

# Commercial Kitchen Exhaust Systems



Fantech's kitchen supply and exhaust fan range provides commercial kitchens with highly effective ventilation solutions that are suitable for most application sizes. Their robust design ensures optimum performance and reliable operation in demanding commercial cooking areas.



**FANTECH**  
Intelligent Ventilation

# Superior Commercial Kitchen Ventilation

**Fantech's range of commercial kitchen exhaust fans are known throughout Australia and New Zealand for their quality and reliability. Their reputation among HVAC contractors and consultants sees them continually installed in some of the most iconic restaurants and best known fast food outlets.**

Their robust design ensures trouble free and reliable operation in transferring contaminated air, cooking heat and grease vapours from the kitchen area quickly and efficiently. Designed with low maintenance in mind, the motors in most models are encased within a vented enclosure to protect it against the grease, dust and fumes handled by the fan.

Additionally, Fantech offers highly efficient, filtered supply units to prevent static pressure buildup in the kitchen, ensuring peak performance for exhaust fans and hoods.





# Committed to Quality & Innovation

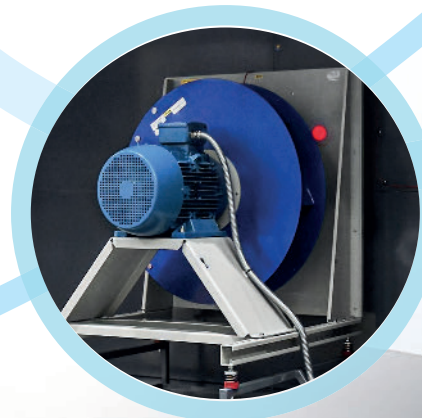
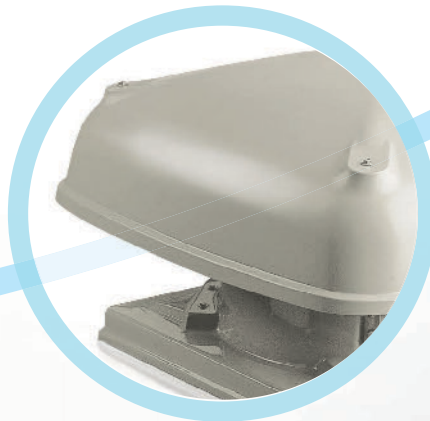
The Fantech product development team delivers innovative kitchen ventilation solutions for the commercial catering industry. These high quality and energy efficient exhaust and supply systems integrate technologies such as high performance mixed flow impellers that reduce noise and increase performance.

Fantech's ventilation equipment is manufactured to exacting standards with quality being assured by individual testing of each fan prior to dispatch from the factory. Focus on quality is supported by expert advice and accurately tested performance data.

Inspired by the demands for increased fan efficiencies, Fantech engineers are continually testing new technologies. This testing looks for ways to optimise fan performance and explore designs to increase air flow, make them more compact, quieter and easier to maintain.

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# Commercial Kitchen Exhaust Fans

## Systemaire

Systemaire commercial kitchen exhaust fans provide powerful performance, energy efficiency and quiet operation. They have been designed and tested by our own engineering team and have proven to be up to 56% quieter, and produce up to 35% more air flow than other equivalent kitchen exhaust fans.

These high performance kitchen exhaust fans are currently available in 300, 380 and 460mm fan inlet sizes.

### Features

- Can produce up to 88% more pressure and be up to 56% quieter than equivalent kitchen exhaust fans currently on the market
- Aerodynamic shaped cowl for smoother air flow, reduced turbulence and increased fan performance
- Advanced mixed-flow impeller design provides high air flow with low noise levels
- Lightweight design with aluminium housing for easy handling and installation
- Smaller exhaust opening than traditional kitchen fans increases discharge velocity and reduces exposure to rain
- Large drainage holes around base to prevent water build-up
- Supplied with matching flange for quick installation to suit standard round Spiro duct
- Precisely matched motor, impeller and components to ensure quiet operation across all fan speeds
- 4-wire connection to junction box on all single phase units
- Can be used with smaller duct sizes as the fan can handle high pressure levels

### Components

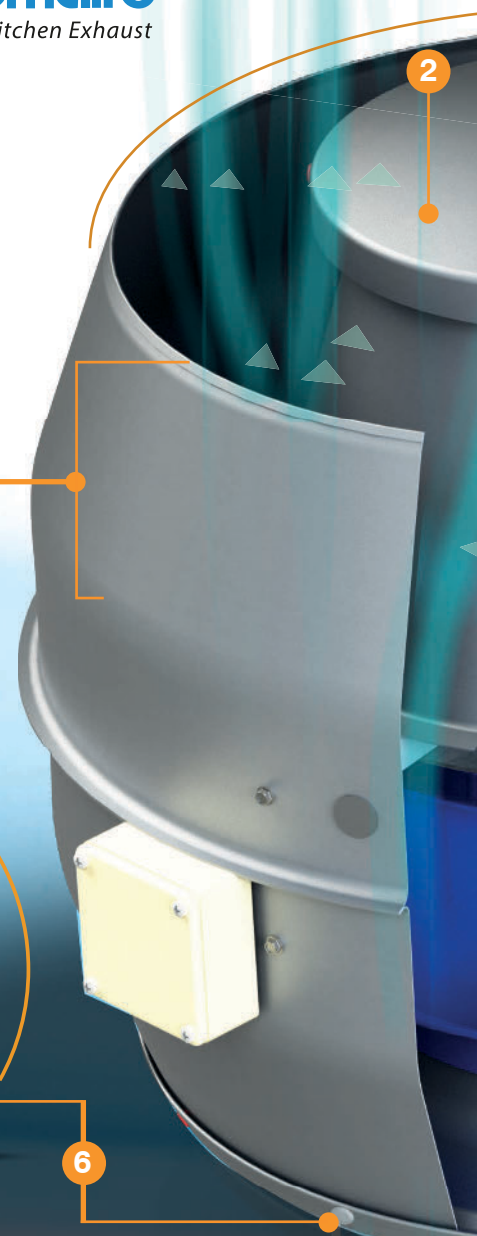
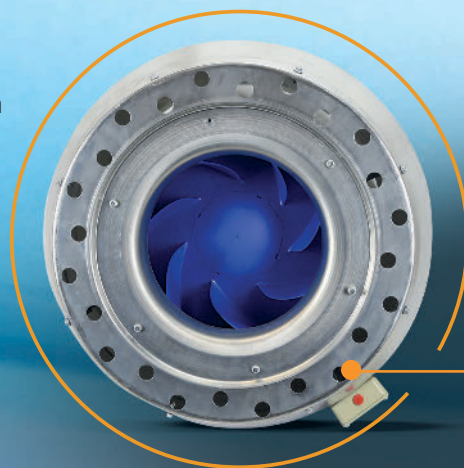
- 1 Aerodynamic shaped cowl for smoother air flow, reduced turbulence and increased fan performance
- 2 Weather and contaminant proof enclosure for maximum motor protection
- 3 Smaller exhaust opening than traditional kitchen fans increases discharge velocity and reduces exposure to rain
- 4 Removable windband for easy cleaning and maintenance
- 5 High performance mixed flow impeller provides quieter operation with better air flow and higher pressure development
- 6 Greater number of drainage holes included around base to prevent water build-up

### Improves the Working Environment

Systemaire commercial kitchen exhaust fans have been designed with both the installer and kitchen staff in mind. They feature a durable but lightweight design which makes them easier and safer to install.

The impact of excessive noise from a commercial kitchen can cause problems for both restaurant staff and patrons. The ultra-quiet operation of Systemaire kitchen exhaust fans can improve the working environment within the kitchen by reducing unwanted noise distractions.

Their robust design ensures reliable operation in transferring contaminated air, cooking heat, steam and grease vapours from the cooking area quickly and efficiently. Designed for low maintenance, the motor is encased within a ventilated enclosure for protection against grease, dust and fumes handled by the fan.

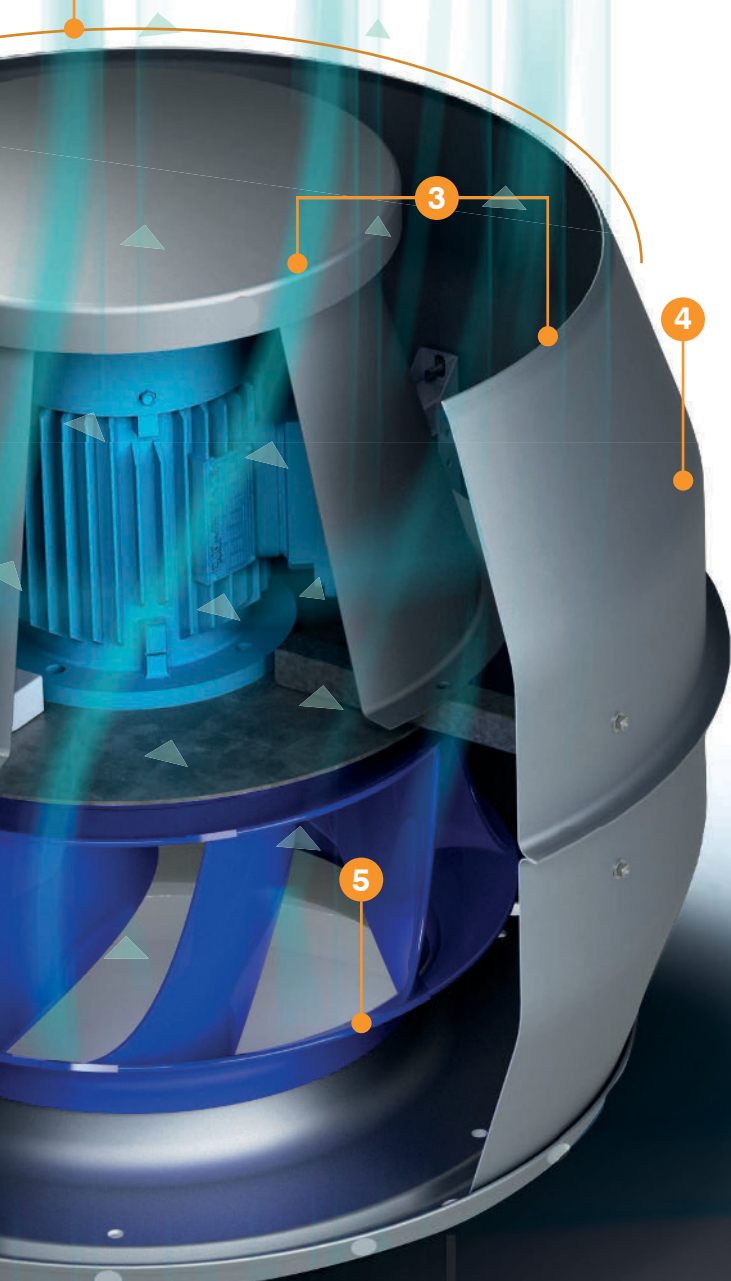




## A High Performance Design

The innovative Systemaire fan housing achieves high air flow performance and delivers quiet air extraction. Its patented housing design has been aerodynamically engineered to allow air to flow through the fan body with the least possible resistance. This provides optimal efficiency and smooth operation which ensures reliable trouble free operation.

It's fitted with a high performance mixed flow impeller that provides high pressure over a wide range of air flows and ensures effective operation at lower fan speeds.



## Construction

Cowls are of aluminium

and can be powder-coated as an optional extra.

Impellers are Mixed-Flow design.

Windband can be easily removed to facilitate cleaning and maintenance.

## Motors

Type - standard TEFC squirrel cage induction motors.

Electricity supply - single or three-phase to suit a wide range of voltages and frequencies.

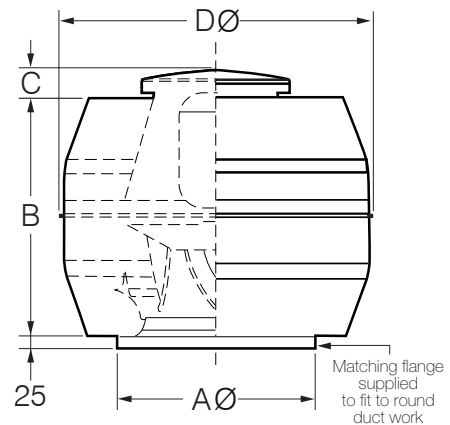
Bearings - sealed-for-life, ball.

Speed-controllable using variable speed drives (See last page for models)

## Testing

- Air flow tests based on ISO5801: 2007
- Noise tests based on ISO13347: Part 3, 2004

## Dimensional Drawing



Model	3ph	AØ	B	C	DØ	Approx. Weight kg*	Air flow# m³/s
KUD...	1ph						
254		260	443	53	580	14	0.48
304L		312	443	53	580	14	0.69
304/6		312	554	16	730	22	0.80
384/6		384	554	39	730	27	1.64
464/6		464	554	64	730	30	2.25

Dimensions in mm.

# Air flows are approximate only and based on 30Pa static pressure.

# Commercial Kitchen Exhaust Fans

## GE Series

The GE Series of vertical exhaust centrifugal roof units has been specifically designed to exhaust grease and oil laden air from applications such as fast food and restaurant kitchens. The design incorporates a grease/water separator which plumbs excess water away from the unit while retaining the oil in a reservoir for later removal.

There are 7 sizes in the range extending from 350 to 710mm diameter.

### Typical Applications

Exhausts grease and oil laden air from fast food shops, cafes and restaurant kitchens.

### Features

- Robust, heavy duty construction
- Choice of speeds available
- Fitted with a high performance backward-curved centrifugal fan
- Quick release toggle clamps on windband provide easy access for cleaning and maintenance of impeller
- Backward tilting fan body allows easy access for cleaning unit base
- Grease/water separator retains oil in a reservoir for later removal

### Construction

Constructed from powder-coated galvanised steel, polyethylene and ABS plastic

Backward-curved centrifugal impellers



### Motors

Type - standard squirrel cage induction motors

Electricity supply - single or three-phase to suit a wide range of voltages and frequencies

Bearing - sealed-for-life, ball

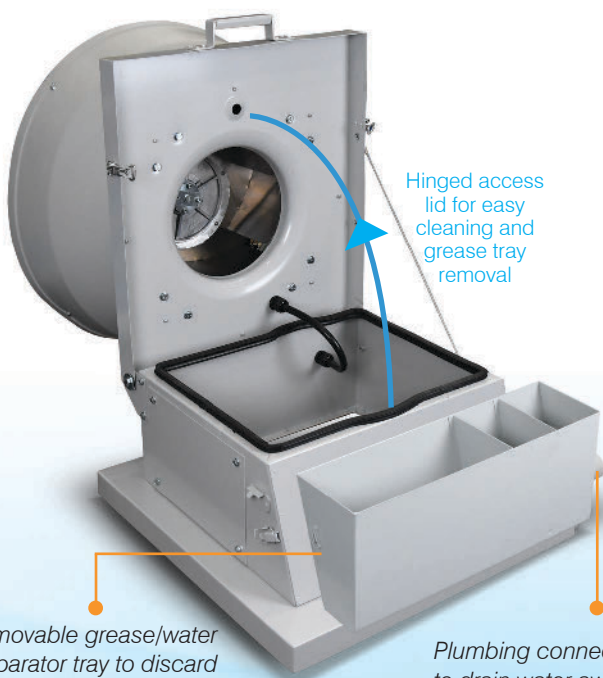
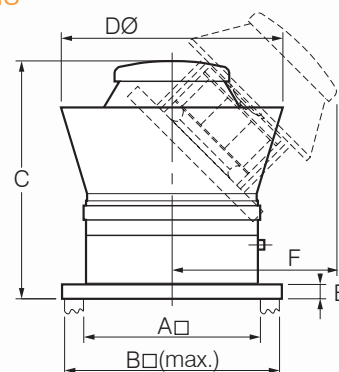
Speed-controllable using variable speed drives

### Testing

Air flow to BS848:Part 1, 1980

Noise tests to BS848, Part 2, 1985

### Dimensions



Hinged access lid for easy cleaning and grease tray removal

Removable grease/water separator tray to discard excess oil and grease

Plumbing connection to drain water away from the unit

Model	A □ B □		C	DØ	E	F	Approx. weight	Air flow <sup>#</sup>
CGD... 3ph	A □	(max)					kg.*	m <sup>3</sup> /s
35.	520	620	810	667	60	820	81	0.83
40.							87	1.10
45.							104	1.55
50.	800	900	935	928	60	980	109	2.16
56.							122	3.14
63.							152	4.51
71.	800	1000	1240	1260	60	1380	163	4.12

Dimensions in mm

\* Unit weights depend on the make of motor used. If critical this should be referred to our sales department at time of order.

# Air flows here apply to 4 pole models (model 71 is 6 pole.), are approximate only and based on 30Pa static pressure.



# Exhaust Fans

## Heritage Ultra

The Heritage Ultra Series of vertical exhaust roof units has been designed for use in ducted exhaust applications. It features a high performance mixed-flow fan and removable windband which makes cleaning and maintenance easy.

There are 9 sizes in the series extending from 250 to 630mm diameter.

### Typical Applications

Can exhaust air for applications such as commercial kitchens and bakeries.

### Features

- Durable galvanised steel construction
- Designed to handle clean and grease laden air
- Motor is mounted out of the airstream
- Special finishes, such as powder coating and epoxy coating can be supplied
- Available in a range of speeds to suit specific applications
- Windband can be easily removed to allow easy access for cleaning and maintenance
- Can be mounted at angles up to 15°

### Construction

Cowls are of galvanised steel and can be powder-coated as an optional extra

Impellers are Mixed-Flow design

Windband is fitted with quick-release toggle clamps to facilitate cleaning and maintenance

### Motors

Type - standard TEFC squirrel cage induction motors

Electricity supply - three-phase to suit a wide range of voltages and frequencies

Bearings - sealed-for-life, ball

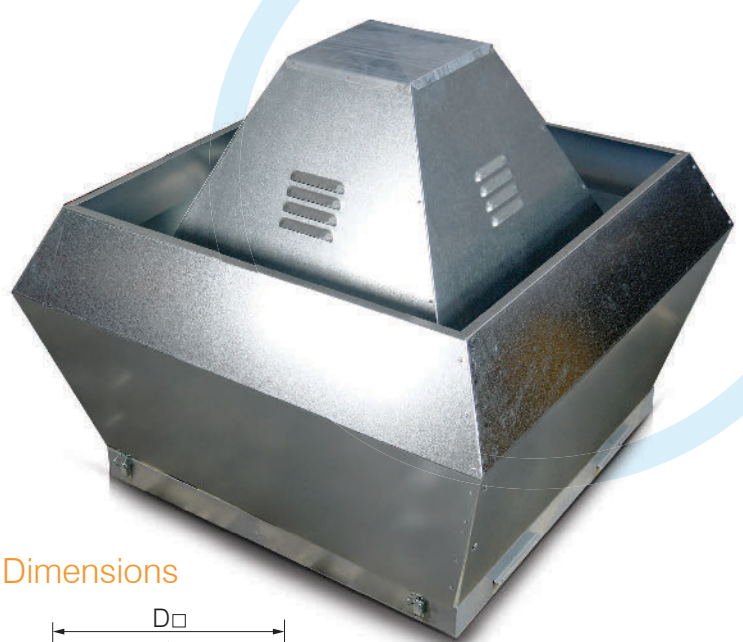
Speed-controllable using variable speed drives.

Multi-speed motors can be supplied

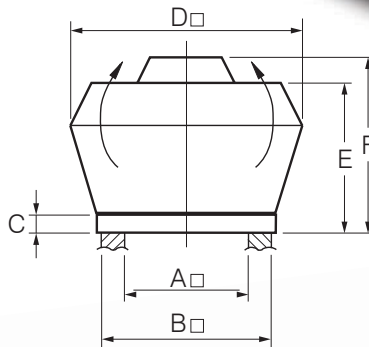
### Testing

Air flow to ISO 5801: 2007

Noise tests based on ISO13347-3



### Dimensions



Model							Approx.*	
HUD... 3ph	A	B	C	D	E	F max.	weight	Air flow#
							kg.	m <sup>3</sup> /s
254							20	0.32
284	310	410	50	520	310	540	23	0.44
314							26	0.66
316	400	500	50	665	420	550	26	0.40
354							31	0.94
356	400	500	50	665	420	570	31	0.60
404							53	1.70
406	620	720	60	900	540	790	31	1.10
454							54	1.20
456	620	720	60	900	540	820	51	1.50
504							56	2.50
506	620	720	60	900	540	850	51	1.60
508							51	1.10
564							97	4.00
566	710	810	60	1160	665	965	74	2.70
568							74	1.80
634							140	5.50
636	710	810	60	1160	665	1000	81	3.50
638							81	2.40

Dimensions, mm

\* Unit weights depend on the make of motor used. If critical this should be referred to our sales department at time of order

# Air flows are approximate only and based on 30Pa static pressure.





# Supply Fans

## Gamma Supply

The Gamma Series of centrifugal supply air roof units have been designed for use in free intake and ducted installations.

These compact and low profile units are ideal for supplying fresh air into commercial kitchens and cafes to assist with effective exhaust.

They are available in 8 sizes extending from 315 to 710mm diameter.

### Typical Applications

Suitable where make-up air or positive pressure is required in the ventilated space.

### Features

- Corrosion-proof, robust construction
- Choice of speeds available
- Ideal for ducted installations
- Fitted bird mesh prevents debris and birds entering building and interrupting motor operation
- High performance backward-curved centrifugal impellers fitted
- Can be mounted at angles up to 30°
- Many 3-phase motors are 2-speed star/delta design as standard

### Construction

- Cowls are of UV-stabilised plastic
- Steel components have a corrosion resistant finish
- Backward-curved centrifugal impellers
- Bird-mesh guards are fitted as standard
- Shutters cannot be fitted

### Motors

- Type - external rotor, squirrel cage induction motors
- Electricity supply - 230V, single and 415V, 3-phase, 50Hz
- Bearings - sealed-for-life, ball
- Speed-controllable using variable speed controller
- Some three-phase units are fitted with 2-speed star/delta design motors

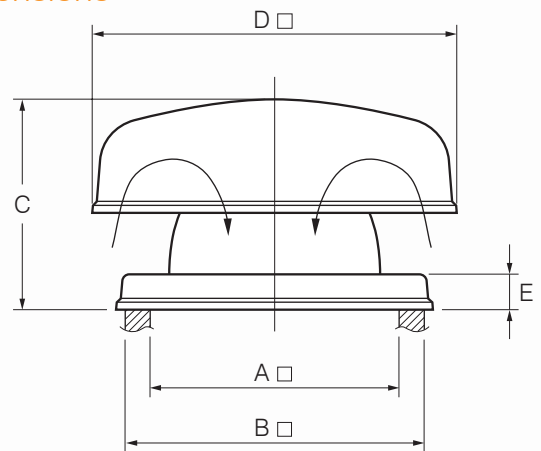


### Testing

Air flow tests to BS848:Part 1 1980

Noise tests to BS848:Part 2 1985

### Dimensions



Model						Approx. weight	Air flow <sup>#</sup>
CD... 3ph	A □	B □	C	D □	E	kg.*	m <sup>3</sup> /s
CE... 1ph							
31.S	480	580	420	670	50	9	0.35
35.S						20	0.60
40.S	590	690	535	890	50	22	0.83
45.S						32	1.30
50.S	740	840	670	1180	90	36	1.85
56.S	805	905	690	1395	50	40	2.70
63.S						67	3.48
71.S	1040	1140	950	1640	50	70	3.16

Dimensions, mm

\* Unit weights depend on the make of motor used. If critical this should be referred to our sales department at time of order.

# Air flows here apply to 4 pole models (model 71.S is 6 pole.), are approximate only and based on 30Pa static pressure.





# Supply Fans

## Inline Filtered Supply Unit

Supplies filtered make up air into medium to large cafés and commercial kitchens with an exhaust system.

### Features

- Robust, yet lightweight galvanised steel construction
- Mixed-flow impeller with high performance blade geometry
- Pure-V washable G4 filters on the fan discharge side that can be easily accessed via a removable side panel
- Choice of external rotor motors available in single phase and 3-phase configurations
- Supplied with TDF flanges as standard for inline mounting or installed with an external grille for flush to wall mounting

### Construction

- Galvanised steel housing with filters on fan discharge side
- Industry standard 35mm TDF profile flange for easy connection to ducting
- External grille has a galvanized surround with fixed aluminum louvres

### Motors

Type – external rotor squirrel cage induction motor or electronic commuted (EC) motor

Electricity supply - 230V, single-phase and 415, 3 phase, 50Hz

Bearings – sealed-for-life, ball

3-phase motors can be speed controlled using variable speed drives

EC motors have an integrated controller providing infinite speed control

### Testing

Air flow tests based on ISO 5801.

Noise tests based on ISO 13347-3.

Performances shown are based on clean filters.

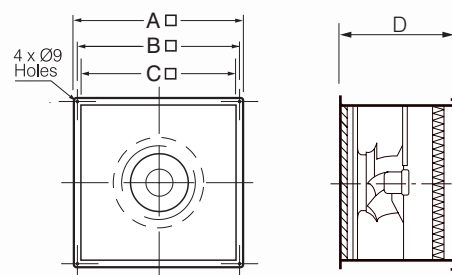
As air flow will be affected by room pressurisation, care should be taken to ensure adequate air relief is provided.



Filter removal via side panel



### Dimensions



Model					Approx. Weight
FSD... 3ph	A	B	C	D	kg.*
FSE... 1ph					
31.	720	683	650	570	35
35.	820	783	750	630	43
40.	820	783	750	630	45
45.	970	933	900	630	63
50.	970	933	900	700	69
56.	1120	1083	1050	700	84
63.	1120	1083	1050	750	90

\* Unit weights depend on the make of motor used. If critical this should be referred to our sales department at time of order.

# Fantech Airbox Kitchen Exhaust Fan for Kaire

The Airbox for Kaire is a commercial kitchen exhaust system that is purpose-built to match the models and variants within the Camfil Kaire filtration range.

Available in 7 different sizes, these units offer multiple transition width and height options to meet the specific filtration needs of the Kaire unit's applications. Each unit is equipped with Ziehl-Abegg AC plug fans, ranging from a 2.2kW fan with a 350mm diameter to a 30kW fan with a 900mm diameter. These fans come with a Danfoss FC131 Variable Speed Drive (VSD), which is pre-programmed to maintain a constant flow. This is achieved through monitoring a differential pressure sensor that is included and installed with the unit.



## Kaire Kitchen Exhaust Filtration System

The Kaire, vertical mount filtration system is tailored to control kitchen exhaust emissions of most types of commercial cooking applications. Designed to operate at 1.85m/s, the Kaire unit utilises three stages of particle filtration with the final odour removal stage to deliver a minimum 0.3 micron particulate removal.

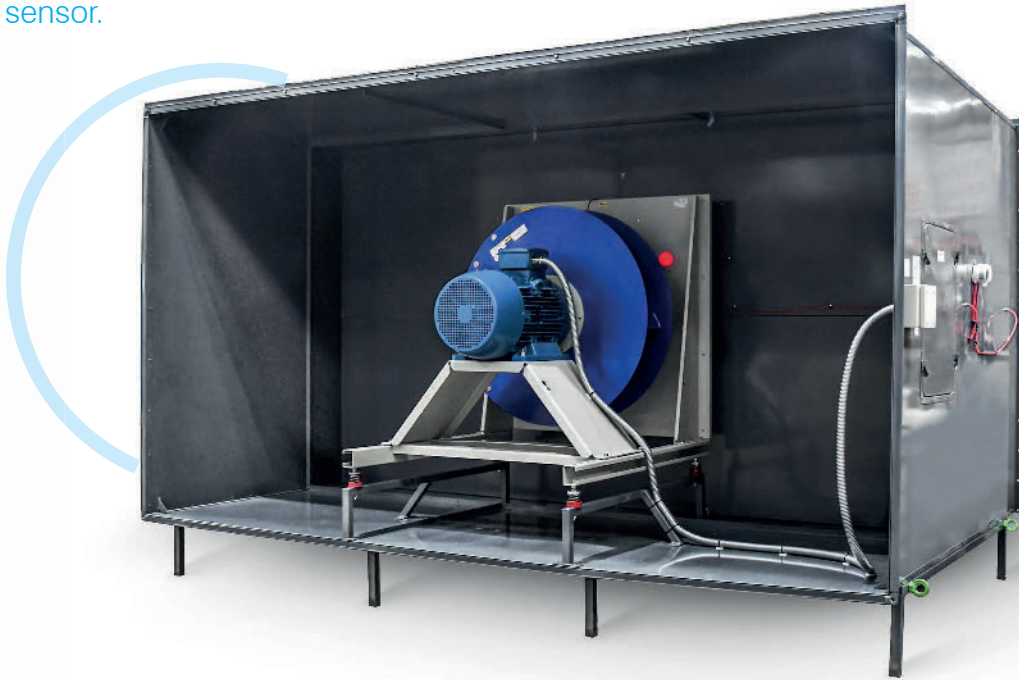




# Fantech Airbox Kitchen Exhaust Fan for PowerClean

The Airbox for PowerClean is a commercial kitchen exhaust system that is purpose-built to match the models and variants within the Camfil PowerClean filtration system.

Available in 8 different sizes, these units offer various transition width and height options to accommodate the specific filtration requirements of PowerClean units. They are equipped with Ziehl-Abegg AC plug fans, ranging from a 2.2kW fan with a 350mm diameter to a 30kW fan with a 1000mm diameter. These fans are connected to a Danfoss FC131 Variable Speed Drive (VSD), which is programmed to maintain consistent airflow by monitoring a differential pressure sensor.



# PowerClean Electrostatic Precipitator

The PowerClean electrostatic precipitator is a robust filtration system designed for large-scale or plant room applications, offering automatic cleaning to manage kitchen exhaust emissions across commercial cooking environments.

It employs multi-staged filtration including an automatic wash system to effectively control light to heavy smoke, grease, and cooking odours. The first three stages focus on removing particulate contaminants and include a washing system and an extended surface bag filter. The fourth stage utilises activated carbon media to eliminate odours.



# Variable Speed Drives

## Danfoss VLT - HVAC

The VLT - HVAC drive is a dedicated drive that is easy to install, and features a trouble-free set up which ensures it is fast and efficient to commission. It incorporates a highly effective heat management system that makes it ideal for demanding environments and where drive space is restricted.



### Features

- User friendly interface with start-up wizard for quick and easy configuration
- Integrated PI controller for smooth variable speed control
- EMC filters to remove electromagnetic interference and lower harmonic levels
- Fire mode function with quick start wizard
- Available as IP54 rated

## Danfoss VLT - Micro

The VLT - Micro drive has been designed for applications where simplicity and efficiency are key requirements. The compact size of the enclosure with forced cooled heat sink allows the drive to be installed into confined spaces.



### Features

- Basic interface with start-up wizard for quick and easy configuration
- EMC filters to remove electromagnetic interference and lower harmonic levels
- Available as IP20 (with optional IP21 kit)
- Optional 1ph input to 3 phase output (0.18 - 2.2kW)

# Wall Plate Speed Controllers



2-speed rotary switch  
(TSS1-15).  
Use with VSD,  
415V, 3PH units



0-10V speed controller  
(DCV-POT10K-WM)  
Use with VSD,  
415V, 3PH units



Variable Speed Controller  
(VA2.0, VA5.0, VA8.0).  
For 240V,  
1PH, 4 pole units



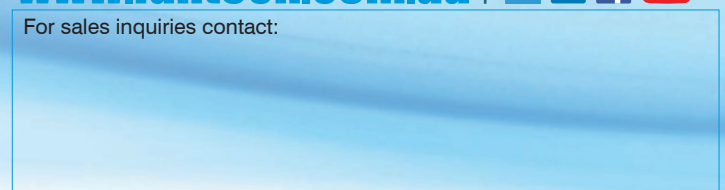
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