

Fan Services Commercial Kitchen Extraction and Ventilation Experts

Email:info@fanservices.co.ukWebsite:www.fanservices.co.ukOffice:0203 539 1475After Hours:0759 500 3000

57 Camden High Street,

NW1 7JL

28th July 2021

KITCHEN EXTRACTION AND ODOUR CONTROL PROPOSAL

Fan Services was asked to carry out a site survey and put together a proposal for the above-mentioned address.

After concluding the odour risk assessment under the DEFRA guidance, the total score was 25 which leads to high level of odour filtration (please see attached Odour risk assessment). Our proposal as follows:

Above the cooking equipment a 4,000mm long x 1,200 deep X 500mm High extractor hood canopy. The canopy is manufactured in 304 grades with external dull polish grain and internal filter housing to removable/washable baffle type grease filters.

Primary grease filters are the first stage of filtration of a re-usable stainless-steel baffle type design. There will be enough primary grease filters fitted to cover the complete length of the canopy face above the cooking ranges which are highly efficient at grease removal.

The ductwork from the canopy hood will connect to the odour filtration unit 4 X12''X24''X24'' / 100KG heavy duty activated carbon filtration unit which is accommodated in a housing box with G4 Pleated Panel Pre-Filters (carbon filtration has a dwell time of around 0.4 to 0.6 seconds, please see attached tech spec for carbon and pre filter).

The filter housing unit will be designed to ensure ease of access for maintenance and to provide a good seal around the filters to prevent gases bypassing the filters.

The ductwork will incorporate a third stage of filtration which is ozone odour control units such as type OC2 which will inject ozone into the extract ductwork just after the canopy and before the fan.

These will treat the odour emissions, via an oxidation reaction. This location closest to the source of the odours, will allow the maximum dwell time for the ozone to react with the emissions in the extract ventilation ductwork and ensure that adequate dilution takes place before the plume interacts with a receptor.

The ozone unit will be interlocked so that it only operates when the extract fan is operating. (please see attached tech spec for the OC2).

The odour system is then connected to Helios GBW560/4 insulated box extractor fan unit with a transformer speed controller to reduce the harmonic of the fan when used on low speed. (please see attached fan technical specification).

The fan is mounted on using anti vibration rubber mountings to eliminate any vibration noise.

A 450mm ductwork will run vertically to terminate one meter over the roof level with high velocity jet accelerator.

Ductwork access hatches to be installed every 1.5-meter centre for ongoing duct cleaning.

A Circular spigotted sound attenuator would be installed after the fan as per acoustic report DAA group (atmosphere outlet side) type Acustica CP03-C*-0500-1D, to achieve the insertion loss. (please see attached Sound attenuator details).

Attenuation has been selected to provide a system rating level of at least 10 dB(A) below the lowest existing background noise level for the proposed operating hours and when extrapolated to the nearest noise sensitive neighbouring residential property.

The system will be designed and installed in accordance to DW172.

CLEANING, SERVICES AND MAINTAINCE SCHEDULE

- 1- Extractor hood canopy filters to be cleaned weekly.
- 2- Pleated G4 Panel Filters before the carbon unit to be changed every 1 weeks.
- 3- Carbon units to be replaced every 4 months.
- 4- TR19 extractor system, ductwork cleaning to be scheduled every 4 months.
- 5- Ozone generator to be services every year.

Kind regards,

Jay Zen

Fan Services LTD Registered office: 25 Lynmouth Avenue, EN1 2LP. Company number: 9863266 – VAT number 242953792

Appendix 3: Risk Assessment for Odour

Odour control must be designed to prevent odour nuisance in a given situation. The following score methodology is suggested as a means of determining odour control requirements using a simple risk assessment approach. The odour control requirements considered here are consistent with the performance requirements listed in this report.

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
Very high	Very high level odour control	more than 35

* based on the sum of contributions from dispersion, proximity of receptors, size of kitchen and cooking type:

Criteria	Score	Score	Details
Dispersion	Very poor	20	Low level discharge, discharge into courtyard
			or restriction on stack.
	Poor	15	Not low level but below eaves, or discharge at
			below 10 m/s.
	Moderate	10	Discharging 1m above eaves at 10 -15 m/s.
	Good	5	Discharging 1m above ridge at 15 m/s.
Proximity of receptors	Close	10	Closest sensitive receptor less than 20m from
			kitchen discharge.
	Medium	5	Closest sensitive receptor between 20 and
			100m from kitchen discharge.
	Far	1	Closest sensitive receptor more than 100m
			from kitchen discharge ¹ .
Size of kitchen	Large	5	More than 100 covers or large sized take
			away.
	Medium	3	Between 30 and 100 covers or medium sized
			take away.
	Small	1	Less than 30 covers or small take away ¹ .
Cooking type (odour and	Very high	10	Pub (high level of fried food), fried chicken,
grease loading)			burgers or fish & chips. Turkish, Middle
			Eastern or any premises cooking with solid
			fuel
	High	7	Vietnamese, Thai, Indian, <i>Japanese</i> ,
			Chinese, steakhouse
	Medium	4	Cantonese, Italian, French, Pizza (gas fired),
	Low	1	Most pubs (no fried food, mainly reheating and
			sandwiches etc), Tea rooms ¹

Note 1: A planner may take a pragmatic view when assessing whether certain low risk kitchens require any odour abatement to be fitted. In reaching this decision the Planner may consider the nature of the food being cooked and/or the size of kitchen and/or its location.





TEL:01622 832777 FAX:01622 832507

sales@airclean.co.uk www.airclean.co.uk

Pleated Panel Filters

Applications

The Pleated Panel is a medium efficiency disposable filter, suitable for ventilation and air conditioning systems which require a higher efficiency and greater dust holding capacity than can be achieved with glass or synthetic panels.

The Pleated Panel can be used where glass panels are undesirable, such as in the food industry and hospitals.

Construction

Pleated filters consist of a dry non-woven fabric media, pleated to give an extended surface area, producing a low initial resistance for the same air volume.

The pleated assembly is contained within either a rigid all cardboard casing, or a cardboard frame with perforated cap-punch retaining grids.



Technical

Filter Classification: Pleated Material Flamability :

Maximum operating temperature: Dust Holding Capacity: Grade G4 to EN779. Fire Resistant to :-Underwriters Laboratories Standard 900 class 2 $100^{\circ}C (212^{\circ}F)$ 840 g/m² (2") and 1260 g/m² (4") to EN779

Resistance to Airflow

Face Velocity										
m/s			1.50		2.0		2.5		3.0	
fpm			300		400		500		600	
Pressure Drop	Pa	"wg	Pa	"wg	Pa	"wg	Pa	"wg	Pa	"wg
2" Panel	22	0.09	27	0.11	50	0.20	70	0.28	-	-
1" Panel	25	0.10	30	0.12	55	0.22	75	0.30	87	0.35

Recommended discard resistance is 125 Pa (0.5"wg) in excess of clean resistances shown above for a 2" panel and 150 Pa (0.6"wg) for 4" panel.

Code AC1/3a Ref 06/11



TEL:01622 832777 FAX:01622 832507

sales@airclean.co.uk www.airclean.co.uk

Capacity Chart (2" Pleated Pa	nels) Data based on Fa	Data based on Face Velocity of 2.5 m/s (500 fpm)						
SIZE	SIZE	Flow Rate						
OT Inches	Actual mm	m³/s						
10 x 10	242 x 242	0.14						
12 x 12	289 x 289	0.20						
15 x 15	369 x 369	0.33						
18 x 18	445 x 445	0.48						
20 x 10	495 x 242	0.29						
20 x 16	495 x 394	0.48						
20 x 20	495 x 495	0.60						
25 x 16	620 x 394	0.60						
25 x 20	620 x 495	0.76						
24 x 12	594 x 289	0.43						
24 x 20	594 x 495	0.73						
24 x 24	594 x 594	0.88						

Actual Face Size = Nominal Size less 6mm (0.25")

SIZE	SIZE	Flow Rate
OT Inches	Actual mm	m ³ /s
10 x 10	242 x 242	0.18
12 x 12	289 x 289	0.25
15 x 15	369 x 369	0.41
18 x 18	445 x 445	0.60
20 x 10	495 x 242	0.36
20 x 16	495 x 394	0.58
20 x 20	495 x 495	0.73
25 x 16	620 x 394	0.72
25 x 20	620 x 495	0.91
24 x 12	594 x 289	0.51
24 x 20	594 x 495	0.87
24 x 24	594 x 594	1.05

Holding Frames and Casings

Holding frames and casings for Disposable Pleated Panels are available singularly or in multiples, and can be manufactured to suit non-standard sizes and special applications. See leaflets (code AC8) for full technical information. Code AC1/3b Ref 06/11



TEL:01622 832777 FAX:01622 832507

sales@airclean.co.uk www.airclean.co.uk

Metal Cased Discarbs

The metal cased 'Discarb' cells have the highest carbon loading in our range, and have standard or heavy-duty carbon panels permanently sealed into a galvanised sheet steel casing. This construction gives a very strong unit capable of handling large air volumes or where conditions dictate, increased contact time. The advantage of this unit is that with panels sealed in, there is no possibility of air leakage. Also, these units can be manufactured to almost any reasonable size, the limiting factors being the overall weight for handling purposes and the size of individual panels. When the unit has finished its useful life it is discarded and replaced with a complete new cell.



Standard Duty Cells										
Nominal Size	Actual Size mm	Number of	Carb.	Discarb	Airf	low	Pressure			
WxHxL	WxHxL	Panels	Weight	Weight	m³/s	cfm	Pa			
12"x 12" x 12"	292 x 292 x 292	6	5 kg	9 kg	0.10	212	75			
12" x 12" x 18"	292 x 292 x 445	6	8 kg	14 kg	0.15	318	95			
12" x 12" x 24"	292 x 292 x 597	6	10 kg	18 kg	0.22	466	140			
18" x 18" x 12"	445 x 445 x 292	8	10 kg	17 kg	0.21	445	55			
18" x 18" x 18"	445 x 445 x 445	8	15 kg	25 kg	0.31	657	70			
18" x 18" x 24"	445 x 445 x 597	8	21 kg	33 kg	0.41	868	105			
24" x 24" x 12"	597 x 597 x 292	12	20 kg	31 kg	0.41	868	70			
24" x 24" x 18"	597 x 597 x 445	12	31 kg	45 kg	0.61	1292	90			
24" x 24" x 24"	597 x 597 x 597	12	42 kg	59 kg	0.81	1716	130			
12" x 24" x 24"	298 x 597 x 597	6	21 kg	35 kg	0.40	847	130			
Extra Duty Cells										
		Extra	Duty Cell	s						
Nominal Size	Actual Size	Extra No. of	Duty Cell Carb.	s Discarb	Airfl	low	Pressure			
Nominal Size W x H x L	Actual Size W x H x L				Airfl m³/s	l ow cfm	Pressure Pa			
		No. of	Carb.	Discarb		1				
WxHxL	WxHxL	No. of Panels	Carb. weight	Discarb weight	m³/s	cfm	Pa			
W x H x L 12"x 12" x 12"	W x H x L 292 x 292 x 292	No. of Panels 6	Carb. weight 6 kg	Discarb weight 10 kg	m ³ /s 0.13	cfm 275	Pa 125			
W x H x L 12"x 12" x 12" 12" x 12" x 18"	W x H x L 292 x 292 x 292 292 x 292 x 445	No. of Panels 6 6	Carb. weight 6 kg 9 kg	Discarb weight 10 kg 15 kg	m ³ /s 0.13 0.20	cfm 275 424	Pa 125 175			
W x H x L 12"x 12" x 12" 12" x 12" x 18" 12" x 12" x 24"	W x H x L 292 x 292 x 292 292 x 292 x 445 292 x 292 x 597	No. of Panels 6 6 6	Carb. weight 6 kg 9 kg 12 kg	Discarb weight 10 kg 15 kg 20 kg	m ³ /s 0.13 0.20 0.27	cfm 275 424 572	Pa 125 175 250			
W x H x L 12"x 12" x 12" 12" x 12" x 18" 12" x 12" x 24" 18" x 18" x 12"	W x H x L 292 x 292 x 292 292 x 292 x 445 292 x 292 x 597 445 x 445 x 292	No. of Panels 6 6 6 8	Carb. weight 6 kg 9 kg 12 kg 12 kg	Discarb weight 10 kg 15 kg 20 kg 19 kg	m ³ /s 0.13 0.20 0.27 0.30	cfm 275 424 572 635	Pa 125 175 250 95			
W x H x L 12"x 12" x 12" 12" x 12" x 18" 12" x 12" x 24" 18" x 18" x 12" 18" x 18" x 18"	W x H x L 292 x 292 x 292 292 x 292 x 445 292 x 292 x 597 445 x 445 x 292 445 x 445 x 445	No. of Panels 6 6 6 8 8 8	Carb. weight 6 kg 9 kg 12 kg 12 kg 19 kg	Discarb weight 10 kg 15 kg 20 kg 19 kg 28 kg	m ³ /s 0.13 0.20 0.27 0.30 0.41	cfm 275 424 572 635 868	Pa 125 175 250 95 125			
W x H x L 12"x 12" x 12" 12" x 12" x 18" 12" x 12" x 24" 18" x 18" x 12" 18" x 18" x 18" 18" x 18" x 24"	W x H x L 292 x 292 x 292 292 x 292 x 445 292 x 292 x 597 445 x 445 x 292 445 x 445 x 445 445 x 445 x 597	No. of Panels 6 6 6 8 8 8 8 8	Carb. weight 6 kg 9 kg 12 kg 12 kg 19 kg 25 kg	Discarb weight 10 kg 15 kg 20 kg 19 kg 28 kg 37 kg	m ³ /s 0.13 0.20 0.27 0.30 0.41 0.54	cfm 275 424 572 635 868 1144	Pa 125 175 250 95 125 185			
W x H x L 12"x 12" x 12" 12" x 12" x 18" 12" x 12" x 24" 18" x 18" x 12" 18" x 18" x 18" 18" x 18" x 24" 24" x 24" x 12"	W x H x L 292 x 292 x 292 292 x 292 x 445 292 x 292 x 597 445 x 445 x 292 445 x 445 x 445 445 x 445 x 597 597 x 597 x 292	No. of Panels 6 6 8 8 8 8 8 8 12	Carb. weight 6 kg 9 kg 12 kg 12 kg 19 kg 25 kg	Discarb weight 10 kg 15 kg 20 kg 19 kg 28 kg 37 kg 35 kg	m ³ /s 0.13 0.20 0.27 0.30 0.41 0.54 0.54	cfm 275 424 572 635 868 1144 1144	Pa 125 175 250 95 125 185 125			

The company reserves the right to change the specifications without notice. E & OE.

Code AC6/2a Ref 02/09



TEL:01622 832777 FAX:01622 832507

sales@airclean.co.uk www.airclean.co.uk

Technical

The capacities shown are based on a dwell time of 0.1 seconds .

For contact times of 0.3 seconds, reduce rated airflow to 1/3rd, pressure drop will also reduce to 1/3rd.

Max Temperature 40 Deg C

Max Humidity 80% RH

Non-standard sizes

Other sizes are available to suit individual requirements. Our Technical Department will be pleased to

Code AC6/2b Ref 02/09



ODOUR CONTROL

OC INNOVATIONS - OC2

Process Information

Oxidation using ozone and activated oxygen ions is used to treat odour emissions from commercial and industrial kitchen processes (DEFRA, 2005: Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems).

The OC2 has been specifically designed for use in commercial kitchens. The system injects ozone into the kitchen extraction canopy or associated duct work where it reacts with odours, which are oxidized in a chemical reaction, which results in the production of carbon dioxide and water vapour. The ozone itself is consumed during the process and is converted back into oxygen.

The benefits of purchasing an OC2 unit over traditional UV/Ozone systems are as follows:

- Compact, lightweight and quiet operation so is less
 obtrusive
- Quick and easy low cost installation
- Low capital and running costs up to 50% less than traditional UVC systems
- Injection into ductwork adding negligible back pressure to the system so requiring less energy to push air through the air handling system. This means less ductwork modifications
- The OC2 maintains efficiency as they remain outside of the air stream, they also require less maintenance and require less cleaning.
- Tested to EN13725:2003, CE Approved



Spec sheet overleaf >

Tel:	0845 643 6728
Email:	sales@ocinnovations.co.uk
Website:	www.ocinnovations.co.uk



ODOUR CONTROL

OC INNOVATIONS - OC2 (SPECIFICATIONS)

TECHNICAL INFORMATION

Ozone Output:
Housing dimensions:
Housing material:
Duct work connection:
Volume flow rate in ductwork:
Air residence time inside chamber:
Pressure drop:
Weight of unit:
Electrical requirements:
Power requirements:
Safety:

20g/hr ozone output 290mm W 290mm L 290mm H Stainless Steel powder coated black 100mm circular Up to 2m3/s per unit, subject to cooking odours. >0.1 seconds N/A 10Kg approx. 240V / 1 ph / 50/60Hz 168W

INSTALLATION

It is recommended to locate the units with an injection point located closest to the source of odours (i.e. Canopy plenum or nearest accessible point on ductwork, in order to maximize dwell time. In any case the dwell time must be no less than 1 second.

The system is powered via a fused spur/socket, which is interconnected to the main extraction fan control to ensure that the OC2 units only operate when the main fan is operating.

THE UNIT MUST BE INTERLOCKED INTO THE FAN CONTROL SYSTEM

MAINTENANCE

An optional service contract is available which entails a yearly inspection of the unit. Please contact us for further information and pricing.



Tel: 0845 643 6728 Email: sales@ocinnovations.co.uk Website: www.ocinnovations.co.uk

Helios

GB

Arbitrary installation position and flexible assembly by five possible discharge directions.

GB T120

Designed for moving dirty, humid and hot air up to max. 120° C. Motor located outside the air flow.



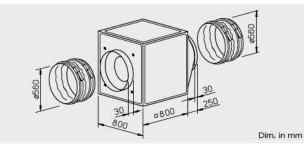


Centrifugal on both sides, free discharge

View from below

225

Dim. in mm



- Special features of types GB T120
- Designed for moving dirty, humid and hot air volumes up to max. 120° C.
- Motor located outside of air flow.
- Temperature insulated partition panel between motor and impeller, lined with 20 mm thick, flame-retardant mineral wool.
- Easily accessible motor and impeller unit, removable without disassembling the system components.
- Inspection cover with handle, simply remove for cleaning and maintenance.
- Condensate collector with condensate spigot included in delivery. Drill hole for rain drainage (accessories) for outdoor installation is prepared.

Assembly GB T120

Installation must be carried out with condensation discharge showing downward. Flexible assembly by three possible centrifugal discharge directions via the discharge adapter. Outdoor installation is possible using outdoor cover hood and external weather louvers (accessories).

® Centrif, disch

Centrifugal on

both sides, free discharge

Feature

Assembly of types GB Arbitrary installation position and flexible assembly by five possible discharge directions via the discharge adapter. For wall mounting the wall bracket (accessories) have to be used. Outdoor installation is possible using outdoor cover hood and external weather louvers (accessories).

Specification of both types Casing

Self-supporting frame construction from aluminium hollow profiles. Double-walled side panels from galvanised sheet steel, lined with 20 mm thick temperature insulating and flame-retardant mineral wool. Intake cone for ideal inflow as well as spigot and flexible sleeve (for the respective max. permissible air flow temperature) for duct connection. With discharge adapter (from square to circular) on the pressure side for low-loss discharge and flexible sleeve to reduce vibration transmission. Simple positioning by standard crane hooks.

Impeller

Condensation outlet

Smooth running backward curved aluminium centrifugal impeller highly efficient and direct driven. Energy efficient with a low noise development. Dynamically balanced together with the motor to DIN ISO 1940 Pt.1 – class 6.3.

Drain

Motor

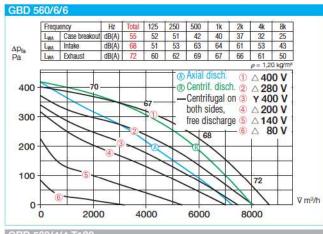
Maintenance-free external rotor motor or IEC-standard motor protected to IP 54. With ball bearings and interference-free as standard.

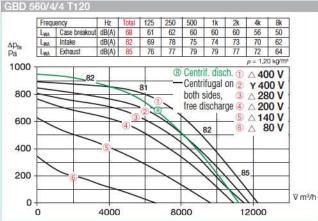
Electrical connection Standard terminal box (IP 54) fitted on the motor; with GB T120 fitted on the motor support plate.

Туре	Ref. no.	Air flow volume (FID)	R.P.M.	Sound press. case breakout	Motor power (nominal)	Cul Full load	rrent speed controlled	Wiring diagram	tempe	n air flow erature controlled	Weight (net) kg	5 step witi mot. prot	h	mer contr with mot. pro	out	unit L	or protection using the al contacts
		∜ m³/h	min ⁻¹	dB(A) in 4 m	kW	Α	Α	No.	+°C	+°C	kg	Type F	lef. no.	Туре	Ref. no.	Туре	Ref. no.
1 Phase moto	r, 230 V / 1	l ph. / 50 Hz,	capacitor	motor, prote	ction to IP 5	4											
GBW 560/4	5508	9123	1409	45	1.83	7.93	10.4	867	45	45	92	MWS 10	1946	TSW 10	1498	MW ¹⁾	1579
2 speed moto	r, 3 Phase	motor, 400 V	/ 3 ph. / 5	50 Hz, Y/ $ riangle$ wi	ring, protec	tion to IP 54											
GBD 560/6/6	5522	7800/9000	705/885	35	0.51/0.80	0.90/1.85	1.90	867	60	60	80	RDS 4	1316	TSD 3,0	1502	MD	5849
GBD 560/4/4	5521	11500/13000	1110/1350) 44	1.70/2.60	2.80/4.80	4.90	867	55	45	90	RDS 7	1578	TSD 7,0	1504	MD	5849
2 speed moto	r, 3 Phase	motor, 400 V	/ 3 ph. / 5	60 Hz, Y/ $ riangle$ wi	ring, protec	tion to IP 54											
GBD 560/4/4	T120 5778	11520/12300	1250/1400) 48	1.85/2.50	3.20/6.80	6.80	520	120	120	105	RDS 7	1578	TSD 7,0	1504	MD	5849
() incl. energian	quitch																

1) incl. operation switch







Motor protection

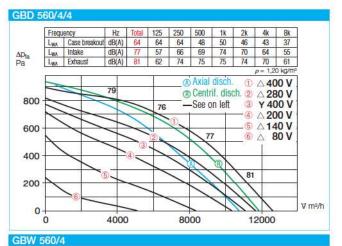
Motors have thermal contacts wired to the terminal block and must be connected to a motor protection unit.

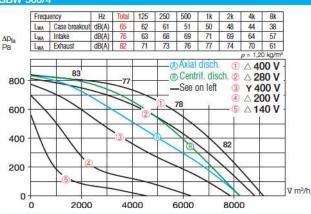
Speed control

All types are speed controllable by voltage reduction using a transformer controller. The 3-phase models can also be 2 speed controlled by star/delta switch (accessories DS 2 or full motor protection unit M 4). The duties at different speeds are given in the performance curve.

Sound levels

- Total sound power levels and the spectrum figures in dB(A) are given for:
- Sound level case breakout - Sound level intake
- Sound level intake
 Sound level exhaust
 In the table below as well as un
 - derneath the performance curve you can find additionally the sound pressure levels at 4 m (free field conditions).





Accessories of both types

Anti vibration mounts for installation indoors. Set of 4. SDD-U Ref. no. 5627

Wall bracket for wall mounting.GB-WK 560Ref. no. 5626

External weather louvers to cover exhaust opening. GB-WSG 560 Ref. no. 5640

Outdoor cover hood for outdoor installation. GB-WSD 560 Ref. no. 5749

On/Off and 2-speed switch for

3-phase Y/△ motors. **Type DS 2**² Ref. no. 1351

2) full motor protection unit recommended: MD Ref. No. 5849

Specific accessories

for types GB

Condensate collector with condensate spigot for pipe connection.

GB-KW 560 Ref. no. 5645

(Condensate collector with condensate spigot included in delivery with GB T120).

for types GB T120

Rain drainagefor outdoor installa-
tion (drill holes for rain drainage is
already prepared).GB-RARef. no. 9418

Information	Page
Information for planning General techn. information	10 on on,
speed control	15 on
Accessory-Details	Page
Speed controller and full	
motor protection unit	525 on





T 01206 852 389 E info@acoustica.co W acoustica.co



CP03-C-0500

500 DIA FAN MOUNTED SILENCER

ACOUSTICA MANUFACTURING LTD

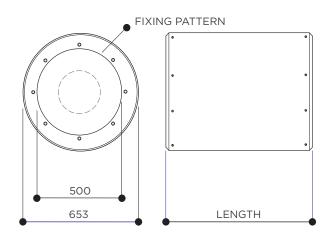
Available in two standard lengths C Series Silencers have excellent attenuation properties, achieved with sound absorbing infill retained in the attenuator casing by a perforated liner. The central pod (code P) is an option to increase the insertion loss, however it will add resistance.

- Fits directly onto 500mm diameter fans
- Standard lengths 500mm (1D) & 1000mm (2D)
- Use up to 70°C (standard construction)
- Systems up to 1000 Pascals
- Special lengths on request

INSERTION LOSS (dB) - CENTRE BAND FREQUENCY

PRODUCT CODE	63 Hz	125 Hz	250 Hz	500 Hz	1000 Hz	2000 Hz	4000 Hz	8000 Hz
CP03-C*-0500-1D	2	3	6	14	14	12	10	5
CP03-C*-0500-2D	3	7	8	19	20	17	14	11
CP03-C*P-0500-1D	2	7	9	17	24	24	20	16
CP03-C*P-0500-2D	4	10	16	26	29	29	29	20

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	LENGTH	FIXING PATTERN	MASS
CP03-CA-0500-1D	500mm	12 x M10-560 PCD	18 Kg
CP03-CA-0500-2D	1000mm	12 x M10-560 PCD	32 Kg
CP03-CAP-0500-1D	500mm	12 x M10-560 PCD	22 Kg
CP03-CAP-0500-2D	1000mm	12 x M10-560 PCD	37 Kg
CP03-CB-0500-1D	500mm	12 x M8 - 541 PCD	18 Kg
CP03-CB-0500-2D	1000mm	12 x M8 - 541 PCD	32 Kg
CP03-CBP-0500-1D	500mm	12 x M8 - 541 PCD	22 Kg
CP03-CBP-0500-2D	1000mm	12 x M8 - 541 PCD	37 Kg





MATERIAL & FINISH

All casings are manufactured from mill finish hot dip galvanised mild steel conforming to EN10327 (BS2989) including the flow formed one piece end fittings. To prevent erosion of absorbing materials the C Series Silencers are fitted with a perforated liner manufactured from galvanised mild steel conforming to EN10327 (BS2989). The C Series Silencers utilise acoustic grade mineral fibre absorbing infill and are manufactured to the HVCA specification DW144 class B and M&E 100 for sheet steel thickness and stiffening.

Pressure	Up to 1000 Pascals positive and negative.
Temperature	-12° to +70° C.
Location	Internally & externally mountable.

MELINEX LINING (OPTIONAL)

Where moist conditions exist (e.g. process systems) or for critically clean applications (e.g. hospitals) the sound absorbing material may be required to be fully sealed by Melinex lining to prevent fibre migration. This will however, effect the acoustic performance of the silencer. Please contact us to discuss your requirements.

ALTERNATE SPECIFICATION

The above specification refers to our standard stock range. We can also supply custom made C Series Silencers with alternative dimensions, temperature ratings, construction materials and product finishes. Please contact us for further information and advice.

PRODUCT CODE GUIDE

Example: CP03-CAP-0500-2D

- CP03 Product Group Code
- CA Drilling Pattern CA for A or CB for B
- 0500 Internal Diameter
- **2D** Length code 1D = 500, 2D = 1000

RESISTANCE TO AIRFLOW (Pa)

AIR VOLUME M ³ /s	0.5	0.6	0.8	1.0	1.3
CP03-C*-0500-1D	-	-	-	-	-
CP03-C*-0500-2D	-	-	-	-	-
CP03-C*P-0500-1D	10	24	40	80	120
CP03-C*P-0500-2D	21	36	61	124	188

- represents a negligible resistance to airflow that can be assumed to be equivalent to a duct section of the same length.

INSTALLATION

For recommendations for the support of the silencer the principles of Part Six (pages 43-46) of the HVCA DW144 standard should be followed. It is important that the recommendations in the table are adhered to when locating the silencer in relation to other duct-mounted equipment. If the silencers are to be used in conjunction with equipment not listed please enquire for advice.

ITEM	LOCATION
Centrifugal Fans	Direct couple only at the same size; use an inlet cone if open after silencer. PODDED - position one duct diameter from fan inlet / outlet.
Axial Fans	Direct couple only at the same size. Use an inlet cone if open after silencer. PODDED - match hub size within 30% of half nominal diameter.
Mixed-Flow Fans	Direct couple only at the same size. Use an inlet cone if open after silencer.
Ductwork Bends	Direct couple only at the same size. PODDED - postion two duct diameters from bend.
Ductwork Reducers	Direct couple only with reducers of maximum 15° cheek slope.
Finned Coils & Filters	Leave 200mm plenum between silencer and coil or filter, and suitable reducer as specified in HVCA DW/144 1998.

MAINTENANCE

Silencers are of a passive nature and as such require no routine maintenance or lubrication.

INSPECTION

For inspection access the recommendations set out in Heating & Ventilating Contractors Association specification DW144 1998, appendix M – Guidance Notes for Inspection, Servicing and Cleaning Access Openings, should be followed. We would suggest Level 2 one 300mm x 200mm-inspection panel down-stream or Level 3 one 300mm x 200mm inspection door each side of the silencer. Refer to table 25 of DW144 or Section 2 of HVCA specification TR17 for further recommendations.

It is our recommendation that the silencers are inspected periodically to ensure that the airways are free from obstructions and no dust or foreign matter has collected and blocked the holes in the perforated liner elements.

CLEANING

Should airways require routine cleaning we recommend low-pressure air blasting, vacuuming or wiping the exposed surfaces with a damp cloth. It is not unusual for "White Zinc Oxide" to develop on galvanised silencers when the zinc in the galvanising reacts electrolytically with moisture.



□63

075

One set consists of 4 elements,

which are positioned individually

under the corners of the fan unit.

Maximum compression:

SDD-U

40 kg/pad = total 160 kg.

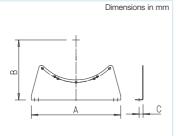
Dimensions in mm

Ref. No. 5627



Mounting feet

To fix Axial/VAR cased fans on ceiling, wall or floor. Made from galvanised sheet steel or hot dipped galvanised steel. Fixing holes fit casing flanges. Set includes a pair of feet, nuts and bolts.



Note:

If motors of high weight are installed, an extension duct (VR...) is recommended to move the centre of gravity within the mounting feet. Mount feet on the outer flange.

Туре	Ref. No.	А	В	С	Weight in kg
MK 200-225	1446	310	208/220	20	1.5
MK 250-280	1447	340	227/245	20	1.7
MK 315-355	1448	380	281/300	25	2.2
MK 400-450	1449	360	311/335	25	2.6
MK 500-560	1450	570	383/415	25	5.3
MK 630	1333	600	465	30	8.5
MK 710	1372	670	515	35	10.5
MK 800	1373	680	565	35	15.5
MK 900	1374	760	625	35	18.0
MK 1000	1375	840	690	35	19.5

SDD 1

SDD 2

SDD 3

The rubber mounting pads SDD-U are suitable as a base for installation of fans on flat, horizontal surfaces. They reduce the direct noise and vibration transmission to the building structure.

Dimensions in mm

ø11

SDD 1F, SDD 4 - 10

M10

120

SDD-U

Anti vibration pads

SDZ	= 0	Dimensions in mm
SDZ 1 – 3		
ere	SDZ 2	
SDZ 1F, 4 – 9	SDZ 3	SDZ 1F SDZ 4 – 9

Anti vibration mounts for suspension To reduce noise and vibration transmission of fans installed hanging from ceilings. Specification as model SDD.



balanced (centre of gravity of heavy motor may cause uneven loading of mounts).

SDD
SDD
1-3
1
SDD 1F, 👲 😂
4 – 10

Anti vibration mounts for compression

To reduce noise and vibration transmission of fans installed on horizontal surfaces. Simple installation in combination with feet MK (accessory). Select size according to fan weight see table).

Rubber elements are suitable for small to middle weights and ambients up to +60 °C. Spring elements are suitable for higher temperatures above + 60 °C (e.g. smoke extraction).

Туре	Ref. No.	Maximum fan weight in kg	H Height in mm	Spring element	Contents 1 set = 4 pieces
SDD 1	1452	80	*		
SDD 1F	1942	70	112 – 82	•	
SDD 2	1453	180	*		
SDD 3	1367	750	*		
SDD 4	1944	130	112 - 86	•	
SDD 5	1924	210	112 - 86	•	
SDD 6	1926	400	112 - 80	•	
SDD 7	1928	580	112 – 82	•	
SDD 8	1930	900	112 – 82	•	
SDD 9	1934	1300	112 – 85	•	
SDD 10	1951	1800	112 – 88	•	

Туре		Ref. No.	Maximum fan weight in kg	H Height in mm	Spring element	Contents 1 set = 4 pieces
SDZ	1	1454	60	*		
SDZ	1F	1943	70	190 - 220	•	
SDZ	2	1455	160	*		
SDZ	3	1366	300	*		
SDZ	4	1945	130	190 - 216	•	
SDZ	5	1925	210	190 - 216	•	
SDZ	6	1927	400	190 - 221	•	
SDZ	7	1929	580	190 - 220	•	
SDZ	8	1931	900	190 - 220	•	
SDZ	9	1935	1300	190 - 217	•	

Accessories

