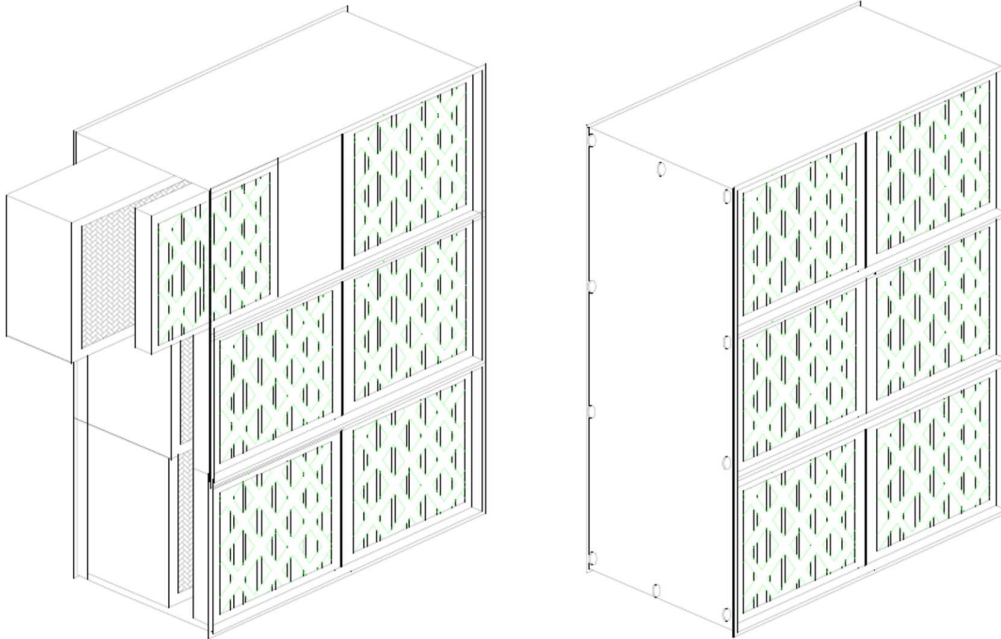
Springfield Group
PRODUCTS

2nd Stage filtration to remove the Smoke element of the system.

EU4 pre filters and H11 Hepa smoke filters for very fine filtration to remove the smoke element of the system.

6 off- Synthetic pre-filter 594mm x 594mm x 97mm 1130415

6 off - Absolute very fine filtration 609mm x 609mm x 292mm H11 Hepa 1510667



AIRCLEAN

YOUR AIR FILTER MANUFACTURER



Bays 2 & 3 Pattenden Lane, Marden, TN12 9QS. T: 01622 832777 F: 01622 832507

12" H11 HEPA FILTERS Tested to EN1822-2009					STD & HIGH FLOW	
Actual Size Mm			Std. Flow	High Flow	Part Numbers	
H	W	D	m ³ /s @ 150 Pa	m ³ /s @ 200 Pa	GA/H11/C	GA/H11/C-H
288	593	292	0.21	0.35	1510661	1510771
300	600	292	0.23	0.35	1510662	1510772
305	609	292	0.23	0.35	1510663	1510773
450	600	292	0.35	0.60	1510664	1510774
593	593	292	0.45	0.75	1510665	1510775
600	600	292	0.45	0.75	1510666	1510776
609	609	292	0.47	0.80	1510667	1510777
Non Standard					1510670	1510770

HEPA Filters (Absolute) – Deep Pleat **H10, H11, H12, H13, H14 to EN1822**

Applications

Absolute (HEPA) filters are used in a wide range of applications such as clean rooms, operating theatres, research facilities, the electronic and micro-electronic industries, nuclear and pharmaceutical industries and high speed turbines.

Clean Rooms tend to employ the narrower 146mm deep filter and utilise a lower face velocity in accordance with the relevant Clean Room Standards, thus providing a laminar air flow either across the work area or across the complete room depending upon the application.



Description

The filtration medium is provided by microfine glass fibres formed into a paper-like surface, supplied in various grades depending upon filtration efficiency required. The filter paper is formed into a close pleated package to provide a large surface area. Corrugated spacers of either kraft paper or aluminium are inserted between each pleat to provide support for the pleat and also maximise the entire surface of the filtering medium.

Technical

These can be provided to efficiencies and performance as shown below:

Grade	Overall Efficiency	Local Value Efficiency	Suggested for ISO 14644 : 1999
H11	95%	-	
H12	99.5%	-	ISO Class 8
H13	99.95%	99.75%	ISO Class 6
H14	99.995%	99.975%	ISO Class 5
U15	99.9995%	99.9975%	ISO Class 4

Selection of Filter Construction:

Spacers:

Aluminium spacers are used as standard in all Deep Pleat HEPA Filter constructions (up to 250°C and 100% RH for aluminium spacers).

Casings:

For temperatures up to 120°C wood cased or aluminium cased filters can be used.
For temperatures above 120°C use galvanised or zintec steel casings (up to 250°C).

Sealants:

Standard Urethane Sealant is suitable for temperatures up to 120°C.
For temperatures above 80°C and up to 250°C use cases as above and silicone sealant (2 part-pink)

3rd and final stage to remove the odour element of the system.

6 off -Activated carbon bonded filter cells 597mm x 597mm x 597mm CARBONCUBE242424

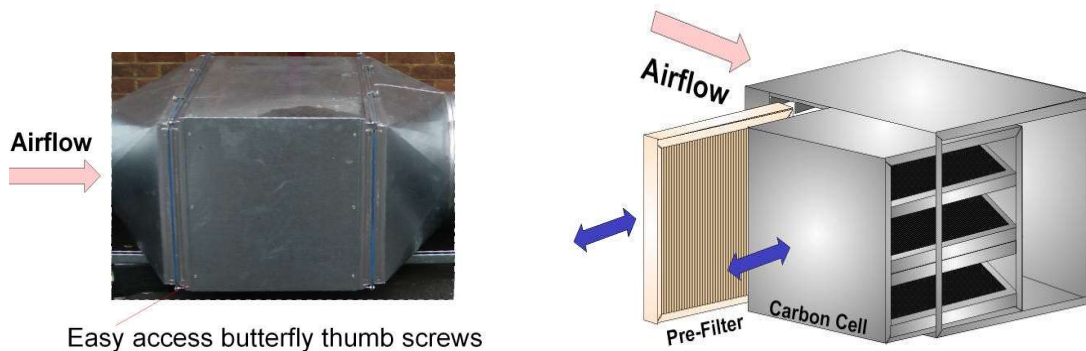
Easy access and mounted at a safe working position for access and maintenance and monitoring.



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 several 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	Residence (seconds)
Canteen, Cafes, English style normal kitchen and restaurants, pizza and bread shops	Normal'	0.10 – 0.15
Kitchens producing large amounts of fried foods or Concentrated cooking of burgers	2 times 'normal'	0.20 – 0.35
Indian restaurants, Chinese, Kebabs etc. (spices etc.)	3 times 'normal'	0.40 – 0.60

Working on the high level of filtration we would propose to install 6 off 600mm x 600mm x 600mm activated carbon filter cells and 8 off EU4 Pre filters.

Dwell time Calculation

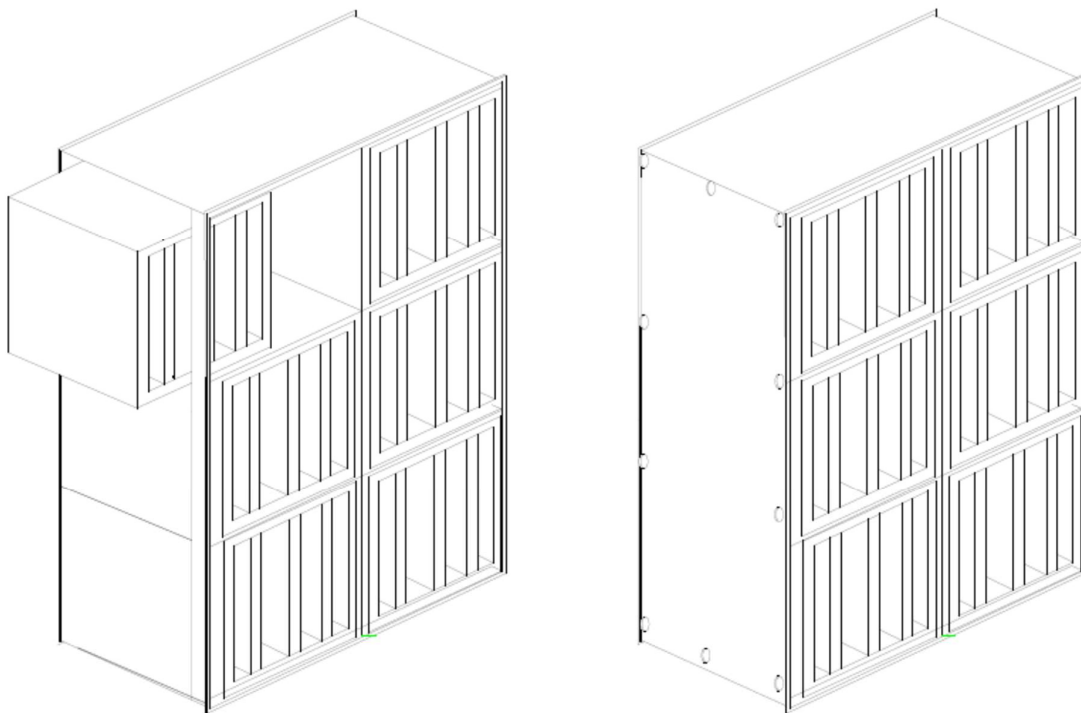
600mm x 600mm x 600 Carbon Cell, face 0.36 M2 X 6 = 2.16 M2

2.16 M2 x 0.60 long = 1.296 M3

1.296 M3 divided by 2.60 M3/sec = 0.50 Seconds dwell time

Fine grade EU4 100mm thick pre-filters and heap before carbons will increase the dwell time.

Total 0.50 seconds



LONGAR® Type 8

Activated Carbon Filters

FITTING INSTRUCTIONS

- Fit products in accordance with installation contractor's specifications.
- Observe direction of airflow.

HANDLING

- Handle with care when unpacking.
- Store in dry and frost protected place.

MAINTENANCE

- Carbon filters cannot be cleaned upon reaching the end of their service life. They must be replaced.
- All maintenance and replacement schedules will be set by the original equipment installer. Please refer to this for more information.
- When handling any components suitable PPE should be used – gloves, eye protection and access equipment.
- Carbon filters may be recycled.

PACKAGING

All units are packaged in double wall boxes, stapled closed for protection whilst in transit against contamination.

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)					
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Airflow M³/SEC @0.12 Contact	Pressure Loss - Pascals
CARBONCUBE242424	597 x 597 x 597mm	609 x 609 x 609mm	60.00kgs	1.00	97
	23.50 x 23.50 x 23.50"	24 x 24 x 24"	132.00lbs		
CARBONCUBE242418	597 x 597 x 450mm	609 x 609 x 457mm	44.00kgs	0.75	97
	23.50 x 23.50 x 17.72"	24 x 24 x 18"	96.80lbs		
CARBONCUBE241824	597 x 450 x 597mm	609 x 457 x 609mm	46kgs	0.75	97
	23.50 x 17.72 x 23.50"	24 x 18 x 24"	101.20lbs		
CARBONCUBE182424	450 x 597 x 597mm	457 x 609 x 609mm	46kgs	0.75	97
	17.72 x 23.50 x 23.50"	18 x 24 x 24"	101.20lbs		
CARBONCUBE242416	597 x 597 x 395mm	609 x 609 x 406mm	40.00kgs	0.67	97
	23.50 x 23.50 x 15.55"	24 x 24 x 16"	88.00lbs		
CARBONCUBE242412	597 x 597 x 292mm	609 x 609 x 305mm	33.00kgs	0.50	97
	23.50 x 23.50 x 11.50"	24 x 24 x 12"	72.60lbs		
CARBONCUBE241224	597 x 297 x 597mm	609 x 304 x 609mm	32.00kgs	0.50	97
	23.50 x 11.69 x 23.50"	24 x 12 x 24"	70.40lbs		
CARBONCUBE24824	597 x 197 x 597mm	609 x 203 x 609mm	19.00kgs	0.33	97
	23.50 x 7.76 x 23.50"	24 x 8 x 24"	41.80lbs		
CARBONCUBE202018	495 x 495 x 445mm	508 x 508 x 457mm	36kgs	0.52	97
	19.49 x 19.49 x 17.52"	20 x 20 x 18"	79.20lbs		
CARBONCUBE181818	450 x 450 x 450mm	457 x 457 x 457mm	28.00kgs	0.42	97
	17.72 x 17.72 x 17.72"	18 x 18 x 18"	61.60lbs		
FINAL RECOMMENDED PRESSURE DROP: 450 PASCALS					

Pressure drop and airflow information available on request.



LONGAR INDUSTRIES

FILTERS AND FABRICATIONS FOR A CLEANER ENVIRONMENT

Longar Industries Limited, Unit 25, Glenmore Business Park, Colebrook Way Weyhill Road, Andover, Hampshire SP10 3GZ United Kingdom

T +44 (0)1264 332 993 F +44 (0)1264 332 994 E info@longarind.com W www.longarind.com

As part of our program for continuous improvement, Longar Ltd reserves the right to change specifications without notice. 15-01-2016.

LONGAR® Type 8

Activated Carbon Filters



LONGAR® TYPE 8 FEATURES:

- High grade carbon / High carbon content / Low pressure loss
- Robust modular construction
- Carbon Unit or panel format / Standard and Custom sizes available
- CNC manufactured / Precision products every time

APPLICATIONS

- Reduction of Cooking Odours
- Removal of Kerosene Exhaust Fumes
- General Odour Reduction
- Neutralisation of Ammonia and its Derivatives
- Removal of Formaldehyde
- Removal of Airborne Pollutants and Contaminants
- Removal of Acid Gases (please enquire as top specific contaminant)

LONGAR® TYPE 8 ACTIVATED CARBON FILTERS

Activated carbon has for many years been used to remove airborne noxious fumes and gases. Its origins date back to the First World War, when gas masks were first filled with Activated carbon to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with a variety of air pollution scenarios.

There are many situations where carbon filtration is used to eliminate toxic or offensive odours, some of these are sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, and office blocks.

PRE FILTRATION

Carbon filters are designed to remove fumes and odours, they are not suitable for removing dust and fine particles. If left unprotected, the life of the carbon product is severely reduced. To protect the filters use the correct pre filtration. If you are unsure please enquire for further information.

LONGAR® TYPE 8 ACTIVATED CARBON PANELS

The Activated carbon panel are sealed into a galvanised steel frame; a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon panel stops any air by-pass; our panels are manufactured using CNC technology to ensure precision manufacture with exact tolerances.

Our panels are the strongest on the market place with a wide range of standard sizes available, custom sizes are also available on request.

LONGAR® TYPE 8 ACTIVATED CARBON UNITS (ACU)

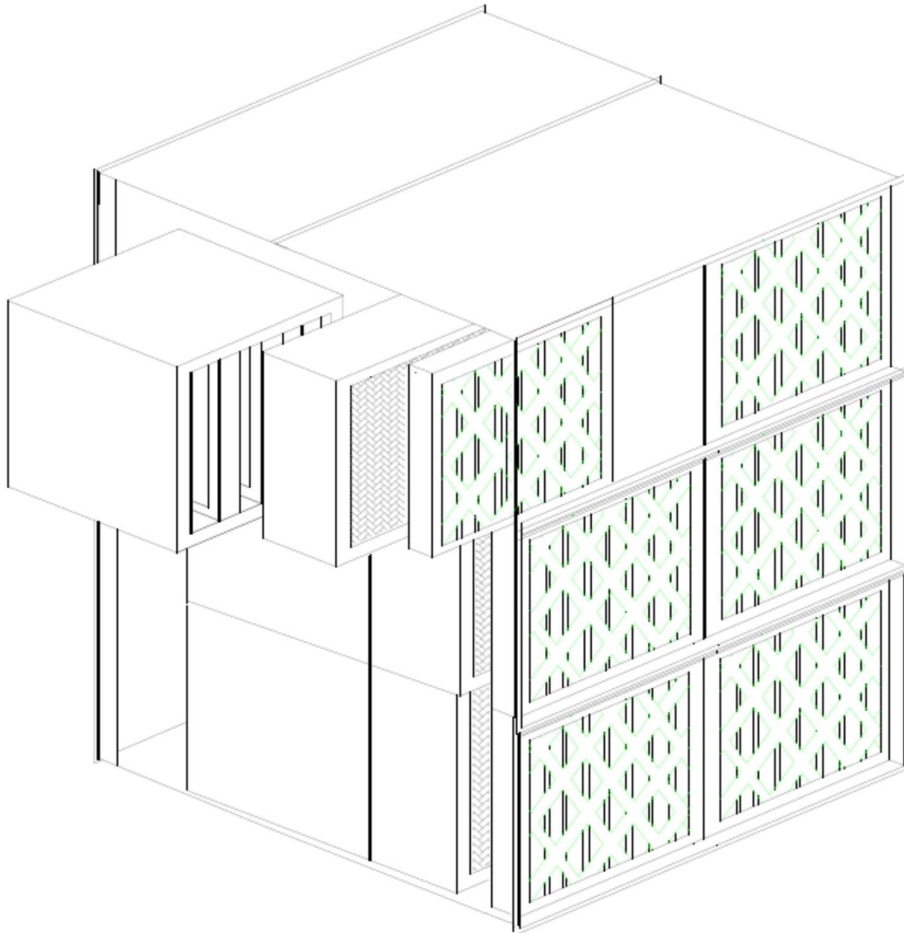
For a modular approach to fume removal the ACU is the ideal solution. The ACU unit is manufactured from a number of carbon panels held in place by a CNC made corrosion proof metal casing. The carbon panels inside the units are 25mm thick, sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

LONGAR® TYPE 8 CYLINDRICAL FILTER

These are constructed from perforated galvanised steel then formed into cylindrical cartridges containing high grade or impregnated carbon. The cylinders have a bayonette fit into the filter mounting plate.

All cylinders have a unique feature of having the option to replace any spent carbon and then refill with new replenished carbon.

Unit assembly with all sections with side access



Never run the extraction system, when filters removed for cleaning, this will introduce grease back into the system, good housekeeping is a must.

First stage mounted in the canopy.

8 off 495mmx495mmx45mm Stainless steel Convolute coil filters.

To be cleaned weekly due to being first line of grease and oil removal.

Second stage 6 cell H11 Hepa and EU4 smoke and pre -filter unit housing.

6 off 595mm x 595mm x 97mm side by side EU4 filter

6 off 595mm x 595mm x 595mm side by side H11 Hepa smoke filter.

Pre-filters

- Manufacturer's name; AIRCLEAN
- Filter name and product code; 1130215
- Dimensions of the pre-filter; 595mm x 595mm x 97mm
- Nature of the filter media. EU4

manufacturer's recommendations on the frequency and type of maintenance of the pre-filter having regard to the conditions that it will be used under.

To be replaced every 4- 6 weeks or depending on condition

6 off 600mm x 600mm x 292mm

Hepa smoke filters in housing

Fine filtration Hepa Filters

- Manufacturer's name; AIRCLEAN
- Filter name and product code; H11 HEPA 1510667
- Dimensions of the pre-filter; 600mm x 600mm x 292mm
- Nature of the filter media. ABSOLUTE VERY FINE FILTRATION FOR SMOKE PARTICULATES

manufacturer's recommendations on the frequency and type of maintenance of the pre-filter having regard to the conditions that it will be used under.

To be replaced every 6 – 12 Months

Third and final stage 6 Activated carbon filter cells

6 off 600mm x 600mm x 600mm

The details and type of carbon filter units should be identified. A copy of the manufacturer's product data sheet should be supplied that clearly shows:

- Manufacturer's name; LONGAR
- Filter name and product code; CARBONCUBE242424
- Dimensions of the filter panel.
- The total number of filter panels in the filter bed 8. 597mm x 597mm x 597mm cassette

The following information should also be included: Type 8

- The nature of the carbon (including product type); Bonded cassette
- The frequency of replacement of the carbon units having regard to the conditions that it will be used under. The assumptions to this calculation must be clearly stated, including the frequency and duration of use. 4-12 months

The manufacturer should provide recommendations on the frequency and type of maintenance required.

- Total volume of carbon expressed in cubic metres; 0.22 M3
- Total mass of carbon expressed in kilograms; 60 kg
- Total surface area of the panels exposed to the exhausted air; and dwell time of the gases in the filter compartment and the control setting at which this is achieved.

Achieving 0.60 Seconds dwell time with a 2.16 M2 face area

System resistance calculations

	Extraction system	Pascal's
1	Splitter silencer & system & Acoustic louvre	70 Pa
8	Convolute grease filters in canopy	90 Pa
1	Activated carbon filters and pre-filters unit	130 Pa
1	Hepa smoke filters unit	150 Pa
Total static resistance on the system		440 Pa Clean +20% Dirty 530 Pa

System duty 2.60 M3/sec @ 530 Pascals.

Access doors to be installed within the ducting system in order to carry out cleaning and maintenance.

Summary of detailed information attached in this specification.

Extraction:

Volume M3/second	Resistance	Discharge Velocity	Filtration	Noise level
2.60 M3/sec	495 pascals	15.31 M/Sec	Convolute filters Activated Carbons 0.56 Secs Hepa Smoke filters	39 dba

Project :
Quotation :
Project Code :
Date : 10 May 2023



Lang_ESTOC
ePowerBox 80-630-3-4
(7NA)
PEPES
1 Day

PRODUCT

Model Code ePowerBox 80-630-3-4 (7NA)
Fan Diameter 630 mm
Installation Type D

PERFORMANCE

Requested Duty 2.60 m³/s @ 530 Pa (Static)
Outlet Dynamic Pressure 41.8 Pa
Velocity 8.34 m/s

MOTOR

Motor Rating 3.28 kW [Integral Frame]
Full Load Current 6.1 A
Starting Current 34.16 A
Electrical Supply 380 - 415 Volts 50 Hz 3 Phase
Motor Winding Standard
Motor Type Class F Insulation

EFFICIENCY GRADES

Regulation 1253 - 2014
UVU Efficiency 56.1% (ErP Compliant) ✓
Nominal Flow Rate 2.25 m³/s @ 800 Pa
Effective Input Power 3.21 kW
Nominal RPM 1387 rpm
Internal Fan Efficiency 56.7%
SFP value 1.10 W/l/s @ Actual Duty

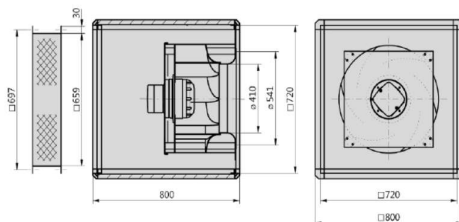
ENVIRONMENT

Air Density 1.2 kg/m³ / 20 °C / 0 m / 40% RH
Smoke Venting No Smoke Venting
Operating Environment Normal

RUNNING COSTS

Power from mains 2.87 KWh
Energy Consumption 5,735.66 (2,000.00 h/Year)
Running Cost / Year £1,433.92
CO2 per Year 2,016.43 kgCO2e

PRODUCT DIMENSIONS



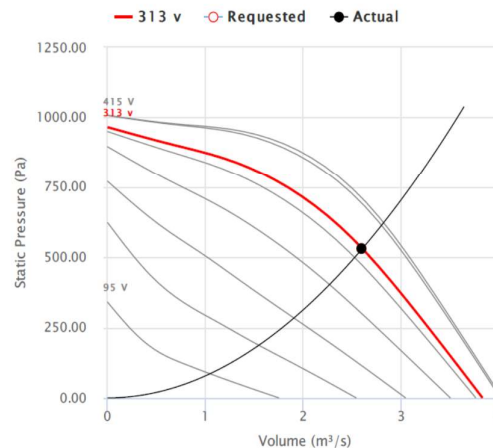
MECHANICAL

Operating Temperatures 0 °C to 70 °C
Maximum Running Speed 1662 rpm [83100 Hz]
Minimum Running Speed 277 rpm [13850 Hz]

COMMENTS

A speed controller will be needed to control the speed of this product

FAN PERFORMANCE CURVE



ACOUSTICS

	Sound Spectrum (Hz)								Overall	Distance (3 m)
	63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3 m **
Inlet	80	70	71	74	73	73	70	64	106	83
Outlet	86	75	79	80	80	78	73	66	112	89
Breakout	69	66	65	55	54	52	48	42	95	72

Sound Data At Requested Duty.

* Lw dB re 10⁻¹² W

* Lw dB re 10⁻¹² W

FAN & ACCESSORIES

Item Description	Part Number	Qty
ePowerBox 80-630-3-4 (7NA)	B1101234	1

A 630mm acoustic cabinet fan complete with a 700mm X 700mm X 900mm long splitter silencer after the fan and exiting through acoustic weather louvre.

The extraction fan specified as a breakout noise through the fan casing of 47 decibels. This is the mechanical noise emitted through the sides, with the fan mounted internally it will be reduced greatly by the fabric of the building.

The 630mm Mixed flow fan has a induct discharge noise of 68 decibels, with the 900mm long splitter silencer and spectrum attached this noise would be reduced by 23 decibels. A further reduction of 6 decibels from the acoustic louvre to give a discharge noise of 39 Dba @ 3 metres from Louvre.

Removing the ducting which is pointing towards the upstairs flat and discharge at low level with fine filtration.

R02 - 5 - Attenuator

Available in seven standard lengths R02 5 Rectangular Duct Mounted Silencers have excellent attenuation properties, achieved with sound absorbing infill splitters, retained in the attenuator casing by a perforated liner. The resistance to airflow is a function of the face velocity and length. It is not recommended to select the R02 5 Silencers with a face velocity above 3.5 metres per second without asking advice regarding re-generated self noise. We can advise on the selections and can perform system analysis to ensure the correct unit is specified.

- High performance rectangular duct silencer
- Seven standard lengths
- Many connection options
- Cross section dimensions in 1mm increments
- System pressure within ducted systems to 1500 Pa
- Special lengths on request



Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 5 - 600	600	4	6	11	19	24	23	18	12
R02 - 5 - 900	900	4	6	12	26	30	31	22	16
R02 - 5 - 1200	1200	5	9	18	32	40	39	28	19
R02 - 5 - 1500	1500	7	11	23	37	45	45	32	22
R02 - 5 - 1800	1800	8	13	25	44	50	50	37	24
R02 - 5 - 2100	2100	9	16	28	50	50	50	45	29
R02 - 5 - 2400	2400	11	19	33	50	50	50	50	32

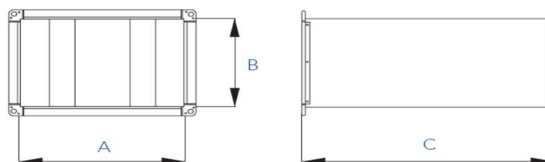
Insertion loss data is derived from continual testing to BS4718 and other standards in independent UKAS certified laboratories, which includes where appropriate, re-generated or self noise testing in both forward and reverse flow conditions. If you request system analysis from our technicians all predictions will be assessed using the relevant certified insertion loss data together with relevant dynamic corrections.

Dimensional Data

Code	A Min	A Max	B Min	B Max	C Min	C Max
R02 - 5	100	1200	100	1200	400	2400

Resistance to Airflow (Pa)

Product Code	1.0m/s	1.5m/s	2.0m/s	2.5m/s	3.0m/s
R02 - 5 - 600	10	16	22	39	60
R02 - 5 - 900	10	16	23	40	62
R02 - 5 - 1200	11	16	24	40	64
R02 - 5 - 1500	11	17	25	40	66
R02 - 5 - 1800	11	18	26	42	67
R02 - 5 - 2100	12	19	26	43	69
R02 - 5 - 2400	13	19	28	48	71



T: 01206 852389 E: info@acoustica.co W: acoustica.co
2 Conder Way, Whitehall Industrial Estate, Colchester, Essex CO2 8JN

A MEMBER OF **eg** ELTA GROUP

Insertion Loss (dB) - Centre Band Frequency

Product Code	Length (mm)	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
R02 - 5 - 900	900	4	6	12	26	30	31	22	16

EXTRACT FAN REQUIREMENTS

Volume

Resistance

Resistance Clean

EXTRACT FAN

Type of Fan
Model
Curve Volume
Speed Controller Required?
Speed Control Volume

Make
Blade Angle
Curve Resistance
Type of controller
Speed Control Resistance

Volume / Resistance Plot

● Clean
● Dirty
● Fan Curve
● Speed Controlled

VOLUME (M3/S)

Variable Resistance Allowance

●

●

●

●

●

●

●

●

●

●

●

●

●

●

NOISE CHARACTERISTICS

Fan Inlet Acoustic Information

	Octave (Hz)							
	63	125	250	500	1000	2000	4000	8000
Given Value (dB)	86	75	79	80	80	78	73	66
Calculated / Given Value (dBA)	59.8	58.9	70.4	76.8	80	79.2	74	64.9
Overall (dB)	89 dB				Overall dBA			
					68 dBA			

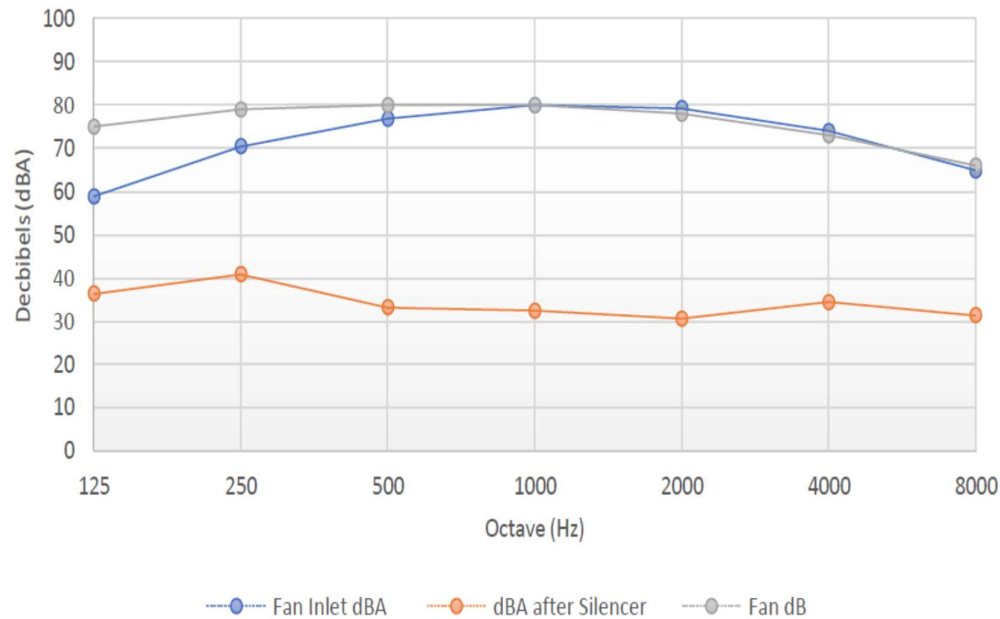
Silencer

Type	Splitter Silencer	Make	
Model	RO2-5-900	Dimension	700mm X 700MM Splitter silencer

	Octave (Hz)							
	63	125	250	500	1000	2000	4000	8000
Given Value (dB)	-4	-5	-12	-26	-30	-31	-22	-16
At Distance	3 m				Directivity Factor			
					On a flat plane			
New dBA levels	38.3	36.4	40.9	33.3	32.5	30.7	34.5	31.4

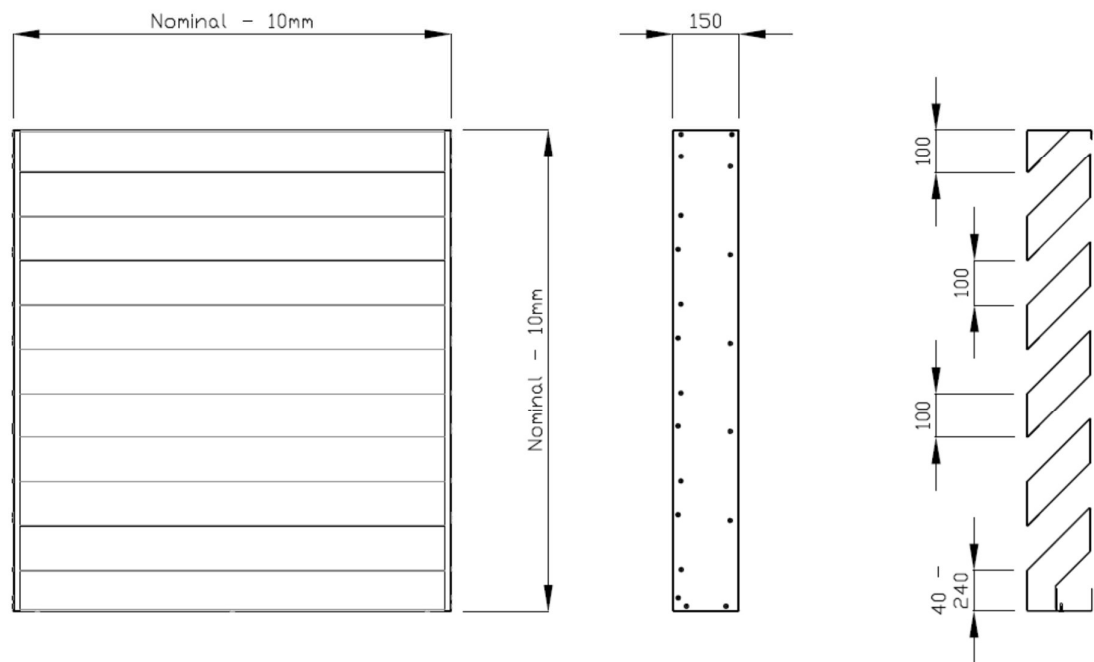
Overall Noise Level

45dBA at 3m



Acoustic louvre, replacing the left-hand side door

AL150: 150mm deep single layer - R_w 11 dB



Schematic drawing of proposed system Plan view



Series AL
Acoustic louvres

Product testing

Acoustic testing

Series AL acoustic louvres have been tested against:

BS EN ISO 10140-2:2010
Acoustics - Laboratory measurement of sound insulation of building elements - Measurement of airborne sound insulation

The testing was carried out in November 2017 by Exova in High Wycombe, Buckinghamshire, England.

The units tested were of nominal size 1000mm x 1100mm.

Copies of the test report are available on request.



Model	Sound reduction figures		
	R_w (dB)	R_w+C (dB)	R_w+C_{tr} (dB)
AL150	11	11	9

