





Project Title - SLW173533 - 70 Bury Old Road, Manchester

Project Address - 70 Bury Old Road, Manchester, M8 5BN

Scope of Works - Install of ventilation system for new proposed kitchen & prep kitchen.

Client - Ian Rodwell, IPR Interiors Ltd

Date Issued – 23/06/2021

Prepared By - Simon Locke-Wheaton

This document has been prepared to detail the proposed ventilation system for 70 Bury Old Road, Manchester, M8 5BN.

With this proposal the following documents can be found.

1. Extent of existing and proposed works and EMAQ+ odour assessment
2. Site Map
3. Elevation drawings of external and internal ventilation services
4. Proposed Plant data sheets.

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Proposed Ventilation Services

The premises plan to install a new back of house kitchen which will require a kitchen extraction system designed in accordance with BESA DW172 2018 2nd Edition and EMAQ Control of Odour and Noise from Commercial Kitchen Exhaust Systems.

The extract system will have a stainless-steel wall mounted extract canopy manufactured by CK Direct. The canopy shall be served by an extract and fresh air ventilation system with all plant, duct and noise located within the first-floor flat roof and second-floor.

The canopy shall have a set of grease separators for the removal of the initial grease from the cooking process before it enters the duct system.

The extract air shall be pulled through the canopy to the duct system, for the removal of grease filter and will exit the system at high level at the rear of the building.

The odour control has been specified on the EMAQ risk assessment scoring process.

Dispersion – Poor - Score 15
Proximity of Receptors – Medium - Score 5
Size of Kitchen -Medium - Score 3
Cooking type – High - Score 7

Total Score 30 - High-level odour control required. Three number CK Direct AirteckG64 unit. Show in drawing (SLW172303-DRG-001, 002 & 003)

The extract duct shall terminate at high level at the rear of the building. Shown on drawing (SLW172303-DRG-001 & 002)

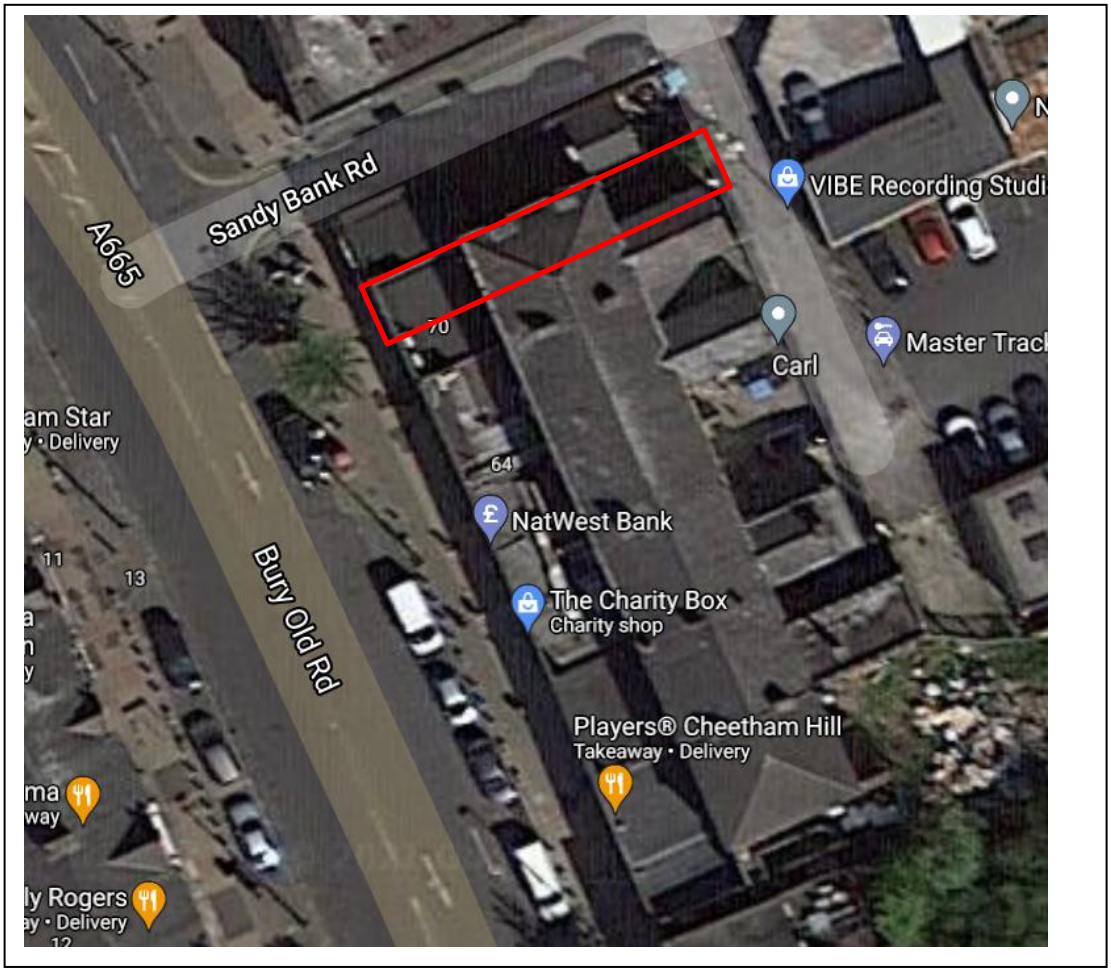
The fresh air duct shall enter the building via the flat roof on the first floor for the ground floor kitchen and via box fan on the front of the building located on the first floor. Shown on drawing (SLW172303-DRG-002 & 003)







Site Map



CK Direct

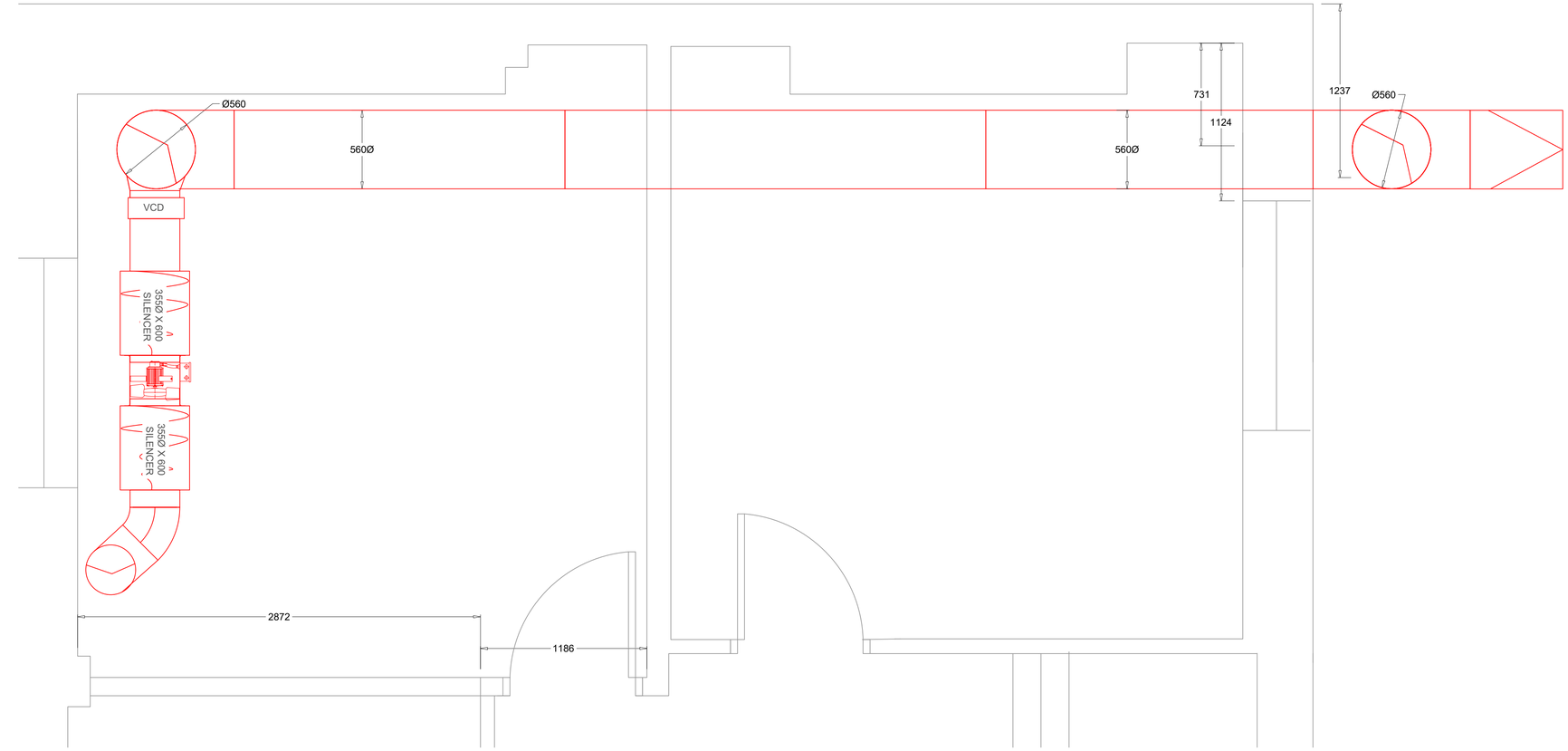
15 Tresham Road

Orton Southgate

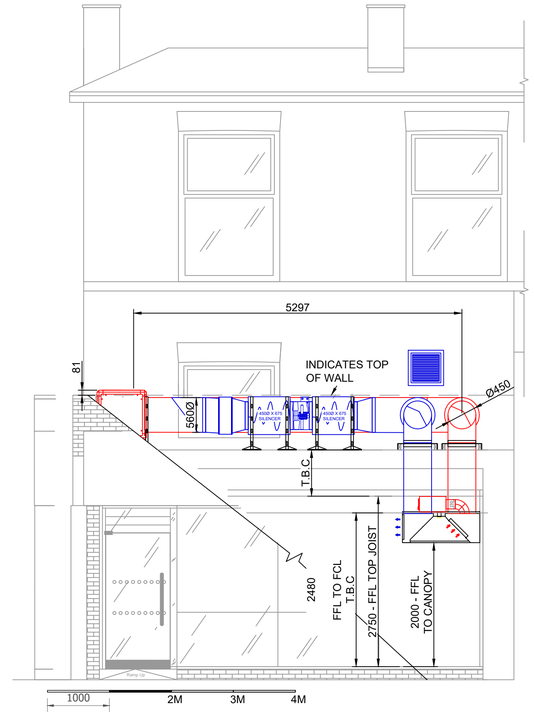
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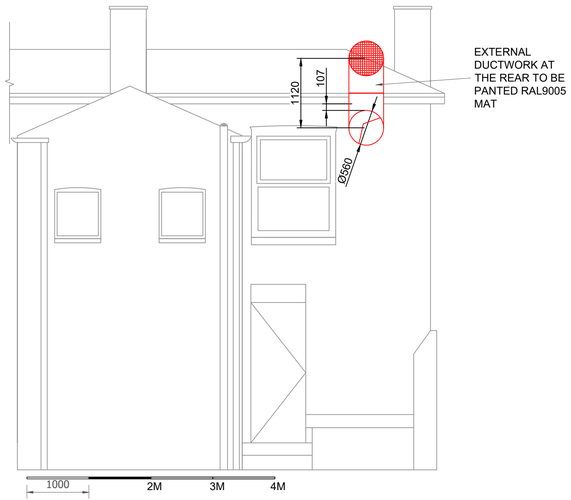
1 SECOND FLOOR PLAN
SCALE - 1:20



2 FRONT ELEVATION - (Eastern)
SCALE - 1:50

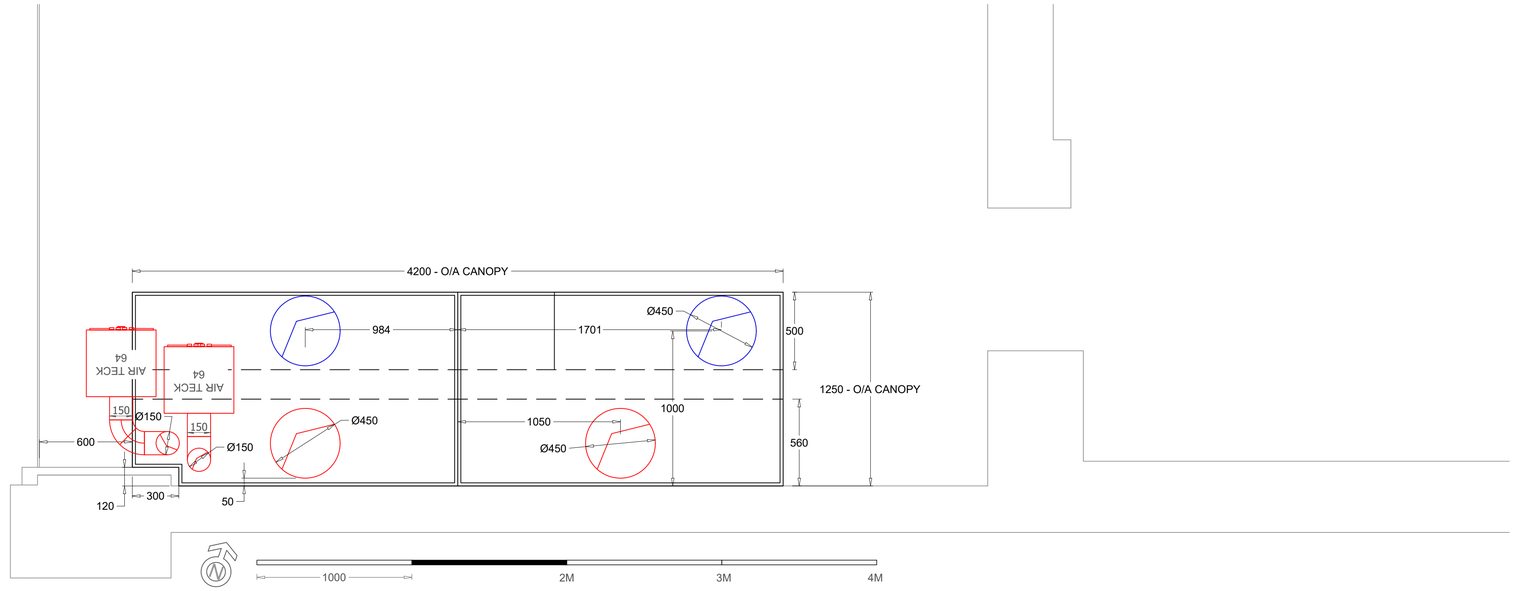


3 REAR ELEVATION - (Western)
SCALE - 1:50



EXTERNAL DUCTWORK AT THE REAR TO BE PANTED RAL9005 MAT

4 GROUND FLOOR PLAN
SCALE - 1:20



INSTALLATION NOTES

- **REVIEW ALL DETAILS BEFORE STARTING INSTALLATION**
- **ALL DUCTING SUPPORTS TO TO HAVE ANTI VIBRATION MOUNTS FITTED**

CKDirect

Tel: 01733 230378
Email: info@ckdirect.co.uk Web: www.ckdirect.co.uk

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Colour Line Legend

- Kitchen Extract
- Kitchen Ambient MUA
- Kitchen Tempered MUA
- General Extract
- General Supply Air
- Toilet Extract
- Toilet Supply

Key Parts Legend

VCD - Volume Control Damper
KEF - Kitchen Extract Fan
KMF - Kitchen MUA Fan
MUF - MUA Filter
ACP - Access Cleaning Panel
FDP - Fire Damper
ATT - Attenuator
FDC - Flexible Duct Connector
AVM - Anti-Vibration Mounts

Revision Information | **Drawing No and Revision** SLW172303-DRG-002-R5 **APPROVAL**

Revision No	Revision Date	Revision Information
R1	22/06/2021	First Issue
R2	23/06/2021	Updated ground floor extract duct riser
R3	30/06/2021	Updated terminate setting out
R4	05/07/2021	Updated added compass & scale bar
R5	27/08/2021	added 3No. AirteckG64 units

Client
IPR Interiors Ltd

Drawing Title
ventilation Services & setting out
Elevations and Second & Ground Floor Plans

Project Address
70 Bury Old Road, Manchester,
M8 5BN

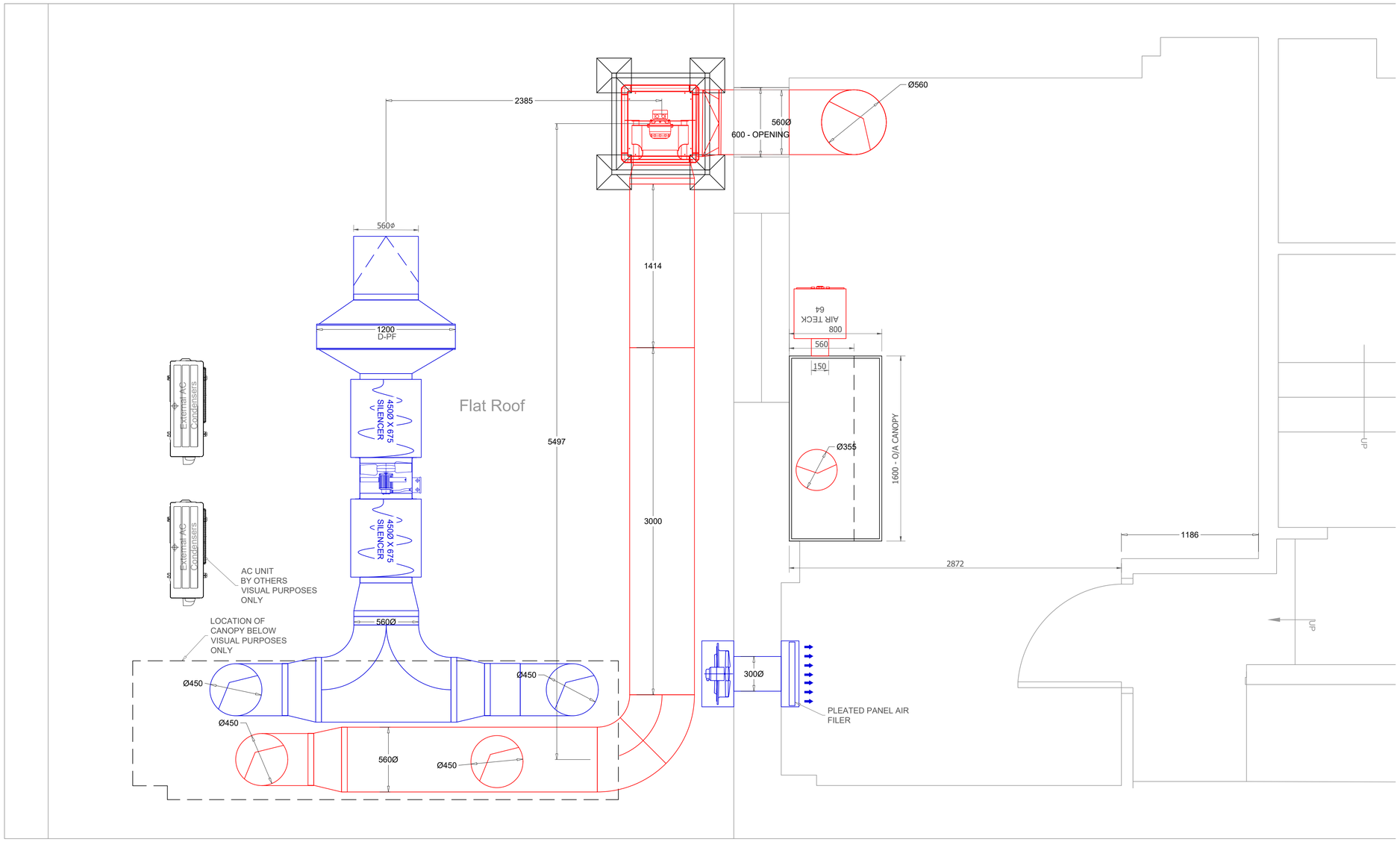
Project Title
70 Bury Old Road

Issue Date
22/06/2021

Scale - Paper Size
1:20 - A1

Drawn By
Simon Locke-Wheaton

1 FIRST FLOOR PLAN
SCALE - 1:20



1000 2M 3M 4M

Ground Floor Canopy Details

Model	Combined Air wall with full front perforation
Size	4200mm x 1250mm x 500mm
Extract Rate and Pressure Drop	120Pa
Extract Spigots	450 dia
Supply Rate and Pressure Drop	80Pa
Supply Spigots	450mm dia
Filters	10No. type 2 395 x 395mm
Lighting	9W LED Downlight IP65 COOL White & Chrome Bezel

Ground Floor Fan Details

Kitchen Extract	
Model	Woods ePowerBoc 80-500-1 (1 Phase)
Air Flow Rate	1.89m3/s
Spigots Air Flow Rate	0.945m3/s
Kitchen Make-Up Air	
Model	Woods Maxfan 45 EJ63266 (1 Phase)
Air Flow Rate	1.60m3/s
Spigots Air Flow Rate	0.80m3/s

First Floor Canopy Details

Model	Extract Only Wall Canopy
Size	1600 mm x 800mm x 500mm
Extract Rate and Pressure Drop	120Pa
Extract Spigots	355mm dia
Supply Rate and Pressure Drop	N/A
Supply Spigots	N/A
Filters	??
Lighting	9W LED Downlight IP65 COOL White & Chrome Bezel

First Floor Fan Details

Kitchen Extract	
Model	Woods Maxfan 35 EJ353266 (1 Phase)
Air Flow Rate	0.60m3/s
Spigots Air Flow Rate	0.60m3/s
Kitchen Make-Up Air	
Model	S&P 450 HCBB/4-450
Air Flow Rate	N/A
Spigots Air Flow Rate	N/A

INSTALLATION NOTES

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Client
IPR Interiors Ltd

Drawing Title
ventilation Services & setting out
first floor plan

Project Address
70 Bury Old Road, Manchester,
M8 5BN

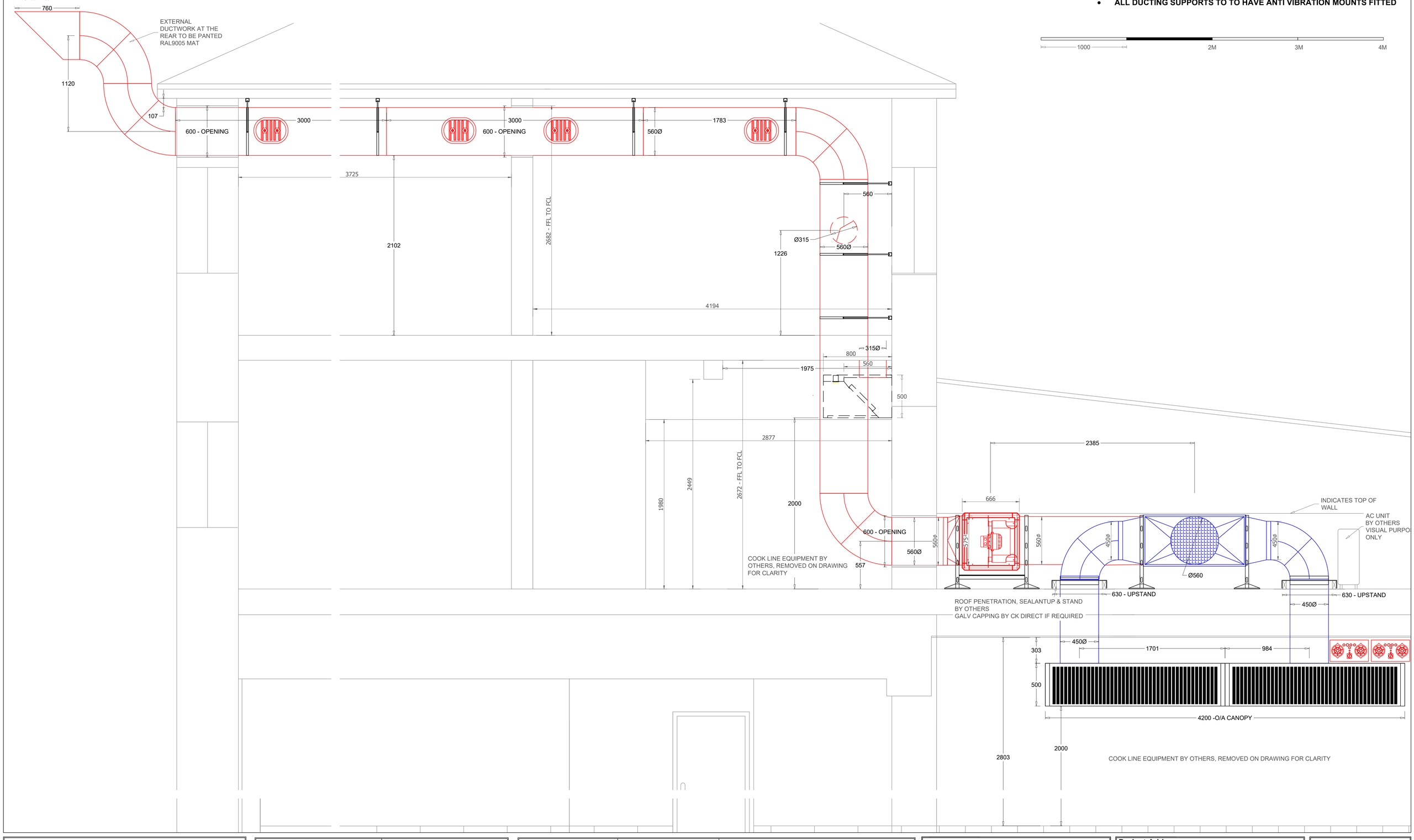
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Scale - Paper Size
1:20 - A1

Drawn By
Simon Locke-Wheaton

1 SECTION VIEW A-A
SCALE - 1:20



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1000 2M 3M 4M

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Revision Information | **Drawing No and Revision** SLW172303-DRG-001-R5 **APPROVAL**

Revision No	Revision Date	Revision Information
R1	22/06/2021	First Issue
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IPR Interiors Ltd

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Drawing Title
ventilation Services & setting out section view A-A

Project Title
70 Bury Old Road

Issue Date
22/06/2021

Scale - Paper Size
1:20 - A1

Drawn By
Simon Locke-Wheaton

LONGAR® Type 11
Pleated Panel Filters





LONGAR® TYPE 11 FEATURES:
- Moisture resistant cardboard frame.
- G4 efficiency to provide a good base level of filtration.
- Fully supported media bonded to expanded mesh grid.
- The filtering media is bonded to the case to eliminate air by-pass.
- Strong, robust construction.
- Extended surface area.
- High dust holding capacity.
- Dimensions of product are part marked into frame for positive ID.

APPLICATIONS
- Hotels
- Offices
- Food production
- Air conditioning
- Hospitals
- Pre-filtration asbestos removal

LONGAR® TYPE 11 PLEATED PANEL FILTER
Used in a variety of HEVAC applications where higher level air cleanliness is needed over the standard pre filters. Glass media is unacceptable in food and pharmaceutical industries and in some hospital areas. Especially useful where the installation requires a combination of high arrestance coupled with control over smaller particles. The high capacity version is selected when space is at a premium; filter sizes match the rated capacities of bag filters.

CONSTRUCTION / MATERIAL SPECIFICATIONS
The LONGAR® Type 11 is manufactured with pleated synthetic media, and an expanded diamond grid with 97% open area. The casing is constructed from a heavy duty rigid water resistant card, with support members along the diagonals. The media is bonded to the support grid and the frame in order to avoid the possibility of air bypass. The case is designed for minimum resistance and maximum free area, the case is also crease formed to stop moisture ingress. The product can be manufactured in a variety of depths from 22mm to 97mm deep. Optional metal frame available as shown above.

22mm (1") Filters are 9 Pleats per 300mm (1ft)
47mm (2") Filters are 9 Pleats per 300mm (1ft)
97mm (4") Filters are 9 Pleats per 300mm (1ft)

TYPE 11 HIGH CAPACITY PLEATED PANEL
We are able to manufacture the Type 11 with increased filter media over the standard product, for situations where an increase in air volume is required.

22mm (1") Filters are 12 Pleats per 300mm (1ft)
47mm (2") Filters are 12 Pleats per 300mm (1ft)
97mm (4") Filters are 12 Pleats per 300mm (1ft)

TYPE 11 HIGH EFFICIENCY PLEATED PANEL
Where situations arise we manufacture the Type 11 with a higher grade of filter media, F6, F7, F8 are available.

LONGAR® TYPE 11 IMPREGNATED CARBON PLEATED PANELS
For less demanding situations the use of impregnated media can be considered. They utilise non-woven synthetic media, which is then impregnated with activated carbon. They offer an alternative to our granular carbon systems however they cannot offer either the life span or dwell time that can be found with the rest of the range.

For technical specifications, part numbers and ordering information, please see overleaf.

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

LONGAR® Type 11
Pleated Panel Filters

FITTING INSTRUCTIONS
- Fit products, observe direction of airflow indicator

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

MAINTENANCE
- 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 should be used where required.
- Filters should not be cleaned but replaced when required in accordance with maintenance schedule set by the installation contractor.

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

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF24824822	248 x 248 x 22mm	254 x 254 x 25mm	0.07kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 0.87"	10 x 10 x 1"	0.15lbs	
PPF49624822	496 x 248 x 22mm	508 x 254 x 25mm	0.14kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 9.76 x 0.87"	20 x 10 x 1"	0.31lbs	
PPF29329322	293 x 293 x 22mm	304 x 304 x 25mm	0.09kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 0.87"	12 x 12 x 1"	0.21lbs	
PPF59429422	594 x 294 x 22mm	609 x 304 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.39 x 11.57 x 0.87"	24 x 12 x 1"	0.41lbs	
PPF37537522	375 x 375 x 22mm	381 x 381 x 25mm	0.15kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.76 x 14.76 x 0.87"	15 x 15 x 1"	0.34lbs	
PPF49637522	496 x 375 x 22mm	508 x 381 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 0.87"	20 x 15 x 1"	0.41lbs	
PPF49639622	496 x 396 x 22mm	508 x 406 x 25mm	0.20kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 0.87"	20 x 16 x 1"	0.43lbs	
PPF62039622	620 x 396 x 22mm	635 x 406 x 25mm	0.24kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 0.87"	25 x 16 x 1"	0.53lbs	
PPF44844822	448 x 448 x 22mm	457 x 457 x 25mm	0.19kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.64 x 17.64 x 0.87"	18 x 18 x 1"	0.42lbs	
PPF49649622	496 x 496 x 22mm	508 x 508 x 25mm	0.24kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 0.87"	20 x 20 x 1"	0.52lbs	
PPF59649622	596 x 496 x22mm	609 x 508 25mm	0.27kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 0.87"	24 x 20 x 1"	0.60lbs	
PPF62049622	620 x 496 x 22mm	635 x 508 x 25mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 0.87"	25 x 20 x 1"	0.63lbs	
PPF59659622	596 x 596 x 22mm	609 x 609 x 25mm	0.31kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 0.87"	24 x 24 x 1"	0.68lbs	
PPF24824847	248 x 248 x 47mm	254 x 254 x 50mm	0.12kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 1.85"	10 x 10 x 2"	0.26lbs	

Pressure drop and airflow information available on request.

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

LONGAR® Type 11
Pleated Panel Filters

TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF49724347	497 x 243 x 47mm	508 x 254 x 50mm	0.21kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.57 x 9.57 x 1.85"	20 x 10 x 2"	0.45lbs	
PPF29329347	293 x 293 x 47mm	304 x 304 x 50mm	0.15kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 1.85"	12 x 12 x 2"	0.33lbs	
PPF59628947	596 x 289 x 47mm	609 x 304 x 50mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 11.38 x 1.85"	24 x 12 x 2"	0.61lbs	
PPF37237247	372 x 372 x 47mm	381 x 381 x 50mm	0.22kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.65 x 14.65 x 1.85"	15 x 15 x 2"	0.48lbs	
PPF39439447	394 x 394 x 47mm	406 x 406 x 50mm	0.25kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	15.51 x 15.51 x 1.85"	16 x 16 x 2"	0.54lbs	
PPF49637547	496 x 375 x 47mm	508 x 381 x 50mm	0.27kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 1.85"	20 x 15 x 2"	0.60lbs	
PPF49639647	496 x 396 x 47mm	508 x 406 x 50mm	0.29kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 1.85"	20 x 16 x 2"	0.63lbs	
PPF62039647	620 x 396 x 47mm	635 x 406 x 50mm	0.34kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 1.85"	25 x 16 x 2"	0.75lbs	
PPF44644647	446 x 446 x 47mm	457 x 457 x 50mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.56 x 17.56 x 1.85"	18 x 18 x 2"	0.61lbs	
PPF49649647	496 x 496 x 47mm	508 x 508 x 50mm	0.34kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 1.85"	20 x 20 x 2"	0.75lbs	
PPF59639647	596 x 396 x 47mm	609 x 406 x 50mm	0.33kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 15.59 x 1.85"	24 x 16 x 2"	0.73lbs	
PPF59649647	596 x 496 x 47mm	609 x 508 x 50mm	0.39kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 1.85"	24 x 20 x 2"	0.87lbs	
PPF62049647	620 x 496 x 47mm	635 x 508 x 50mm	0.39kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 1.85"	25 x 20 x 2"	0.87lbs	
PPF59659647	596 x 596 x 47mm	609 x 609 x 50mm	0.47kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 1.85"	24 x 24 x 2"	1.02lbs	
PPF24824897	248 x 248 x 97mm	254 x 254 x 102mm	0.22kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	9.76 x 9.76 x 3.82"	10 x 10 x 4"	0.49lbs	
PPF49624897	496 x 248 x 97mm	508 x 254 x 102mm	0.38kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 9.76 x 3.82"	20 x 10 x 4"	0.84lbs	
PPF29329397	293 x 293 x 97mm	304 x 304 x 102mm	0.28kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	11.54 x 11.54 x 3.82"	12 x 12 x 4"	0.61lbs	
PPF59728997	597 x 289 x 97mm	609 x 304 x 102mm	0.48kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.50 x 11.38 x 3.82"	24 x 12 x 4"	1.06lbs	

Pressure drop and airflow information available on request.

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TECHNICAL SPECIFICATIONS

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Available Efficiencies *
PPF37537597	375 x 375 x 97mm	381 x 381 x 102mm	0.41kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	14.76 x 14.76 x 3.82"	15 x 15 x 4"	0.90lbs	
PPF39639697	396 x 396 x 97mm	406 x 406 x 102mm	0.44kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	15.59 x 15.59 x 3.82"	16 x 16 x 4"	0.97lbs	
PPF49637597	496 x 375 x 97mm	508 x 381 x 102mm	0.49kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 14.76 x 3.82"	20 x 15 x 4"	1.08lbs	
PPF49639697	496 x 396 x 97mm	508 x 406 x 102mm	0.52kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 15.59 x 3.82"	20 x 16 x 4"	1.15lbs	
PPF62039697	620 x 396 x 97mm	635 x 406 x 102mm	0.61kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 15.59 x 3.82"	25 x 16 x 4"	1.33lbs	
PPF44644697	446 x 446 x 97mm	457 x 457 x 102mm	0.52kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	17.56 x 17.56 x 3.82"	18 x 18 x 4"	1.14lbs	
PPF49649697	496 x 496 x 97mm	508 x 508 x 102mm	0.66kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	19.53 x 19.53 x 3.82"	20 x 20 x 4"	1.46lbs	
PPF59639697	596 x 396 x 97mm	609 x 406 x 102mm	0.59kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 15.59 x 3.82"	24 x 16 x 4"	1.29lbs	
PPF59649697	596 x 496 x 97mm	609 x 508 x 102mm	0.69kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 19.53 x 3.82"	24 x 20 x 4"	1.52lbs	
PPF62049697	620 x 496 x 97mm	635 x 508 x 102mm	0.71kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	24.41 x 19.53 x 3.82"	25 x 20 x 4"	1.56lbs	
PPF59659697	596 x 596 x 97mm	609 x 609 x 102mm	0.79kgs	G4, F6, F7, F8, High Capacity, Carbon Impregnated Pleated Panels
	23.46 x 23.46 x 3.82"	24 x 24 x 4"	1.74lbs	
FINAL RECOMMENDED PRESSURE LOSS: 250 PASCALS				

Pressure drop and airflow information available on request.

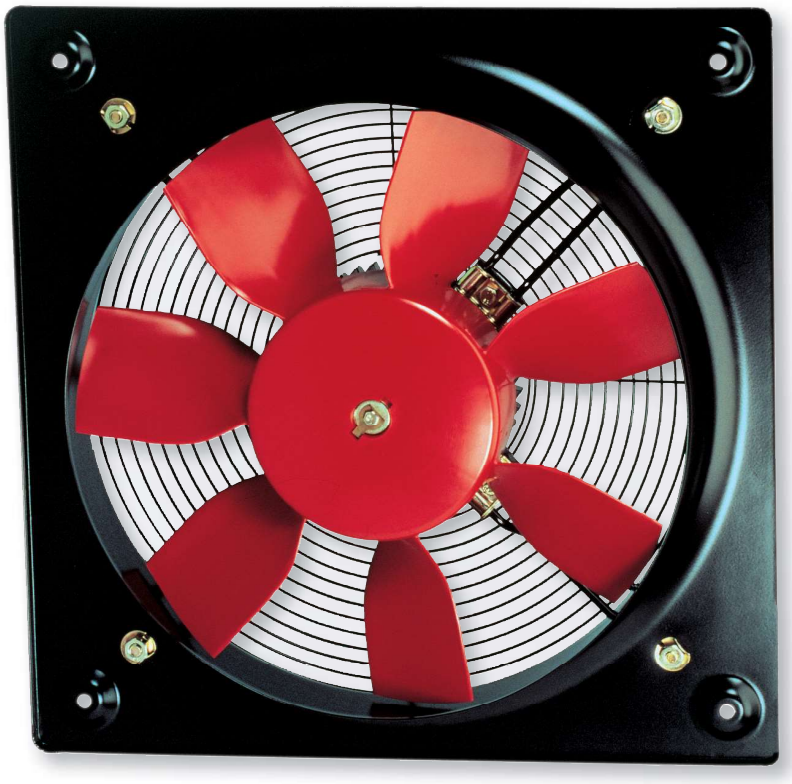
- *Efficiency required to be confirmed at a time of ordering.

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.



Range of low profile plate mounted axial fans fitted with plastic impellers with fiberglass, single phase motor (HCFB) or three phase motor (HCFT), IP65 (1), Class F insulation (2), equipped with thermal protection (3).
(1) Ø 800, 900 and 1000 models are IP55.
(2) Working temperatures from -40ºC up to +70ºC. Except models 4-710 suitable up to +55ºC and models Ø 800 to 1000 suitable for usage in environments from -20ºC to +40ºC.
(3) Except models 800 to 1000.

Motors
Available, depending upon the model, with single or three phase motors in 2, 4 or 6 poles.
All motors are speed controllable by autotransformer except 2 pole and /4-630, 710, T/800, T/900 and T/1000.
Three phase models are speed controllable by inverter.
Electrical supplies:
Single phase 220-240V-50Hz. (Capacitor located inside the wiring terminal box).
Three phase 220-240/380-415V-50Hz or 380-415V-50Hz. (See characteristic chart).

Additional information
Standard air direction: form (A) configuration.
(Motor over Impeller).

On request
Inlet finger proof guard for models Ø 800 to 1000.

ErP OK

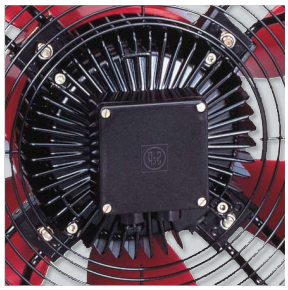
IP65(1)
PROTECTION



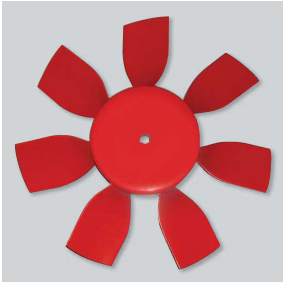
Compact design
Compact design created by the combination of the motor with the factory matched direct drive wrap around impeller hub.



Corrosion resistance
Mounting plate, motor support and finger proof guard protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box
Wiring terminal box with cable gland PG-11.



Impeller dynamically balanced
Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.



Manufacturing variations
Multiple manufacturing variations, depending on the type of installation and use conditions.



Configuration for models Ø 800 to 1000
Special design of motor over impeller, which provides compactness and tightness IP55.



Range of low profile plate mounted axial fans fitted with aluminium impellers and single phase motor (HCBB) or three phase motor (HCBT), IP65 (1), Class F insulation (2), equipped with thermal protection (3).
(1) Models 800, 900 and 1000 are IP55.
(2) Working temperatures from -40ºC up to +70ºC.
Except models 4-710 suitable up to +55ºC and models Ø 800, 900 and 1000 suitable for usage in environments from -20ºC to +40ºC.
(3) Except models Ø 800 to 1000.

Motors
Available, depending upon the model, with single or three phase motors in 4 or 6 poles. All motors are speed controllable by autotransformer except models /4-630, B/710, T/4-710, T/800, T/900 and T/1000. Three phase models are speed controllable by inverter.
Electrical supplies:
Single phase 220-240V-50Hz. (Capacitor located inside the wiring terminal box).
Three phase 220-240/380-415V-50Hz or 380-415V-50Hz.
(See characteristic chart).

Additional information
Standard air direction: form (A) configuration. (Motor over Impeller).

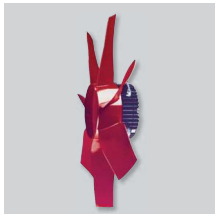
On request
Inlet finger proof guard for models Ø 800 to 1000.

Specific applications

Versions

ErP OK

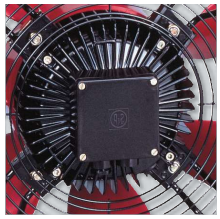
IP65 (1)
PROTECTION



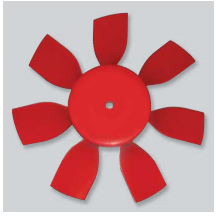
Compact design
Compact design created by the combination of the motor with the factory matched direct drive wrap around impeller hub.



Corrosion resistance
Mounting plate, motor support and finger proof guard protected by cataforesis primer and black polyester paint finish. Stainless steel screws.



Terminal box
Wiring terminal box with cable gland PG-11.



Impeller dynamically balanced
Impellers are dynamically balanced, according to ISO 1940 standard, giving vibration free operation.



Manufacturing variations Multiple manufacturing variations, depending on the type of installation and use conditions.



Configuration for models Ø 800 to 1000
Special design of motor over impeller, which provides compactness and tightness IP55.

ATEX Versions HCBT
On request, explosion proof versions in accordance with ATEX Directive, for three phase models.
- Motors IP55, Class F
- 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.
  For models 800 to 1000mm
  Ex II 2G Ex d IIB T4
  Ex II 2G Ex d IIB+H2 T4 (with Ex d IIC T4)
- ATEX Increased safety-Gas
  Except models HCBT/ 4-250, HCBT/ 6-355, HCBT/ 6-400
  Available model HCBT/ 6-400 with 230/400 V motor
  Available models to HCBT-1000
  Ex II 2G Ex e II T3
- ATEX Dust
  In standard ATEX version, ATEX motors for dust are without thermal protection.
  If used with frequency inverter, ATEX motors for dust with a PTC-type thermal protection must be specified at order.
  For models 800 to 1000mm
  Suspended flammable particles and non-conductive dust:
  Ex II 3D Ex tc IIIB T125ºC
  Conductive dust:
  Ex II 3D Ex tc IIIC T125ºC (with IP65 motor)

Working temperatures for ATEX versions:
-20ºC to +55ºC
  models HCBT/4-315 to HCBT/4-710
  models HCBT/6-450 to HCBT 6-710
-20ºC to +40ºC
  model HCBT/4-800 to 1000
  model HCBT/6-800 to 1000
To select HCBT ATEX refer to Easyvent.

Note electrical data may vary for ATEX motors.

TECHNICAL CHARACTERISTICS WITH ALUMINIUM IMPELLERS

Before making any electrical connection ensure that the voltage and frequency of the mains electrical supply matches that of the fan data plate label.

Model	Speed (r.p.m.)	Diameter (mm)	Maximum absorbed power (W)	Maximum current (A)		Sound pressure level* (dB(A))	Maximum airflow (m^3/h)	Weight (kg)	Speed controller		Inverter control	
				230 V	400 V				REB	RMT**	VFTM**	VFKB**
SINGLE PHASE 4 POLE												
HCBB/4-250/H	1325	250	84	0,4	–	49	1.130	5	REB-1	–	–	–
HCBB/4-315/H	1235	315	124	0,7	–	55	2.220	7	REB-1	–	–	–
HCBB/4-355/H	1385	355	193	0,9	–	59	3.590	8	REB-2,5	–	–	–
HCBB/4-400/H	1360	400	315	1,5	–	62	4.830	9	REB-2,5	–	–	–
HCBB/4-450/H	1410	450	626	2,8	–	65	7.180	13	REB-5	–	–	–
HCBB/4-500/H	1370	500	762	3,3	–	68	8.850	16	REB-5	–	–	–
HCBB/4-560/H	1390	560	1433	6,5	–	70	13.400	22	REB-10	–	–	–
HCBB/4-630/H	1360	630	1879	8,3	–	71	16.720	25	–	–	–	–
SINGLE PHASE 6 POLE												
HCBB/6-355/H	900	355	84	0,4	–	48	2.230	8	REB-1	–	–	–
HCBB/6-400/H	845	400	112	0,5	–	51	3.010	9	REB-1	–	–	–
HCBB/6-450/H	935	450	191	0,8	–	54	4.400	13	REB-2,5	–	–	–
HCBB/6-500/H	915	500	244	1,1	–	57	5.620	16	REB-2,5	–	–	–
HCBB/6-560/H	930	560	449	1,9	–	59	8.950	22	REB-2,5	–	–	–
HCBB/6-630/H	915	630	588	2,9	–	62	10.950	25	REB-5	–	–	–
THREE PHASE 4 POLE												
HCBT/4-250/H	1330	250	81	0,3	0,2	49	1.120	5	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-315/H	1330	315	125	0,5	0,3	55	2.380	7	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-355/H	1380	355	181	0,8	0,5	59	3.530	8	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-400/H	1340	400	283	1,2	0,7	62	5.020	9	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-450/H	1350	450	547	1,7	1,0	65	6.800	13	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/4-500/H	1390	500	809	2,7	1,6	68	9.140	16	–	RMT-2,5	VFTM-Tri 0,55	VFKB-45
HCBT/4-560/H	1390	560	1287	4,0	2,3	70	12.950	22	–	RMT-2,5	VFTM-Tri 0,75	VFKB-45
HCBT/4-630/H	1385	630	1736	5,4	3,1	73	16.840	25	–	–	VFTM-Tri 1,1	VFKB-45
HCBT/4-710/H	1350	710	2554	7,6	4,4	74	22.400	27	–	–	VFTM-Tri 2,2	VFKB-45
HCBT/4-800/L-X-1,5	1410	800	2632	7,3	4,2	78	23.290	37	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/4-800/H-X-3	1440	800	4595	12,8	7,4	84	33.100	52	–	–	VFTM-Tri 4	VFKB-48
HCBT/4-900/L-X-3	1450	900	3909	12,0	6,9	82	34.270	62	–	–	VFTM-Tri 3	VFKB-48
HCBT/4-900/H-X-5,5	1455	900	7893		13,4	87	46.270	96	–	–	VFTM-Tri 5,5	–
HCBT/4-1000/L-X-3	1415	1000	5048	14,2	8,2	86	39.910	67	–	–	VFTM-Tri 4	VFKB-48
HCBT/4-1000/H-X-7,5	1470	1000	8675		14,6	93	53.700	101	–	–	VFTM-Tri 7,5	–
THREE PHASE 6 POLE												
HCBT/6-355/H	900	355	91	0,3	0,2	48	2.270	8	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-400/H	840	400	120	0,5	0,3	51	3.050	9	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-450/H	925	450	198	0,9	0,5	54	4.620	13	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-500/H	905	500	282	1,1	0,6	57	6.190	16	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-560/H	895	560	401	1,4	0,8	59	8.650	22	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-630/H	910	630	596	2,3	1,3	62	10.950	25	–	RMT-1,5	VFTM-Tri 0,37	VFKB-45
HCBT/6-710/H	950	710	953	4,7	2,7	65	15.350	27	–	RMT-5	VFTM-Tri 1,5	VFKB-45
HCBT/6-800/L-X-0,55	940	800	1025	3,3	1,9	73	17.600	31	–	–	VFTM-Tri 0,75	VFKB-45
HCBT/6-800/H-X-0,75	935	800	1309	4,2	2,4	75	20.630	36	–	–	VFTM-Tri 1,1	VFKB-45
HCBT/6-900/L-X-1,1	960	900	1341	4,8	2,8	74	23.700	54	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-900/H-X-1,5	955	900	2289	7,3	4,2	78	32.300	57	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-1000/L-X-1,1	940	1000	1855	5,9	3,4	79	28.810	56	–	–	VFTM-Tri 1,5	VFKB-45
HCBT/6-1000/H-X-1,5	940	1000	2392	7,7	4,4	83	34.300	60	–	–	VFTM-Tri 2,2	VFKB-45

* Sound pressure level measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1,5 meters.
** Three phase speed controllers (RMT) or inverter control (VFKB/VFTM): three phase 400V.

REFERENCE

H	C	F	T	/	4	-	4	0	0	/	H		A			
1	2	3	4		5		6				7		8	9		

1 - H: Compact plate axial fan.
2 - C: Series designation.
3 - Impeller type:
- **F:** Ø 250-Ø 630 Fixed blade plastic impeller. Ø 710 - Ø 1000 Aluminium impeller hub + adjustable plastic blade impellers.
- **G:** Adjustable plastic blade impellers.
- **B:** Ø 250-Ø 400 Fixed blade aluminium impeller Ø 450 - Ø 1000 Adjustable blade aluminium impeller.

4 - Electrical supply:
- **B:** Single phase.
- **T:** Three phase.

5 - Number of poles:
- **2:** (approx. 2900 rpm - 50 Hz)
- **4:** (approx. 1400 rpm - 50 Hz)
- **6:** (approx. 900 rpm - 50 Hz)

6 - Nominal diameter of impeller (mm).
7 - Pitch angle.
- **H:** High.
- **I, L:** Low.

8 - Direction of air:
- **A:** Motor over impeller.

9 - Special construction:
- **X:** Motor support without inlet finger guard.
- **L:** Weatherproof protected.
- **C:** Condensation drain holes on motor.
- **EX:** Explosion proof versions in accordance to ATEX Directive, for three phase models: -EXE: Increased safety Ⓔx II2G EExeIIT3 -EXD: Flame proof, only for models 800 and 1000 Ⓔx II2G EExdIIBT5 or EExdIICT4
- **G:** Special corrosion treatment for agricultural applications.
- **TF:** With anticorrosive Teflon paint finish.

SUPPLY VOLTAGES AND FREQUENCIES



Mains supply voltage	Motor type	Connection	Speed
SINGLE PHASE 220V 50Hz, 240V 50Hz	**230V 50Hz**	**See wiring diagram**	**High**
THREE PHASE 220V 50Hz 240V 50Hz	**230/400V 50Hz**	△	**High**
		Y	**Low***
THREE PHASE 380V 50Hz 415V 50Hz	**230/400V 50Hz**	Y	**High**
	400V 50Hz	△	**High**
		Y	**Low***

* From sizes 450 up to 630 mm diameter.

ACOUSTIC CHARACTERISTICS

The sound levels shown in the technical characteristic chart and performance curves, correspond to the value of sound pressure dB(A), measured in free field conditions at a distance equivalent to three times the diameter of the impeller with a minimum of 1.5 meters.

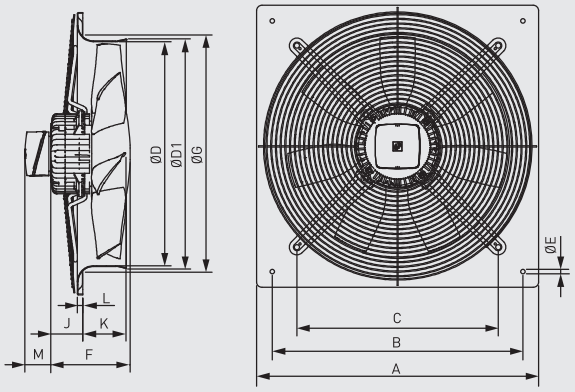
Sound power level spectrum in dB(A) at the corresponding frequency band in Hz and the point of maximum flow.

Model	63	125	250	500	1000	2000	4000	8000	LwA
HCGB/2-315	50	61	68	70	72	69	64	58	77
HCGT/2-315	55	66	73	75	77	74	69	63	82
HCGB/2-355	55	66	73	75	77	74	69	63	82
HCGT/2-355	55	70	69	77	82	78	73	66	85

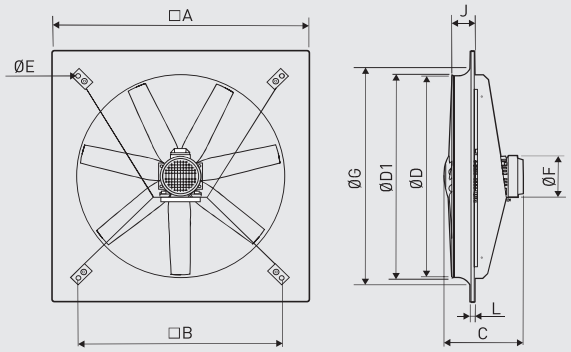
Model	63	125	250	500	1000	2000	4000	8000	LwA
/4-250/H	31	45	52	57	58	57	52	44	63
/4-315/H	42	53	60	62	64	61	56	50	69
/4-355/H	43	58	57	65	70	66	61	54	73
/4-400/H	48	61	62	68	73	69	66	57	76
/4-450/H	46	65	62	68	75	74	69	62	79
/4-500/H	49	68	68	74	78	76	72	65	82
/4-560/H	57	70	74	78	80	78	74	67	85
/4-630/H	57	72	76	81	85	82	79	72	89
/4-710/H	58	75	83	85	87	85	81	72	92
/4-800/L	58	77	87	93	93	89	83	76	97
/4-800/H	64	83	93	99	99	95	89	82	103
/4-900/L	59	81	91	97	98	94	88	80	102
/4-900/H	64	86	96	102	103	99	93	85	107
/4-1000/L	62	85	95	101	102	98	93	84	106
/4-1000/H	69	92	102	107	109	105	100	90	113

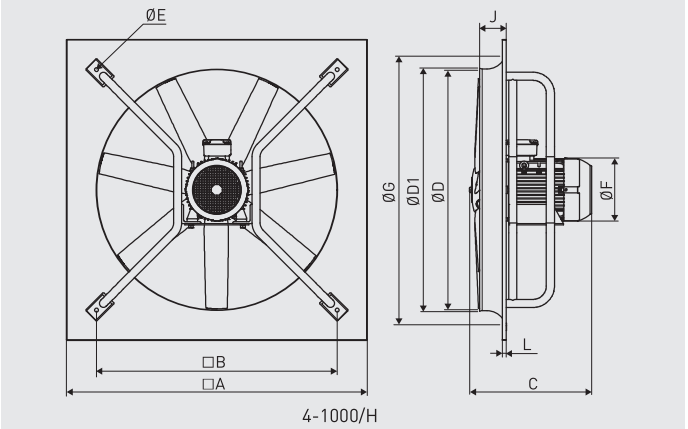
Model	63	125	250	500	1000	2000	4000	8000	LwA
/6-315/H	32	43	50	52	54	51	46	40	59
/6-355/H	32	47	46	54	59	55	50	43	62
/6-400/H	37	50	51	57	62	58	55	46	65
/6-450/H	35	54	51	57	64	63	58	51	68
/6-500/H	38	57	57	63	67	65	61	54	71
/6-560/H	46	59	63	67	69	67	63	56	74
/6-630/H	46	61	65	70	74	71	68	61	78
/6-710/H	49	66	74	76	78	76	72	63	83
/6-800/L	52	71	81	87	87	83	77	70	91
/6-800/H	54	73	83	89	89	85	79	72	93
/6-900/L	51	73	83	89	90	86	80	72	94
/6-900/H	55	77	87	93	94	90	84	76	98
/6-1000/L	56	78	89	94	96	92	86	77	100
/6-1000/H	60	83	93	99	100	96	91	82	104

DIMENSIONS (mm)



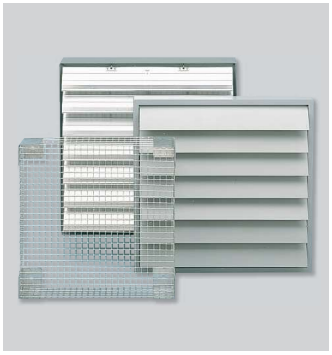
Model	A	B	C	Ø D	Ø D1	Ø E	F Number of poles /2	F Number of poles /4	F Number of poles /6	Ø G	J Number of poles /2	J Number of poles /4	J Number of poles /6	K	L	M Three phase	M Single phase
250	315	260	220	254	261	10		122		294		59		53	12	60	65
315	400	330	280	315	320	10	129	122	122	329	45	32	32	68	12	60	65
355	450	380	315	355	363	10	129	129	129	371	45	45	45	75	12	60	65
400	500	420	355	400	410	10		129	129	422		40,5	40,5	78	12	60	65
450	560	480	400	450	457	10		150	150	476		48	48	91	12	60	65
500	630	560	450	500	512	10		150	150	536		44,5	44,5	97	12	60	65
560	710	630	510	560	570	10		218,5	150	596		110,5	42	98,5	12	60	65
630	800	710	580	630	640	12		218,5	150	674		110,5	41	103	12	60	65
710	900	800	636	710	720	12		220	218,5	733		114	134	91,5	16,5	60	65

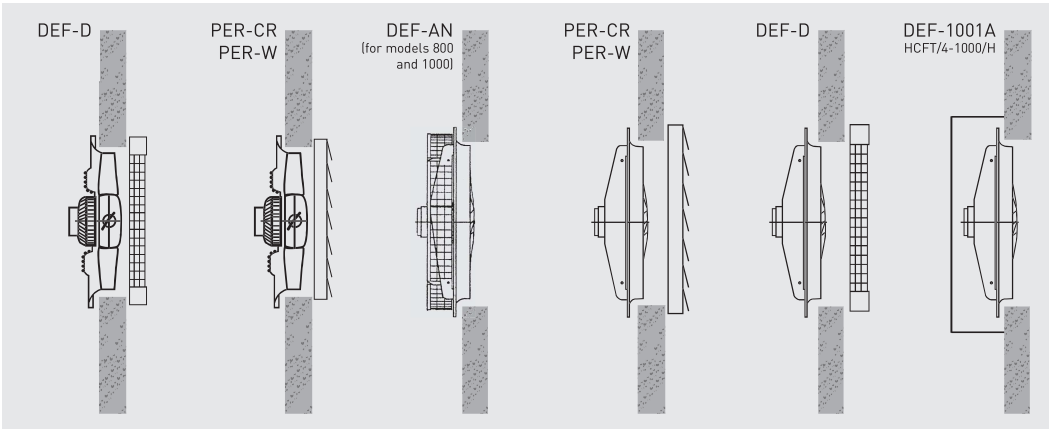




Modelo	A	B	Ø D	Ø D1	Ø E	J	Ø G	C /4 L	C /4 H	C /6 L	C /6 H	Ø F /4 L	Ø F /4 H	Ø F /6 L	Ø F /6 H
800	1000	800	800	810	18	92	926	363	442	318	363	180	200	160	180
900	1120	900	900	910	18	120	1060	442	512	400	400	200	280	200	200
1000	1250	1000	1000	1010	18	110	1154	442	-	345	400	200	-	200	200
4-1000/H	1250	1000	1000	1010	16	110	1154	-	512	-	-	-	280	-	-

MOUNTING ACCESSORIES





Model HCFB/HCFT HCBB/HCBT	Wire Protection Guards		Exhaust Side Louvre Shutters		
	Outlet	Inlet	Plastic	Aluminium	ATEX version*
250	DEF-250 D	–	PER-250 W	PER-250 CR	PER-315 Ex
315	DEF-325 D	–	PER-355 W	PER-355 CR	PER-315 Ex
355	DEF-375 D	–	PER-355 W	PER-355 CR	PER-355 Ex
400	DEF-450 D	–	PER-400 W	PER-400 CR	PER-400 Ex
450	DEF-450 D	–	PER-450 W	PER-450 CR	PER-450 Ex
500	DEF-525 D	–	PER-500 W	PER-500 CR	PER-500 Ex
560	DEF-630 D	–	PER-560 W	PER-630 CR	PER-560 Ex
630	DEF-630 D	–	PER-630 W	PER-630 CR	PER-630 Ex
710	DEF-800 D	–	PER-710 W	PER-710 CR	PER-710 Ex
800	DEF-800 D	DEF-800 AN	PER-800 W	PER-800 CR	-
/4-900/H	DEF-1000 D	DEF-900 AN	PER-1000 W	PER-1000 CR	-
/4-900/L	DEF-1000 D	DEF-901 AN	PER-1000 W	PER-1000 CR	
/6-900	DEF-1000 D	DEF-901 AN	PER-1000 W	PER-1000 CR	-
1000	DEF-1000 D	DEF-1000 AN	PER-1000 W	PER-1000 CR	-
/4-1000 / H	DEF-1000 D	DEF-1001 AN	PER-1000 W	PER-1000 CR	-

* Three phase speed controllers (RMT) or inverter control (VFKB/VFTM): three phase 400V.

ELECTRICAL ACCESSORIES



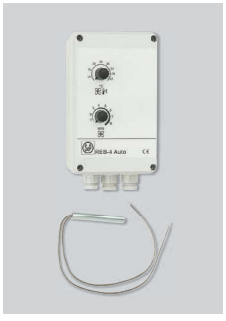
REB-1N / REB-2,5N
Single phase electronic speed controllers.



REB-5
REB-10
Single phase electronic speed controllers.



RMT
Three phase auto transformer speed controllers.



REB-4 Auto
Electronic single phase speed controllers with temperature sensor. For agricultural applications.



VFTM TRI IP54
Adjustable frequency drive for three phase motors from 0,37 to 15 kW. 230 V or 400 V.



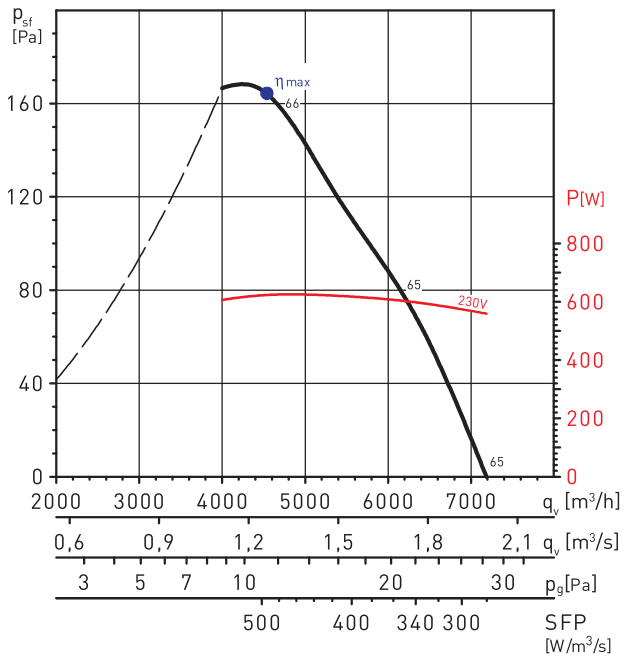
VFKB IP65
Adjustable frequency drives for three phase motors from 0,37 to 4 kW 230 V or 400 V.



COM D/S
To connect three phase fans with 400 V motor.
For three phase models.

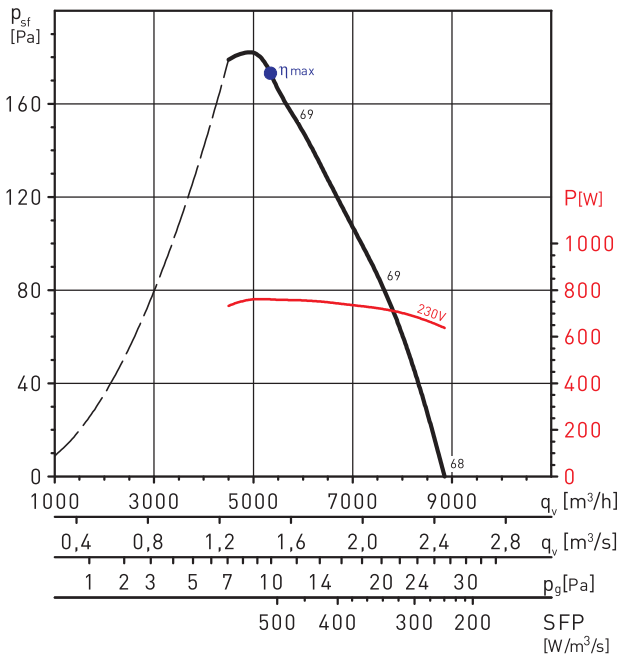
PERFORMANCE CURVES - 4 POLE MOTORS

HCBB/4-450/H



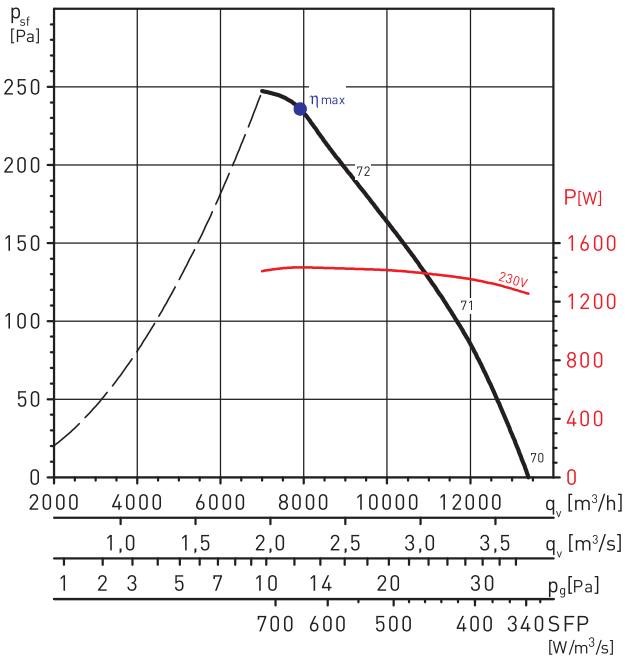
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	33,2	40,8	0,623	4538	164	1390

HCBB/4-500/H



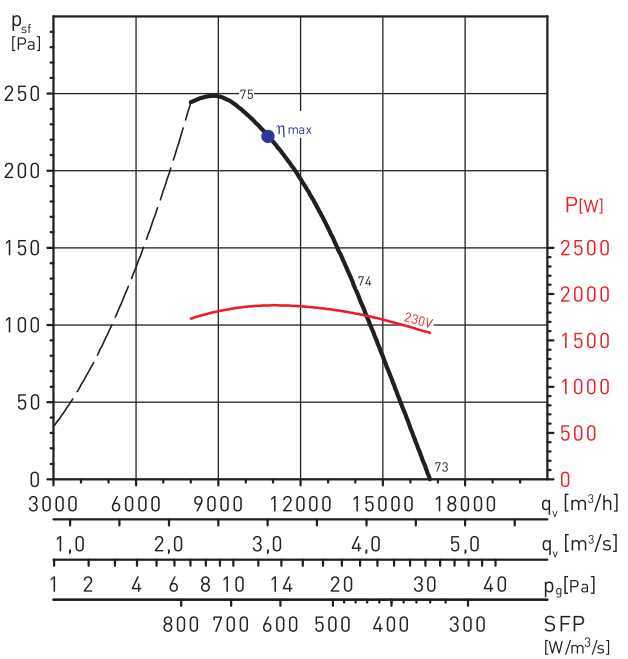
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	33,6	40,7	0,760	5336	172	1322

HCBB/4-560/H



MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	36,0	41,3	1,433	7896	235	1367

HCBB/4-630/H



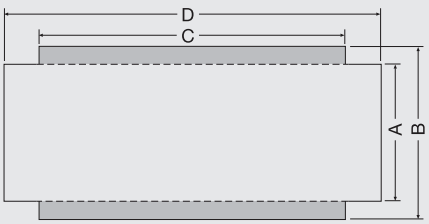
MC	EC	VSD	SR	η[%]	N	[kW]	[m³/h]	[Pa]	[RPM]
A	Static	No	1	35,6	40,2	1,878	10817	223	1305



SIL

Sound attenuator to reduce noise transmission to ducting system.
In galvanized steel.

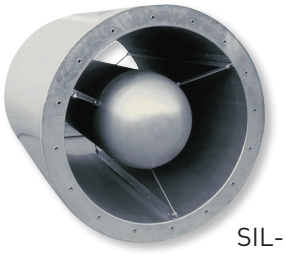
Model	ØA (mm)	ØB (mm)	C (mm)	D (mm)	Weight (kg)	Attenuation in dB							
						63	125	250	500	1000	2000	4000	8000
SIL 125	125	225	600	700	5,08	4	6	10	19	28	33	25	18
SIL 160	160	250	600	700	6,53	2	4	8	16	26	26	23	10
SIL 200	200	300	600	700	8,63	0	3	7	16	22	20	13	10
SIL 250	250	355	600	700	12,9	1	2	6	13	19	15	8	6
SIL 315	315	415	600	700	14,5	0	1	4	10	12	7	4	4
SIL 355	355	450	900	1050	16,9	1	2	6	14	18	12	6	5
SIL 400	400	500	900	1050	16,9	1	2	5	13	15	8	3	2
SIL 450	450	560	900	1050	22,4	1	2	5	13	13	6	4	3
SIL 500	500	630	900	1050	26,4	1	2	4	13	11	3	4	2
SIL 560	560	670	900	1050	26,5	2	4	7	12	12	12	10	2
SIL 630	630	710	900	1100	30,4	1	1	4	10	11	8	9	6



SIL-CZ / SIL-CZO



SIL-CZ



SIL-CZO

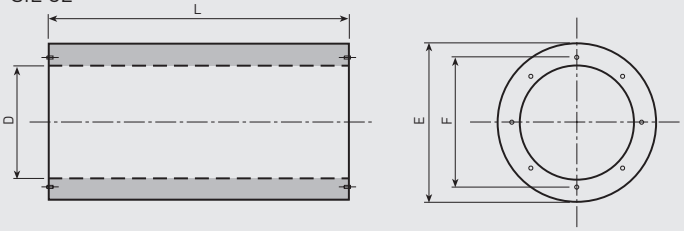
SIL CZ
Casing pre-galvanised sheet steel Z200 of thickness 0,8 mm.
Mounting flange with threaded insert.
Acoustic miner wool density 70kg/m^3 with erosion resistant facing with M0 fire resistance.

SIL CZO
As SIL CZ but with internal pod for extra attenuation.

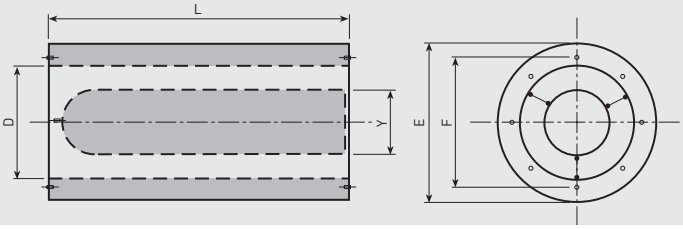
On request
Version with stainless steel casing.

Ø nominal (mm)	ØD (mm)	ØE (mm)	ØF (mm)	Holes		ØY (mm)	L		
				nº	Type		ØDx1	ØDx1,5	ØDx2
400	400	540	450	8	M10	200	400	600	800
450	450	610	500	8	M10	250	450	675	900
500	500	660	560	12	M10	250	500	750	1000
560	560	720	620	12	M10	300	560	840	1120
630	630	790	690	12	M10	300	630	945	1260
710	710	870	770	16	M10	380	710	1065	1420
800	800	1000	860	16	M10	380	800	1200	1600
900	900	1100	970	16	M12	380	900	1350	1800
1000	1000	1200	1070	16	M12	650	1000	1500	2000
1120	1120	1320	1190	20	M15	650	1120	1680	2240
1250	1250	1450	1320	20	M12	650	1250	1875	2500
1400	1400	1600	1470	20	M15	650	1400	2100	2800
1600	1600	1800	1680	24	M12	650	1600	2400	3200

SIL CZ



SIL CZO



Square Duct Fans - ESTOC Range



Features

- Sizes from 355 to 710 mm diameter
- Air flow 1,900 m^3/h (5.2 m^3/s)
- Static pressures up to 1150 Pa
- Maximum temperature from +40° C to +70` ° C (depending on the model)
- Adjustable external rotor motors
- Multiple outlet orientations

Electrical Supply

220 - 240V / 50Hz / 1 Ph
380 - 420V / 50Hz / 3 Ph

Sizes

355, 400, 450, 500, 560, 630 and 710.

Features and Construction

The Estoc casing is made from galvanized sheet steel with PentaPost construction and acoustic insulation made from mineral wool with a thickness of 20 mm.

Impeller

The Estoc has a backward curved centrifugal impellers made of plastic with galvanised steel support plates for those up to 450 mm. Fans with a diameter of 500 mm and larger have high efficiency backward curved centrifugal impellers made of aluminium.

Motor

The impellers together with the external rotor motors are dynamically balanced to quality standard G2,5 DIN ISO 19410

Speed Controllers

Speed is 100% infinitely variable using auto transformers or electronic control (please see page 99).

Product Code

Estoc 50-355-3

- ESTOC - Product Name
- 50 = Box Size ie, 50 = 500mm; 67 = 670mm; 80 = 800mm; 102 = 1020mm
- 355 = Spigot Diameter size
- 3 = 3 Phase or 1 Phase

Accessories

The range of accessories include dampers, flexible connectors, service doors, outlet covers, guards, side covering and insulating connections . A quick reference guide is shown below. For full details on these items please see pages 57-62.


SFC


SSC


SAD


SOC


SWR


CIG

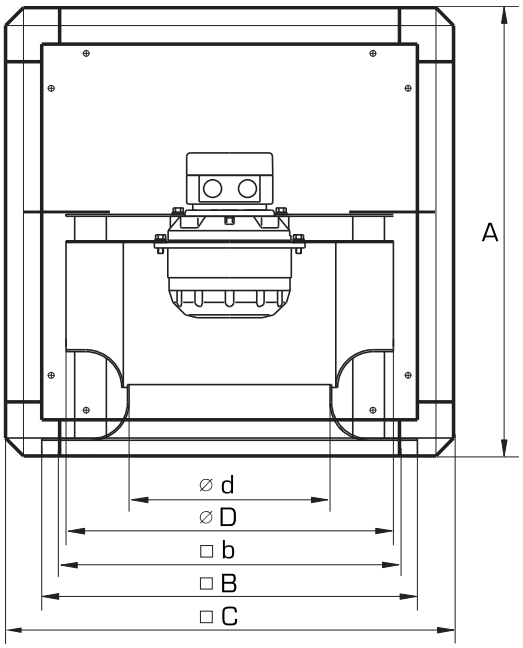
Electrical Details and Sound Levels

Product Code	Product Number	Speed rpm	Motor Frame	Electrical Supply	Electrical Current			Wiring Diagrams	Maximum Operating Temp °C	Breakout	**Speed Controllers
					Motor (kW)	Full Load Current (A)	Starting Current (A)			*Sound Level db(A) (3m)	Transformer
ESTOC 50-355-1	UB503514	1325	Integral	220-240 V-50 Hz-1 Ph	0.29	1.25	2.5	CD3005	55	33	T
ESTOC 50-355-3	BI101216	1355	Integral	380-420V-50 Hz-3 Ph	0.3	0.66	2.18	CD3003	50	34	I
ESTOC 50-355-3	UB503544	1355	Integral	380-420 V-50 Hz-3 Ph	0.3	0.66	2.18	CD3003	50	34	T
ESTOC 67-400-1	UB674414	1360	Integral	220-240 V-50 Hz-1 Ph	0.53	2.4	4.9	CD3005	45	45	T
ESTOC 67-400-3	BI101217	1335	Integral	380-420V-50 Hz-3 Ph	0.48	0.9	2.88	CD3003	50	37	I
ESTOC 67-400-3	UB674044	1355	Integral	380-420 V-50 Hz-3 Ph	0.48	0.9	2.88	CD3003	50	37	T
ESTOC 67-450-1	UB674514	1270	Integral	220-240 V-50 Hz-1 Ph	0.76	3.5	7.35	CD3005	45	41	T
ESTOC 67-450-3	BI101218	1240	Integral	380-420V-50 Hz-3 Ph	0.67	1.33	3.46	CD3003	50	37	I
ESTOC 67-450-3	UB674544	1240	Integral	380-420 V-50 Hz-3 Ph	0.67	1.33	3.46	CD3003	50	37	T
ESTOC 67-500-1	UB675514	1310	Integral	220-240 V-50 Hz-1 Ph	1.57	7.3	16.79	CD3005	40	45	T
ESTOC 67-500-3	BI101219	1380	Integral	380-420V-50 Hz-3 Ph	1.8	3.7	17.76	CD3003	40	44	I
ESTOC 67-500-3	UB675044	1380	Integral	380-420 V-50 Hz-3 Ph	1.8	3.7	17.76	CD3003	40	44	T
ESTOC 80-560-3	BI101220	1350	Integral	380-420V-50 Hz-3 Ph	2.5	4.8	20.16	CD3003	40	47	I
ESTOC 80-560-3	UB805644	1350	Integral	380-420 V-50 Hz-3 Ph	2.5	4.8	20.16	CD3003	40	44	T
ESTOC 80-630-3	BI101221	1380	Integral	380-420V-50 Hz-3 Ph	3.65	6.6	27.72	CD3003	45	55	I
ESTOC 80-630-3	UB806344	1380	Integral	380-420 V-50 Hz-3 Ph	3.65	6.6	27.72	CD3003	45	55	T
ESTOC 102-710-3	BI101222	890	Integral	380-420V-50 Hz-3 Ph	2.45	4.7	18.8	CD3003	45	49	I
ESTOC 102-710-3	UB107166	890	Integral	380-420 V-50 Hz-3 Ph	2.45	4.7	18.8	CD3003	45	49	T

Key: T = Transformer, I = Inverter

*Sound power levels are average dBA at 3 metres distance over sphere, under free field conditions and are presented for comparative purposes only. Values taken at the mid point on the wave at the highest point. **For speed controllers, please see page 99.

Drawings and Dimensions



Product Code	A	B □	b □	C □	Ø D	Ø E	Weight max (kg)
ESTOC 50-355	500	450	420	500	365	224	33
ESTOC 67-400	670	620	590	670	404	253	49
ESTOC 67-450	670	620	590	670	454	286	58
ESTOC 67-500	670	620	590	670	504	321	66
ESTOC 80-560	800	720	690	800	570	361	95
ESTOC 80-630	800	720	690	800	634	407	105
ESTOC 102-710	1020	940	910	1020	718	438	157

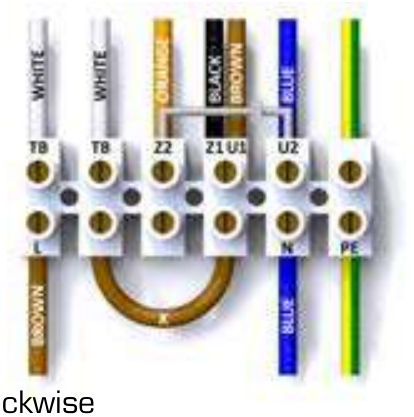
All dimensions in mm

Wiring Diagrams

CD3003



CD3005



Clockwise

TEID – TRANSFORMER SINGLE PHASE

INDEPENDENT DRIVE

FEATURES

- Independent transformer 5 step speed control for fans with off position
- Supply: 230 VAC, 50/60 Hz, 1 Phase
- IP54 ingress protection
- Switch: 5 positions with off-position
- Indicator light
- Current fuse
- 230 VAC unregulated output
- Ready mounted cable glands
- Enclosure: plastic (R-ABS, UL94-V0, grey RAL 7035) or sheet steel (RAL 7035)
- Max ambient temperature: 50°C

ENVIRONMENT
ECONOMICAL
EXPERTISE



DESCRIPTION

Our TEID transformer speed controllers are based on the principle of voltage control using autotransformers. They are applicable to single phase voltage controllable motors (230 V, 50/60 Hz) to control the rotational speed of fans in five steps.

RANGE

To ensure correct drive selection, please choose a drive that has an amp rating that is equal to or above the fan motor full load current (FLC).

Model	TEID1A	TEID1.5A	TEID2.2A	TEID3.5A	TEID5A	TEID7.5A	TEID13A
Part	**EA900000**	**EA900001**	**EA900002**	**EA900003**	**EA9000004**	**EA900005**	**EA900006**
Lmax (A)	1	1.5	2.2	3.5	5	7.5	13
Fuse (A)	1.25	2.5	3.15	5	8	10	20
IP Rate	IP54	IP54	IP54	IP54	IP54	IP54	IP54

TRANSFORMER SETTINGS AND WIRING DIAGRAM

The order of switching and the voltage corresponding to each step of a particular switch can be changed by moving the internally mounted clip connectors within this transformer unit. Factory defaults are shown below:

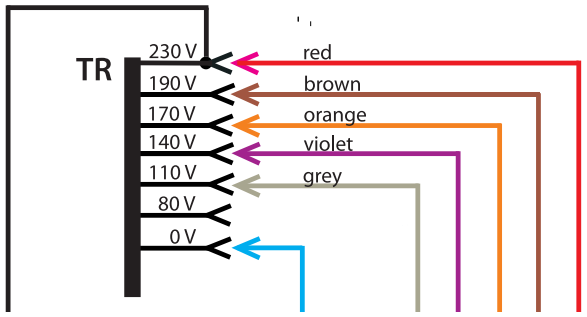
Voltage Tap	0	80	110	140	170	190	230
SWITCH POSITION			1	2	3	4	5

L-N - Power supply 230 VAC, 50/60 Hz

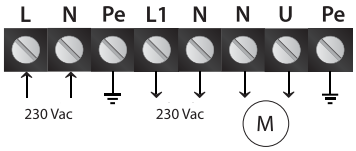
L1 N1 - Unregulated output 230 VAC (2 A)

N-U - Motor connection

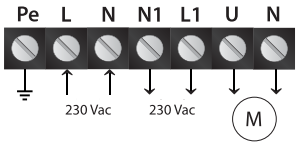
Pe - Earth connections



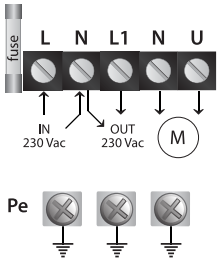
TEID1A



TEID1.5A-2.2A



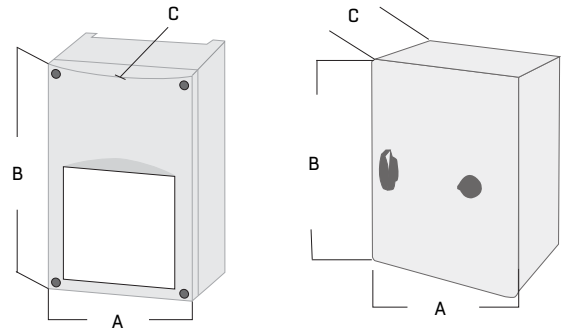
TEID3.5A-13A

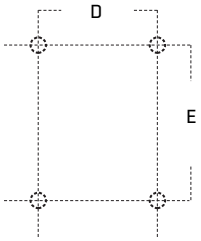


Products in **bold** are available from our UK Distributors on next day delivery, if ordered by 4pm. Please call to confirm availability on 01206 222 555.

Specifications are subject to alteration without notice

DIMENSIONS AND WEIGHTS





Model	A	B	C	D	E	Net kg	Gross kg	Enclosure
TEID1A	84	160	88	71	108	1.2	1.3	Plastic
TEID1.5A	115	205	100	98	140	1.9	2.1	Plastic
TEID2.2A	115	205	100	98	140	2.1	2.3	Plastic
TEID3.5A	170	255	140	155	194	4.5	4.7	Plastic
TEID5A	170	255	140	155	194	5	5.4	Plastic
TEID7.5A	200	305	140	183	236	7.6	8	Plastic
TEID13A	300	185	185	255	255	14.8	15.3	Steel

COMPATIBILITY

Our TEID Speed controller is suitable for use with single phase voltage controllable motors.

MOUNTING

Break (Isolate) mains voltage. Ensure that this controller is mounted on a smooth flat surface. Connect voltage supply, motor(s) and earth as shown in the scheme with cables of the proper diameter.

ISOLATION AND WIRING (SEE DIAGRAM ON PREVIOUS PAGE)

A safety isolator/disconnect switch should be installed on the mains electricity side of all motor drives; Please refer to SISO product.

MOTOR PROTECTION

If motors are fitted with thermostat (Tk) overheat protection it is recommended to use the TEDS range to utilise this feature.

TRANSPORT AND STOCK KEEPING

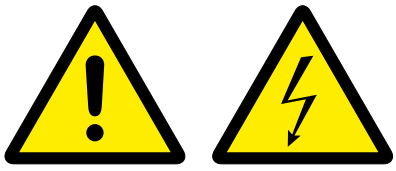
Avoid shocks and extreme conditions. Stock in original packing.

WARRANTY

Any modifications or alterations to the product relieve the manufacturer of all responsibility. The manufacturer bears no responsibility for any misprints or mistakes in this data, and modifications or improvements to the product can be made at any time after date of publication.

MAINTENANCE

In normal conditions our controllers are maintenance-free. If external surfaces requires light cleaning, please use a dry or slightly damp cloth. If heavy cleaning is needed, then we recommend the use of a non-aggressive cleaning product. Particular attention should be paid to ensure that no fluids enter the controller. Only reconnect the controller to the mains electrical supply when it is completely dry.



General danger Electrical hazard

All works may only be carried out by skilled personnel following the local regulations and AFTER the controller is completely isolated from the mains. Replace fuse only with same type and rating.

Woods
A Fläkt Woods Brand

FläktWoods

ALSO AVAILABLE FROM THE **WOODS** RANGE


JMv Aerofoil


MaXfan²


JM Aerofoil


HT JM Aerofoil

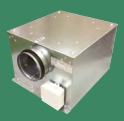

JM Bifurcated

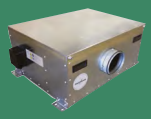

Series 33

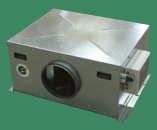

Plate Fans


Cased & Plate Axial Accessories


Tube Fans


Sabina EC Box Fans

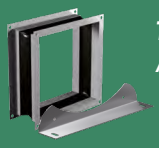

Daisho AC Box Fans


Daisho EC Box Fans

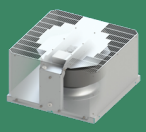

Estoc

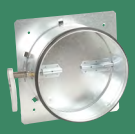

Estoc Targe


Estoc EC


Tube & Box Accessories


Roof Units Horizontal


Roof Units Vertical


Fire Dampers


Iris Dampers


Fire Valves


Valves Supply KE


Valves Extract KK


Valves Exhaust VEFS


Nozzles DK & DR


Louvres/ Cowls EYMA and DYMA


External Louvres USAV


Controllers

Selected products available from our UK Distributors on next day delivery, if ordered by 4pm. Please call 01206 222 555 for more information.



Specifications are subject to alteration without notice

HIGH PERFORMANCE CASED AXIAL
MAXFAN COMPAC

PRODUCT FACTS

- Volumes up to 4.9m³/s
- Static Pressures up to 900 Pa (Non-stalling characteristic)
- Fans tested to ISO5801 and BS848
- High efficiency energy saving IE2 motor
- Low breakout noise levels
- Motor protection and terminal block IP55 (DW172 & Defra Compliant)
- Ambient temperatures up to 80°C (dependent on size)
- Overheat protection as standard
- Compact robust light weight construction
- Galvanised casing for high corrosion resistance
- Full inverter control and flexibility

ELECTRICAL SUPPLY

230v/50Hz/1 Ph (3 Ph Motor) - L Type

TEMPERATURE RANGE

Suitable for temperatures up to 80°C*

*dependent on the fan size, please refer to the specific fan technical page.

SIZES

315, 355, 400, 450, 500, 560 and 630 mm

IMPELLERS

A unique high efficiency aerofoil section blade with a smoothed hub and clamp plate offers a high efficiency solution.

The Fläkt Woods impellers are all high pressure die cast to offer thin aerofoil sections for low generation of noise. Every cast aluminium component is X-ray examined using Real Time Radiography inspection prior to assembly. The maximum pitch angles shown allow for speed control by frequency inverter.

MOTORS

All motors are totally enclosed air stream rated with class F insulation. Constructed from aluminium or cast iron as standard with special pad mounted fixings. Although this product incorporates a three phase electric motor, by using a matched inverter solution it is suitable for use with a single phase electrical supply on site. In addition, using a frequency inverter allows the speed to be turned down to 20% of maximum speed. Suitable for horizontal or vertical shaft operation. Supplied IP55, with removable drain plugs.

Sealed for life bearings lubricated with wide temperature range grease. The complete range of motors are fitted with Thermistor OHP as standard. Motors are IE2 efficiency class as standard.



CASING

The MaXfan Compac is available with a galvanised casing, complete with an externally mounted pre-wired electrical terminal box. Casings are spun from sheet steel with integral pre-drilled and radiused inlet flanges. The galvanised finish gives a high resistance to corrosion and is ideal for external as well as internal use.

PRODUCT CODE

40 MaXfan Compac

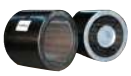
- 40 - denotes the fan impeller diameter in centimetres


Mounting Feet


Rubber AV's


Flexible Connector & Clips


0-10v Potentiometer


Silencer B1D/B2D Standard & Melinex


Matching Flange

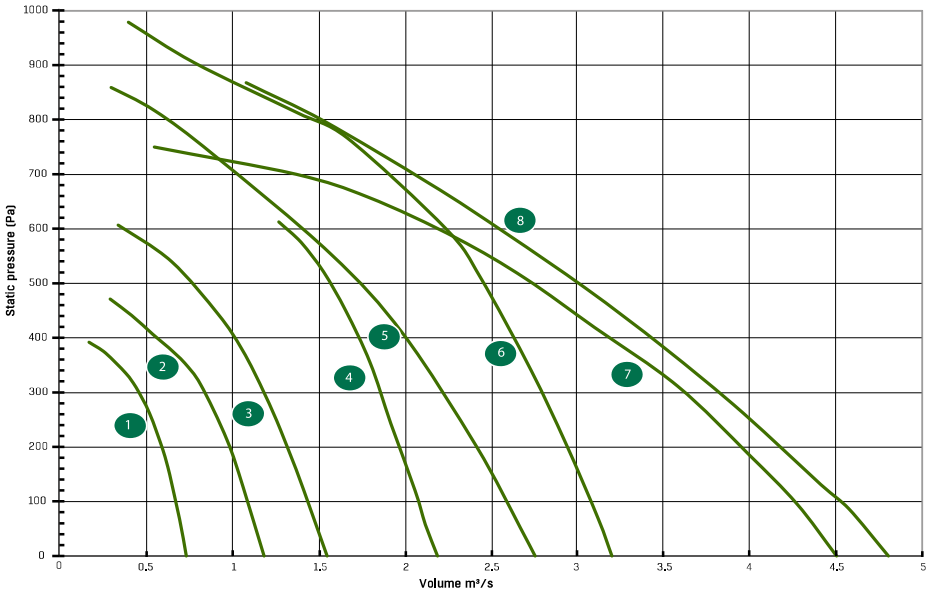

Damper


Acoustic Jacket

Specifications are subject to alteration without notice

MAXFAN COMPAC PRODUCT PERFORMANCE & ELECTRICAL DATA

220-240V/50HZ/1ϕ L TYPE
PERFORMANCE CHART



PERFORMANCE TABLE

Ref	Part Number	Fan Description	m³/s @ Pa (Static)										
			0	50	100	200	300	400	500	600	700	800	900
1	EJ313266	31 MaXfan Compac	0.74	0.71	0.68	0.59	0.46						
2	EJ353266	35 MaXfan Compac	1.19	1.14	1.09	0.99	0.85	0.57					
3	EJ413456	40 MaXfan Compac	1.55	1.49	1.44	1.31	1.18	1.02	0.78	0.41			
4	EJ463266	45 MaXfan Compac	2.19	2.14	2.07	1.98	1.87	1.74	1.58	1.33	0.89	0.6	0.35
5	EJ513255	50 SC MaXfan Compac	2.77	2.67	2.59	2.42	2.23	1.99	1.72	1.4	1.04	0.61	
6	EJ513266	50 MaXfan Compac	3.21	3.15	3.09	2.97	2.78	2.64	2.47	2.25	2.00	1.48	0.81
7	EJ563236	56 MaXfan Compac	4.54	4.4	4.22	3.96	3.62	3.24	2.78	2.25	1.33		
8	EJ623236	63 MaXfan Compac	4.87	4.66	4.52	4.19	3.81	3.44	3.00	2.51	2.1	1.53	0.79

PRODUCT AND ELECTRICAL TABLE

Ref	Part Number	Fan Description	Temperature (°C)	Frame	kW	Max Input Amps	FLC (A)	SC (A)	Phase	Voltage	Inverter Model	Wiring Diagram	Breakout Sound Level dB(A) @ 3m	Fan Weight (kg)	Casing Length (mm)
1	EJ313266	31 MaXfan Compac	80	80	0.9	11.6	3.3	18.7	1	230	4.2	CD3042	45	33	375
2	EJ353266	35 MaXfan Compac	80	80	0.9	11.6	3.3	18.7	1	230	4.2	CD3042	45	33	375
3	EJ413456	40 MaXfan Compac	80	80	1.32	18.7	5.1	25.5	1	230	6.8	CD3042	40	35	375
4	EJ463266	45 MaXfan Compac	55	80	1.32	18.7	5.1	25.5	1	230	6.8	CD3042	43	37	375
5	EJ513255	50 SC MaXfan Compac	65	80	1.73	18.7	6.3	35.5	1	230	6.8	CD3042	49	32	375
6	EJ513266	50 MaXfan Compac	65	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	48	51	520
7	EJ563236	56 MaXfan Compac	70	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	48	55	520
8	EJ623236	63 MaXfan Compac	55	90	2.64	26.4	9.4	52.8	1	230	9.6	CD3042	50	61	520

For ErP efficiency ratings and grades please refer to our Fan Selector for more information. For speed controllers please see pages 250-297.

Sound pressure levels quoted are at the inlet, and are average dBA at 3m distance over a sphere at the mid point at the highest angle given, under free field conditions. These are presented for comparative purposes only.

Products in **bold** are available from our UK Distributors on next day delivery, if ordered by 4pm. Please call to confirm availability on 01206 222 580.

Specifications are subject to alteration without notice

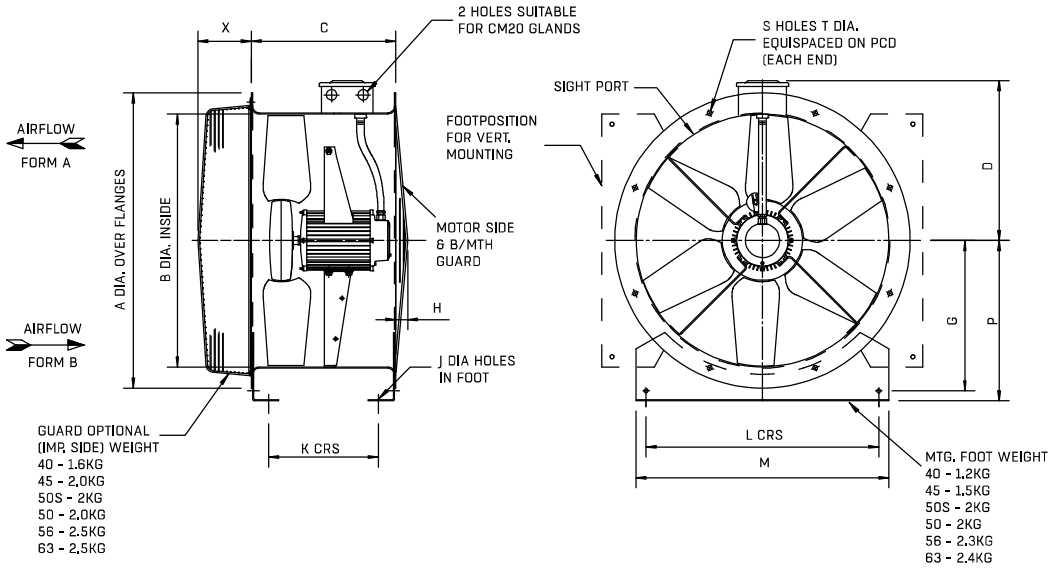
SOUND DATA - MAXFAN COMPAC

Fan Description	Ps Sound data at	Pa Static		Sound Spectrum (Hz)								Overall	
				63	125	250	500	1k	2k	4k	8k	Lw*	LpA @ 3m**
31 MaXfan Compac	0.53 m3/s	252	Inlet*	81	79	80	82	80	76	71	66	88	63
31 MaXfan Compac	0.53 m3/s	252	Outlet*	83	80	81	82	80	77	72	67	89	64
31 MaXfan Compac	0.53 m3/s	252	Breakout*	73	68	64	66	61	53	51	47	75	45
35 MaXfan Compac	0.84 m3/s	302	Inlet*	82	80	84	83	80	77	73	69	89	65
35 MaXfan Compac	0.84 m3/s	302	Outlet*	83	80	85	84	81	78	74	69	90	65
35 MaXfan Compac	0.84 m3/s	302	Breakout*	74	68	68	67	60	54	53	51	76	47
40 MaXfan Compac	1.32 m3/s	200	Inlet*	75	76	82	79	78	77	74	70	86	63
40 MaXfan Compac	1.32 m3/s	200	Outlet*	77	77	85	80	79	77	75	71	88	64
40 MaXfan Compac	1.32 m3/s	200	Breakout*	67	62	65	59	53	48	50	48	70	40
45 MaXfan Compac	1.86 m3/s	300	Inlet*	78	81	88	82	80	80	78	75	91	66
45 MaXfan Compac	1.86 m3/s	300	Outlet*	79	81	88	82	81	80	79	77	91	67
45 MaXfan Compac	1.86 m3/s	300	Breakout*	69	63	66	59	56	52	57	53	72	43
50 SC MaXfan Compac	2 m3/s	400	Inlet*	81	82	89	85	87	87	83	79	95	72
50 SC MaXfan Compac	2 m3/s	400	Outlet*	81	82	91	86	87	87	85	81	96	73
50 SC MaXfan Compac	2 m3/s	400	Breakout*	71	64	69	63	62	59	63	57	75	49
50 MaXfan Compac	2.63 m3/s	400	Inlet*	83	79	87	88	86	85	81	78	94	71
50 MaXfan Compac	2.63 m3/s	400	Outlet*	85	79	90	89	86	86	81	79	95	72
50 MaXfan Compac	2.63 m3/s	400	Breakout*	75	61	68	66	61	58	59	55	77	48
56 MaXfan Compac	3.22 m3/s	400	Inlet*	86	93	88	90	88	85	79	77	97	72
56 MaXfan Compac	3.22 m3/s	400	Outlet*	87	95	89	90	88	85	80	79	98	72
56 MaXfan Compac	3.22 m3/s	400	Breakout*	77	74	63	65	63	58	61	55	79	48
63 MaXfan Compac	3.4 m3/s	400	Inlet*	85	95	93	91	87	84	83	81	99	72
63 MaXfan Compac	3.4 m3/s	400	Outlet*	86	98	94	91	87	85	84	83	100	73
63 MaXfan Compac	3.4 m3/s	400	Breakout*	76	77	68	66	62	58	65	59	80	50

*Lw dB re 10^{-12} W

**dBA re $2x10^{-5}$ Pa

DRAWING - MAXFAN COMPAC

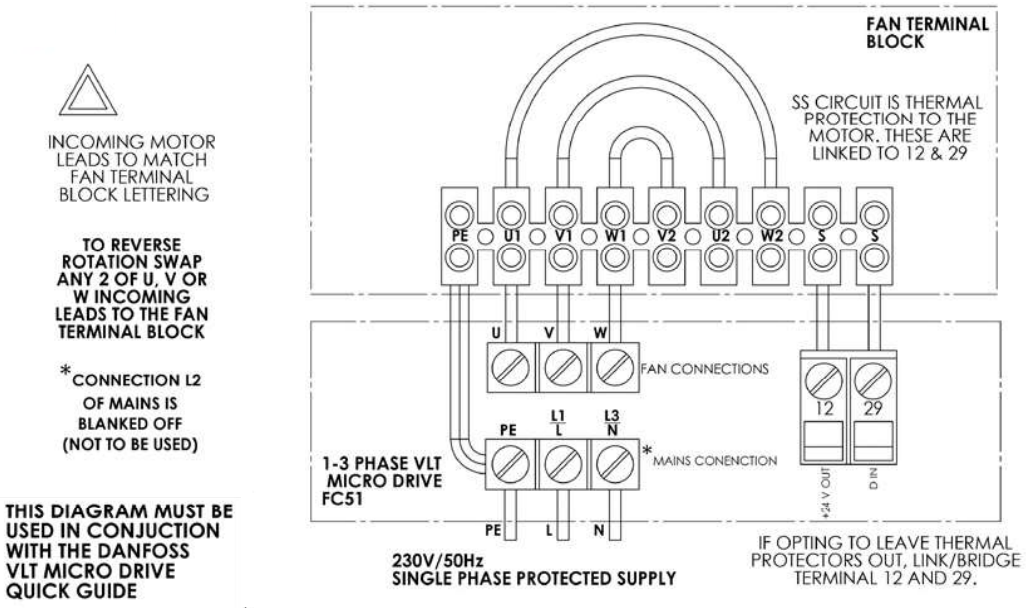


Product Code	Motor Frame	A	B	C	D	G	H	J	K	L	M	P	S	T	x	Weight (kg)
31 MaXfan Compac	80	395	315	375	229	200	30	10	285	265	315	200	8	10	137	33
35 MaXfan Compac	80	435	355	375	249	225	30	10	285	305	355	225	8	10	137	33
40 MaXfan Compac	80	480	400	375	279	225	30	10	290	350	400	250	8	12	137	35
45 MaXfan Compac	80	530	450	375	306	255	30	10	290	400	450	280	8	12	137	37
50 SC MaXfan Compac	80	594	500	375	338	290	30	10	290	450	500	315	12	12	137	32
50 MaXfan Compac	90	594	500	520	338	290	30	10	290	450	500	315	12	12	137	51
56 MaXfan Compac	90L	654	560	520	368	330	50	10	434	510	560	355	12	12	137	55
63 MaXfan Compac	90S	724	630	520	403	375	50	10	434	580	630	400	12	12	137	61

WIRING DIAGRAMS - MAXFAN COMPAC

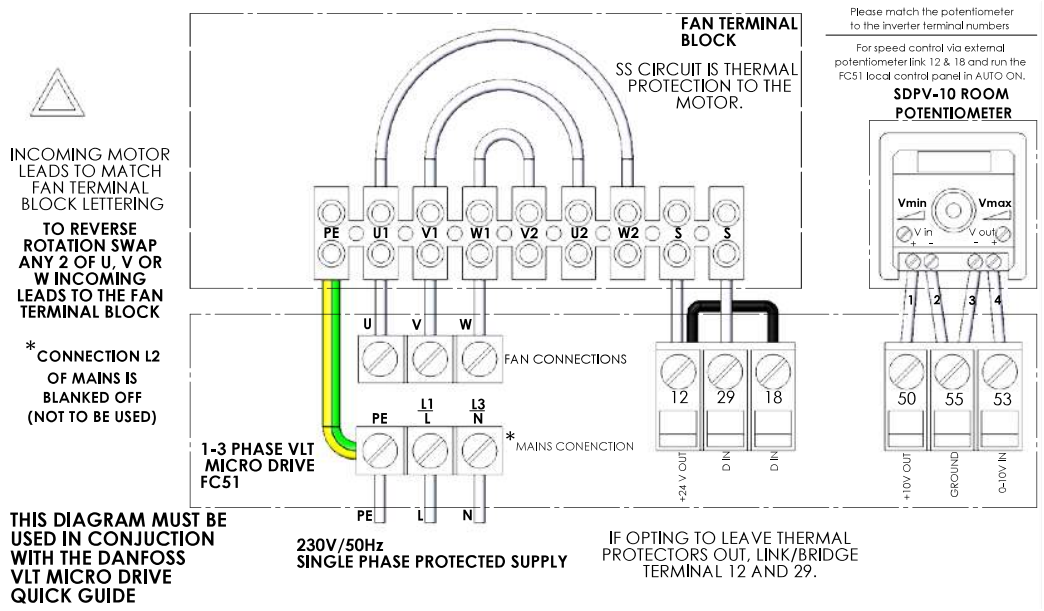
CD3042 - MAXFAN COMPAC

Mode - On hand (Speed controlled via the up and down arrows on key pad)



CD3043 - MAXFAN COMPAC INCLUDING POTENTIOMETER

Mode - Auto (Speed controlled via 0-10 volt potentionmeter)



The MaXfan Compac can also be fitted using a remote switch conntected between 12 & 18

INVERTER SINGLE TO THREE PHASE

FEATURES & BENEFITS

- 1 Ph 200-240VAC to 3 Ph 200-240 VAC electrical supply
- Pre-Programmed for easy installation
- Max shielded cable length 25m
- Asynch motor speed control
- Ultra compact & light making it easy to install
- Simple to use Alpha-numeric display
- Included fitted potentiometer for manual speed adjustment
- Connectable as Modbus RTU offering control flexibility
- Built in RFI filter minimising interference
- Built-in brake functions with built in DC and AC brake functions
- 2xAI, 1xAO & 1xRO / RS485 connection options
- BMS enable/disable
- Maximum operating ambient 50°C
- Coated PCB standard for harsh environments
- High energy efficiency

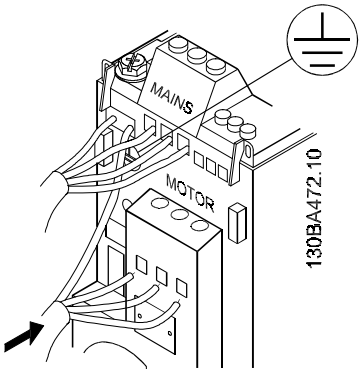
DESCRIPTION

Our inverter is a frequency converter with unsurpassed reliability, user-friendliness, condensed functionality, and extremely easy to commission. Terminal numbers are named in the same manner as in the rest of the family, making installation easy.

It converts a single phase 200-240 VAC input into a three phase output to allow the MaXfan Compac product to use a high efficiency 3Ph, 230V motor.

A safety isolator/switch disconnector should be installed on the mains side of the drive to ensure that the mains supply can be isolated for maintenance.

Please see the image below, illustrating the connections on the bottom of the inverter drive.





RANGE

There are three matched inverters that are specifically designed to use with our MaXfan Compac fan range. Details are shown below.

Part Number	Inverter Model	Ph.	V	Amps	kW	Enc.
PK901092	4.2	1-3	200-240V	4.2	0.75	M1
PK901090	6.8	1-3	200-240V	6.8	1.5	M2
PK901091	9.6	1-3	200-240V	9.6	2.2	M3

Step 1
Fit top cover on frequency converter.

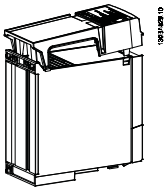


Illustration 4.14

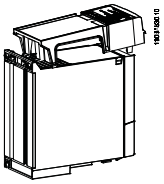


Illustration 4.15

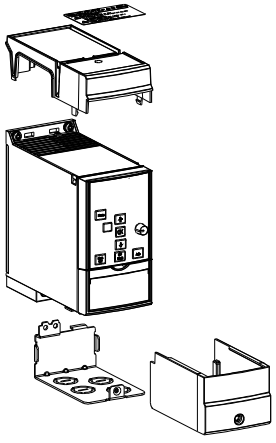


Illustration 4.16

Specifications are subject to alteration without notice

INVERTER - QUICK INSTALLATION GUIDE



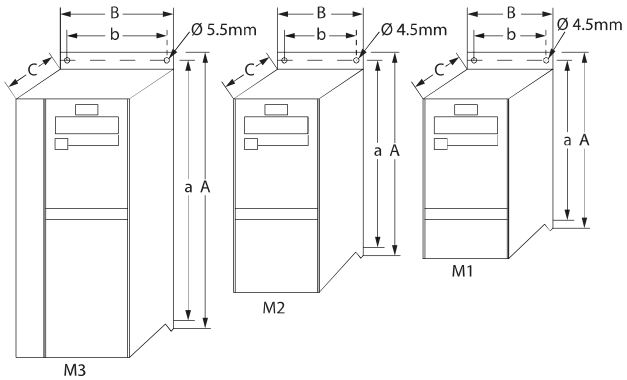
Ready – Steady – Go!

Connect motor and power cables, turn the control knob, and watch the motor speed change.



RoHS compliant
The VLT® Micro Drive does not contain lead, cadmium, hexavalent chrome, mercury, *or flame retardant PBB and PBDE.*

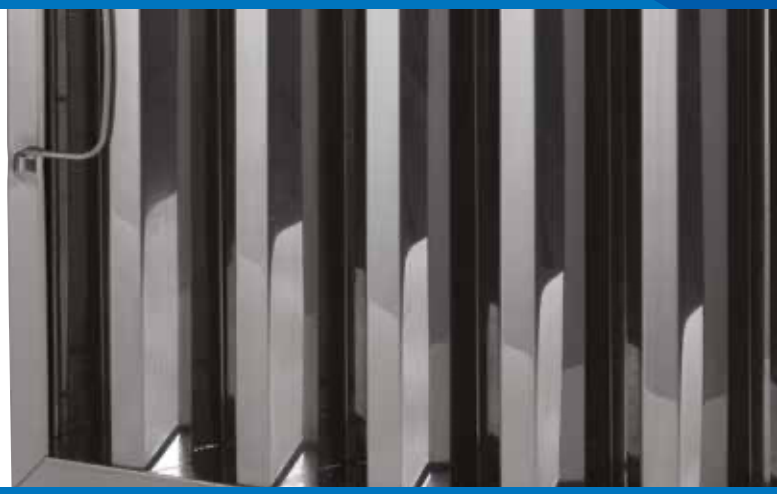
INVERTER - TECHNICAL & DRAWING DETAILS



Part Number	Inverter Model	Enc.	Ph.	V	Amps	kW	Power [kW]	Height [mm]	Width [mm]		Depth [mm]	Max. Weight
							1x200-240 V	A (incl. conversion kit)	B	b	C	kg
PK901092	4.2	M1	1-3	200-240V	4.2	0.75	0.75	219.3	70	55	148	1.1
PK901090	6.8	M2	1-3	200-240V	6.8	1.5	1.5	245.6	78	59	144	1.6
PK901091	9.6	M3	1-3	200-240V	9.6	2.2	2.2	297.5	95	69	210	3

LONGAR® Type 2
High Performance Premium Baffle Filter





LONGAR® TYPE 2 FEATURES:
- 100% Flame barrier protection to DIN 18869-5.
- Cutsafe safety edges.
- Fully welded construction – all stainless steel construction.
- Meets insurance requirements.
- Meets HVCA DW172 requirements.
- Folding handles and drainholes as standard.
- Robust baffle filter construction – built to last.
- Tested & certified to European standard DIN 18869-5.
- Tested & certified to American standard UL1046.
- Tested & certified to ASTM2519.

APPLICATIONS
- Commercial kitchens
- Water mist separation
- Spark arrestors
- Sand filtration
- Grease filtration

LONGAR® TYPE 2 PREMIUM BAFFLE FILTER
For use in commercial kitchens and ventilation to extract grease laden air and act as a fire barrier. Fire barriers prevent any cooking flames traveling past the extract canopy. The new Type 2 is a development of customers requesting certain attributes for the baffle filter, the main ones being safety edges on frame and blades. LONGAR® Type 2 is available in standard depths of 20mm and 45mm depths, this is required for the filter to operate at a constant efficiency and to protect the system as a flame barrier as tested to European Standard DIN 18869-5 and American Standard UL1046. Custom sizes are available on request.

CONSTRUCTION / MATERIAL SPECIFICATIONS
As standard all baffles are manufactured with Stainless Steel 430 polished finish, (Other finishes and materials are available). Maximum Operating temperature 400C or 750F.

FITTING INSTRUCTIONS
- Fit products, handles in direction of air in.
- Product vertical in air stream.

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

MAINTENANCE
- All maintenance should be carried out in accordance with the planned maintenance set by installation contractor.
- When handling any components suitable PPE should be used - gloves, eye protection and access equipment.
- Filters should be cleaned by a trained operative either daily for heavy use or weekly for light use.
- For more exact guide to cleaning you should contact a cleaning specialist.

PACKAGING
- All units are packaged in double wall boxes with separators for standard sizes, glued closed for protection whilst in transit against contamination.

FILTER CLASSIFICATION:
- Filter Class G2
- UL Class 2

TESTED TO:
- DIN 18869-5
- UL 1046
- ASTM 2519

MANUFACTURED TO:
- DW172
- ISO9001

For technical specifications, part numbers and ordering information, please see overleaf.

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

LONGAR® Type 2
High Performance Premium Baffle Filter

TECHNICAL SPECIFICATIONS

Longar specifies the baffle filter as height x width x thickness. The handles are fixed to the height and drain holes punched on the width. The length of the baffle blade is the height; please ensure correct orientation is given when ordering.

SIZE ORDERING GUIDE (TOLERANCES +/- 2mm)				
Part Number	Actual Size HxWxD	Nominal Size HxWxD	Weight	Filter Free Area
TYPE2ST10X20X2	243 x 496 x 45mm	254 x 508 x 50mm	1.40kgs	0.08m²
	9.57 x 19.53 x 1.77"	10 x 20 x 2"	3.08lbs	0.86ft²
TYPE2ST12X20X2	295 x 496 x 45mm	304 x 508 x 50mm	1.61kgs	0.09m²
	11.6 1 x 19.53 x 1.77"	12 x 20 x 2"	3.54lbs	1.02ft²
TYPE2ST16X16X2	395 x 395 x 45mm	406 x 406 x 50mm	1.54kgs	0.10m²
	15.55 x 15.55 x 1.77"	16 x 16 x 2"	3.39lbs	1.05ft²
TYPE2ST16X20X2	395 x 496 x 45mm	406 x 508 x 50mm	1.96kgs	0.13m²
	15.55 x 19.53 x 1.77"	16 x 20 x 2"	4.31lbs	1.40ft²
TYPE2ST18X18X2	444 x 444 x 45mm	457 x 457 x 50mm	1.98kgs	0.13m²
	17.48 x 17.48 x 1.77"	18 x 18 x 2"	4.36lbs	1.40ft²
TYPE2ST20X16X2	496 x 395 x 45mm	508 x 406 x 50mm	1.93kgs	0.12m²
	19.53 x 15.55 x 1.77"	20 x 16 x 2"	4.25lbs	1.32ft²
TYPE2ST20X20X2	496 x 496 x 45mm	508 x 508 x 50mm	2.41kgs	0.16m²
	19.53 x 19.53 x 1.77"	20 x 20 x 2"	5.30lbs	1.76ft²
TYPE2ST24X24X2	597 x 597 x 45mm	609 x 609 x 50mm	3.15kgs	0.24m²
	23.50 x 23.50 x 1.77"	24 x 24 x 2"	6.93lbs	2.56ft²
FINAL RECOMMENDED PRESSURE DROP: 400 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.

THE MERLIN RANGE
MERLIN CT1250 SYSTEM

The Merlin CT1250 ventilation interlock system, with built in current monitoring, is designed specifically for use in commercial kitchens to meet BS6173. This panel is to be used when the kitchen appliances do have flame failure devices, therefore Gas proving is not a requirement.

The Merlin CT1250 acts as an interlock between the ventilation system and the gas solenoid valve.

The system has built in current monitors in order to interlock with up to 2 fans and offers an alternative to using air pressure differential switches.



Key Features of the Merlin CT1250 System

- Allows Compliance with BS6173 for commercial kitchens
- To be used when all appliances have flame failure devices
- 2 built in current monitors can be easily adjusted to the user's requirements
- Reliable method of interlock, with no moving parts there's little to go wrong
- BMS Terminals Normally Closed or Normally open and common.
- Will accept remote emergency knock-off buttons.
- Can monitor up to 20 amp running current.
- Clear LED display for system indications
- Can be used when pressure differential switches cannot be used e.g. wall-mounted fans
- Straightforward to install and calibrate. The CT1250 can be easily adjusted to the user's requirements
- Easy installation
- Covered by S&S Northern Ltd 3 year warranty.

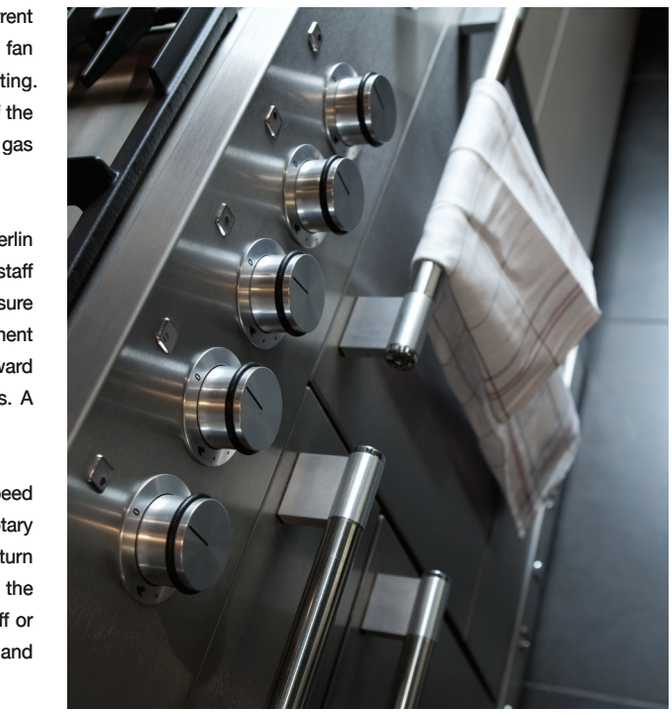


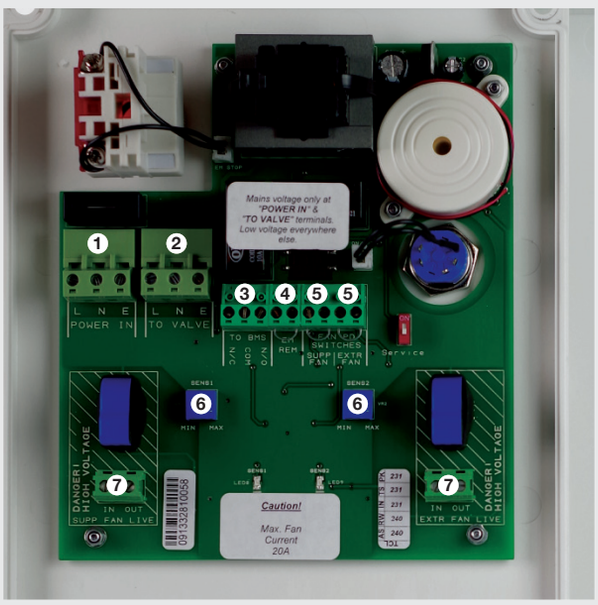
KITCHEN EQUIPMENT
ENGINEERED TO MEET BS6173

When the fan is turned “on” the CT1250 monitors the electrical current going to the fan motor, when there is sufficient current going to the fan motor our panel receives a signal to indicate the fans are operating. Turning the key to the “on” position will open the gas solenoid valve. If the fans should fail, the “fan fault” LED on the panel will illuminate and the gas solenoid valve will close.

When there is a “fan fault” the supply fan or extract fan led on the Merlin CT1250 panel fascia will flash. This informs the electrician or kitchen staff which fan has failed. Operating the system in the above manner will ensure the requirements of BS6173 are fully met where all the catering equipment has flame failure devices fitted. Wiring of the system is straightforward using volt free connections for all BMS and remote emergency stops. A Gas Safe engineer would be required to fit the gas solenoid valve.

Calibration of the current monitor is easy, once wired set the fan speed controller to setting 1 (or low setting) for example. Turn the blue rotary switches anti-clockwise until the green LED goes out, and then slowly turn clockwise until the green LED is again illuminated. This indicates the current is being detected going to the fan motor, if the fan is turned off or faulty the LED will switch off and the system will go into a ‘fan fault’ and shut off the gas.





Merlin CT1250 System Wiring Diagram

1. 230v AC Supply
2. 230v AC output to valve
3. Terminal for BMS connections
4. Remote emergency stop Input
5. Fan sensor input- close when fan on - (for use with PD switches)
6. Pots are adjusted to increase or decrease sensitivity
7. Live wire going to the fan goes in and back out onto the fan

S&S Northern has a full technical team available on 01257 470 983 or if you are based in the South East please call 01702 291 725

Merlin CT1250 Box Dimensions	
Height	*254mm*
Length	*178mm*
Depth	*62mm*

S&S NORTHERN
www.snsnorthern.com

Kitchen Extraction

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Welcome to

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Making **a world of difference**

CK Direct is an innovator in alternative green technologies; providing sustainable, energy conscious and cost-effective solutions that will make a real difference to the environment.

When the very future of our planet necessitates the need for cleaner air and cleaner water, CK Direct is pioneering solutions to reduce the cost and complexity of bacteria, pathogen and odour control.

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Revolutionising the **cleansing and purification** of the air extracted from restaurant kitchens.

A choice of two cooking extraction units for use in restaurants of all sizes.
Significantly reducing the costs and time of in-line filtration maintenance and cleaning.



AirTeck 64gex Slim TRIOXYGEN GENERATOR
AirTeck 10gex TRIOXYGEN GENERATOR

Full CE-ENC accreditation.
Independently approved CE-ENC accreditation:
EN 61000-6-3:2007+A1:2011
EN 61000-6-1:2007
EN 13725 – 2003 Odour Abatement
EN 13824-1 Grease Control

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AirTeck 64gex Slim

TRIOXYGEN GENERATOR

The AirTeck 64GEX slim is one of a new generation of high efficiency trioxygen generator units.

- More compact casing
- Separate indicators for each generator, indicating if the generators are working or not
- Higher airflow
- Internal airflow sensor
- External Air Flow Meter-Interlock for trioxygen monitoring if required
- Externally serviceable air-filters.



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AirTeck 10gex

TRIOXYGEN GENERATOR

The AirTeck 10GEX trioxygen generator unit, is similar in functionality to the 64gex slim but has been designed for use in smaller establishments.

- More compact casing
- Separate indicator for the generator, indicating if the generator is working or not
- External airflow meter
- External Air Flow Meter-Interlock for trioxygen monitoring if required
- Externally serviceable air-filters.



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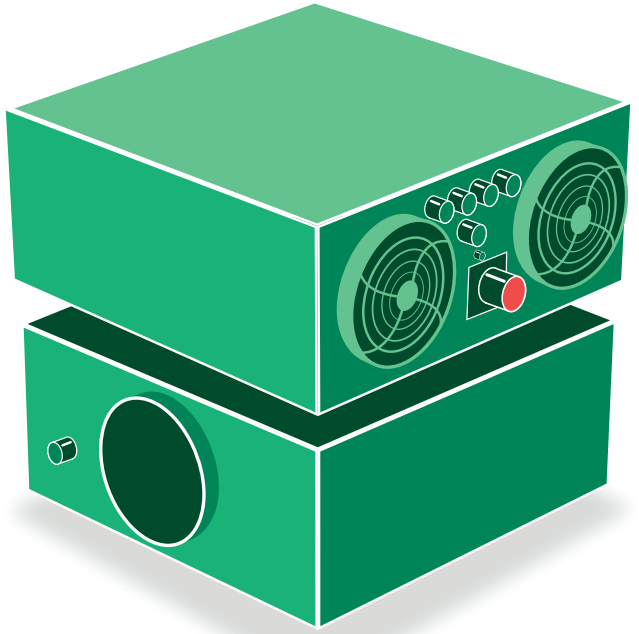
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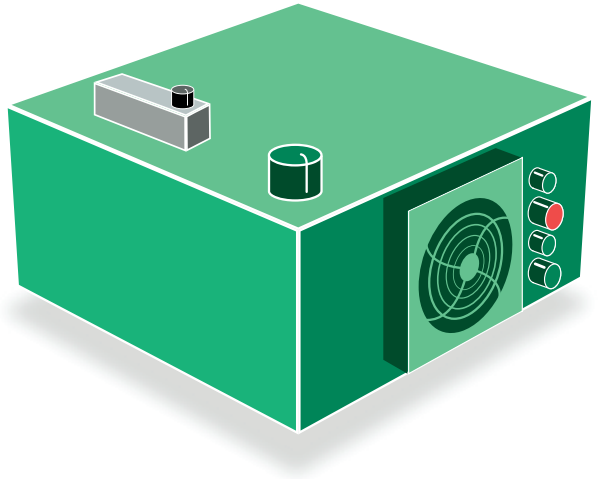
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The **clean, green, mean** machines

- The unit is quickly and easily installed between the extraction point and the exhaust fan, external to the ductwork
- Makes servicing and maintenance much easier
- The unit produces trioxygen that eliminates odours and grease by oxidising the pathogens in the air flow in the duct work. The unit is installed between the canopy and the fan
- The number of units is dependant on the type of cooking and the airflow. High fat foods typical in Asian cooking /Indian Cooking / Fast Food Burger Joints will need numerous units to combat the high fat levels.





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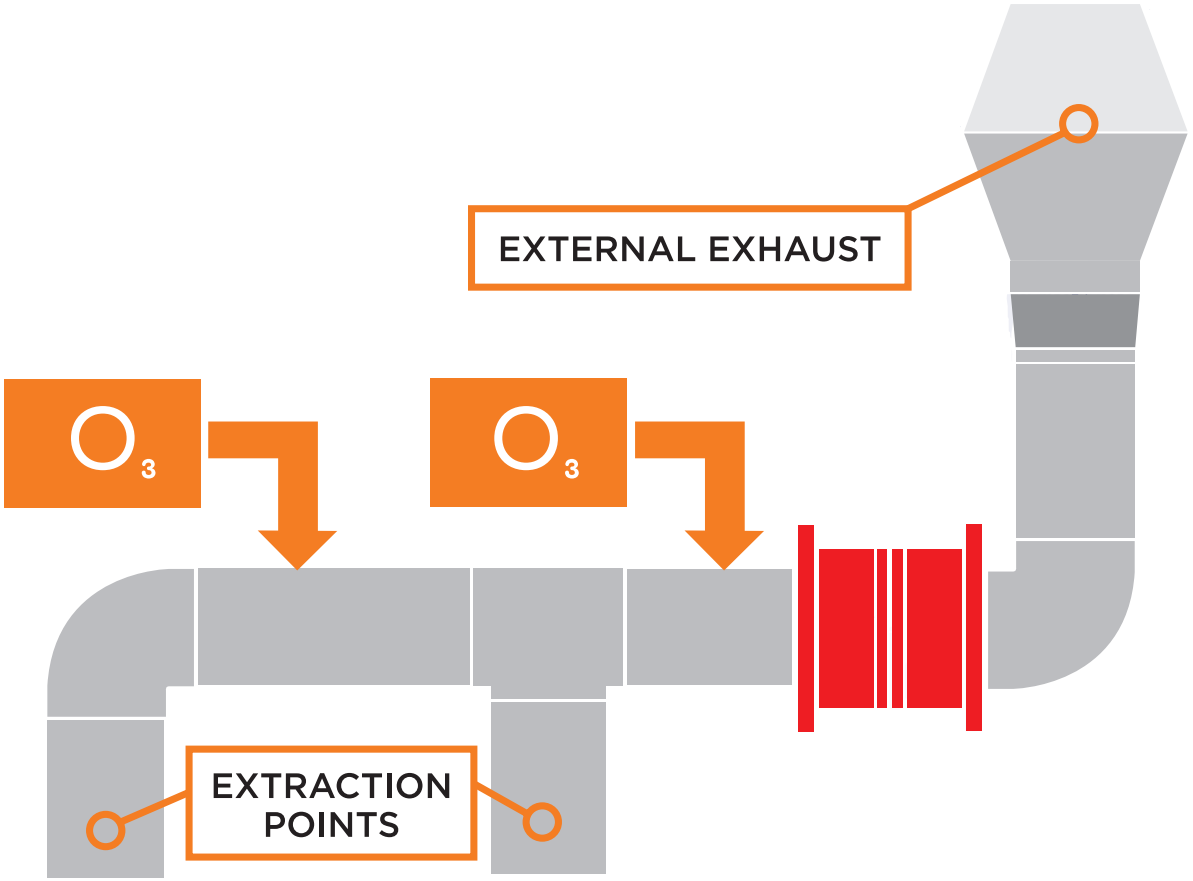
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Typical usage scenario

- Unit is installed external to the extraction duct work
- The trioxygen injection points are connected between the canopy and the fan
- The system has two safety features - an airflow switch and an interlock - the interlock is designed to connect trioxygen monitoring if required
- The airflow switch enables operation only when the fan is in operation.



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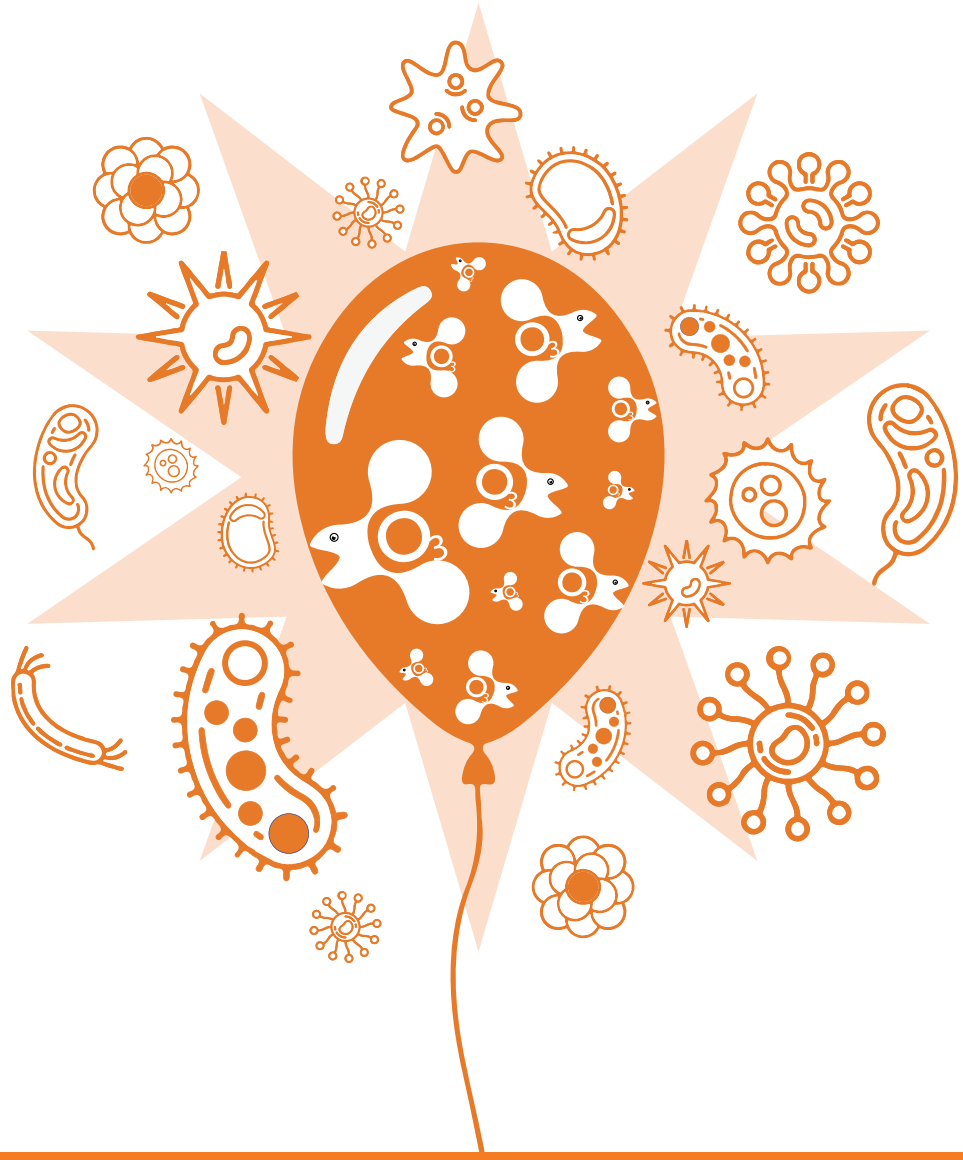
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What is trioxygen?

At the heart of CK Direct extraction unit technology is the production of trioxygen. The air that we breathe is made up of two oxygen atoms – O_2, we then add a third oxygen atom to create trioxygen – O_3

- In the environment trioxygen is known as ozone – Mother Nature's greatest cleanser
- The ozone layer protects the earth from harmful sunrays, and the clean, fresh smell you sense after a lightning storm is due to the ozone produced by the lightning
- In essence, we recreate the same effect as lightning to produce trioxygen.



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What makes CK Direct trioxygen extraction units *so much better?*

OUR MUNCHING MOLECULE



SO SIMPLE Ready to use instantly without expensive or complicated installation and maintenance

SO CLEAN Trioxygen is the most powerful oxidiser and steriliser known to man

SO GREEN Trioxygen is nature's way of cleansing and protecting and is 100% natural and pure

SO COST-EFFECTIVE Easy to install, clean, service and maintain; the CK Direct trioxygen generators effectively run on air with no expensive chemicals or filtration processes making the whole process incredibly efficient and cost-effective.

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Cleaner, purer kitchen extraction...

there is no comparison!

PRODUCT	AIRTECK 64 SLIM	ESP- 4500	CARBON TWIN BLOCK
COST PER UNIT	£2,699.00 INSTALLED	£5,500.00 INSTALLED	£2,500.00 INSTALLED
SERVICE COSTS	SERVICE COSTS £495.00 FOR 1-3 UNITS PLUS £50 FILTER COST PER UNIT TOTAL £545.00	SERVICE COSTS £3,400.00	SERVICE COSTS £1,600.00
TOTAL COST YEAR 1 CAPITAL & SERVICING	£3,244.00	£8,900.00	£4,100.00
TOTAL SERVICING COST OVER 5 YEARS	£2,725.00	£17,000.00	£8,000.00
TOTAL COST CAPITAL & SERVING OVER 5 YEARS	£5,424.00	£22,500.00	£10,500.00

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The real dangers of chemicals

‘THE FIRE service has confirmed the ‘chemical incident’ in Abingdon that left four people in hospital yesterday was caused by cleaning products.’ *June 25, 2019*

- The area was cordoned off after high levels of dangerous gases were identified
- Oxfordshire Fire and Rescue Service described the gases as ‘toxic fumes’ and said a man fell unconscious after being exposed
- High levels of carbon monoxide and hydrogen sulphide were detected by firefighters
- The fire service stated that a workman who was cleaning the kitchen extract system in a local curry house, passed out when exposed to gases produced from the industrial cleaning chemicals he was using
- Four people were taken to hospital.

Fire station manager Lee Swain warned: ‘Mixing cleaning products can generate deadly gases, which can kill.’



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Safety

Trioxygen is a strong oxidiser that is generally not harmful to humans at low concentrations, but is lethal to microorganisms such as bacteria.

Trioxygen, like any other strong oxidising agent, can be harmful if not handled properly. Our website ‘trioxygen page’ has specific information with guidelines and helpful data on how trioxygen should be handled.



Call our technical team
ANYTIME

Our products are manufactured and tested to the very highest standards so we are confident that if they are correctly used and maintained as instructed, they will be problem-free.

Whenever possible, machines will be repaired on site but if the machine needs to be taken away for repair, a replacement will be supplied if required.

Any repairs will be carried out to Original Equipment Manufacturer (OEM) standards and the machine returned as promptly as possible.



Testimonial

‘The site had a major issue with another local business who complained about the odours being created by the factory on a daily basis. With no actual odour control system in place, apart from simple HEPA filters; to avoid closure of the plant we had to invest significantly in a new air filtration system that would accommodate the complexities of our style of cooking. Based on market intelligence and information we decided to look at trioxygen, and after numerous meetings and discussion we decide to use the CK Direct cooking odour control trioxygen systems. 12 units were installed in October 2017 and the subsequent issues relating to odour have been completely eradicated. Thanks to CK Direct we have a happy EHO, happy local business partner and an excellent odour control system.’



Iceland Food Processing - Manchester, Supplied by
Nick Stone site engineer & H&S officer

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Sectors

Broadly speaking, CK Direct kitchen extraction falls into three categories, which accordingly define the sectors in which they are most commonly used.



CARE HOMES



HOTELS & RESTAURANTS



UNIVERSITIES & SCHOOLS

EVHA

CESA CATERING EQUIPMENT SUPPLIERS' ASSOCIATION
INFORMATION INVOLVEMENT INFLUENCE

cubo College & University Business Officers

EUO3TA.org European Ozone Trade Association

Customers using **our technology**

The ease of installation, flexibility and scalability of out kitchen extraction units has made them the choice of many leading, respected organisations and well-known high street names.



Gino D'ACAMPO • MY RESTAURANT •

CES Catering Equipment Solutions

Charles Wells BREWING FAMILY SINCE 1876

SUBWAY eat fresh.™

GORDON RAMSAY RESTAURANTS

Berkeley Group

Punch TAVERNS

HOLMES GROUP

Lorne Stewart

KIER

Scobie McIntosh BAKERY • CATERING • REFRIGERATION • COFFEE • VENDING

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Thank you!

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Appendix A - Information Required to Support Planning Applications for Commercial Kitchen Exhaust Systems

This form has been developed in line with the Guidance on the Control of Odour and Noise from Commercial Kitchen Exhaust Systems – DEFRA 2005

The following points from the guidance should be adhered to:

- The aim of any ventilation/extraction is to ensure that no nuisance, disturbance of loss of amenity is caused by odour, fumes, food droplets or noise to nearby properties.
- A suitably qualified and experienced person with specialist knowledge of ventilation schemes should undertake the design and installation of a ventilation system.
- In circumstances where the end user of the premises is unknown, or where the specific type of food to be cooked is unknown, the installation should be designed to achieve the highest level of odour control in order to cater for a worst case scenario.

Information Required:

1. Information on Premises - No of meals to be served per day. - Method of preparation and cooking. - Type of food served.	
2. Plans and Drawings - Scaled plan showing internal arrangement of premises and dimensions/location of the ventilation system. - Scaled plan showing dimensions and route of external exhaust duct work. The location and type of all filters and the location of the fan must be clearly marked.	Shown on drawing (SLW172303-DRG-001 & 002)
3. Pre-filters - Copy of manufacturer's product data sheet. - Dimensions and nature of pre-filter media. - Manufacturer's recommendations on frequency and type of maintenance.	On the make-up air system F7 grade filter unit with changeable filters to be installed with the ground floor system and prep kitchen fan box.
4. Electrostatic precipitators (where proposed) - Copy of manufacturer's product data sheet. - Dimensions of ESP and flow rate rating. - Manufacturer's recommendations on frequency and type of maintenance.	Due the location of the terminate at hight level at the rear of the building and type of cooking, we feel smoke control will not be required.
5. Carbon filters (where proposed)	

- Copy of manufacturer's product data sheet. - Dimensions on filter panel. - No. of filter panels in filter bed. - Nature of carbon (including product type). - Frequency of replacement of units. - Dwell time.	Due the location of the terminate at hight level at the rear of the building, we added 3 No. CK Direct AirteckG64, shown on drawing (SLW172303-DRG-001 & 002 & 003) and issued data sheets.
6. Odour counteractant or neutralizing system (where proposed) - Copy of manufacturer's product data sheet. - Counteractant or neutralizing chemical to be used. - COSHH data sheets for chemical to be used.	Due the location of the terminate at hight level at the rear of the building, we added 3 No. CK Direct AirteckG64, shown on drawing (SLW172303-DRG-001 & 002 & 003) and issued data sheets.
7. Cooker Head - Length the cooker hood overhangs the appliances.	Ground Floor kitchen – 4200 x 1250 x 500mm First floor prep kitchen – 1600 x 800 x 500mm
8. System operation - Extract rate in m3/s	Ground Floor kitchen – 1.89m3/s First floor prep kitchen – 0.60m3/s Total extract air flow rate 2.49m3/s
9. Flue Design - Height and velocity of final discharge. Discharge should be min. 1m above roof ridge level. Where this is not possible additional filters will be required. Final discharge should be vertically upwards and unimpeded by flue terminals.	The extract duct shall terminate at high level at the rear of the building. Shown on drawing (SLW172303-DRG-001 & 002)
10. Maintenance Schedule of maintenance must be provided including details for: - Cleaning of washable grease filters. - Frequency of inspection and replacement of all filters proposed. - Inspection and servicing of fans.	Under DW172 the extract and canopies will require TR19 standard clen & service between 6 to 12 months.

Additional Notes:

- Air inlets must not permit pests to enter kitchen (e.g. fly screens can be used).

- The method for supplying make up air into the kitchen must not result in its contamination (e.g. separate provision must be made for ventilation of a toilet).

- There must be sufficient access points to permit adequate cleaning of all the ductwork.

BS EN ISO 9001 : 2015 Certification

Registration Certificate

This document certifies that the Quality Management Systems of

C K DIRECT DUCT & MAINTENANCE LTD

Have been assessed and approved by CQS (Certified Quality Systems) Limited to the following Management System Standard

BS EN ISO 9001 : 2015

The scope of this certification applies to the Quality Management Systems relating to the following activities

THE PROVISION OF MANUFACTURING, FABRICATION AND INSTALLATION OF COMMERCIAL KITCHEN VENTILATION SYSTEMS

REGISTERED FIRM | INTERNATIONAL ACCREDITATION BOARD

Certificate Issued: 4th December 2018

Certificate No: GB2005474

Expiry Date: 3rd December 2021

Should verification of the validity of this certificate be required please contact:

CQS (Certified Quality Systems) Ltd
United Kingdom Head Office: +44(0)1684 571350
email: verification@cqsltd.com

On behalf of CQS (Certified Quality Systems) Limited

EAC 23

SIC 33190

This certificate remains valid while the holder maintains their Management Systems in accordance with the guidelines above, which will be audited by CQS (Certified Quality Systems) Ltd or its nominee
This certificate remains the property of CQS (Certified Quality Systems) Ltd and must be returned in the event of cancellation.

CHAS®

SSIP SAFETY SCHEMES IN PROCUREMENT
FOUNDER MEMBER

CERTIFICATE OF ACCREDITATION

This is to certify that

C K Direct Duct & Maintenance Ltd

has demonstrated compliance with the CHAS standards in line with SSIP Core Criteria and UK H&S Legislation and has been awarded accreditation to the requirements of the CDM Regulations 2015

HEALTH & SAFETY

Contractor - Construction

H&S

VALID UNTIL

09

NOVEMBER

2021

020 8545 3838

CHAS.co.uk

Ian McKinnon
Managing Director

The information on this certificate is correct at the time of issue. To confirm the validity of a contractor, please visit https://portal.chas.co.uk

Certificate of Accreditation

This is to certify that

CK Direct Duct & Maintenance Ltd

has achieved SafeContractor accreditation

Date: 16th February 2021

This certificate is valid until: 16th February 2022

Certificate number: NF7280

Signed:

Alyn Franklin
Alcumus CEO

SAFETY SCHEMES IN PROCUREMENT

SafeContractor APPROVED

Alcumus SafeContractor, Axys House, Parc Nantgarw, Cardiff, CF15 7QX
T: 029 2026 6749 E: safecontractor@alcumusgroup.com W: www.alcumusgroup.com | www.safecontractor.com
This certificate is the property of Alcumus SafeContractor and must be returned on request

Schedule to SafeContractor certificate

This SafeContractor certificate is awarded for the following services:

Work Categories:

General Building Maintenance: General Building Maintenance
HVAC Services: Extraction Fans & Canopies Installation / Maintenance / Inspection, Ventilation Ductwork Installation / Maintenance

Industry Roles:

Construction Contractor

Category Related Activities:

Hot Works, Ladders / Step Ladders, Working at Height, Working on Services, Systems, or Equipment Requiring Isolation, Working with Chemicals and Hazardous substances

This SafeContractor Accreditation has been awarded as part of a previous SSIP accreditation

SSIP Originator Scheme: **Contractors Health and Safety Assessment Scheme (CHAS)**
SSIP Originator Scheme expiry: **09/11/2021**

SafeContractor accreditation has been achieved following an assessment of the contractor's health & safety documentation, and compared against the **SafeContractor** Charter Standards, which set out the health & safety standards required to achieve accreditation.

For more information on the Charter Standards, the **SafeContractor** scheme or for confirmation of this contractor's accreditation please telephone **SafeContractor** on 029 2026 6749.

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