

Kitchen Extract System at Cambrian Inn, Commercial Road, Newport, South Wales.

We are submitting this application for the installation of a kitchen extract ventilation system at the Cambrian Inn, Commercial Road, Newport, South Wales. The proposed system is designed to effectively extract cooking fumes and maintain air quality within the commercial kitchen environment, ensuring compliance with relevant health and safety standards.

The system comprises the following components:

A 600mm diameter header duct serves as the main extract conduit.

Two banks of carbon filters, each measuring 600mm x 600mm, installed within the header to efficiently capture grease and particulates from the extracted air.

A 500 MUB (Make-Up Blower) fan, which provides the necessary airflow and extraction capacity.

A vertical 600mm diameter exhaust duct that discharges the filtered air at an appropriate height.

The exhaust terminates 1000mm above the eaves level of the building, in accordance with local regulations and to minimise impact on neighbouring properties.

Maintenance Schedule:

To ensure ongoing efficiency and compliance with health and safety standards, the following maintenance schedule will be adhered to:

Carbon Filters: The carbon filters will be inspected and replaced every 3 months, or more frequently if necessary, depending on usage levels and air quality. Regular replacement ensures optimal removal of odorous fumes and maintains system performance.

Ductwork and Filters: The ductwork and grease/cartridge filters will be visually inspected monthly to check for grease build-up or blockages. A thorough cleaning of the ductwork and replacement of filters will be carried out at least every 6 months, or as needed based on inspection findings.

This maintenance plan will be documented and recorded, with all servicing carried out by qualified technicians to ensure the system remains fully operational, efficient, and compliant with all relevant standards.

We trust that this submission meets the requirements for approval and look forward to your positive consideration.



FEATURES

- High quality carbon
- Robust modular construction
- High carbon content
- Special sizes available on request
- Available with handles and seals
- Low pressure losses

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 biscuits held in a vee formation within a corrosion proof metal casing. The carbon biscuits inside the units are 25mm thick and are also sealed into the frames using polymer which eliminates the possibility of any air by-pass around the carbon.

PRE-FILTRATION

Carbon filters are designed to remove fumes and odours and are therefore not able to filter fine particles and dust. If left unprotected, the life of the carbon is severely reduced. To protect the filters use pleated and bag filters to the correct grade; this will depend on the environment.

SIDE ACCESS HOUSINGS

These are housings which encompass the Activated Carbon Unit along with the Pre-Filtration (such as Bag/Panel Filters). All housings have a side panel which is removable so that access can be gained easily to replace the filters.

This type of housing is ideal for adding to existing installations such as catering extracts or industrial ventilation systems.

Options are available depending on the application.

APPLICATIONS

Activated Carbon dates back many years. In the first World War gas masks were filled with activated carbon granules to remove chlorine gas. Today Longar produces a wide range of carbon filters to deal with many noxious fumes and gases, whilst maintaining high levels of strength and low pressure loss.

Major uses of carbon are in areas where toxic or offensive odours need eliminating. For example sewage works, hospitals, slaughterhouses, restaurant kitchens, airports, toilets, wash rooms, laboratories, office blocks and many more.

ACTIVATED CARBON

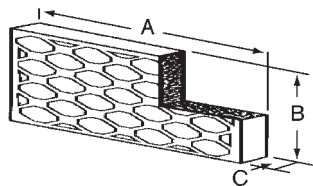
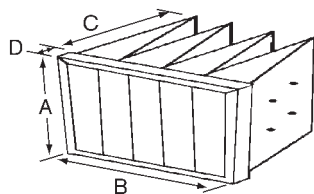
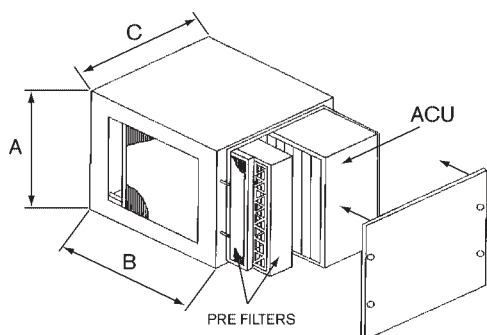
Activated carbon is different from the normal type of loose carbon granule panel in some ways. Firstly, and most importantly, activated carbon granules are fixed and set in position through a thermo-chemical process. With the loose fill granule carbon filters there is a tendency for the granules to rub against each other causing bedding down of the granules and excess dust which would need further filtration.

In addition, bedding down will also allow odours and toxic fumes to by-pass the filter.

The bonding process in our activated carbon filters joins the carbon granules by the points, leaving the pores free to absorb the unwanted contaminants.

This type of construction produces a strong carbon biscuit, which requires no internal structure to support the filter.

Width	Height	Depth	Panels	Flow and pressure loss @ 0.12 secs contact time		Flow and pressure loss @ 0.24 secs contact time	
				M ³ /sec	PA	M ³ /sec	PA
mm	mm	mm					
597	597	147	12	0.230	125	0.115	40
597	597	297	12	0.450	125	0.225	40
597	597	447	12	0.705	125	0.353	40
597	597	597	12	0.940	125	0.470	40
292	597	147	6	0.115	125	0.058	40
292	597	297	6	0.225	125	0.113	40
292	597	447	6	0.353	125	0.176	40
292	597	597	6	0.470	125	0.235	40



CARBON PLEATED PANEL & BAG FILTERS

The Pleated Panels like the Carbon Bag filters are made from non-woven synthetic filter media which is impregnated with activated carbon.

This type of filter is a good solution for less demanding applications, and an inexpensive alternative to the granular carbon filters.

Due to the nature of the product, they can not offer the same life or dwell time associated with ACUs or the Carbon panel filters.

Available in various sizes.

ACTIVATED CARBON PANELS

The carbon biscuits are sealed into steel frames, a scrim is then added to protect the carbon surface from dust contamination. Sealing the carbon blocks in a frame stops any air by-pass, whilst protecting and supporting the carbon block. Please view the price list for stock sizes. Custom sizes are also available.

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MUB 042 500E4-A2 MULTIBOX+

Item no. 2141

Version: 50 Hz - 90° airflow

Document type: **Product card**
 Document date: **2014-12-08**
 Generated by: **Systemair Online Catalogue**

Description

- Speed-controllable
- Modular system
- Integral thermal contacts
- Low sound level
- Flexible airflow direction due to removable panels
- Installation in any mounting position
- Maintenance-free and reliable

The MUB fans size 499 have impellers with backward curved blades, manufactured from aluminium. The MUB 499 is equipped with external rotor motors, fully speed controllable. The three phase motors are D/Y connected for two speed operation. Motor protection is done by thermal contacts, which have to be connected to an external motor protection device. The casing consists of a corrosion-resistant aluminium frame with fibreglass reinforced plastic corners of PA6; highly shock-resistant. The double skin panels are manufactured from galvanised steel with 20 mm mineral wool insulation. To avoid condensation the profile is provided with a separate chamber to fix screws. The Multibox fans are delivered for straight through airflow but can easily be rebuilt due to removable panels. This allows flexible ventilation solutions. The MUB can also be used as extract- or supply air unit in air handling units. Installation in any mounting position is possible.



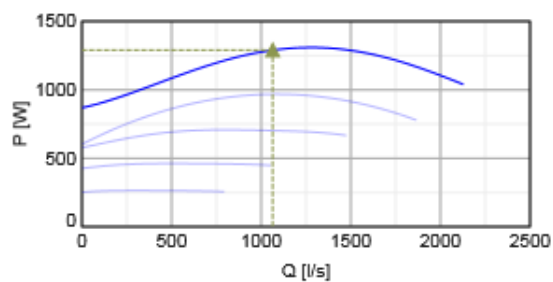
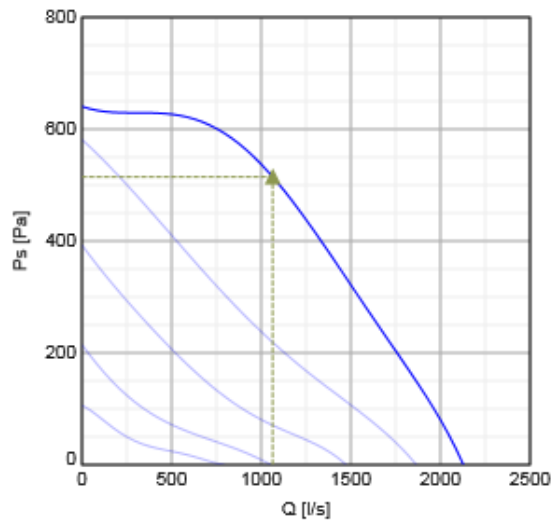
Note! Motors marked with E (e.g. E4-A2) is 1-phased

Technical parameters

Voltage	230	V
Frequency	50	Hz
Phase	1	~
Input power (P1)	1310	W
Current	5.78	A
Max. airflow	2128	l/s
R.p.m.	1332	r.p.m.
Max. temperature of transported air	40	°C
Sound pressure level at 3 m	56	dB(A)
Weight	57	kg
Insulation class, motor	F	
Enclosure class, motor	54	IP
Capacitor	30	µF

Diagrams

Diagrams



Hydraulic data

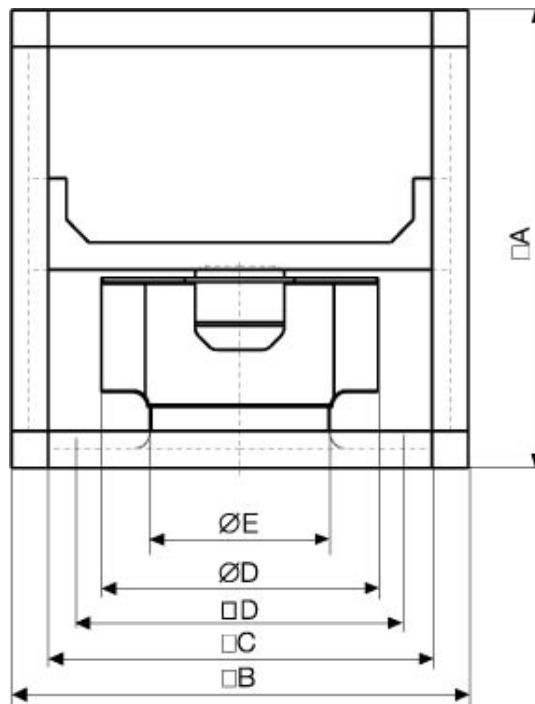
	Working point						
	Q [l/s]	Ps [Pa]	P [W]	n [r.p.m.]	I [A]	SFP [kW/m³/s]	U [V]
Max efficiency	1064	515	1290	1333	5.7	1.21	230

Acoustics

		Mid-frequency band, Hz									
		Hz	Tot	63	125	250	500	1k	2k	4k	8k
LwA Inlet	dB(A)	79	66	68	72	74	73	70	65	58	
LwA Outlet	dB(A)	81	68	70	74	76	75	72	67	60	
LwA Surrounding	dB(A)	63	50	52	56	58	57	54	49	42	

Measuring point: $q_v = 1,35 \text{ m}^3/\text{s}$, $P_s = 380 \text{ Pa}$

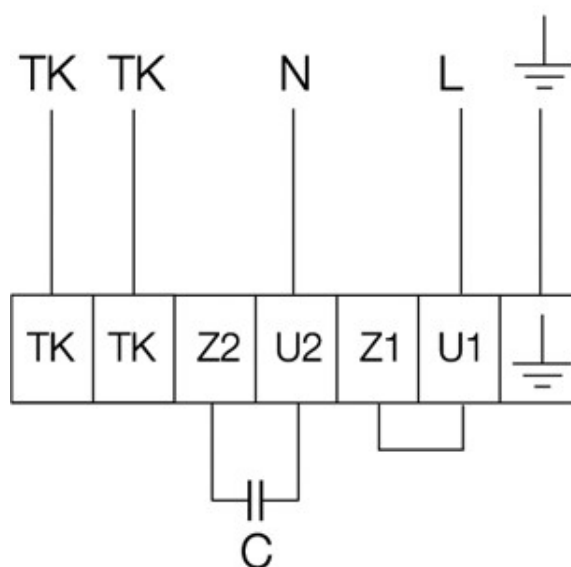
Dimensions



	□A	□B	□C	□D	øD	øE
MUB025 355	500	500	420	378	355	224
MUB042 400	670	670	590	548	404	253
MUB042 450	670	670	590	548	454	286
MUB042 499	670	670	590	548	504	321
MUB042 500	670	670	590	548	504	321

Wiring

230V 1~



Accessories

Electric accessories

- REU 7 Speed control (5007)
- REV-5POL/05 ON/OFF (33979)
- RTRE 7 Speed control (5011)
- S-ET 10 Motor Protection (5154)
- STL 10 Speed controller (84272)

Accessories

CCM inlet MUB042 d400 (311780)
CCM inlet MUB042 d500 (311781)
CCM outlet MUB042 d400 (311682)
CCM outlet MUB042 d500 (311683)
FGV 042/586-586 flex. conn. (4605)
SDM Service Door MUB 042 comp. (32572)
SD-MUB Vibration pad set (37324)
SRKG 042/588-588 shutter valve (4868)
UGS 042/500 adapter flex. (4357)
WSD 042 (730x730) complete (31481)
WSG 042 MUB complete (31485)

Documentation



[\(2014-01_EC-declaration of conformity MUB_DE-EN.pdf, 472kB\)](#)



[\(Operating and maintenance instructions_2010-07.pdf.pdf, 488kB\)](#)



[\(IMO_MUB_DE-EN-SE-DK-ES-RU_311722.pdf, 5MB\)](#)