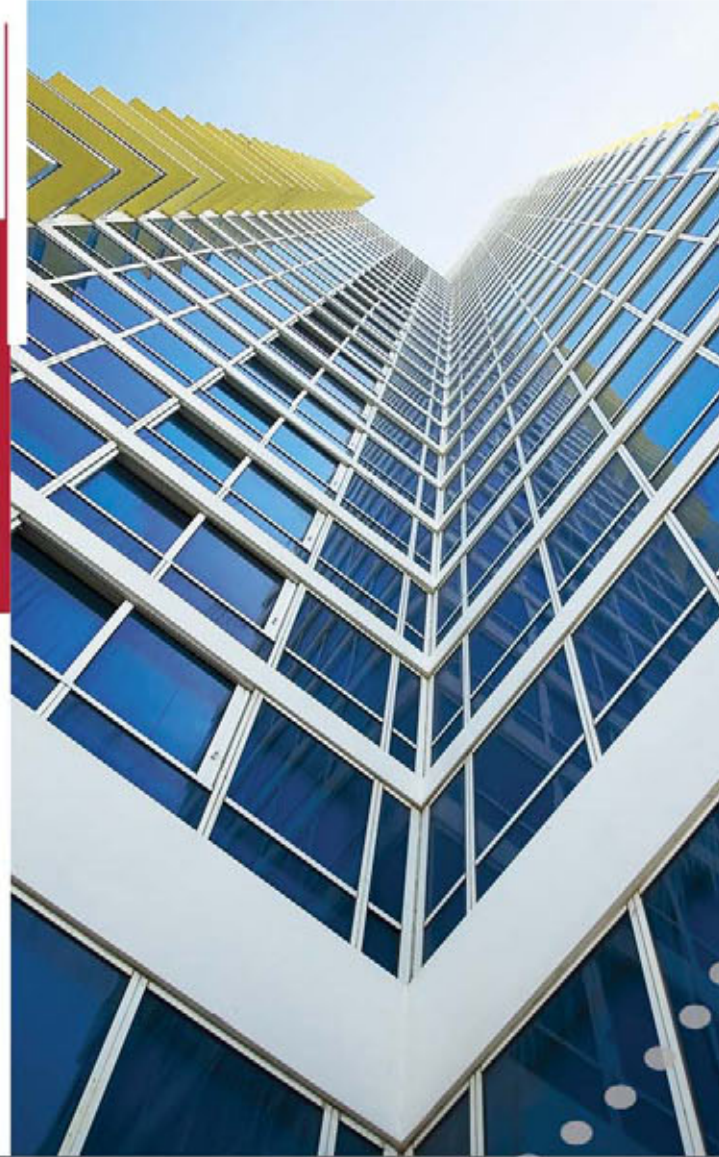


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8th Edition



Specification Range

Specification Range

Residential and Non-Residential Sectors

Vent-Axia[®]

Contents - Products

INTRODUCTION	4-13		
LO-CARBON RESIDENTIAL FANS	14-29		
Lo-Carbon VA100®/SELV	16-17	HR100R/RS	62
Lo-Carbon Silhouette® 100/SELV	18-19	HR200V	63
Lo-Carbon Centra®/SELV	20-21	HR250	64
Lo-Carbon Solo® Plus/SELV	22-23	HR500	65
Lo-Carbon Minivent	24	HR500D	66
Lo-Carbon Vent-A-light	25	HR500EP/IP	67
Lo-Carbon VA150	26	HR500DP	68
Lo-Carbon Silhouette® 150	27		
Lo-Carbon Quadra®/SELV	28-29		
dMEV, MEV & PIV SYSTEMS	30-41	DUCTING & FITTINGS	70 - 81
NEW Lo-Carbon PoziDry	32	COMMERCIAL RANGE	82 - 103
NEW Lo-Carbon PoziDry Compact	33	ACM® 100 - 200	84
Lo-Carbon Centra/SELV	34-35	ACM® 250 - 315	85
Lo-Carbon Multivent	36	Powerflow	86-87
Multivent	37	Lo-Carbon T-series® Window/Wall/Roof/Panel	88-91
Lo-Carbon Sentinel® Multivent	38-40	Traditional T-series® Window/Wall/Roof/Panel/ Darkroom/In-line	92-97
Lo-Carbon Multivent MVDC-MS/MSH	41	Super T-series®	98
		Traditional Standard Window/Roof/Wall/Panel	99-103
SINGLE ROOM dMVHR	42-49	HEATING RANGE	104 - 117
Lo-Carbon Tempra/SELV	44	NEW Bluethermal™ Underfloor Heating	106-109
Lo-Carbon HR25 Solo® Plus	45	Optimax® Combination Storage Heaters	110
Lo-Carbon HR25	46	Optimax Plus® Storage Heaters	111
HR200WK	47	Optimax Plus® Panel Heaters	112
HR300	48	Optimax® Towel Rails	113
		Opal® Zone Controllable Panel Heaters	114
MVHR UNITS FOR RESIDENTIAL & COMMERCIAL APPLICATIONS	50-69	Plinth Heaters	116
Lo-Carbon Sentinel Kinetic Range	52-53	Warm Air Curtains	116
Lo-Carbon Sentinel Kinetic® Compact & Hood Cooker MVHR	54-55	Downflow Heater	117
Lo-Carbon Sentinel Kinetic® Plus	56-57		
Lo-Carbon Kinetic® E	58	ACCESSORIES & CONTROLLERS	118 - 139
Lo-Carbon Astra	59	- RESIDENTIAL & LIGHT COMMERCIAL	
Integra®	60		
Integra® Plus	61		

PLATE & CASED FAN RANGE	140 - 213	ROOF FAN RANGE	372 - 407
Sabre Plate Mounted Sickle Fans (VSP)	142 -147	Sabre Sickle Roof Fans (VSR)	374-383
Sabre Sickle Short Case Fans (VSC)	148-153	Mixed Flow roof Fans (RMH)	384-389
NEW Long Case Axial Fans (LCA)	154-183	Centrifugal Roof Fans (RBH)	390-397
eTurboProp™ High Pressure Axial Fans (ETP)	184-187	Vertical Discharge Roof Fans (RMV)	398-403
NEW Bifurcated Case Axial Fans (BIFA)	188-213	LoWatt Mx Roof Fans (MX)	404-407
IN-LINE FAN RANGE	214 - 269	SPECIALIST APPLICATION FANS	408 - 423
NEW Eco Mix Flow Fans (eMF)	216-221	Smoke Fan Systems Application	410-411
Powerflow In-Line Duct Fans (ACP)	222-225	Bifurcated Axial Flow Fume Handling Units (BIF)	412-413
NEW Airtrak™ In-Line Centrifugal Duct Fans (ACH)	226-229	Axial Flow Fan (THGT)	414-415
Access™ Pac (PAC)	230-239	In-Line Duct Fan (ILHT)	416-417
Acoustic In-Line Fans (ACQ)	240-245	Roof Mounted Fan (CHT)	418
Mixed Flow Fans (MFQ)	246-253	Roof Mounted Fan (CVCT)	419
Access™ Rectangular In-Line Fans (ARH)	254-261	Cabinet Fan (CV)	420-423
High Pressure Centrifugal In-Line Fans (BS)	262-269		
TWIN FAN RANGE	270 - 325	ACCESSORIES & CONTROLLERS - NON-RESIDENTIAL	424 - 445
Acoustic In-Line Direct Driven Twin Fans (ATQ)	272-277		
Power Twin Fans (TDF)	278-287	AIR HANDLING UNITS	446 - 479
Galaxy In-Line Direct Driven Twin Fans (GDD)	288-291	Air Handling Unit Range Overview	448
Galaxy In-Line Belt Driven Twin Fans (GDB)	292-297	AeroCad Selection Software	449
Galaxy Roof Mounted Direct Driven Twin Fans (GRD)	298-301	NEW eViking Air Handling Unit Range	450-453
Galaxy Roof Mounting Belt Driven Twin Fans (GRB)	302-309	XP Viking Air Handling Units	454-455
Gemini Roof Twin Fans (G2B)	310-315	FP Viking Air Handling Units	456-457
High Pressure Twin Fans (BT)	316-323	Viking Control Systems	458-459
Trakmaster Twin Fan Controllers	324-325	VMD Range	460-465
		MSA, MSB & SL Minislim & Slimline Units	466-469
		D1 to D6 Mini Direct Range	470-475
		Standard Control Systems	476-477
		Air Handling Design Request Form	478
SENTINEL D-BOX	326 - 353	GENERAL INFORMATION	480 - 484
Sentinel D-Box Fans Introduction	328-331		
Sentinel D-Box Single Fan	332-341		
Sentinel D-Box Twin Fan	342-351		
Sensors and Controllers	352-353		
SENTINEL TOTUS D-ERV	354 - 371		
Sentinel Totus D-ERV Fans Introduction	356-365		
Sentinel Totus D-ERV Fans	366-371		



The First Name in Ventilation

A warm welcome to this, the 8th Edition of the Vent-Axia Industrial Ventilation catalogue and now my second as Managing Director of Vent-Axia. We continue to live and work in challenging times. The regulatory frame work within which we operate continues to tighten the performance criteria for ventilation products and systems. Legislative pressures will continue to build in the years ahead and increase the demand for equipment and technologies to be specified which raise the bar in terms of both energy efficiency and reduced carbon emissions. From my perspective, it's at times like these when the top manufacturers in the sector must raise their game and provide the product, sales and technical support you need to succeed. And, as the UK's premier domestic, commercial, and industrial ventilation company, that's precisely what Vent-Axia is all about.

This edition shows the continued investment in products and services we are specifically making in our comprehensive range of products. For the first time we have brought together our Lo-Carbon residential, Non-residential products in one place providing what we believe to be the best solutions for specification today.

We have introduced many new models which expand upon our traditional, well-proven products as well as broadening our capabilities further with a whole host of innovations in Vent-Axia Lo-Carbon™ and energy reducing ventilation solutions. I recommend that you take a close look in the front section. To answer market needs we have made some exciting additions to our Lo-Carbon™ residential range including the Sentinel Kinetic and Kinetic Plus Mechanical Ventilation with Heat Recovery (MVHR) system. We have also introduced a new range of decentralised ventilation systems including the innovative Centra a discreet, near silent dMEV solution with the lowest specific fan power on SAP Appendix Q, and the versatile, multipurpose fan, Quadra.





These additions reflect changes to Building Regulations, since Part F and Part L now favour continuous ventilation because it performs better in SAP, is easier to specify and easier to standardise, as trickle vents are not required. It is likely that these factors, along with the Dwelling Emission Rate (DER) benefits of SAP Appendix Q will combine to boost the adoption of both wholehouse Mechanical Extract Ventilation systems (MEV and dMEV) and Mechanical Extract Ventilation systems with Heat Recovery (MVHR).

A special highlight within this range is still the Sentinel Totus D-ERV (Demand Energy Recovery Ventilation) system. Sentinel Totus can achieve up to 90% energy recovery and can eliminate the need for after heaters which are commonly required in many lower efficiency ventilation installations.

It's a breakthrough everyone here at Vent-Axia is rightly proud of and part of a Sentinel demand ventilation range which is already bringing significant benefits to consultants, contractors and end-users.

Vent-Axia is here to help you right through the design, specification and installation process, backed by a nationwide 70 strong sales team and an unrivalled technical support group based here in Crawley. Our commitment to quality and service runs right through the core of the business, and through our supply chain to you, our customers.

Vent-Axia – the First Name in Ventilation.
Ronnie George
Managing Director

Redrow Homes

Vent-Axia has signed a national supply agreement with one of the UK's leading residential and mixed use property developers, Redrow Homes. In the agreement Vent-Axia has contracted to provide Redrow Homes' developments with the new Vent-Axia Lo-Carbon™ Centra extract fan, which will ensure that the dwellings meet carbon reduction targets under Level 3 and Level 4 of the Code for Sustainable Homes.

Client: Redrow Homes
Product: Centra



Livinhome Project

Vent-Axia has been selected as the preferred ventilation supplier for the 'livinhome' housing project, a new and innovative approach to affordable housing developed by Geraghty Taylor Architects and Guildhouse-Rosepride. Vent-Axia has been contracted to provide all livinhome houses with its Lo-Carbon™ Sentinel Kinetic mechanical ventilation with heat recovery (MVHR) and Sentinel Kinetic Cooker Hood range of fans. Specifically designed for new build constructions with a high level of insulation, the Sentinel Kinetic is ideal for increasingly air tight homes and complies with the latest Building Regulations Document F 2010 for wholehouse ventilation, System 4. The system is capable of 90% heat recovery which will be significant in helping reduce the DER of livinhome properties.

Client: Livinhome (Geraghty Taylor Architects and Guildhouse-Rosepride).
Product: SentinelKineticCookerHood



Oldmachar Academy

Vent-Axia has retrofitted its state-of-the-art Sentinel Totus D-ERV (Demand Energy Recovery Ventilation) system with a low pressure hot water (LPHW) heater to provide heating and ventilation, saving energy in classrooms and admin offices as part of a major refurbishment programme at Aberdeen's Oldmachar Academy. Following the installation of 50 Sentinel Totus Midi units, the system now regulates the room temperature whilst providing the required amount of fresh air, keeping CO₂ levels below the prescribed 1500 parts per million level as set out in Bulletin 101.

Client: Oldmachar Academy
(Hutcheon Services)
Product: Sentinel Totus Midi



North Middlesex Hospital

As part of a major renovation programme at North Middlesex University Hospital in London, Vent-Axia has provided a complete, reliable and effective hospital ventilation solution for the project by installing Acoustic in-line (ACQ) and twin (ATQ) fans, which also feature a 50mm acoustic lined sound controlled housing rated Class 'O' for use where quiet operation is required and are designed to be as compact as possible for concealed false ceiling applications. Vent-Axia's ACM in-line mixed flow fans were also used, which are dimensionally compact and feature low noise and non-overloading characteristics.

Client: North Middlesex Hospital
(Bouygues)
Product: ACQ, ATQ and ACM fans



Legislation

Approved Document F 2010 - Means of Ventilation

The purpose of the regulation is to ensure adequate means of ventilation is provided for people in the building. According to the document, ventilation is the 'removal of stale air from a building and replacement with fresh outside air.

By providing outside air to breathe, ventilation assists in the dilution and removal of pollutants as well as reduction in humidity/condensation, which combined create a more pleasant environment and relief for asthma and allergy sufferers.

In short, ventilation provides fresh, clean air reducing the health risks to people and protecting the building fabric from damage.

Part F is a performance based whole building solution stating not only what should, but also guidance on how this can be achieved.

The pollutants in today's modern dwellings has lead to these changes, with the types of pollutant and the acceptable levels now detailed in the Approved Document Part F 2010.

Nitrogen Dioxide (NO₂)

Carbon Monoxide (CO₂)

Total volatile compounds (TVOC)

Bio-effluents (body odours)

Within ADF 2010 Ventilation requirements for new build properties now reference the whole dwelling based on an analysis of floor area, number of bedrooms and occupants. There are four systems covered in ADF 2010 including Intermittent Extract Fans, Passive Stack, Continuous Mechanical Extract Ventilation (MEV) and Mechanical Ventilation with Heat Recovery (MVHR).

On top of the changes to the main document a new guide has also been published called the "Domestic Ventilation Compliance Guide". This covers installation practices as well as sign off and commissioning - now a requirement.

Where the key Part F changes for October 2010?

Efficiency regulations require buildings to be 'better sealed' and 'more airtight'. In ADF 2010 there are now 2 ventilation rates based on the design infiltration rate of your building. There is one rate for properties with infiltration rates over 5m³/h/m² (leakier properties) and a higher ventilation rate for properties below 5m³/h/m² (tighter properties). These changes mean that for the first time Infiltration rates need to be known before ventilation can be sized. The practical outcome of this means that in airtight properties, the following applies:

- Trickle vents with intermittent fans are up to 50% bigger
- MVHR rates are increased

At the same time there are also some benefits for designers. With MEV in properties at 5m³/h/m² or over no trickle vents are now needed, simplifying the applications.

Guidance has been given for ventilation of basements in houses and trickle ventilation for replacement windows.

Compliance with Part F requires installed performance to meet

the ventilation rates quoted in the document. This now means that ventilation has to be commissioned and signed off by a competent person.

Why are these changes being made?

The Governments commitment to reduce energy consumption and carbon emissions requires buildings to be more airtight and more energy efficient. Air tightness is now measurable and defined in Part L of the building regulations. The developments in Part F reflect these changes, accounting for the requirement to ventilate efficiently for human comfort and health, whilst using proven technology such as Heat Recovery ventilation and energy saving Lo-Carbon motors to achieve this. Vent-Axia has been active for over 15 years in supplying heat recovery solutions to countries around the world, whose building regulations already demand this most effective, sustainable and energy efficient of ventilation solutions.

At the same time, the changes being made reflect the most recent research, linking air pollutants and condensation to effects on health (particularly asthma) and damage to the building fabric (mould), with guidance on ventilation systems and required flow rates taking this into account.

Noise

With the growth in the use of brownfield site for residential development noise ingress from traffic, industry and airports has become an important aspect for any building designer to consider.

With increasing airtightness the acoustic properties also improve leading to a reduction of external noise entering our dwellings. However this makes any noise generated inside the property even more noticeable, so in this Part F a maximum noise level of 35dBA has been set for the trickle speed on continuous ventilation systems.

Approved Document L 2010 – Conservation of Fuel and Power

At the same time as the Changes to ADF further changes to ADL Conservation of fuel and Power are also being made.

There are additional documents published to support these changes including the Non-residential and a Residential Building Services Compliance guides.

These documents set new minimum performance levels for ventilation efficiencies and reducing the consumption of the systems.

Building Regulations 2010

The revised Building Regulations 2010 have brought some significant changes to the ventilation sector in a bid to improve both air quality and energy efficiency.

Part L – New inclusions

- New TERs have been set to deliver a 25% reduction over the previous regulations, in line with the Code for Sustainable

Homes level 3 and the Domestic Building Services Compliance Guide – Specific Fan Power Requirements.

- Non-domestic building services compliance guide - Revised specific power requirements. New minimum heat recovery efficiency minimums to EN308 test standard introduced
- A minimum energy efficiency level for all ventilation systems has been set. Newbuild and refurbishment applications for intermittent fans must have a specific fan power (SFP) of less than 0.5 W/l/s. Vent-Axia is the only ventilation company offering a full range of Lo-Carbon fans for all applications that comply with this requirement.

Part F - New inclusions - Ventilation based on infiltration

- To further lower dwelling emission levels, homes need to be increasingly air tight, therefore Part F publishes guidelines for airtight properties below 5m³/m² infiltration rates at 50pa. For Intermittent System 1 and Passive Stack System 2 approaches, in airtight dwellings the guidance increases background ventilation rates by 50%.
- The ventilation rate of a given property is calculated dependant on the designed infiltration rates. This eliminates the need for background ventilators in habitable rooms when specifying MEV or dMEV systems for applications at 5m³/m² or above. So, dMEV systems, like Centra from Vent-Axia, would prove a

simple and scalable solution which, because it is also the best performing dMEV unit on SAP Appendix Q, would result in DER reductions too.

Domestic Ventilation Compliance Guide

There is now some guidance on good installation practice and a commissioning guide. This has been designed to ensure that ventilation not only delivers the required airflow, but also does it efficiently and quietly. This has been designed to link in with competent persons schemes developed for ventilation.

Vent-Axia – Lo-Carbon range

- Historically low energy DC or EC motors in residential extract fans have been available at a high premium. However, the new Lo-Carbon range from Vent-Axia is available with only a small increase in cost making them a real alternative. Energy efficient and affordable. Our investment in UK manufacturing has enabled us to develop these ranges of improved extract fans. We have also introduced a new range of Lo-Carbon decentralised ventilation systems including:
- Safety Extra Voltage (SELV) version of the innovative Centra a discreet, near silent dMEV solution with the lowest specific fan power on SAP Appendix Q
- SELV version of the versatile, multipurpose fan, the Quadra.



Future Direction

Building Regulations – Where are we going?

Things have moved on a bit since 1992 when ventilation was first introduced into the Building Regulations. Here is an overview of the changes including 2006.

2006 – Part F included continuous ventilation for the first time.

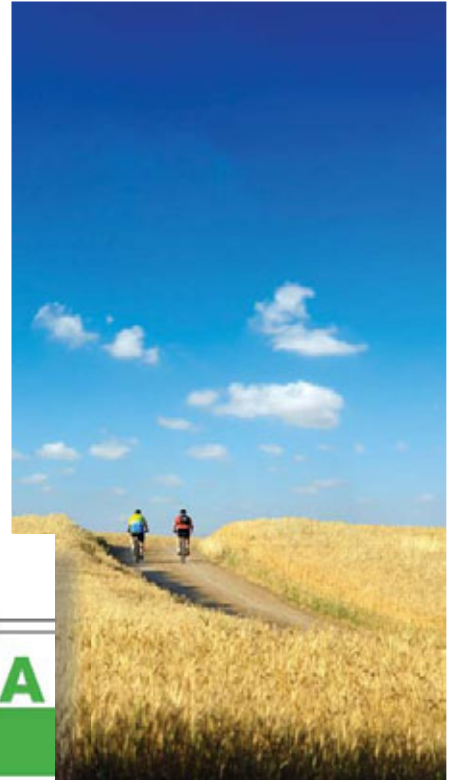
Ventilation systems were being installed by skilled persons but the performance data was never tested. Part L changes meant that SAP Q products could be included as part of the dwelling's SAP calculations

2010 – Design, install and ensure its used correctly. With dwellings being designed with increased energy efficiency and reduced air permeability, ventilation systems now require specific flow rates and there is more demand for highly efficient heat recovery to help reduce the DER's. Ventilation is now required to be installed correctly with the installation recorded and measured plus there needs to be guidance to the home occupier as to how it operates.

2013 – Ventilation is likely to become a controlled service with notification.

The road map to Zero Carbon means a 44% reduction in Carbon emissions and ventilation systems will be installed by fully qualified persons and notified in much the same way as gas appliances now.

2016 – Mechanical ventilation with heat recovery the most likely choice. Buildings will require a significant reduction in Carbon emissions and Zero Carbon Homes targets are likely to make MVHR the natural choice for energy efficient homes.



Things to Remember



Training Scheme

Domestic Ventilation Systems Installer Training - Become a Qualified Installer with your Ventilation Partner

Vent-Axia is now offering a BPEC course designed to meet the requirements in the Domestic Ventilation Compliance Guide 2010 for the installation, inspection, testing, commissioning and provision of information for Fixed Domestic Systems for both new and existing residential buildings.

The course is recognised by all Competent Persons Schemes within the industry including HVCA and NICEIC.

The course will train you to:

- **Install** Domestic Ventilation Systems in a safe and workmanlike manner.
- **Inspect and test** Domestic Ventilation Systems
- **Commission** and provide information on Domestic Ventilation Systems

To be eligible for this course you must hold or be taking a formal qualification such as N/SVQ level 3, or have a number of years experience in Plumbing, Heating, Electrical Ventilation installation

The course will be run over 2 days:

The 1st day will be theoretical with candidates working with the trainer through the BPEC training manual.

The 2nd is taken up with practical exercises including the commissioning of a working MVHR system.

At the end of the course, there is an open book multiple choice assessment that each individual candidate needs to pass.

What does the course fee include?

The course fee includes both days training with lunch, your personal copy of the training manual which will be sent in advance of your starting date and your certification upon successful completion which lasts five years. Hotel accommodation is not included.

What do I need to do to register?

If you meet the requirements above then the registration can be completed online. Upon registration you will be emailed confirmation and an order number to retain for any future correspondence. The manual will also be sent for you to study before the course starts.

What do I need to bring?

The manual must be bought with you to the training along with two passport photographs which will be needed for your registration.

When and where are the courses run?

The dates are shown on the next page along with the last registration date to ensure you receive the course materials in time to prepare. Course timings are 9.30am to 5.00pm on both days. The course is held at our new BPEC approved training facility at Crawley. The cost of the course is £395.00 including VAT + postage.



Turnkey Solutions - Residential Ventilation

There are very few suppliers of products and services within the building and construction industry that can provide a complete and fully integrated service to their clients.

With over 75 years of ventilation experience, Vent-Axia continues to lead the way in the development of new products and systems. As legislation drives the development of ventilation systems and services Vent-Axia is providing a dedicated team of mechanical ventilation systems experts within Vent-Axia New Build - Residential Team.

This experienced systems ventilation team and the Turnkey services they provide remove the need for clients to have specially trained systems installation staff and hence reduce the liabilities for the client.

Design

Vent-Axia 'Turnkey' Service

From an initial enquiry Vent-Axia will take full responsibility of system design, supply of its equipment, installation of the system and finally commissioning and balancing, complete with a hand-over pack for each property (with a full guarantee of the installed system) from date of practical completion.

Vent-Axia firmly believes significant advantages can be gained by its clients in having all diverse and complex project services integrated under one roof. Main advantages are effective co-ordination, economies of scale and a seamless support structure. Vent-Axia has a dedicated team of experienced, highly qualified site managers, technicians, service personnel and engineers who are at the forefront of engineering technology.

From Enquiry to Project

Once an enquiry has been received, either direct from the customer or following a site visit by one of Vent-Axia's experienced field representatives, a dedicated team is assigned to the project.

Project to Design

Using bespoke ventilation computer aided design software, Vent-Axia will produce sample system designs, showing unit location, ducting runs, air flow rates and noise considerations. This enables the designer to produce an accurate price for the supply and installation of systems for the whole development.

Supply & Install

Placing the Order

Once the order has been placed, site specific Health & Safety documentation will be provided, including method statements and risk assessments, company policies and general safe working practices. An account for the customer and a 'white card' system specific to this project will be issued. The 'white card' system is a staged progress payment procedure, where applications will be made for the various stages of the installation as the project progresses.

'Supply Only' or 'Supply and Fit'

Vent-Axia New Build - Residential products can be acquired in different ways. 'Supply and Fit' directly from Vent-Axia on a project basis.

Once a design and quotation has been agreed upon, Vent-Axia New Build - Residential will supply the products and project manage the installation of the systems using approved subcontractors to complete the installation work. Of course, the products can also be purchased on a 'Supply Only' basis



Payment Applications

Payment applications will be issued to the client on a monthly basis and based on the 'white card' work details. This is a method of controlling the installation, ensuring that payments are claimed on a 1st, 2nd & 3rd fix basis.

The Vent-Axia Supervisors are the main point of contact on Site. Their responsibilities include training the approved network of installers, monitoring of the installations, ensuring that Vent-Axia standards are upheld at all times and finally, the commissioning of the completed systems.

Commission

Commissioning and balancing

Commissioning and balancing is undertaken by Vent-Axia Supervisors or approved contractors. Using anemometer hoods, airflow readings are taken and recorded on commissioning sheets.

Any adjustments to the unit or the adjustable diffusers are made to ensure the system meets the design intent. The completed Air Flow Calculation sheets will then be included in the handover pack.

This stage is essential to ensure that the installed performance requirements of the Building Regulations are satisfied.

Vent-Axia can provide installation training certified by BPEC to ensure installation, commissioning and balancing are conducted using best practice.

Complete Project

When a project has been completed, the Vent-Axia commitment does not end. A full handover pack for each property will be provided including the completed Air Flow Calculation Sheets and Operating and Maintenance manuals. The handover pack also includes a copy of the system design, fitting and wiring documentation and commissioning figures.

After Sales Service

Experience in the market place shows that products will last longer and operate more efficiently when properly serviced. Vent-Axia clients entrust the company to care for their installed equipment and in so doing gain significant benefits in terms of improved environmental conditions, reduced downtime, greater energy efficiency, reduced running costs and lower capital expenditure.



Lo-Carbon Residential Fans

Continuing our commitment to Lo-Carbon we are proud to introduce the latest inclusion to the range. In this section you will find Lo-Carbon solutions for any intermittent and continuous fan application.

In axial or centrifugal, wall, ceiling or window applications in bathrooms or kitchens we now have a Lo-Carbon fan offering up to 90% energy saving over the equivalent traditional fan.

We are the first manufacturer in the UK to provide such an inclusive offer at a price point which makes these products a real alternative.

The only range in the UK to be compliant to the new Building Regulations requirements.



Range



Vent-Axia®

Lo-Carbon VA100®/SELV

Axial Bathroom/Toilet Fans

Features & Benefits

- Suitable for wall, ceiling, panel and window mounting.
- Fitted with a motorised shutter
- Meets current building regulations when installed.
- 5 Year Motor Guarantee
- Protected against low energy lighting circuits
- Reduces your carbon footprint
- IPX4 rated - IPX7 rated (SELV)
- Efficient Long life DC motor
- Uses up to 87% less energy.
- Low sound levels.
- 1 of 2 speeds selectable at installation'
- Low specific fan power
- SELV Models - Supplied with a remote transformer.
- Datalogger as standard on all models.

Long Life Ventilation VA100

The improved range of Vent-Axia Lo-Carbon VA100 features Lo-Carbon long life DC motors that are more efficient than conventional motors whilst delivering up to 87% energy savings.

Shutters

Vent-Axia Lo-Carbon VA100 range are fitted with motorised shutter mechanism that uses no extra power in operation or running.

Installation

Fitted with integral protection against low energy lighting circuits the VA100 is a 100mm axial fan suitable for use in the bathroom or toilet. VA100 is a quick and simple to fit product with easy-wire terminals. Suitable for installation in window, walls or panels/ceilings at any angle using kits available. The 100mm telescopic wall kit fit walls 225 to 360mm thick.

The range meets the requirements of the current Building Regulations for the ventilation of toilets i.e. 6 l/s, bathrooms 15 l/s with a 15 minute overrun timer for internal rooms on the LT and XT versions.

Models

Lo-Carbon VA100/SELV LP (Pullcord)

Ultra long life DC motor. Pullcord On/Off override switch with neon indication. 2 speed options.

Model	Stock Ref
LP	443159
SELV LP	441614A

Lo-Carbon VA100 XP/SELV (Shutter/Pullcord)

Ultra long life DC motor Pullcord On/Off override switch with neon indication. 2 speed options.

Model	Stock Ref
XP	443160
SELV XP	459049A

Lo-Carbon VA100/SELV LT (Timer)

Electronic adjustable overrun timer (5-25 minutes) Neon indication. 2 speed options.

Model	Stock Ref
LT	443161
SELV LT	441615A

Lo-Carbon VA100/SELV XT (Shutter/Timer)

Integral electronic adjustable overrun timer (5-25 minutes). Neon Indication. 2 speed options.

Model	Stock Ref
XT	443162
SELV XT	459050A

Lo-Carbon VA100/SELV LHTP (Integral Humidity Sensor/Pullcord)

Complete with integral humidity control with pullcord override. Neon which operates on the manual override only. 2 speed options.

Model	Stock Ref
LHTP	443163
SELV LHTP	441616A

Lo-Carbon VA100/SELV XHTP

(Shutter/Integral Humidity Sensor/Pullcord)
Complete with integral humidity control with pullcord override. Neon which operates on the manual override only.

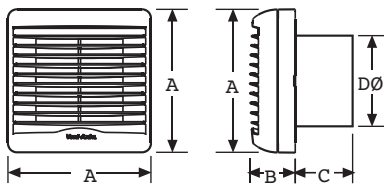
IPX4 rated. 2 speed options.

Model	Stock Ref
XHTP	443164
SELV XHTP	436064A



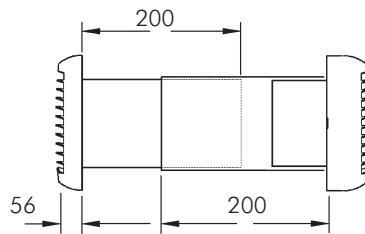
Dimensions (mm)

Panel



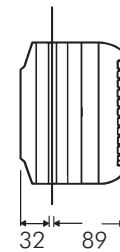
Fixing hole diameter 105mmØ

Wall



Fixing hole diameter 117mmØ

Window



	A	B	C	DØ
Bathroom/Toilet	155	44	68	98
SELV Transformer (W x H x D)	87 x 87 x 33			
Weight	1 kg			

For wall/window fitting kit refer to Ducting Section

Performance

Area	Model	Extract Performance - FID			Sound dB(A)	SFP
		m³/h	l/s	Watts	@ 3m	@ 0Pa
TOILET/ BATHROOMS	Lo-Carbon VA100/SELV LP/XP	60	17	3.4	26	0.20
	Lo-Carbon VA100/SELV LT/XT	60	17	3.4	26	0.20
	Lo-Carbon VA100/SELV LP/XP	91	25	6.5	32	0.26
	Lo-Carbon VA100/SELV LT/XT	91	25	6.5	32	0.26
	Lo-Carbon VA100/SELV LHTP/XHTP	91	25	6.5	32	0.26

Lo-Carbon Silhouette® 100/SELV

Bathroom/Toilet Fans

Features & Benefits

- Models Basic/Timer/Humidity - Installation options.
- Low Power consumption - Lower running costs.
- Quiet running
- Fully opening and closing shutters - Improved insulation.
- 1 of 2 speeds selectable at installation'
- Non transparent shutters - Enhanced privacy.
- Blue neon power indicator - Modern aesthetics.
- Ball bearing motors for vertical or horizontal application
- Unique humidity sensor track - Improved response.
- 5 Year Motor Guarantee
- IPX4 rated - IPX7 rated (SELV)
- Suitable for wall, ceiling, panel and window* mounting.
- SELV Transformer to BS EN 60742.
- SELV Models - Supplied with a remote transformer.

Slimline Bathroom Ventilation

With a slim profile of only 17mm, Silhouette blends in with the wall surface to provide an unobtrusive installation. Silhouette has a FID performance up to 95m³/h. Silhouette can be ceiling/panel mounted and connected to an appropriate duct run to the outside.

Safety Extra Low Voltage (SELV) designed for areas where a fan has to be fitted within zone 1 in a room containing a fixed bath or shower according to IEE wiring regulations. The New Silhouette SELV can be safely installed within the spray area. The fan is rated IPX7 control is by a mains safety isolating transformer with 12V DC SELV output, which is sited away from any source of spray and out of reach of a person using fixed bath or shower.

Models

Lo-Carbon Silhouette 100B/ SELV 100SVB

100mm, bathroom/toilet fan with neon running light and backdraught shutter.

Model	Stock Ref
100B	441624
SELV 100SVB	441511

Lo-Carbon Silhouette 100T/ SELV 100SVT

100mm bathroom/toilet fan with integral adjustable electronic overrun timer (up to 30 mins), neon running light which operates a manual override only and backdraught shutter.

Model	Stock Ref
100T	441625
SELV 100SVT	441512

Lo-Carbon Silhouette 100HT/ SELV 100SVH

100mm bathroom/toilet fan with integral adjustable auto humidity sensor from 60-90% RH and overrun timer, neon running light which operates a manual override only and backdraught shutter.

Model	Stock Ref
100HT	441626
SELV 100SVH	441513



17mm actual profile

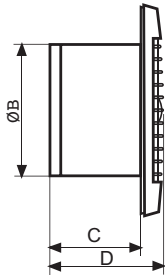
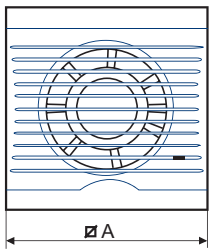


Backdraught prevention vanes fitted on discharge

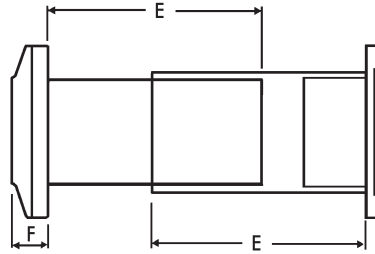


Dimensions (mm)

Panel



Wall Kit



A	BØ	C	D	E	F
160	99	115	132	200	32
SELV Transformer (WXHXD) 87X87X33					
Weight 0.6kg					

Fixing hole diameter 117mmØ

For wall/window fitting kit refer to Ducting Section

Performance

Area	Model	Extract Performance - FID			Sound dB(A)		SFP
		m ³ /h	l/s	Watts	@ 3m	Shutter	@ 0Pa
TOILET	Lo-Carbon Silhouette 100B	60	16	3.4	26	Spring	0.21
	Lo-Carbon Silhouette 100T	60	16	3.4	26	Spring	0.21
	Lo-Carbon Silhouette 100H	60	16	3.4	26	Spring	0.21
	Lo-Carbon Silhouette 100 SVB	55	15	3.5	26	Spring	0.23
	Lo-Carbon Silhouette 100 SVT	55	15	3.5	26	Spring	0.23
	Lo-Carbon Silhouette 100 SVH	55	15	3.5	26	Spring	0.23
BATHROOMS	Lo-Carbon Silhouette 100B	88	24	6.5	32	Spring	0.27
	Lo-Carbon Silhouette 100T	88	24	6.5	32	Spring	0.27
	Lo-Carbon Silhouette 100H	88	24	6.5	32	Spring	0.27
	Lo-Carbon Silhouette 100 SVB	95	26	7.5	32	Spring	0.29
	Lo-Carbon Silhouette 100 SVT	95	26	7.5	32	Spring	0.29
	Lo-Carbon Silhouette 100 SVH	95	26	7.5	32	Spring	0.29

* For window mounting shutter cannot be used and must be removed

Lo-Carbon Centra®/SELV dMEV Unit

Features & Benefits

- Part F compliant, System 3 Continuous mechanical extract.
- SAP Appendix Q eligible - Low SFP on SAP Q.
- Quietest dMEV available.
- Discreet, tasteful styling.
- Single fan for use in all applications.
- IPX4 rated - IPX7 rated (SELV)
- Constant volume option.
- Normal and Boost speeds.
- Lo-Carbon motor offering 90% energy savings and long life.
- 5 Year Motor Guarantee
- Suitable for wall, ceiling, panel and window mounting.
- SELV Models - Supplied with a remote transformer.
- Suitable for 'Zone 1' installation

What is de-centralised MEV (dMEV)

The Building Regulations Part F gives examples of four main methods of ventilation, System 3, Continuous mechanical extract ventilation can be achieved using a single centralised extract unit such as the Sentinel Multivent ducted to 'wet' rooms (kitchen, bathroom, en-suite and WC) or by decentralised individual fans in the 'wet' rooms. The fans run continuously at near silent levels providing a simple and effective form of ventilation.

SELV (Safety Extra Low Voltage) is designed for areas where a fan can be installed within Zone 1 in a room where there is a fixed bath or shower. Ingress Protected (IP) to IPX7 Lo-Carbon Centra SELV can be fitted safely within the spray area. The separate transformer can be mounted away from the spray zone and out of reach from the bath or shower.

The Lo-Carbon Centra meets the latest requirements of the Building Regulations

Document F 2010 for wholehouse system ventilation.

Selection of the two normal flow rates (6l/s or 9l/s) is via a simple 'jumper' on the control board. Different methods are available for operating boost speed from a simple switched live to integral humidistat or CO₂ sensor. See individual models for further details.

The attractive and discreet styling of the Vent-Axia Lo-Carbon Centra will complement the décor of any new home while virtually silent operation ensures optimum ventilation is achieved without intrusive noise.

Lo-Carbon Centra

The SAP Appendix Q eligible Lo-Carbon Centra has a specific fan power of only 0.18 w/l/s in through-the-wall kitchen applications.

Models

Lo-Carbon Centra

Optional Constant Volume. The integral digital air velocity sensor will monitor the airflow and maintain the preset extract flow rate of either 6l/s, 9l/s or 15l/s, minimising energy use and noise.

Stock Ref
441782

Lo-Carbon Centra/SELV T (Timer)

Ideal for bathroom and toilet applications, this unit runs continuously on trickle setting and may be boosted by the switched live input which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
T	442954
SELV T	443175

Lo-Carbon Centra/SELV HT (Humidistat/Timer)

For bathroom/toilet applications, the continuous running HT model is automatically boosted by the built-in humidistat or by a switched live input which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
HT	442955
SELV HT	443176

Lo-Carbon Centra/SELV HTP (Humidistat/Pullcord)

For bathroom/toilet applications, the continuous running HTP model is automatically boosted by the built-in humidistat or by the pullcord which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
HTP	443045
SELV HTP	443177

Lo-Carbon Centra CO₂ and humidity

Continuous running, automatically boosted with integral CO₂ and humidistat sensor.

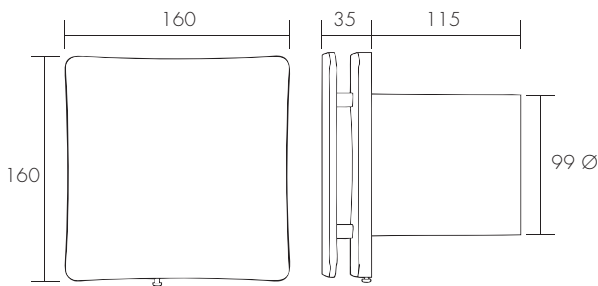
Stock Ref
444672

150mm Conversion Kit

Stock Ref
443334



Dimensions (mm)



Transformer (W x H x D) 87 x 87 x 33

For wall/window fitting kit refer to Ducting Section

Performance Guide

Model	Extract Performance (l/s)			Power consumption (Watts)			Sound dB(A)@ 3m		
	Trickle low	Trickle high	Boost	Trickle low	Trickle high	Boost	Trickle low	Trickle high	Boost
Lo-Carbon Centra	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV T	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV HT	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV HTP	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra CO ₂	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2

SAP Appendix Q Performance

Systems With Rigid Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	High	13.2	12.4	0.32	6
In Room	Wet Room	9 L/s	8.4	8.0	0.28	5
Through Wall	Kitchen	High	13.5	13.0	0.18	4
Through Wall	Wet Room	9 L/s	8.6	8.0	0.20	8

Systems With Flexible Or Mixed Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	High	13.2	12.5	0.32	5
In Room	Wet Room	9 L/s	8.6	7.9	0.28	8
Through Wall	Kitchen	High	13.5	13.0	0.18	4
Through Wall	Wet Room	9 L/s	8.6	8.0	0.20	8

Lo-Carbon Solo Plus/SELV

Centrifugal Bathroom/Toilet Fan

Features & Benefits

- **Lo-Carbon Solo Plus SELV is suitable for installation over or within reach of a shower or bath**
- **Reduces your carbon footprint**
- **Up to 70% energy saving**
- **Integral Lo-Carbon power supply**
- **Built-in washable filter feature**
- **Meets the Building Regulation (Document F) requirements for domestic bathrooms and toilets**
- **IPX4 rated - IPX7 rated (SELV)**
- **Flush or surface mountable**
- **Adjustable rear or side exit spigot**
- **Extremely low sound levels**
- **5 Year Motor Guarantee**
- **Suitable for wall, ceiling and panel mounting.**
- **SELV Models - Supplied with a remote transformer.**

Long Life Ventilation

The Lo-Carbon Solo Plus range from Vent-Axia has been specially designed for through the wall and ducted applications, suitable for internal bathrooms, toilets and other small rooms. Finished in white, the Lo-Carbon Solo Plus can be flush or surface mounted, with a 2-position 100mm circular spigot for rear entry or connecting to a vertical ducting system. The powerful centrifugal impeller allows installations using 100mm ducting in straight runs up to 50m, whilst still achieving 15l/s as required by Document F of the current Building Regulations.

Continuous running products, such as the Solo Plus installed in all wet areas of a dwelling are classed as a wholehouse ventilation system and therefore, only needs to move the amount of air as laid down in table 1.1b of Document F.

The Lo-Carbon Solo Plus has an adjustable boost speed which is set at installation variable between 12-25l/s for boost/override operation to meet Building Regulations thus ensuring minimum energy usage and low sound levels.

All models have an optional speed for constant trickle ventilation (12l/s), selectable at installation. Depending on the model, the fan will switch from trickle (if selected) to boost via the pullcord/light switch/humidity sensor/PIR.

All models can be wall; panel or ceiling mounted and can be connected to either circular, rectangular or Vent-Axia's flat ducting. Enclosure of the electrical components is manufactured from flame retardant grade material. Supply voltage 220-240V/1/50Hz. Output to fan SELV 24V DC.

Safety Extra Low Voltage Fan (SELV)

Designed for areas where a fan has to be fitted over or within zone 1 in a room containing a fixed bath or shower according to IEE wiring regulations (BS 7671), the Lo-Carbon Solo Plus SELV fan can be safely installed within the spray area. The fan is rated IPX7. Control is by mains safety isolating transformer unit with 24V DC SELV output, which is sited away from any source of spray and out of reach of a person using a fixed bath or shower. Controller Supply voltage 220-240V/1/50Hz. Output to fan SELV 24V DC.

Models

Lo-Carbon Solo Plus/SELV P (Pullcord)

Flush or surface mountable. Control by Pullcord. 2 Speed. Constant trickle option. Adjustable boost. In-built Lo-Carbon controller.

Model	Stock Ref
P	427481A
SELV P	427485A

Lo-Carbon Solo Plus/SELV T (Timer)

Flush or surface mountable. Control by room light or switch. 2 Speed. Constant trickle option. Adjustable boost. Adjustable timer overrun. Delay on timer. In-built Lo-Carbon controller.

Model	Stock Ref
T	427482A
SELV T	427486A

Lo-Carbon Solo Plus/SELV HT (Humidistat-Timer)

Flush or surface mountable. Humidity controlled fan with override pullcord. Constant trickle option. Adjustable boost. Adjustable timer overrun. Delay on timer. Adjustable humidity sensor. In-built Lo-Carbon controller.

Model	Stock Ref
HT	427483A
SELV HT	427487A

Lo-Carbon Solo Plus/SELV TM (Timer/PIR)

Flush or surface mountable. Control by integral PIR detector. 2 Speed. Constant trickle option. Adjustable boost. In-built Lo-Carbon controller.

Model	Stock Ref
TM	427484A
SELV TM	427488A

Lo-Carbon Solo Plus Bezel

Used when flush mounting - reduces the need to make good

Stock Ref
437078

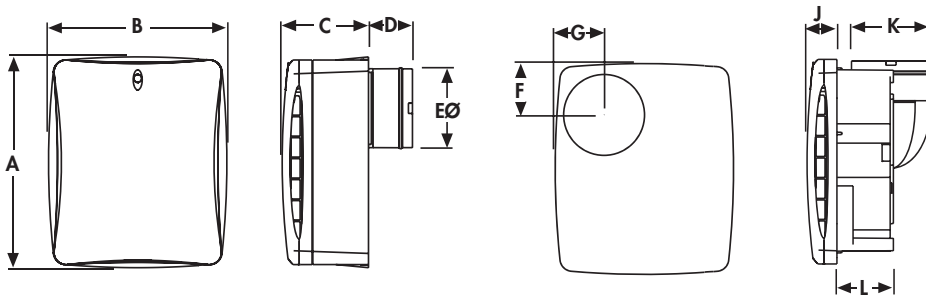
For wall/window fitting kit refer to Ducting Section

Vent-Axia®

Lo-Carbon Residential Fans



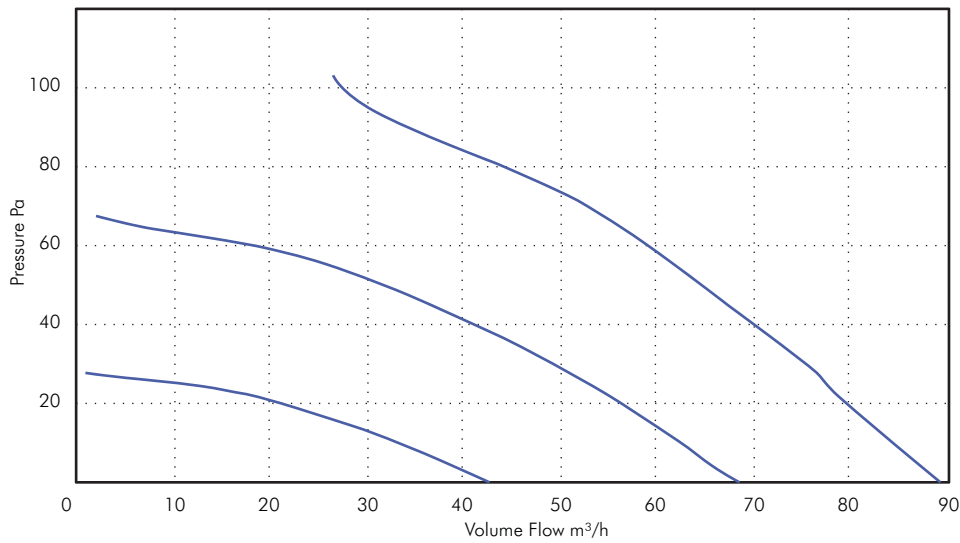
Dimensions (mm)



A	B	C	D	EØ
261	221	107	54.5	98
F	G	H	I	J
64	61	37	98	70

SELV Transformer: (W x H x D) 147 x 88 x 50.
Weight 2.2kg, SELV Weight 2.7kg.

Performance Curve



Performance Guide

Model	Extract Performance m³/h (l/s) - FID			Watts			Sound dB(A) @ 3m		
	Max Boost	Min Boost	Trickle	Max Boost	Min Boost	Trickle	Max Boost	Trickle	SFP @ 0Pa
Lo-Carbon Solo Plus P	90 (25)	69 (19)	43 (12)	15	8.6	4	46.4	24.6	0.43
Lo-Carbon Solo Plus T	90 (25)	69 (19)	43 (12)	15	8.6	4	46.4	24.6	0.43
Lo-Carbon Solo Plus HT	90 (25)	69 (19)	43 (12)	15	8.6	4	46.4	24.6	0.43
Lo-Carbon Solo Plus TM	90 (25)	69 (19)	43 (12)	15	8.6	4	46.4	24.6	0.43
Lo-Carbon Solo Plus SELV P	90 (25)	69 (19)	43 (12)	16	9.6	5	46.4	24.6	0.5
Lo-Carbon Solo Plus SELV T	90 (25)	69 (19)	43 (12)	16	9.6	5	46.4	24.6	0.5
Lo-Carbon Solo Plus SELV HT	90 (25)	69 (19)	43 (12)	16	9.6	5	46.4	24.6	0.5
Lo-Carbon Solo Plus SELV TM	90 (25)	69 (19)	43 (12)	16	9.6	5	46.4	24.6	0.5

Tested at 240VAC @ 50Hz

Lo-Carbon Minivent Ducted Bath/ Shower Fan Kit



Features & Benefits

- IP44 rated
- Powerful axial in-line fan with downstream airflow guide vanes
- Complete kit supplied
- Meets Building Regulation Requirements for toilets and bathrooms
- Adjustable timer version available
- 5 Year Motor Guarantee
- 1 of 2 speeds selectable at installation'

in one box. This simplifies fitting of an efficient ventilation system to small rooms, including bath, shower rooms and toilets. It is especially suitable for en-suite bathrooms.

When installed the fan kit has ample performance to meet the Building Regulations Requirements for toilets and bathrooms. The timer version should be used for internal rooms.

The kit consists of a Lo-Carbon Minivent IP44 In-Line fan, a white ceiling grille and spigot, 3 metres of flexible duct and an external louvre for soffit or wall mounting. The duct should be cut to the required length and the bend radius kept to a maximum to provide the best fan performance.

Enclosed terminal compartment, Class 2 appliance. Supply voltage 220-240/1/50Hz.

Models

Lo-Carbon Minivent Shower Fan - Basic

Comprises - high output tube fan, 3 metres of flexible duct, ceiling inlet grille and spigot, soffit/wall outlet grille.

Stock Ref
441421

Lo-Carbon Minivent Shower Fan - Timer

Comprises - high output tube fan, 3 metres of flexible duct, ceiling inlet grille and spigot, soffit/wall outlet grille.

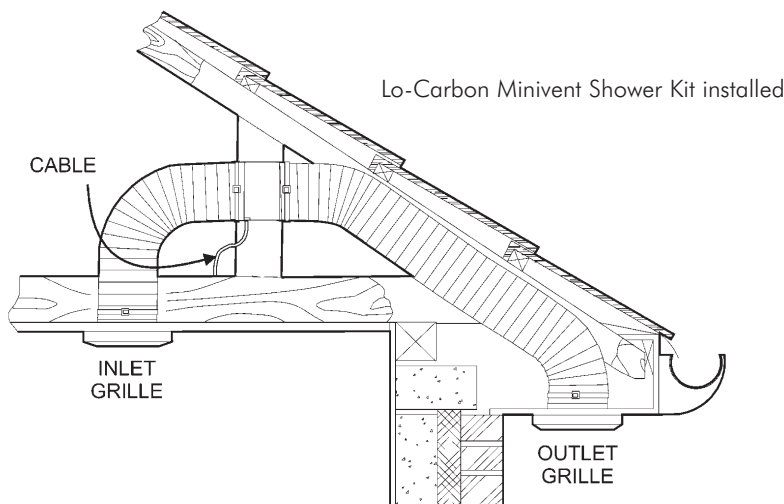
Stock Ref
441422

Powerful Lo-Carbon In-Line Fan Kit

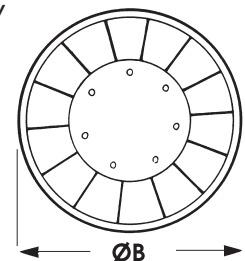
The Vent-Axia Lo-Carbon Minivent ducted bath/shower kit includes all the components necessary to install a ducted 100mm system

Dimensions (mm)

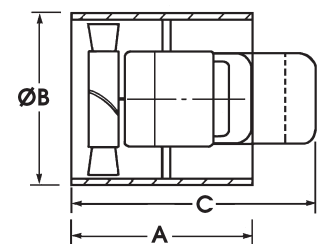
A	BØ	C
80	98	138



Rear View



Side View



Internal/External Grille Dimensions
170x170mm

Performance

Model	Extract performance - FID			Sound dB(A)	
	m ³ /h	l/s	Watts	@ 3m	SFP @ 0Pa
Lo-Carbon Minivent B	110	31	6.5	23	0.21
Lo-Carbon Minivent T	110	31	6.5	23	0.21

Lo-Carbon Vent-A-Light

Ducted Bath/ Shower Fan Kit



Features & Benefits

- Suitable for shower enclosure and wet areas
- Provides simultaneous fan and light operation
- Meets Building Regulations when installed
- '1 of 2 speeds selectable at installation'
- IP44 rated fan
- Double insulated fan
- Light assembly Class III.
- 5 Year Motor Guarantee
- Supplied with Chrome and white bezels

100mm Lo-Carbon axial in-line shower fan and light kit. Provides simultaneous fan and light operation. Suitable for shower enclosures and wet areas. 12V 35W GU5.3 MR16 dichroic halogen lamp. Available with both a white and chrome bezel on light assembly. The light assembly can be held in place using fixing clips or screws.

Typical Specification

Performance

Model	Extract performance - FID			Sound dB(A)	
	m ³ /h	l/s	Watts	@ 3m	SFP @ 0Pa
Lo-Carbon Vent-A-Light B	110	31	6.5 + 35	23	0.21
Lo-Carbon Vent-A-Light T	110	31	6.5 + 35	23	0.21

Tested at 240V 50Hz

IP44 rated fan. CE marked in accordance with all the relevant EEC Harmonised Directives.

Fan double insulated and the motor is fitted with Thermal Protection. Light assembly class III.

When installed the fan performance meets the new Building Regulations 2006.

Models

Lo-Carbon Vent-A-Light Fan and Light Kit - Standard

100mm axial in-line shower fan and light kit. Includes fan, 3m flexible ducting, white grille, light transformer and light assembly with white and chrome bezels.

Stock Ref
441423

Lo-Carbon Vent-A-Light Fan and Light Kit - Timer

100mm axial in-line shower fan and light kit. Fan has electronic overrun timer adjustable from 5 to 30 minutes. The factory setting is 15 minutes. Includes fan, 3m flexible ducting, white grille, light transformer and light assembly with white and chrome bezels.

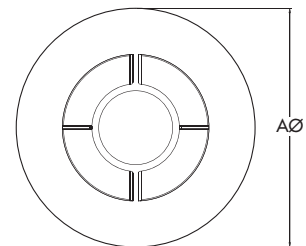
Stock Ref
441424

Dimensions (mm)

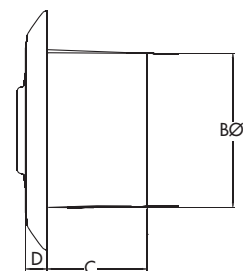
AØ	BØ	C	D
155	100	65	14
Hole Sizes: Ø115mm when using screws.			
Ø130mm with fixing clips			

Light Transformer Dimensions
(W x H x D) 101 X 20 X 39

Front View



Side View



Internal/External Grille Dimensions 170x170mm
Fan Transformer (W x H x D) 87 x 87 x 33

Lo-Carbon VA150

Axial Kitchen & Utility Room Fans



Features & Benefits

- Reduces your carbon footprint
- Long life Lo-Carbon motor lasts 5 times longer than conventional motors
- Up to 60% energy saving
- Meets current building regulations when installed
- IP44 rated
- Low sound levels
- 5 Year Motor Guarantee
- Suitable for wall, ceiling and panel mounting
- Unique patented instant electric opening shutter with positive closure
- '1 of 2 speeds selectable at installation'

Long Life Ventilation

Vent-Axia Lo-Carbon VA150 fans feature Lo-Carbon long life DC energy saving motors that last 5 times longer than conventional motors, whilst delivering up to 60% energy savings. The extended life of Lo-Carbon fans is due to the use of a new generation of high quality electronically controlled ball-bearing motors especially developed for this range. The motors are perfectly designed for the wet conditions of utility rooms and kitchens, extracting stale, moisture-laden air quietly and efficiently.

Shutters

Vent-Axia Lo-Carbon VA150 fans have instant shutters using patented Integral Magnetronic Control (IMC) technology ensuring that the fan is only open to the outside world when it is working - with no extra power used to operate the shutter. This means that the only air to escape is the air extracted. When the fan stops the shutter closes firmly, until the fan operates again.

Installation

The Lo-Carbon VA150 range is suitable for installation in panels, walls or windows using the kits available. Lo-Carbon fans are quick and simple to fit using reversible grommets and easy-wire terminals, and are suitable for wall or ceiling mounting at any angle.

150mm telescopic wall kits are available with a white or brown outside grille. The kit is supplied with a telescopic wall sleeve to fit walls 225–360mm thick. Hole diameter 152mm.

Window fitting kits are available for use with all Lo-Carbon 150mm models through single or double glazed windows up to 40mm thick. Hole diameter 152mm.

The range meets the requirements of the current Building Regulations Document F for the ventilation of utility rooms 30l/s and for kitchens 60l/s.

Models

Lo-Carbon VA150P (Shutter/Pullcord)

Ultra long life DC energy saving motor. Patented instant electric opening shutter. Controlled with integral power supply with pullcord On/Off switch.

Stock Ref
459123

Lo-Carbon VA150T (Shutter/Timer)

Ultra long life DC energy saving motor.

Performance

Setting	Model	Extract Performance		Sound dB(A)		SFP @
		m³/h	l/s	@ 3m	Watts	OPa
UTILITY SETTING	Lo-Carbon VA150P	160	46	33	7.5	0.16
	Lo-Carbon VA150T	160	46	33	7.5	0.16
	Lo-Carbon VA150HP	160	46	33	7.5	0.16
KITCHEN SETTING	Lo-Carbon VA150P	230	64	36	11.5	0.18
	Lo-Carbon VA150T	230	64	36	11.5	0.18
	Lo-Carbon VA150HP	230	64	36	11.5	0.18

Patented instant electric opening shutter. Controlled with integral power supply with electronic adjustable overrun timer (5-25 minutes).

Stock Ref
459124

Lo-Carbon VA150HP (Shutter/Humidistat)

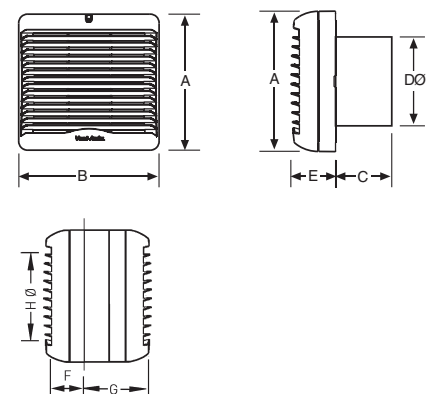
Ultra long life DC energy saving motor. Patented instant electric opening shutter. Controlled with integral power supply with pullcord override switch and adjustable humidity sensor (60-95% RH).

Stock Ref
459125

Dimensions (mm)

A	B	C	DØ	E
216	224	80	146	60

Weight 1.2kg



For wall/window fitting kit refer to Ducting Section

Lo-Carbon Silhouette® 150

Axial Kitchen Fans



Features & Benefits

- Stylish ultra low profile grille
- Downstream airflow guide vanes for improved pressure development
- Ball bearing motors for vertical or horizontal application
- Wall kit design ensures installed performance to meet Building Regulation Document F requirements
- 5 Year Motor Guarantee
- '1 of 2 speeds selectable at installation'
- IPX4 rated
- Low Specific Fan Power
- Suitable for wall, ceiling and panel mounting

Slimline Lo-Carbon Kitchen Ventilation

The Lo-Carbon Silhouette range is designed for modern living. With a profile of only 19mm on the kitchen models, Lo-Carbon Silhouette blends in with the wall surface to provide an unobtrusive installation.

Mounted in the centre of the fan, beneath the ultra slim profile grille, are the electronics, incorporating a humidistat for detecting a change in internal humidity or an overrun timer option that is adjustable between 5 and 30 mins.

Models

Lo-Carbon Silhouette 150mm
Slim profile only 19mm. FID performance of 67l/s, double insulated. Power consumption only 8.2 watts.

Lo-Carbon Silhouette 150B
150mm kitchen fan with neon running light and backdraught shutter.
Stock Ref
441628

Lo-Carbon Silhouette 150T
150mm kitchen fan with integral adjustable electronic overrun timer (up to 30 mins), neon which operates on the manual override only and spring backdraught shutter.
Stock Ref
441629

Lo-Carbon Silhouette 150HT
150mm with integral adjustable auto humidity sensor from 60-90% RH and overrun timer, neon running light which operates on the manual override only and backdraught shutter.
Stock Ref
441630

Performance

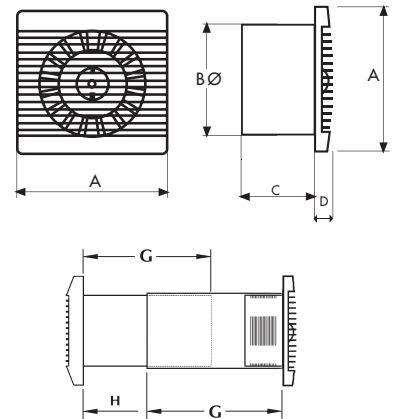
Setting	Model	m³/h	Extract Performance		Sound dB(A) @ 3m	SFP @ OPa
			l/s	Watts		
UTILITY SETTING	Lo-Carbon Silhouette 150B	165	46	5	35	0.15
	Lo-Carbon Silhouette 150T	165	46	5	35	0.15
	Lo-Carbon Silhouette 150HT	165	46	5	35	0.15
KITCHEN SETTING	Lo-Carbon Silhouette 150B	241	67	8.2	43	0.15
	Lo-Carbon Silhouette 150T	241	67	8.2	43	0.15
	Lo-Carbon Silhouette 150HT	241	67	8.2	43	0.15

Fixing hole diameter 152mmØ (when wall kit used)

Dimensions (mm)

A	BØ	C	D	G	H
223	147	130	19	220	37

Weight 1.75kg



For wall/window fitting kit refer to Ducting Section

Lo-Carbon Quadra®/SELV

“One Fan fits all” Centrifugal Fan

Features & Benefits

- Single fan for use in toilets, bathrooms, utility rooms and kitchens
- Meets Building Regulations for intermittent or continuous use
- Guaranteed installed performance
- SAP Appendix Q eligible - Low SFP on SAP Q 0.38.
- 100mm circular spigot for easy installation and replacement of any existing fan
- Filterless technology and maintenance free
- Lo-Carbon motors offering 90% energy savings and long life
- Motor cassette cartridge for simple replacement
- Suitable for flush or surface mounting
- 5 Year Motor Guarantee
- IPX4 rated - IPX7 rated (SELV)
- Suitable for wall, ceiling and panel mounting.
- TP and HTP main and SELV version also includes an optional datalogger.

SAP Appendix Q Performance

Systems With Rigid Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	15 l/s	15.8	14.4	0.41	9
In Room	Wet Room	9 l/s	14.6	13.2	0.61	10
Through Wall	Kitchen	15 l/s	21.4	19.4	0.38	9
Through Wall	Wet Room	9 l/s	19.5	17.6	0.58	10

Systems With Flexible Or Mixed Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	15 l/s	13.7	12.4	0.41	9
In Room	Wet Room	9 l/s	12.9	11.6	0.63	10
Through Wall	Kitchen	15 l/s	21.4	19.4	0.38	9
Through Wall	Wet Room	9 l/s	19.5	17.6	0.58	10

Lo-Carbon Quadra SELV

The Lo-Carbon Quadra SELV has been designed to meet building requirements where there is a need to fit in Zone 1 containing a fixed bath or shower according to IEE wiring regulations. The Lo-Carbon Quadra SELV can be safely installed within the spray area with the 24VDC Safety Isolating Power Supply situated away from the spray zone and out of reach of the person using the facility

Ventilation for any room

The Lo-Carbon Quadra offers a single fan suitable for surface or flush mounting. Low speed selectable between 6, 9 and 12l/s and high between 15, 30 and 60l/s all with through the wall or two ducted selections to ensure installed performance is met.

Discrete

With discrete aesthetics and low noise levels due to an accurately balanced impeller. it is also one of the most unobtrusive centrifugal kitchen fans available. The front cover design also provides no area for dirt to build up so it stays looking better for longer.

Models

Lo-Carbon Quadra TP/SVTP (Timer/pullcord)

Dual speed continuous running or intermittent to high speed. High speed via pullcord (on/off) or switch live (with overrun timer)

Model	Stock Ref
TP	439251
SVTP	442865
TP Datalogger	443811
SVTP Datalogger	446269

Lo-Carbon Quadra HTP/SVHTP

Dual speed continuous running or intermittent to high speed. High speed via integral pullcord (on/off), integral adjustable humidity sensor or switch live (with overrun timer)

Model	Stock Ref
HTP	439181
SVHTP	442866
HTP Datalogger	443812
SVHTP Datalogger	446270

Lo-Carbon Quadra TM/SVTM

Dual speed continuous running or intermittent to high speed. High speed via integral PIR sensor or switch live (both with overrun timer)

Model	Stock Ref
TM	439253
SVTM	442867

Flush mounting Kit

Stock Ref
439256

Filter (optional)

Stock Ref
439927

Decoration Frame

Stock Ref
442551

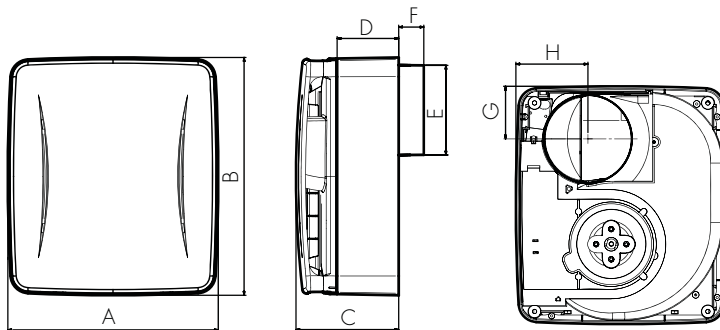


Dimensions (mm)

Front View

Side View

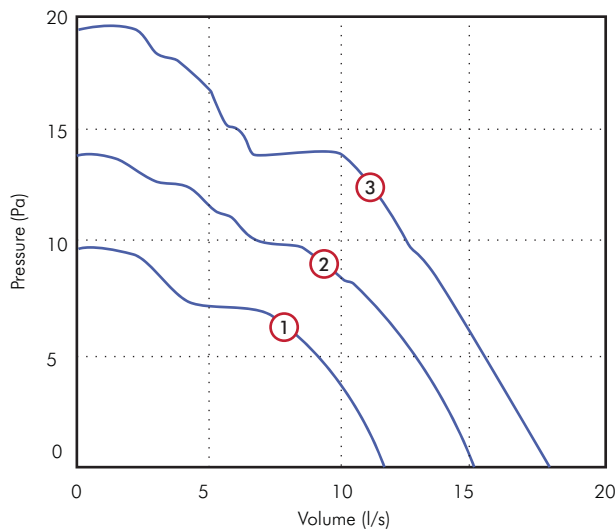
Rear View



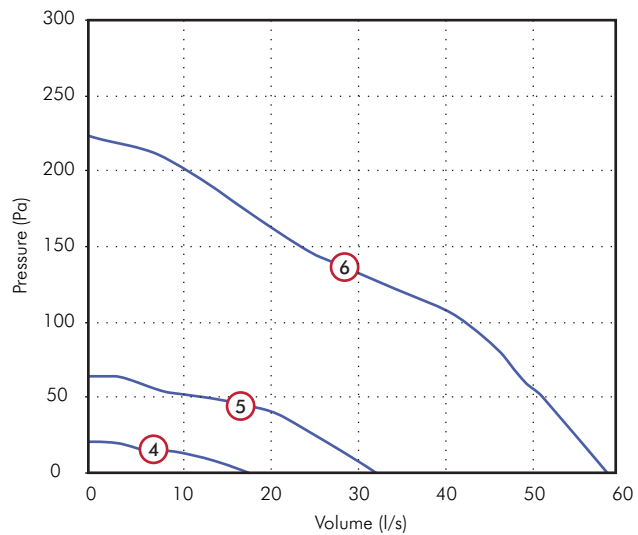
A	B	C	D	E	F	G	H
230	260	112	67	98	27	58	79

For wall fitting kit refer to Ducting Section

Performance Curve



- ① Quadra 6 l/s
- ② Quadra 9 l/s
- ③ Quadra 12 l/s



- ④ Quadra 15 l/s
- ⑤ Quadra 30 l/s
- ⑥ Quadra 60 l/s

Performance Guide

Model	m ³ /h	Extract Performance				Power		Sound dB(A) @ 3m	
		High	Low	High	Low	High	Low		
		l/s	m ³ /h	l/s	Watts	Watts			
Lo-Carbon Quadra/SELV TP	216	60	22	6	35.7	3.8	50	20	
Lo-Carbon Quadra/SELV HTP	216	60	22	6	35.7	3.8	50	20	
Lo-Carbon Quadra/SELV TM	216	60	22	6	35.7	3.8	50	20	

*Tested in through the wall installation

dMEV, MEV & PIV Systems

What is MEV & dMEV?

The Building Regulations Part F gives examples of four main methods of ventilation. System 3, Continuous mechanical extract ventilation can be achieved using a single centralised extract unit such as the Sentinel Multivent ducted from 'wet' rooms (kitchen, bathroom, en-suite and WC) or by decentralised individual fans (dMEV) in the 'wet' rooms. The fans run continuously at near silent levels providing a simple and effective form of ventilation.

The Centra meets the latest requirements of the Building Regulations Document F 2010 for wholehouse system ventilation.

New from Vent-Axia

Positive Pressure Ventilation

For controlling condensation particularly in the refurbishment sector, the Vent-Axia PoziDry offers a quick and simple solution. A loft mounted positive input fan draws fresh air from atmosphere, filters it and pushes into the dwelling via a ceiling mounted diffuser. All stale air in the property is forced out through the natural forms of ventilation, such as window mounted trickle vents.



Range



The most comprehensive range of MEV and PIV solutions on the market today.

Lo-Carbon PoziDry

Positive Pressure Unit



Features & Benefits

- Selectable air capacities to suit house volumes of up to 400m³, or floor area up to 150m².
- Uses latest Lo-Carbon technology motor for low running costs.
- Ultra Low sound level.
- Lo-Carbon PoziDry comes complete with ceiling diffuser, flexible duct, worm drive clips and anti-vibration mounts.
- Standard 5 year guarantee.
- Up to 5 year maintenance free EU4 filter
- IPX2
- SFP of 0.22W/l/s

Positive Pressure Ventilation

For controlling condensation particularly in the refurbishment sector, the Vent-Axia Lo-Carbon PoziDry offers a quick and simple solution. A loft mounted positive input fan draws fresh air from atmosphere, filters it and pushes into the dwelling via a ceiling mounted diffuser. All stale air in the property is forced out through the natural forms of ventilation, such as window mounted trickle vents.

Without heater

Stock Ref
444075

With integral heater

Stock Ref
444766

Installation

It is simply installed, out of sight in the loft space it can be suspended from a roof beam or be floor mounted, with a purpose-designed diffuser normally located over the stairwell of a conventional two story dwelling or in the main hall of a bungalow. The Lo-Carbon

PoziDry is set to the appropriate speed at installation based on the size of the dwelling, providing positive pressure input ventilation. Background ventilation openings provide the exhaust points.

Performance

The robust construction of the Lo-Carbon PoziDry features a specially developed Lo-Carbon DC fan/motor arrangement quietly delivers incredibly low running costs.

The sensor monitors the temperature in the loft, automatically adjusting the air volume when necessary and the built in fault detection software ensures continual safe functioning

Can be used for air replacement in conjunction with an extract fan.

Filter

The unit includes a filter with up to 5 years maintenance free to reduce the number of call outs needed throughout its life span.

Time Elapsed Meter

The unit includes a time elapsed meter to enable precise running information

Speed Control

With selection of 2 of 6 speeds available up to 50l/s, the unit is suitable for houses up to 400m³.

Heater

An optional comfort heater is available for operation when the incoming air temperature becomes low.

Typical Specification

Supply and install a Lo-Carbon PoziDry positive pressure loft unit for wholehouse condensation control as manufactured by Vent-Axia Ltd, Fleming Way, Crawley, West Sussex, RH10 9YX. Telephone: 0844 8560590. The unit

should be mounted in the loft space with a diffuser in self-extinguishing ABS positioned at the top of the stairwell. The unit should meet the EMC and low voltage directives.

The unit should include a filter with up to 5 year maintenance intervals and an integral time elapse meter.

Motor

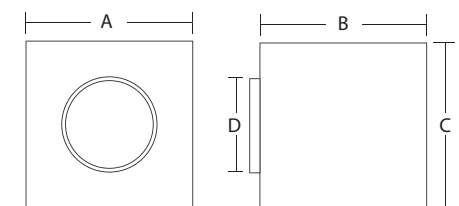
The electronically controlled DC motor is manufactured with long life ball bearings and is fitted with Standard Thermal Overload Protection (S.T.O.P.). Suitable for ambient operating temperatures of -25°C to +40°C.

For complete peace of mind the Vent-Axia Lo-Carbon PoziDry is backed by a 5 year guarantee.

Dimensions

Weight: 11.5kg

A	B (depth)	C
438	411	379



Speed	1	2	3	4	5	6
FID (l/s)	10	18	26	34	42	50
Power (W)*	2.5	3	4	5	7	13
Floor Area up to (m ²)	72m ²	130m ²	180m ²	245m ²	302m ²	400m ²
dB(A) @ 3m	19					23

*add 500w for heater version

Lo-Carbon PoziDry Compact

Positive Pressure Unit



Features & Benefits

- Ultra low sound level.
- Selectable air capacities to suit volumes of up to 34 l/s or Floor area up to 100m².
- Extremely low running costs - from less than one penny per day.
- Washable, high capacity filter.
- Round to rectangular duct adaptor included.
- 5 Year Guarantee.

Positive Pressure Ventilation

For those properties that do not have a loft, Lo-Carbon PoziDry Compact provides an easy to install solution. The duct mounted unit that can be fitted in a number of locations around a single floor flat or apartment.

Air is drawn into the Lo-Carbon PoziDry Compact unit via an external inlet and through a short length of duct. The specially developed fan/motor assembly (using the Lo-Carbon DC motor technology) draws the air through an integral, high capacity, washable filter. The backward curved impeller guarantees increased efficiency, lower sound levels and better performance.

The fresh, filtered airflow passes along the ducting and terminates on an internal wall with a discreet grille. This directs the airflow upwards where the incoming air mixes with the warm air that gathers at ceiling height.

The system automatically provides fresh, tempered airflow into the home. There is minimal power consumption and costs as little as one penny a day to run. Creating an environment where the damaging effects of condensation find it hard to exist, benefits both the occupants and the structure of the home.

Can be used for air replacement in conjunction with an extract fan. EU4 filter as standard.

Without heater
Stock Ref
444076

With integral heater
Stock Ref
444767

Typical Specification

Supply and install a Lo-Carbon PoziDry Compact positive pressure flat unit for condensation control as manufactured by Vent-Axia Ltd, Fleming Way, Crawley, West Sussex, RH10 9YX Telephone: 0844 856 0590. The unit should be mounted on the wall with a inlet from atmosphere and on the supply side flat duct to the central area of the property. The unit should meet the EMC and low voltage directives.

The unit should have 2 speed settings: low, medium and high, and incorporate an extra low speed setting, which automatically cuts in when the temperature drops below 5°C. A tamper proof cover to prevent casual interference in the running of the unit. The unit should have an optional 'dry out' feature which will continuously run the unit for a 14 day period and then revert to the selected setting.

The motor should be of the Lo-Carbon DC type with long life ball bearings suitable for ambient operating temperatures of -25°C to +40°C and should be fitted with Standard Thermal Overload Protection (.S.T.O.P.).

The unit includes a time elapsed meter to enable precise running information

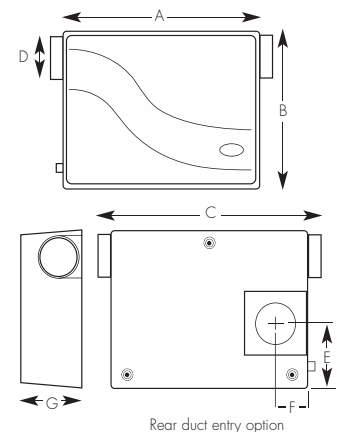
Air Replacement Grille Set

For air replacement through doors. Consists of a two-piece telescopic set, which fits unobtrusively on either side of the door panel. Minimum fixing thickness 30mm. Plastic. Dimensions: 454 x 90mm.

Dimensions (mm)

A	B	C	D	E	F	G
435	365	490	100	160	58	160

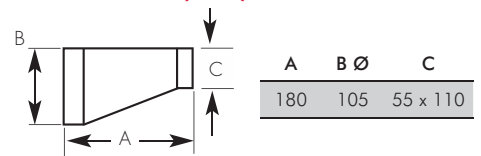
Weight: 7kg



Performance

Speed	1	2	3	4
FID (l/s)	10	18	26	34

Duct Adaptor (included) Dimensions (mm)



Lo-Carbon Centra®/SELV

dMEV Unit

Features & Benefits

- Part F compliant, System 3 Continuous mechanical extract.
- SAP Appendix Q eligible - Low SFP on SAP Q.
- Quietest dMEV available.
- Discreet, tasteful styling.
- Single fan for use in all applications.
- IPX4 rated - IPX7 rated (SELV)
- Constant volume option.
- Normal and Boost speeds.
- Lo-Carbon motor offering 90% energy savings and long life.
- 5 Year Motor Guarantee
- Suitable for wall, ceiling, panel and window mounting.
- SELV Models - Supplied with a remote transformer.
- Suitable for 'Zone 1' installation

What is de-centralised MEV (dMEV)

The Building Regulations Part F gives examples of four main methods of ventilation, System 3, Continuous mechanical extract ventilation can be achieved using a single centralised extract unit such as the Sentinel Multivent ducted to 'wet' rooms (kitchen, bathroom, en-suite and WC) or by decentralised individual fans in the 'wet' rooms. The fans run continuously at near silent levels providing a simple and effective form of ventilation.

SELV (Safety Extra Low Voltage) is designed for areas where a fan can be installed within Zone 1 in a room where there is a fixed bath or shower. Ingress Protected (IP) to IPX7 Lo-Carbon Centra SELV can be fitted safely within the spray area. The separate transformer can be mounted away from the spray zone and out of reach from the bath or shower.

The Lo-Carbon Centra meets the latest requirements of the Building Regulations

Document F 2010 for wholehouse system ventilation.

Selection of the two normal flow rates (6l/s or 9l/s) is via a simple 'jumper' on the control board. Different methods are available for operating boost speed from a simple switched live to integral humidistat or CO₂ sensor. See individual models for further details.

The attractive and discreet styling of the Vent-Axia Centra will complement the décor of any new home while virtually silent operation ensures optimum ventilation is achieved without intrusive noise.

Lo-Carbon Centra

The SAP Appendix Q eligible Centra has a specific fan power of only 0.18 w/l/s in through-the-wall kitchen applications.

Models

Lo-Carbon Centra

Optional Constant Volume. The integral digital air velocity sensor will monitor the airflow and maintain the preset extract flow rate of either 6l/s, 9l/s or 15l/s, minimising energy use and noise.

Stock Ref
441782

Lo-Carbon Centra/SELV T (Timer)

Ideal for bathroom and toilet applications, this unit runs continuously on trickle setting and may be boosted by the switched live input which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
T	442954
SELV T	443175

Lo-Carbon Centra/SELV HT (Humidistat/Timer)

For bathroom/toilet applications, the continuous running HT model is automatically boosted by the built-in humidistat or by a switched live input which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
HT	442955
SELV HT	443176

Lo-Carbon Centra/SELV HTP (Humidistat/Pullcord)

For bathroom/toilet applications, the continuous running HTP model is automatically boosted by the built-in humidistat or by the pullcord which activates the timer (adjustable up to 30 minutes).

Model	Stock Ref
HTP	443045
SELV HTP	443177

Lo-Carbon Centra CO₂ and humidity

Continuous running, automatically boosted with integral CO₂ and humidistat sensor.

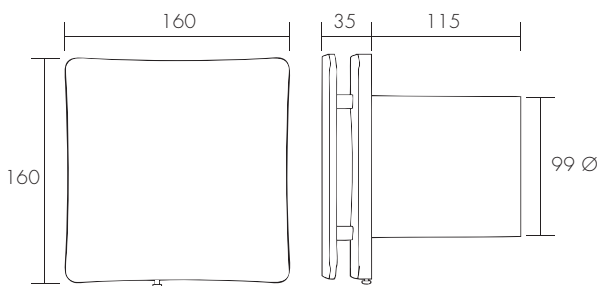
Stock Ref
444672

150mm Conversion Kit

Stock Ref
443334



Dimensions (mm)



Transformer (W x H x D) 87 x 87 x 33
For wall & window kit refer to Ducting Section

Performance Guide

Model	Extract Performance (l/s)			Power consumption (Watts)			Sound dB(A)@ 3m		
	Trickle low	Trickle high	Boost	Trickle low	Trickle high	Boost	Trickle low	Trickle high	Boost
Lo-Carbon Centra	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV T	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV HT	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra/SELV HTP	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2
Lo-Carbon Centra CO ₂	6	9	15	1.4	1.6	2.4	10.8	15.5	25.2

SAP Appendix Q Performance

Systems With Rigid Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	High	13.2	12.4	0.32	6
In Room	Wet Room	9 L/s	8.4	8.0	0.28	5
Through Wall	Kitchen	High	13.5	13.0	0.18	4
Through Wall	Wet Room	9 L/s	8.6	8.0	0.20	8

Systems With Flexible Or Mixed Ductwork Installation Only

Unit Configuration	Location	Fan Speed Setting	Flow Rate (L/s)	Flow Rate - Wind Condition (l/s)	Specific Fan Power (W/l/s)	% Reduction Of Total Flow Rate
In Room	Kitchen	High	13.2	12.5	0.32	5
In Room	Wet Room	9 L/s	8.6	7.9	0.28	8
Through Wall	Kitchen	High	13.5	13.0	0.18	4
Through Wall	Wet Room	9 L/s	8.6	8.0	0.20	8

Lo-Carbon Multivent MEV Unit



Features & Benefits

- Fitted with four extract 125 or 100mm diameter spigots allowing quick connection to ducts
- Option of wall, ceiling and loft mounting
- Quiet operation suitable for continuous operation
- Can extract from a number of rooms, depending on the dwelling
- Wireless Controller available

The Lo-Carbon Multivent continuous mechanical extract ventilation range is designed for the simultaneous ventilation of separate areas in the home or as a multi-point extractor system for a wide range of commercial applications.

In the home the system is usually located in the loft or airing cupboard with ducts taken to the bathroom, kitchen and utility room to remove water vapour at source and from toilets to remove odours.

Lo-Carbon Multivent is ideal for a range of commercial multipoint extract applications such as toilets, fitting rooms, and kiosk's. The units can be installed at any angle and where the ambient air has a high humidity content condensate drains are provided.

The Lo-Carbon Multivent H version incorporates a built-in humidity sensor to switch between 2 of the 3 speeds. A Wire-less Controller is available for use with the Lo-Carbon Multivent H with 3 speed options offering total control of the systems.

Lo-Carbon MVDC

The Lo-Carbon MVDC Multivent minimises running costs by incorporating the latest DC technology. DC efficiency means less wear and tear on the motor which guarantees longer life.

Extended motor guarantee to 5 years offered.

Acoustic Lining Kit

For reducing noise in sensitive installations

Stock Ref
438195

Models

Model	Stock Ref
MVDC	181520C
MVDCH	183020B

Multivent Wire-less Controller
(for use with MVDCH only)

Stock Ref
426035

Multivent Installation Packs

Accessory kits for Multivent installations including flexible duct, grilles, diffusers etc.

Model	Stock Ref
2 point Extract kit	455225
3 point Extract kit	455224
4 point Extract kit	455223

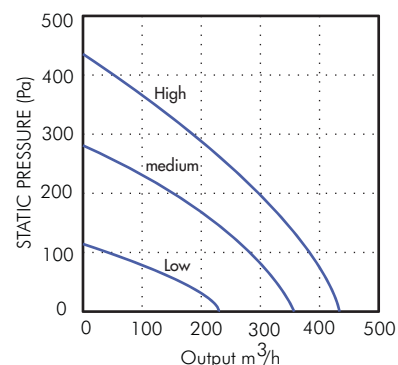
Technical Data

Model	Low		Medium		High	
	Current Amps	Power Watts	Current Amps	Power Watts	Current Amps	Power Watts
MVDC	0.1	13	0.23	35	0.39	45
MVDCH	0.1	13	0.23	35	0.39	44

Sound Level

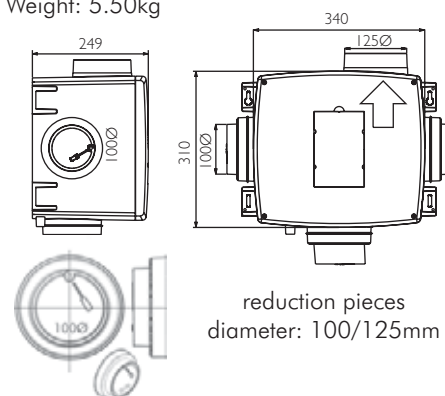
Model	FID Perf. m ³ /h (l/s)	Sound dB(A) @ 3m		
		Casing Breakout	Duct Inlet 100mmØ	Duct Inlet 125mmØ
MVDC				
low	232 (64)	33.3	36.5	36.5
medium	365 (100)	33.7	47.9	47
high	434 (120)	38.8	51.7	51.5
MVDCH				
low	232 (64)	33.3	36.3	36.5
medium	365 (100)	33.7	47.9	47
high	434 (120)	38.8	51.7	51.5

Performance Curve



Dimensions (mm)

Weight: 5.50kg



Multivent

MEV Unit



Features & Benefits

- Fitted with four extract 125 or 100mm diameter spigots allowing quick connection to ducts.
- Option of wall, ceiling and loft mounting.
- Quiet running suitable for continuous operation.
- Can extract from a number of rooms, depending on the dwelling.
- Wire-less Controller available.

The Multivent continuous mechanical extract ventilation range is designed for the simultaneous ventilation of separate areas in the home or as a multi-point extractor system for a wide range of commercial applications.

In the home the system is usually located in the loft or airing cupboard with ducts taken to the bathroom, kitchen and utility room to remove water vapour at source and from toilets to remove odours.

Multivent is ideal for a range of commercial multipoint extract applications such as toilets, fitting rooms, and kiosks. The units can be installed at any angle and where the ambient air has a high humidity content condensate drains are provided.

The Multivent H version incorporates a built-in humidity sensor to switch between 2 of the 3 speeds. A Wire-less Controller is available for use with the Multivent H with 3 speed options offering total control of the systems.

Acoustic Lining Kit

For reducing noise in sensitive installations
Stock Ref **438195**

Models

Model	Stock Ref
MV250	181510A
MV250H	183010A

Multivent Wire-less Controller
(for use with MV250H only)

Stock Ref **426035**

Multivent Installation Packs

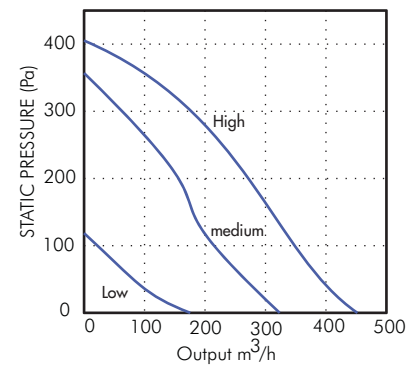
Accessory kits for Multivent installations including flexible duct, grilles, diffusers etc.

Model	Stock Ref
2 point Extract kit	455225
3 point Extract kit	455224
4 point Extract kit	455223

Sound Level

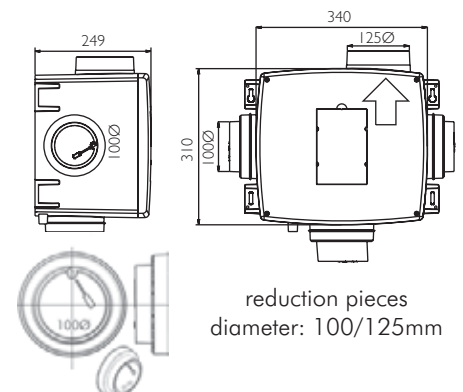
Model	FID Perf. m ³ /h (l/s)	Sound dB(A) @ 3m		
		Casing Breakout	Duct Inlet 100mmØ	Duct Inlet 125mmØ
MV 250				
low	161 (45)	22.4	27.9	27.8
medium	305 (85)	31.0	42.9	43.2
high	443 (123)	35.4	48.6	48.0
MV 250H				
low	175 (48)	22.4	27.9	27.6
medium	344 (95)	31.0	42.9	43.2
high	443 (123)	35.4	48.6	48.0

Performance Curve



Dimensions (mm)

Weight: 5.50kg



Technical Data

Model	Low		Medium		High	
	Current Amps	Power Watts	Current Amps	Power Watts	Current Amps	Power Watts
MV250	0.2	25	0.30	54	0.34	81
MV250H	0.2	25	0.30	54	0.34	81

Lo-Carbon Sentinel® Multivent MEV Unit

Features & Benefits

- Reduces your carbon footprint
- SAP Appendix Q Listed
- Specific fan power 0.19 W/l/s (K+1)
- Suitable for use with external sensors and controllers
- Optional integral humidity sensor and wireless control available
- Ultra quiet - acoustically lined for low noise levels
- Complies with Building Regulations Part F (System 3)
- Manufactured in the UK from re-cyclable materials

Sentinel Multivent continuous mechanical extract ventilation, C-MEV is designed for the simultaneous ventilation of separate areas in the home or as a multi-point extraction system for a wide range of commercial applications. The units can be installed at any angle. Where the ambient air has a high humidity content condensate drains are provided.

In support of Sentinel Multivent, Vent-Axia offers:

- Practical advice on product selection and installation
- Guidance on solutions to meet legislation requirements
- Project management and site deliveries
- After sales support and maintenance information

The need to improve efficiency

Sentinel Multivent has been designed to meet the exacting demands of developers, installers and users offering advanced control options and easier installation and commissioning.

- Demand Control – enables precise ventilation rate to be set based on property size within 1° of PWM.
- Integral LCD display allows installer

- to select appropriate low, normal and boost speeds to meet demand
- Manual and automatic control options
- Integral adjustable overrun timer and delay on timer
- Plug-n-Play automatic sensor detection
- Switched live and SELV connections
- Dry Out setting – Option set at installation, Sentinel Multivent will run on boost for 1 week to assist in removing moisture
- Optional Wireless Control – up to 4 controllers on any one system
- Energy efficient EC/DC motors - 1/3 less energy lost to heat than a conventional AC motor
- Low Specific Fan Power (SFP) making it one of the most efficient products on the market

The need to meet legislation

Through the Code for Sustainable Homes Level 3, the UK is required to deliver a 25% reduction in CO2 levels compared to the 2006 Building Regulations.

- Meets Building Regulations Part F (System 3)
- SAP Appendix Q listed up to kitchen + 6 wet rooms
- Meets carbon footprint reduction targets
- Lowest SFP figures of any demand control MEV system

The need for better health

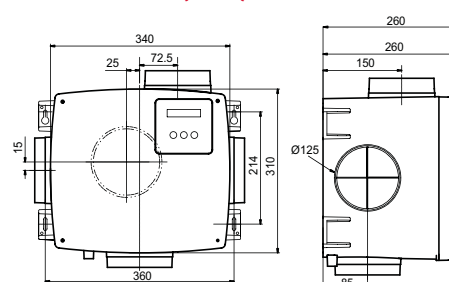
Removal of pollutants, such as moisture, carbon dioxide and external fumes are all important factors in maintaining indoor air quality, helping to create a better living environment.

- The integral humidity sensor increases fan speed in proportion to relative humidity levels, saving energy and reducing noise.
- The sensor also reacts to small but rapid increases in humidity, even if the normal trigger threshold is not reached. This unique feature ensures adequate

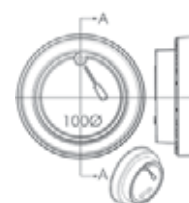
ventilation, even for the smallest wet-room.

- Night time relative humidity increment setback feature suppresses nuisance tripping as humidity gradually increase with falling temperature
- Acoustically lined - low noise levels only 18.1 dB(A) @3m

Dimensions (mm)



Reduction Pieces
Diameter:
100/125mm



Model

Model	Stock Ref.
Sentinel Multivent	437601

SAP Appendix Q

In order to make the right choice, developers and contractors should refer to Building Regulations Part L1a SAP 2009 and Appendix Q.

SAP Appendix Q was launched in June 2006 to reward innovative ventilation manufacturers by testing and listing energy efficient products that assist in helping developers meet their Target Emission Rates (TER).

SAP is the underpinning methodology behind the Energy Performance Certificates and is used to demonstrate compliance with Building



Regulations for Dwellings - Part L (England and Wales), Section 6 (Scotland) and Part F (Northern Ireland). Appendix Q specifically relates to wholehouse ventilation systems and lists a number of Vent-Axia Mechanical Ventilation solutions which offer an improved SAP rating over and above the default for these product types.

SAP Appendix Q Test Results

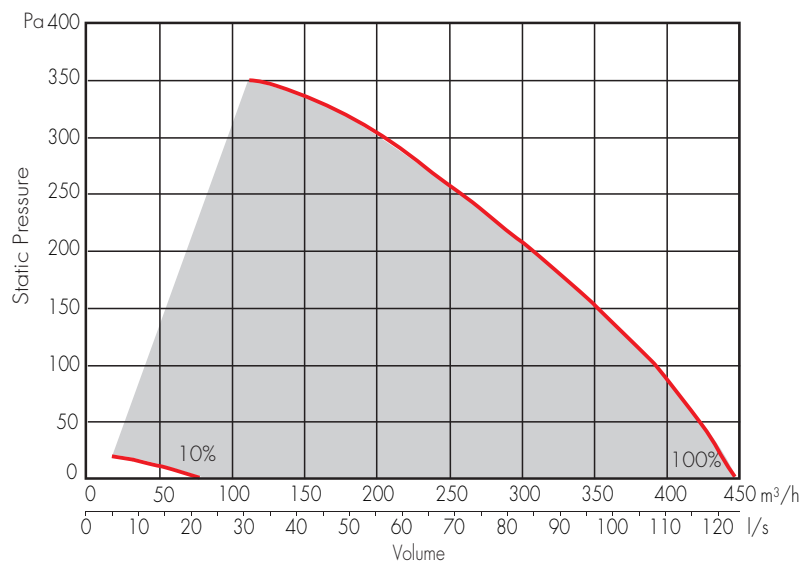
Exhaust Terminal Configuration	Total Flow Rate (l/s)	Specific Fan Power (W/l/s)
Kitchen + 1 additional wet room	21.0	0.19
Kitchen + 2 additional wet rooms	29.0	0.20
Kitchen + 3 additional wet room	37.0	0.24
Kitchen + 4 additional wet room	45.0	0.27
Kitchen + 5 additional wet rooms	53.0	0.32
Kitchen + 6 additional wet rooms	61.0	0.38

To assist developers and contractors Vent-Axia can provide detailed scheme designs together with installation guidance and training.

Your Carbon Footprint

The Carbon Footprint is a measure of the amount of carbon dioxide (CO₂) emitted through the burning of fossil fuels. From a residential and commercial building perspective, it is the amount of carbon generated when you produce a kilowatt of electricity. Reducing a building's carbon footprint will ultimately reduce electricity bills and save money for every individual household or business. It will also help meet the UK target for the reduction of emissions, as well as allowing you to help the environment.

Performance Curve



■ Infinitely variable performance

Performance Guide

Stock Ref.	Casing Breakout		Inlet Duct		Speed	FID	Power
	dB(A) @ 3m	dB(A)	dB(A)	dB(A)	(pwm)	l/s	Watts
437601	18.1	17.0			10%	17	4

Stock Ref.	Casing Breakout		Inlet Duct		Speed	FID	Power
	dB(A) @ 3m	dB(A)	dB(A)	dB(A)	(pwm)	l/s	Watts
437601	36.8	35			100%	125	50

Sound Data

Speed (PWM)		Induct sound power levels dB								dB(A) @ 3m
		63	125	250	500	1K	2K	4K	8K	
10%	Breakout	43.6	37	36.9	30.6	26.2	22.8	23.6	30.4	18.1
10%	Extract	43.8	39.9	36.1	30.4	24.6	21.8	22	30.3	17.8
28%	Breakout	44	44.4	43.3	39	31.1	26.1	24.3	30.1	22
28%	Extract	42.2	40.1	42.2	40.5	32	23.3	23.4	30.5	22
46%	Breakout	45	42.8	46.7	44.1	38.8	35.6	26.7	30.6	25.8
46%	Extract	40.8	42.5	46.4	44.4	41	31.1	25.3	30.3	26
82%	Breakout	46.3	48.3	50	52.1	48.4	47.7	37.8	32.4	33.7
82%	Extract	46.7	49.6	48.9	54.3	51.8	42.7	38.1	34.2	36.1

Controllers and Sensors

Sentinel Multivent can be used with a wide range of Vent-Axia controllers and sensors. Ranging from integral humidistats, through wireless controllers to wired remote sensors.



Integral Humidistat

- Simple Plug-n-Play installation
- Eliminates the need for additional controllers or sensors
- Reacts to any rapid increases in relative humidity or relative humidity above 60%
- Future proof – can be fitted after installation
- Self programming

Stock Ref.
437598



Wireless Transmitter Controller Receiver Kit

- Manual boost
- Adjustable overrun timer
- Easy wire-less installation
- Reduces installation time
- Future proof - add more controllers at any time

Stock Ref.
439352



Wireless Transmitter Controller

- Additional controller for 439352
- A maximum of 4 controllers can be used per system
- Can be connected to other accessories (eg Humidistat) to send a boost signal wirelessly

Stock Ref.
437827



Ambient Response Humidity Sensor

- Pullcord override and neon indicator
- Changeover relay switch
- Operating range: 30% - 90%RH
- Ambient operating temp. 5°C to 40°C
- 220-240V AC
- Will fit single gang box for surface mounting

Stock Ref.
563550A



Ecotronic Humidity Sensor

- Set Point adjustable
- Maximum switching load 1 amp inductive
- Pullcord override indicator
- Ambient operating temp. 0°C to 40°C
- Supply voltage 220-240V

Stock Ref.
563532A



Air Quality Sensor

- Ambient operating temp. 0°C to 50°C
- Min - Max mode or direct damper control
- Surface mounted
- 1 - 25 min O/R timer
- Supply voltage 220-240V

Stock Ref.
563506B



Visonex PIR Sensor

- Fits any UK single gang mounting box
- Adjustable timer overrun (5-25 mins)
- Range of detection up to 10 metres
- Designed to meet IP43
- Ambient operating temp. range 0°C to 50°C

Stock Ref.
459623A



CO₂ + Temp Room Sensor

- 240V DC
- 0 - 2000ppm CO₂ working range.
- 0 - 50°C working range
- Auto-calibrating NDIR CO₂ absorption sensor
- Thin film platinum temperature sensor for high accuracy

Stock Ref.
433257



Ventwise

- Automatically boosts fan when temperature of the supply pipe to a shower or bath increases
- Automatically boosts fan when electric hob is switched on
- Can be used in conjunction with manual override input
- Adjustable overrun timer
- Two sensor options available.

Stock Ref.
435960

Lo-Carbon Multivent MVDC-MS/MSH

MEV Unit



Vent-Axia
dMEV, MEV & PIV Systems



Features & Benefits

- Reduces your carbon footprint.
- SAP Appendix Q Listed.
- Fitted with four extract 125 or 100mm diameter spigots allowing quick connection to ducts.
- Complies with Building Regulations Part F (System 3)
- Option of wall, ceiling and loft mounting.
- Improved controllability.
- LS Boost connection.
- Fully variable normal and boost speeds.
- Ultra quiet - acoustically lined for low noise levels.
- Integral humidistat (H version)

With the growing concerns about over ventilating properties, the Lo-Carbon Multivent MVDC range offers the option of 'Close Control' both in the residential and the commercial sectors. With a DC motor the multi speed Lo-Carbon Multivent is one of the most efficient central extract units in the UK.

The units have 2 fully variable speeds for trickle and boost, with a switched live (LS) activation for the boost speed. An additional third speed (purge) is available using a second switched live connection.

An acoustic lining is included as standard, ensuring minimum noise levels.

The new potentiometer controlled speed selector allows accurate setting of airflow, ensuring exactly the right ventilation rate. This feature also reduces noise, and energy consumption.

Models

Model	Stock Ref
MVDC-MS	437634A
MVDC-MSH	443298

SAP Appendix Q Test Results

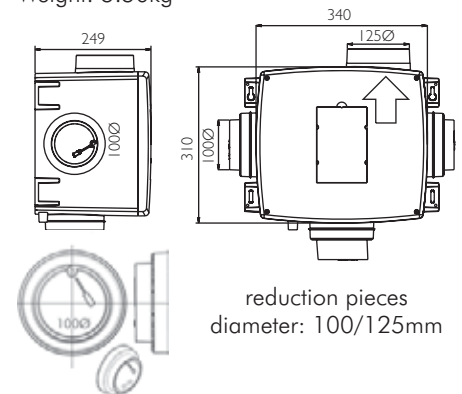
Exhaust Terminal Configuration	Total Flow Rate (l/s)	Specific Fan Power (W/l/s)
Kitchen + 1 additional wet room	26.5	0.24
Kitchen + 2 additional wet rooms	30.5	0.18
Kitchen + 3 additional wet room	41.1	0.21

Sound Levels

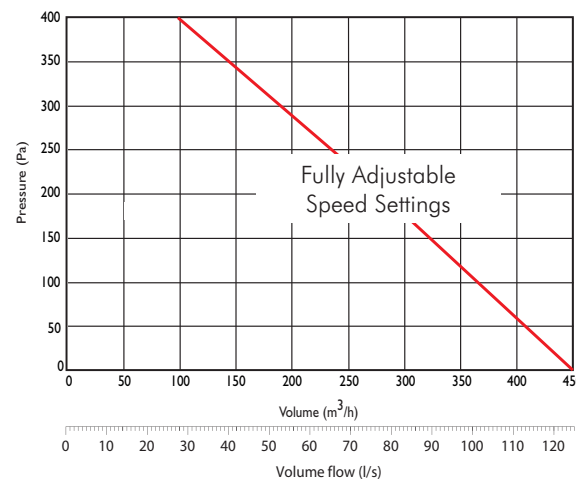
Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa. The free field sound power level spectra figures are dB with reference of 10–12 Watts.

Dimensions (mm)

Weight: 5.50kg



Performance



MVDC-MSH features an integral humidistat which triggers the unit to boost when humidity levels in the duct system exceed 70%

Model	Min				Max			
	Casing Breakout dB(A) @ 3m	Inlet Duct dB(A)	FID l/s	Power Watts	Casing Breakout dB(A) @ 3m	Inlet Duct dB(A)	FID l/s	Power Watts
MVDC-MS	19	18	21	6	37	38	123	55
MVDC-MSH	19	18	21	6	37	38	123	55

Residential & Commercial Single room dMVHR

Improving air quality on a room-by-room basis, the Vent-Axia through the wall mounted range of heat recovery ventilation units simultaneously extract stale air and introduce fresh air – warming the incoming air flow with heat recovered from the exhaust stream.

Tempra

The Vent-Axia Lo-Carbon Tempra through the wall heat recovery units are suitable for fitting through a 100mm (4") circular hole, ideal for refurbishment and are designed for use in bathrooms, toilets, utility rooms and kitchens. Meets Building Regulations Part F and L.



Range





Vent-Axia®

Lo-Carbon Tempra/SELV

Single Room Heat Recovery Unit



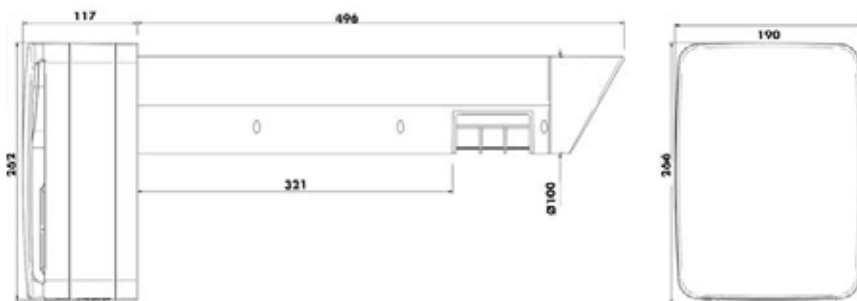
Features & Benefits

- Fits in 100mm diameter hole – ideal for refurbishments
- 80% heat recovery
- Reduces your carbon footprint
- Choice of control options
- Suitable for refurbishment
- Summer setting
- Helps prevent noise ingress
- Continuous running or intermittent extract
- Meets Building Regulations Part F and L.
- Low SFP of 0.3W/l/s
- IPX4 rated

Through The Wall Mounted Heat Recovery Unit

The Vent-Axia Lo-Carbon Tempra is designed to fit in 100mm diameter hole and is suitable for refurbishment, kitchen, bathroom, toilet or utility applications. The unit meets the performance requirements for intermittent extract fans under the Building Regulations Part F and also

Dimensions



Performance

Model	Stock ref	Extract Performance l/s			Power Consumption Watts					
		Trickle Low	Trickle High	Boost	Trickle Low	Trickle High	Boost	Trickle Low	Trickle High	Boost
Lo-Carbon Tempra P/SELV P	443312/444368	6	9	15	3.2	5.7	26.6	20	22	36
Lo-Carbon Tempra T/SELV T	443310/444369	6	9	13	3.2	5.7	26.6	20	22	36
Lo-Carbon Tempra HT/SELV HT	443311/444370	6	9	13	3.2	5.7	26.6	20	22	36

*Octave band frequency range of 250Hz to 4KHz at 3m. Unit mounted on a reflective surface.

for continuous products. Installed in all wet areas, the Tempra is classed as a wholehouse ventilation system and therefore is only required to move the amount of air as laid down in table 5.1a of Document F.

The Tempra is available in three models, a P version with pullcord control, a T version with overrun timer and an HTP version with built-in pullcord overrun timer.

The manual summer setting allows the unit to be set to extract only, helping to prevent a dwelling becoming too warm in hot summer conditions.

Performance

Tempra can be set to run continuously at 6l/s or 9l/s, boosting up to 13l/s, recovering heat from extracted air and returning it to the dwelling. The unique, compact heat exchanger has a temperature efficiency up to 80%, saving energy and reducing your carbon footprint. For intermittent extract the Tempra is set to 15l/s.

The Lo-Carbon ECDC motor with twin impellers consumes as little as 2 Watts on trickle rate and runs almost noiselessly at only 20dB(A).

Typical Installation

The unique heat exchanger design allows the Tempra to be fitted in a 100mm diameter hole, allowing it to replace standard 100mm extract fans while giving all the benefits of heat recovery.

Model

Lo-Carbon Tempra P

Constant trickle speed with Pullcord to boost Or intermittent operation by pullcord

Model	Stock Ref
P	443312
SELV P	444368

Lo-Carbon Tempra T

Constant trickle speed with switch live to boost Or intermittent operation by switch live

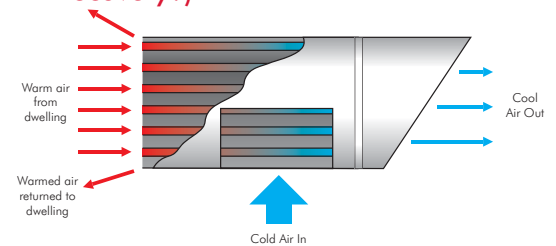
Model	Stock Ref
T	443310
SELV T	444369

Lo-Carbon Tempra HTP

Constant trickle speed with Humidistat and linked overrun timer to boost Or intermittent operation by switch live

Model	Stock Ref
HT	443311
SELV HT	444370

Heat Exchange (what is heat recovery?)



Lo-Carbon HR25 Solo® Plus

Single Room Heat Recovery Unit



Features & Benefits

- Reduces your carbon footprint.
- 84% temperature based heat recovery.
- Up to 90% energy saving.
- IP24 rated
- Controls condensation and eliminates mould.
- Long life ECDC motors
- Installation can be carried out from within the building

Through The Wall Mounted Heat Recovery Unit

The Vent-Axia Lo-Carbon HR25 Solo Plus through the wall heat recovery units are suitable for fitting through a 152mm (6") circular hole and are designed for use in bathrooms, toilets and utility areas.

The Vent-Axia Lo-Carbon HR25 Solo Plus is available with pullcord control.

Long Life DC Motor

The units are fitted with a 24V DC motor and are supplied with a state of the art Switch Mode Power Supply (S.M.P.S.) This has the ability to operate at only 2 Watts power consumption on normal setting, offering a 90% energy saving over conventional AC equivalents. A 5m cable is provided for fixed wiring of the unit to the S.M.P.S.

Performance

Model	Extract Performance		Intake Performance		Watts		Sound	
	m³/h (l/s)		m³/h (l/s)				dB(A) @ 3m*	
	Boost	Trickle	Boost	Trickle	Boost	Trickle	Boost	Trickle
Lo-Carbon HR25 Solo Plus P	39.6 (11)	10.8 (3)	43.2 (12)	4.7 (1.3)	23	2	49.2	16.8

*Octave band frequency range of 250Hz to 4KHz at 3m. Unit mounted on a reflective surface.

Typical Installation

The Lo-Carbon HR25 Solo Plus P (Pullcord) unit is designed for installation in a 152mm (6") core drilled hole. All installation can be carried out from inside the building. The units are suitable for external walls up to 310mm thick.

Maintenance

Apart from removing odours, providing fresh air and recovering heat, this appliance extracts airborne impurities such as dust, dirt and grease. These gradually build up and detract from the efficiency and appearance of the appliance. To ensure peak performance, the appliance, including the filters and heat exchanger should be cleaned regularly in accordance with the instructions supplied.

Model

Lo-Carbon HR25 Solo Plus P

The HR25 Solo Plus P is fitted with a pullcord switch which operates the twin speed control function.

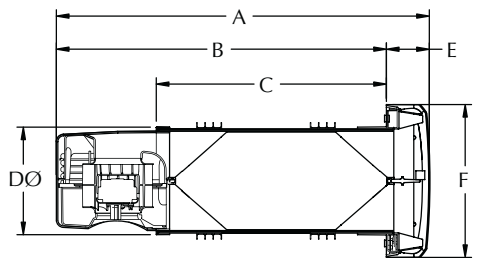
Stock Ref
434036

Dimensions (mm)

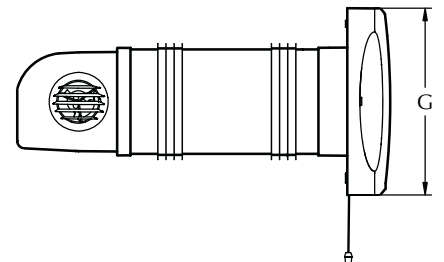
A	B	C	DØ	E	F	G
505	447	327	147	58	208	253

Weight 3kg

Top Profile



Side Profile



Fixing hole Ø 152mm

Lo-Carbon HR25

Single Room Heat Recovery Unit



Features & Benefits

- Reduces your carbon footprint.
- Designed for installations in bathrooms, toilets and utility areas.
- 84% temperature based heat recovery.
- Up to 90% energy saving.
- Controls condensation and eliminates mould.
- Choice of control options.
- Long life ECDC motors
- IP24 rated

Long Life Ventilation

The Vent-Axia Lo-Carbon HR25 range of through the wall heat recovery units are suitable for fitting through a 152mm (6") circular hole and are designed for use in bathrooms. Available in 2 lengths, a standard version suitable for wall thicknesses of up to 310mm and an extended version suitable for wall thicknesses of up to 425mm. The Vent-Axia Lo-Carbon HR25 is available in 2 models, a standard version with pullcord control and a H version with an integral humidity sensor.

Performance

Model	Extract Performance		Intake Performance		Watts		Sound	
	m³/h (l/s)		m³/h (l/s)		Boost	Trickle	dB(A) @ 3m*	
	Boost	Trickle	Boost	Trickle	Boost	Trickle	Boost	Trickle
HR25	55 (15)	20 (5)	36 (10)	8 (2)	23	2	49.2	16.8
HR25H	55 (15)	20 (5)	36 (10)	8 (2)	23	2	49.2	16.8
HR25L	55 (15)	20 (5)	36 (10)	8 (2)	23	2	49.2	16.8
HR25LH	55 (15)	20 (5)	36 (10)	8 (2)	23	2	49.2	16.8

*Octave band frequency range of 250Hz to 4KHz at 3m. Unit mounted on a reflective surface.

Performance

The units are fitted with a 24V DC motor and are supplied with a state of the art Switch Mode Power Supply (S.M.P.S.) This has the ability to operate at only 2 Watts power consumption on normal setting. A 5m cable is provided for fixed wiring of the unit to the S.M.P.S.

Maintenance

Apart from removing odours, providing fresh air and recovering heat, this appliance extracts airborne impurities such as dust, dirt and grease. Filters should be replaced every six months or as conditions necessitate.

Models

Lo-Carbon HR25

The HR25 is fitted with a pull cord switch which operates the twin speed control function.

Stock Ref
372261

Lo-Carbon HR25H

The HR25H is fitted with an adjustable humidity sensor which automatically switches between its high and low settings depending on the relative humidity in the room.

Stock Ref
372262

Lo-Carbon HR25L

An extended version of the HR25 is available, designed for installations where the wall thickness is between 311mm and 425mm.

Stock Ref
372264

Lo-Carbon HR25LH

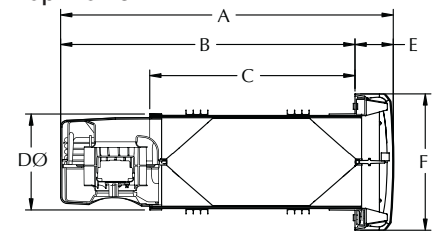
An extended version of the HR25H is available, designed for installations where the wall thickness is between 311mm and 425mm.

Stock Ref
372265

Dimensions (mm)

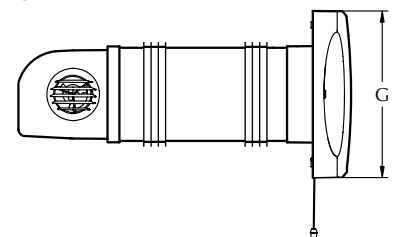
	A	B	C	D	E	F
Standard	508	451	318	147	204	54
Long	666	548	433	147	204	54
Standard - Weight	3.4kg					
Long - Weight	3.5kg					

Top Profile



Side Profile

Fixing hole Ø 152mm



HR200WK

Single Room Heat Recovery Unit



Features & Benefits

- Single room domestic heat recovery ventilation unit
- 3 speed motor
- Integral washable filter
- Up to 75% heat recovery
- Saves energy - controls condensation
- Low noise

Heat Recovery Ventilation

The Vent-Axia HR200WK is a heat recovery ventilation unit specifically designed for use in domestic kitchens and utility rooms to meet the Building Regulations. The unit is also suitable for light commercial requirements up to 220m³/h (50l/s). The compact, self contained unit is designed for through wall mounting.

The three speed, external rotor motor has two matched impellers to ensure a controlled air flow through the unit, with exceptionally economical 25 watt low speed power consumption.

Easy Installation

The HR200WK fits through walls up to 335mm thick requiring a fixing hole 250mm square. The internal grille has washable, polymeric foam supply and extract filters. Only the neat internal twin grille visible from the room. A wall extension sleeve is available for walls up to 550mm thick.

Performance

	Performance m ³ /h (l/s)		Watts	%	Sound dB(A) @ 3m
	Extract	Intake			
Speed 1	60 (16)	50 (13)	25	75	19
Speed 2	110 (30)	100 (27)	60	70	33
Speed 3	220 (61)	200 (55)	140	65	46

Heat Exchanger

The highly efficient, polymeric heat exchanger cube is washable. The compact cube interleaves outgoing moist warm air with incoming fresh air and allows the heat from one to warm the other without the two air streams mixing. Up to 75% of the heat, which would otherwise be lost, is transferred to the intake air, ensuring energy saving ventilation.

Electrical

HR200WK 220-240V/1/50Hz Class 1 earthed appliance. The 3 speed motor, can be wired to operate On/Off for any one of the three speeds. Alternatively, an Ambient Response Humidity Sensor or simple changeover switch can be used to provide switching between any two speeds, giving permanent trickle ventilation and automatic changeover to a higher speed during periods of high moisture generation. Also the 3 speed controller enables the unit to be switched from permanent trickle to either medium or boost speed.

Extension Wall Sleeve

Stock Ref
370421

Electronic Controller

Stock Ref
W300310

Models

HR200WK - for Kitchens

A heat recovery unit specifically designed for use in domestic kitchens and utility rooms to meet the latest building regulations. 3 speed motor, trickle ventilation mode, optional range of switches available.

Stock Ref
14120020

HR200WK Controller

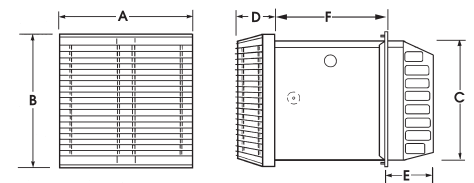
A three position rotary control which enables the unit to be switched from permanent trickle ventilation to either medium or boost speed.

Stock Ref
563533

Dimensions (mm)

A	B	C	D	E	F
270	270	245	85	68min	335max

Weight 9.7kg



Wall fixing hole 250mm x 250mm sq.

HR300

Single Room Heat Recovery Unit



Features & Benefits

- Designed for continuous operation, providing up to 70% heat recovery
- Controls condensation and eliminates mould
- Speed controllable
- Quiet operation
- Washable filters

Heat Recovery Ventilation

The HR300 provides ventilation with heat recovery. It is ideal for light commercial applications including function rooms, offices, classrooms etc. The HR300 unit comes complete with an integral shutter.

Performance

The HR300 unit is designed for continuous operation providing up to 70% heat recovery. Effectively lowering internal relative humidity the HR300 unit controls condensation and eliminates mould.

Fresh, pre-warmed air from outside is continually provided to the room with simultaneous extraction of stale moist air and smells. Heat is transferred via a unique plastic heat exchanger from outgoing air to the fresh air supply with no cross contamination, maintaining internal temperatures and providing a fresh environment.

The unit is fully controllable for speed using a small dedicated speed controller. Automatic ON/OFF control or switching to boost is easily achieved using sensors/timers e.g. humidistat. For summer operation the heat exchanger can be removed and replaced with a plastic divider board to provide positive cooling to rooms.

Performance

Model	Extract Performance m ³ /h (l/s)			Intake Performance m ³ /h (l/s)			Max Watts	Sound dB(A) @ 3m		
	Low	Normal	Boost	Low	Normal	Boost		Low	Normal	Boost
HR300	75 (20)	210 (58)	300 (83)	70 (19)	190 (52)	270 (75)	108	37	40	44

Installation

The HR300 unit requires a 380mm x 280mm hole. Units should be level and square in the wall. The unit should be fitted so that it overhangs by minimum of 50mm on the inside, and a minimum of 70mm on the outside. An extension sleeve is available for walls up to 650mm thick.

Maintenance

Filters should be cleaned by washing every six months or as conditions necessitate. Replacement filters can be purchased in packs of two

Filters

Stock Ref
370402

Extension Sleeve

Stock Ref
370422

Electronic Controller

Stock Ref
W300310

VCON6 Controller

Stock Ref
370356

The heat exchanger should be washed in warm soapy water every twelve months, or as conditions necessitate. Access to the filter and heat exchanger is via two screws on the internal grille.

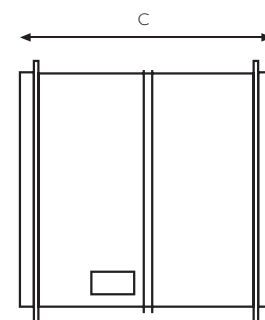
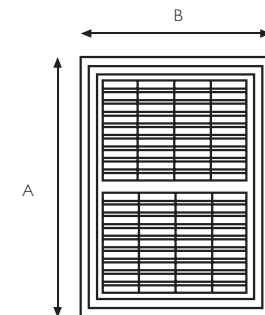
Models

HR300
Stock Ref
370394

Dimensions (mm)

A	B	C
370	270	400

Weight 11kg



MVHR units for residential and commercial applications

A complete range of MVHR units for a range of residential and commercial applications, including many that are SAP Q Eligible.

New Sentinel Kinetic ®

The first of our new generation of MVHR systems incorporating a range of new features. Small enough to fit into a kitchen cupboard with integrated digital controls for easy installation it is designed with installers in mind. With 90% efficiency and low specific fan powers designers will also see a reduction in their dwelling emission rate.

Single Room Heat Recovery

HR500 heat recovery ventilation units for through wall installation, which exhaust stale air whilst introducing warmed fresh air from the outside.

Ideal for computer rooms, classrooms, offices and the health and leisure industries. The Vent-Axia HR500 unit is the perfect solution to commercial areas that require a high performance balanced intake/extract scheme. As a heat recovery ventilation unit it moves a useful 550m³/h of air.



Range



Vent-Axia

Lo-Carbon Sentinel Kinetic® Range

Mechanical Ventilation with Heat Recovery

Features & Benefits

- Manufactured in the UK
- Building Regulations Part F compliant
- SAP Appendix Q Eligible
- Energy Savings Trust best practice compliant
- Up to 92% heat recovery whilst controlling condensation
- Programmable Summer bypass
- Left or right hand installation
- Horizontal and/or vertical duct outlets
- Integrated digital controller for simple and accurate commissioning
- Light-weight for easy installation
- External condensate connection
- Plug and play controls; Humidistat, Vent-Wise, Wireless remote
- BMS connectivity
- LS inputs/(Light Switch)
- Volt-free inputs
- Self diagnosis for simplified fault finding
- Adjustable delay on/delay off timer

The Sentinel Kinetic Range incorporates:

A wholehouse heat recovery system with up to 92% energy efficiency. An easily accessible heat recovery cube protected by two removable EU3 filters. Two Lo-Carbon Energy Saving EC DC fans ensure long life (typically over double the life of AC motors) and lowest possible energy use. Fully insulated construction with built in condensation drain. Specifically designed for new build constructions with a high level of insulation.

Lo-Carbon Sentinel Kinetic meets the latest requirements of the Building Regulations Document F 2010 for wholehouse system ventilation: System 4. Continuous mechanical supply and extract with heat recovery. The Lo-Carbon Sentinel Kinetic models have 3 fully adjustable speeds and a purge setting - maximum. On the front of the unit is a digital controller that can be used to pre-set the speeds to any required air-flow within the performance range.

Integral Humidity sensor

The integral humidity sensor increases speed in proportion to relative humidity levels, saving energy and reducing noise. The sensor also reacts to small but rapid increases in humidity,

even if the normal trigger threshold is not reached. This unique feature ensures adequate ventilation, even for the smallest wet-room. Night time relative humidity setback feature suppresses nuisance tripping as humidity gradually increases with falling temperature. Acoustically lined - low noise levels from only 20dB(A) @3m.

Models

Kinetic V

(non-summer bypass)

Kinetic B

(with summer bypass)

Kinetic BH

(with summer bypass & humidity sensor)

Kinetic CW L

(with white Cooker Hood)

Kinetic CS L

(with Brushed Aluminium Cooker Hood)

Kinetic CW R

(with white Cooker Hood)

Kinetic CS R

(with Brushed Aluminium Cooker Hood)

Kinetic Plus BH

(with Summer bypass and humidity sensor)





Optional Controls

Wired Remote Controller

with 15 metre cable

Wireless enable kit

(includes one switch)

Additional wireless boost switch

(max 3 switches)

Vent-Wise Controller

(also requires sensors, see accessories & controllers section)

Optional F5 supply filters

Kinetic V

Kinetic B, BH & Cooker Hoods

Kinetic Plus range

For sensors see accessories & controllers section.

Multiple control options:

Five Volt-free pairs of switch terminals for sensor inputs allow boosting from a full range of Vent-Axia controllers – humidistats, PIR, timers.

Two terminals with 0-24V outputs allow 0V to 10V proportional control by sophisticated controllers such as CO₂ sensors and proportional humidistats.

The optional Vent-Wise controller senses temperature rise in a bath/shower hot water supply and/or current in a cooker/hob electrical circuit to activate boost, ensuring additional ventilation when needed.

Switched-live for boosting via light switches (220-240 V AC) or manual Normal/Boost switches. This connection has the advantage of Delay-On and Delay-Off facility. Delay-On enables you to prevent the Boost airflow between 0 and 10 minutes, after a light switch has been activated. Delay-Off allows the Boost airflow to continue after a light switch is turned off to ensure effective clearance of humidity. This timer is adjustable between 0 and 25 minutes.

Purge setting:

The unit can be set to maximum flow (100%) by pressing and holding the Boost button on the unit itself or optional wireless controller for 5 seconds. Purge will continue for two hours unless cancelled by pressing the Boost button again.

Summer Bypass

An internal damper is activated when the outside temperature is less than the room temperature. The damper opens allowing cooler fresh air to bypass the Heat Recovery Cell and reduce the internal temperature towards the pre-set 'Comfort Temperature'. When the inside air temperature reaches the pre set 'Comfort temperature' the bypass damper closes. Anti-frost protection: In cold climates there is a possibility of frost building up on the intake side of the heat exchanger. In order to prevent damage, the Kinetic reduces supply flow while maintaining extract flow at temperatures below 0°C.

Cooker Hood System range

System canopy hoods are a motorless hood with extract being provided by the MVHR unit. When the boost button on the canopy is activated, the MVHR unit goes to boost setting and the summer bypass opens preventing cooking by-products entering the heat exchanger cell.

Wired Remote Controller (option)



Supplied with 15 metres of cable (max length), the Wired Remote Controller duplicates all the features of the on-board control panel, allowing commissioning, diagnosis and user control.

Flush mounting, suitable for a single gang patress box 16mm deep.

Lo-Carbon Sentinel Kinetic® Compact & Cooker Hood MVHR

MVHR Unit

Features & Benefits

- SAP Appendix Q eligible
- Ultra quiet
- Light-weight for easier installation (V&B models 15kg)
- Horizontal duct option for space-saving installations
- V&B models fit within a 290mm deep kitchen cupboard
- Cooker Hood models fit within a 600mm wide aperture (300mm deep)
- Integrated digital controller for simple and accurate commissioning
- Plug and play controls; Humidistat, Vent-Wise, Wireless remote
- BMS connectivity
- LS inputs/(Light Switch)
- Volt-free inputs
- Self diagnosis for simplified fault finding
- Adjustable delay on/delay off timer

Easy Installation

The Sentinel Kinetic models can be mounted vertically in a roof space, and are suitable for wall mounting or within a kitchen cupboard. When mounted in an unheated area ducting should be insulated. Ducting can be attached to the unit horizontally, vertically or both. Minimum internal depth of kitchen cupboard: V&B models 290mm. CW models 300mm

V&B Models

Left or right hand installation. The unit is supplied with duct spigots to outside on the right hand side. These can be reversed onsite by simply removing the control panel, rotating the unit 180 degrees and re-attaching the control panel.

Horizontal and vertical spigots: The combination of spigot options allows

installation in confined locations. If vertical and horizontal connection is required on the same outlet/inlet, additional spigots can be supplied.

Condensate drain can be taken out through the back, or bottom of the unit. Using the fittings supplied, the final condensate connection is made outside the unit and can be completed after installation.

Cooker Hood Unit

The Sentinel Kinetic Cooker Hood is designed to fit in a 600mm aperture above a hob. The telescopic hood incorporates two flat removable metal grease filters, low energy light bulbs and is available with White or Brushed Aluminium front trim.

The hood contains an integral fire damper in accordance with BRE Digest 398 and is connected to the heat recovery unit by a galvanised steel duct with access for cleaning. When the hood is opened, the heat recovery unit goes to boost speed and the summer bypass automatically opens to prevent cooking by-products entering the heat recovery cell. As an additional safety feature, the duct also contains a thermal cut-out fuse which turns off the MVHR unit in the event of excessive temperature in the airway. Cooker Hood units cannot be handed on-site and must be purchased as left hand or right hand models.

Models

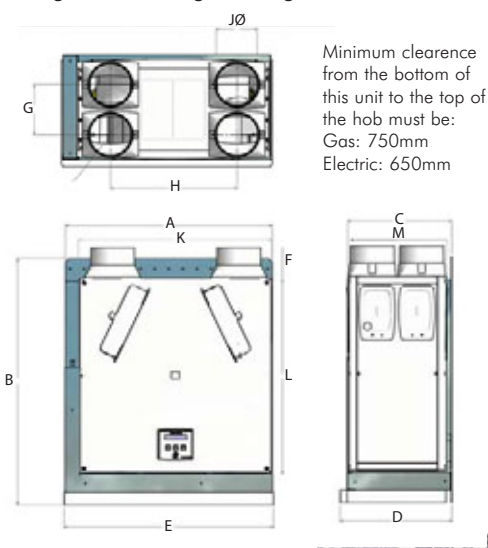
Model	Stock Ref
Kinetic V (non-summer bypass)	438342
Kinetic B (with summer bypass)	438222
Kinetic BH (with summer bypass & humidity sensor)	443319
Kinetic CW L (with white Cooker Hood)	441483
Kinetic CS L (with Brushed Aluminium Cooker Hood)	441484
Kinetic CW R (with white Cooker Hood)	441485

Kinetic CS R **441486**
(with Brushed Aluminium Cooker Hood)

Dimensions (mm)

With and without Cooker Hood

Weight : V&B 15kg; C 27kg



Kinetic Cooker Hood

A	B	C	D	E	F	G	H	J
590	710	295	316	598	90	140	360	125

Kinetic V & B

K	L	M	G	J	H
550	550	285	140	125	360

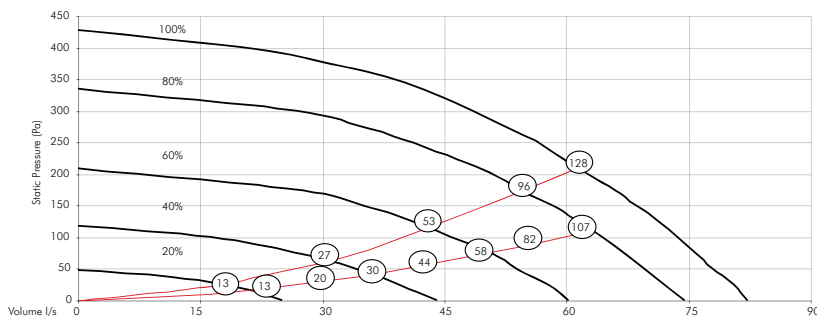
SAP Appendix Q Performance

	Specific Fan Power (W/l/s)	Thermal Efficiency
K+1	0.72	92%
K+2	0.74	91%
K+3	0.81	90%
K+4	0.93	88%
K+5	1.07	87%



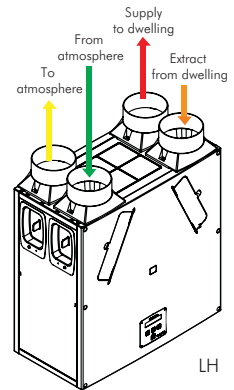
Performance Curve

Fan speeds are fully adjustable within the performance range

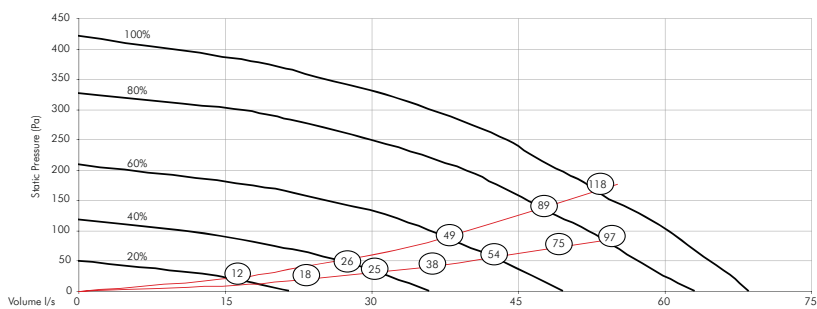


⊗ wattage (both motors)

Example system curves - vertical spigots

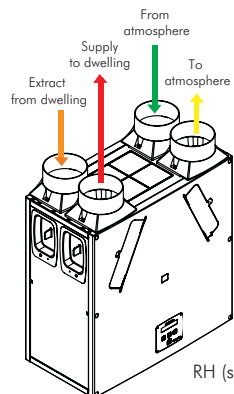


LH



⊗ wattage (both motors)

Example system curves - horizontal spigots



RH (supplied)

Sound Data

Octave band, Hz, dB SWL

Flow, l/s	Test mode	63	125	250	500	1K	4K	8K	SPL dBA@ 3m
10	Supply	47.8	40.2	38	31.1	28.2	23.6	30.9	21.4
10	Extract	47	38.7	36	29.9	25	23.3	30.8	20.6
10	Breakout	43.6	36.2	37.4	30.9	27.4	24.2	31.4	18.6
20	Supply	54	46.6	50.2	44.5	44.4	28.8	31.9	31.2
20	Extract	46.8	40.5	34.6	34.2	34.6	23.7	30.3	22.9
20	Breakout	45.9	39.9	40.6	35.7	33.5	25.3	31.2	21.3
30	Supply	58.1	54.5	57.6	52.2	51.7	38.6	35.8	38.5
30	Extract	47.6	46.2	38.7	41.3	42.8	26.4	30.5	28.4
30	Breakout	45.2	42.4	48.2	40.8	37.7	30	31.1	25.2
40	Supply	65.2	58.4	62.3	58	56.5	44.1	41.4	43.6
40	Extract	53.5	53	44	47.7	48.1	31.5	31.5	33.5
40	Breakout	50.9	47.6	47.4	48.1	42.5	36.3	34.4	29.3
50	Supply	66.4	63.2	66.3	62.5	61.7	50	47.8	48.3
50	Extract	64.2	55.2	48	50.9	52.1	35.9	35	37.2
50	Breakout	55	51	51.3	51.6	46.9	42	38.3	33.2

Tested according to BS848. Breakout quoted spherical, Supply and Extract quoted hemispherical.

Lo-Carbon Sentinel Kinetic® Plus

MVHR Unit

Features & Benefits

- SAP Appendix Q eligible
- Ultra quiet
- Horizontal duct option for space-saving installations
- High airflow and ideal for student accommodation clusters
- Unique folding filter for removal when access is restricted
- Integrated digital controller for simple and accurate commissioning
- Light-weight for easy installation
- Plug and play controls; Humidistat, Vent-Wise, Wireless remote
- BMS connectivity
- LS inputs/(Light Switch)
- Volt-free inputs
- Self diagnosis for simplified fault finding
- Adjustable delay on/delay off timer

Increased Performance

The Kinetic Plus benefits from the latest high efficiency, backward curved impeller design, ensuring the lowest possible energy consumption, ultra quiet operation and an exceptional performance range covering small one bed apartments to the largest of houses.

Care Homes and Student Accommodation

The Kinetic Plus is ideal for larger homes and multiple occupancy units such as nursing homes and student accommodation. Capable of 400m³/hr at 150Pa, the unit can extract from up to ten bathrooms and a communal kitchen while still achieving almost 90% heat recovery. The fully automatic capability of the Kinetic range means that adequate ventilation is always achieved.

The Kinetic's BMS capability is also ideal for these commercial applications where

landlords or property managers want to monitor and optimise building performance and maintenance. The Kinetic BMS can provide status information and it's self diagnostics can report if any fault is found.

Spigot Options

In addition to horizontal and vertical spigot positions, the Kinetic Plus has 150mm spigot connections as standard with the option of 180mm or 200mm spigot connections. In installations where very high airflows are expected, the larger spigots can reduce resistance, lowering noise and energy consumption.

180mm/200mm spigots can also simplify connection in commercial installations where larger diameter duct work has been used.

Quick Change filter

As many systems are placed within cupboards the unique filter design folds as you remove it to ensure easy access in restricted spaces.

Airflow Options (CVP Model)

Normal; Airflow based on system pressure. Airflow reduces as system pressure increases. Constant Volume; Maintains pre-set airflow irrespective of system pressure. Constant Pressure; Maintains system pressure by adjusting airflow when constant pressure dampers open or close.

Model	Stock Ref
Kinetic Plus B	443028
Kinetic Plus CVP	443029

(Constant volume or pressure)

Accessories

Model	Stock Ref
Wired remote controller	443283
Wireless enable kit	441865

Vent-Wise Controller

For more options, refer to accessories and controllers section

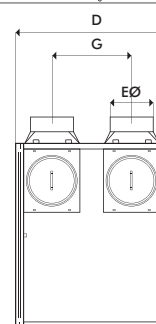
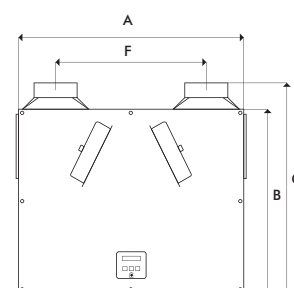
Kinetic Spare Filters 2 pack

F 5 pollen filter

443351
444201

Dimensions (mm)

A	B	C	D	EØ	F	G
785	632	722	526	150	520	275



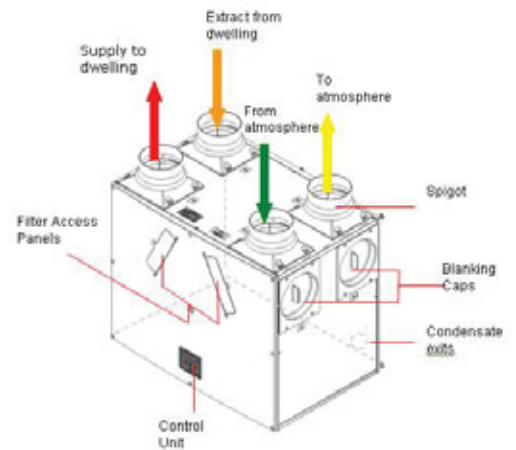
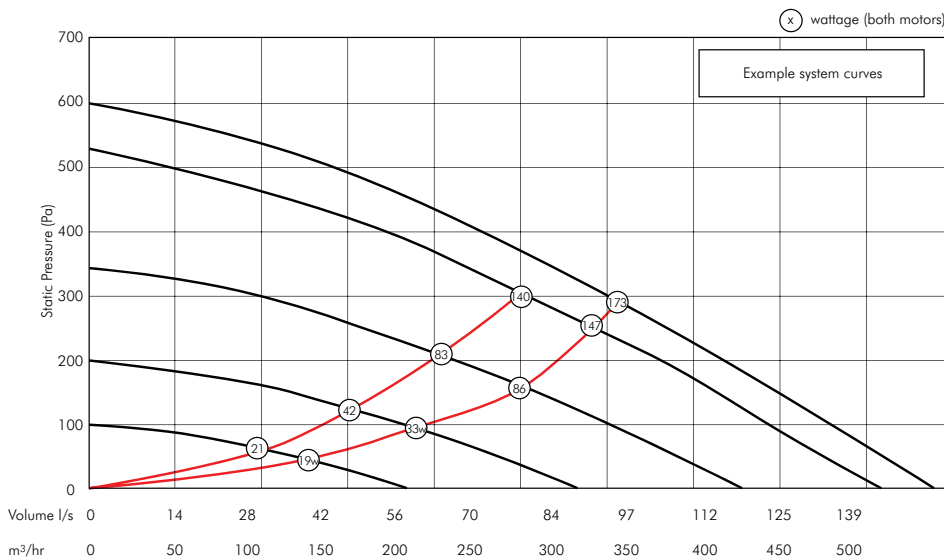
SAP Appendix Q Performance

	Specific Fan Power (W/l/s)	Thermal Efficiency
K+1	0.56	92%
K+2	0.49	92%
K+3	0.52	91%
K+4	0.57	90%
K+5	0.62	90%
K+6	0.70	89%
K+7	0.80	89%



Performance

Fan speeds are fully adjustable within the performance range



Sound Data

Flow, l/s	Unit setting	Test mode	Octave band, Hz, dB SWL								SPL dB(A) at 3m
			63	125	250	500	1k	2k	4k	8k	
50	20%	Supply	46.5	54.3	46.4	44.8	36.2	28.5	24.5	31.2	28.5
50	20%	Extract	46	52.2	42.3	38.7	27.6	24.2	24	31.7	25
50	20%	Breakout	48.5	42.6	43.3	38.9	35.8	29.3	23.8	30.7	22.8
78	40%	Supply	50.3	59.1	54.5	56.5	47	39.9	26.3	31.7	38
78	40%	Extract	46.8	51.6	47.8	44.4	32.7	27.4	24.4	31.7	28
78	40%	Breakout	48.4	51.2	53.4	46	41	34.6	25	30.3	28.5
104	60%	Supply	52.4	57.2	60.4	60.9	55.8	50.3	33.1	33.9	43.6
104	60%	Extract	50	49.8	56.8	52.4	40.2	35.9	33.4	39.8	35.2
104	60%	Breakout	55	49.6	59.7	54.5	46.9	39.9	33.6	39.2	34.9
127	80%	Supply	54.9	60.7	67.4	66.6	61.8	56	39.6	37.7	49.5
127	80%	Extract	50.4	52	61.2	56.6	45.1	39.6	34.2	40.2	39.1
127	80%	Breakout	53.5	53.4	60.8	59.1	53	45.3	36	40.1	38.7
137	100%	Supply	54.7	61.7	70.5	69.9	62.7	57.5	42.1	38.3	52
137	100%	Extract	54.4	55.1	65.8	57.5	46.9	40.6	33.7	40	41.8
137	100%	Breakout	56.6	54.6	60.5	60.7	54.7	45.9	36.5	39.6	40

Tested according to BS848. Breakout quoted spherical, Supply and Extract quoted hemispherical.

Lo-Carbon Kinetic® E MVHR Unit



Features & Benefits

- Compact and quiet.
- Light weight for easy installation.
- Easy access filters.
- External condensate connection.
- Compatible with a range of controls: PIR, Humidistat
- Horizontal spigot option.
- Energy saving ECDC motors
- Quiet operation.
- Manufactured in the UK.
- Switched live inputs (Light switch control)

Horizontal and vertical spigots:

The combination of spigot options allows installation in confined locations. If vertical and horizontal connection is required on the same outlet/inlet, additional spigots can be supplied.

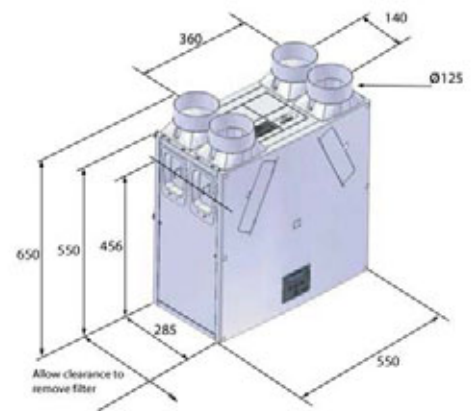
Control options

There are two LS (Switched Live) inputs allowing the unit to be connected to a number of sensors and controllers such as Vent-Wise, Timespan, Ambient Response Humidistat. One of the LS connections also benefits from a 'delay on' feature which prevents the unit boosting unnecessarily.

SAP Appendix Q Test Results

Exhaust Terminal Configuration	Specific Fan Power (W/l/s)	Thermal Efficiency
Kitchen + 1 additional wet room	0.51	91%
Kitchen + 2 additional wet rooms	0.58	90%
Kitchen + 3 additional wet rooms	0.71	89%

Dimensions (mm)



A wholehouse heat recovery system with 91% energy efficiency. An easily accessible heat recovery cube protected by two removable EU3 filters. Two Lo-Carbon Energy Saving EC DC fans ensure long life (typically over double the life of AC motors) and lowest possible energy use. Fully insulated construction with built in condensation drain.

Lo-Carbon Kinetic E meets the latest requirements of the Building Regulations Document F 2010 for wholehouse system ventilation.

The Lo-Carbon Kinetic E model has 2 adjustable speeds, normal and boost. On the front of the unit is the controller that can be used to pre-set the speeds to any required performance, up to 135m³/hr (38l/s) 100pa. Offering 'Close Control' to prevent over ventilating. Acoustically lined - low noise levels from only 20dB(A) @3m.

Left or right hand installation.

Units are supplied as RH version with duct spigots to outside on the right hand side. These can be reversed onsite by simply removing the control panel, rotating the unit 180 degrees and re-attaching the control panel.

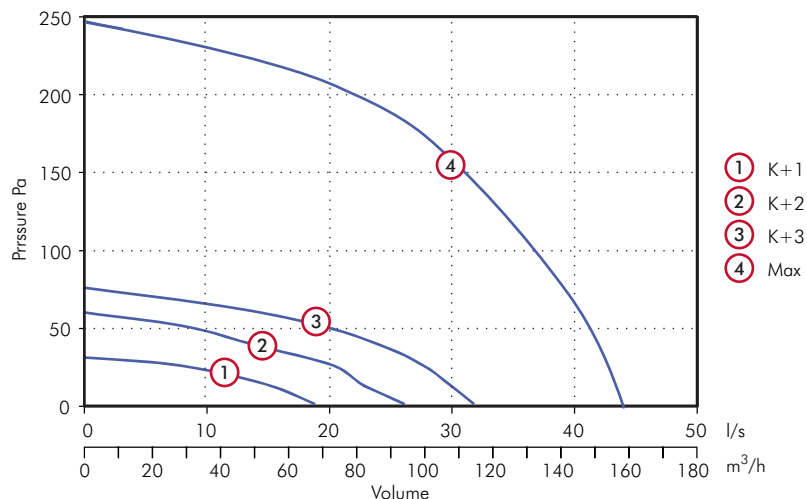
Model

Model Kinetic E Stock Ref 443303

Kinetic Spare Filters 2 pack 441774

Optional F5 Pollen Filter 444199

Performance



Lo-Carbon Astra MVHR Unit

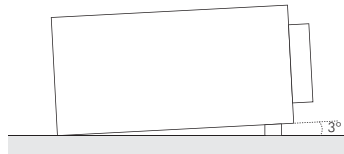


Features & Benefits

- Part F compliant, System 4 continuous Mechanical Ventilation with Heat Recovery.
- Normal, Boost & Purge speeds.
- Lo-Carbon motor offering 90% energy savings and long life.
- Up to 90% heat recovery.
- Washable EU3 filters.
- 3 position switch.
- 2 volt free inputs.
- Light weight for easy installation.

Models

Lo-Carbon Astra
Stock Ref
442919



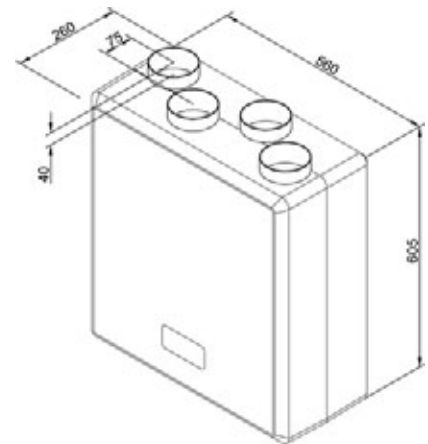
Horizontal slab mounting kit
also available.
Stock Ref
445048

SAP Appendix Q Performance

	Specific Fan Power (W/l/s)	Thermal Efficiency
K+1	0.73	91%
K+2	0.72	90%
K+3	0.79	89%
K+4	0.93	88%

Dimensions (mm)

Weight : 14kg



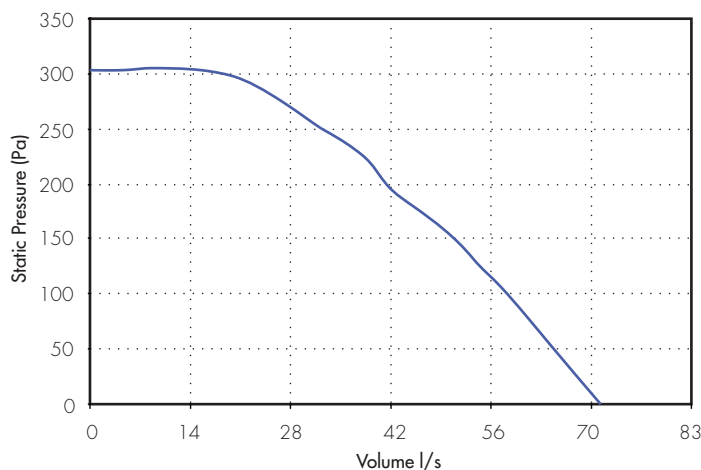
This compact, high efficiency residential mechanical ventilation unit boasts up to 90% thermal efficiency while providing continuous extraction of stale air. The ECDC motors ensure minimal running costs and provide years of trouble free service.

Designed for properties with up to 4 wet rooms (kitchen, bathroom, utility, en-suite), the unit helps prevent noise ingress from external sources by providing supply & extract ventilation without the need for trickle ventilators.

Fully variable control for Normal, Boost and Purge provides accurate setting of the ventilation rate, optimising energy efficiency and reducing noise.

- Fitted with four 125mm duct spigots
- Suitable for kitchen and up to four wetrooms
- Light weight for easy installation
- Fits in a standard kitchen cupboard

Performance



Integra®

Ducted MVHR Unit



Features & Benefits

- Powered heat recovery unit for smaller residential or commercial applications up to 160m³
- Up to 70% heat recovery
- Meets new Building Regulations.
- Low power consumption
- Effective condensation control

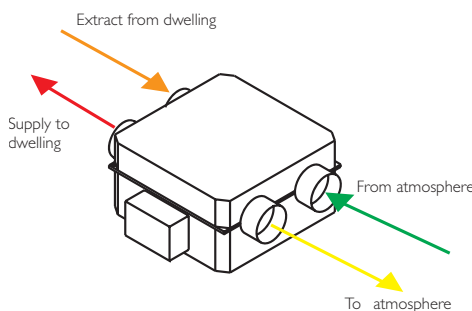
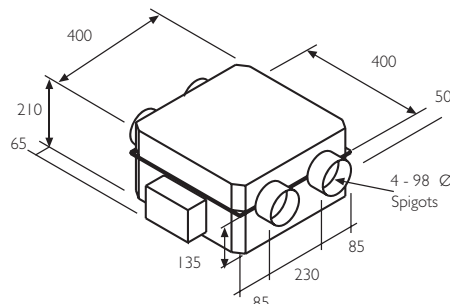
Models

Integra
Stock Ref
456864

Controller 150VA
Stock Ref
563538A

Dimensions (mm)

Weight: 6.5kg



The Integra heat recovery unit has been specially designed to provide ventilation for flats or internal rooms in residential, commercial, educational or leisure applications. Balanced ventilation is achieved by using nominal 100mm diameter insulated flexible ducting.

The unit is completely self contained and includes two integral centrifugal speed controllable fans plus a high efficiency polymeric heat exchanger.

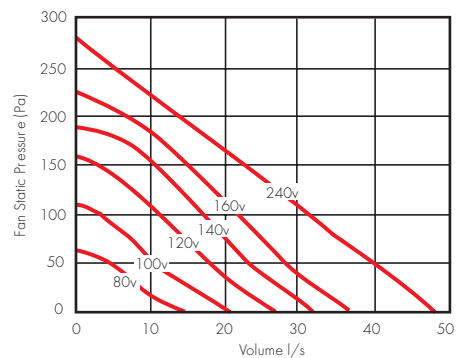
Using a high performance, polymeric heat exchange cube, together with two powerful fans, the Vent-Axia Integra boasts a temperature efficiency of up to 70%.

The compact cube interleaves outgoing moist air with incoming fresh air, allowing the heat from one to warm the other without the two air streams mixing. Energy is saved on room heating, with no power being used by the cube itself.

Performance of Integra: Up to 175.4m³/h FID. Ideal for installation in the ceilings voids or cupboards.

The 150VA Transformer enables the selection of trickle settings to match dwelling volume.

Performance



Integra to be used with a 150VA Transformer for maximum controllability

Motor Speed	1	2	3	4	5	6
Volume l/s (FID)	15.3	21.3	27.3	32.4	37.1	48.7

Power Consumption

Speed 1	80V	32W
Speed 2	100V	47W
Speed 3	120V	64W
Speed 4	140V	81W
Speed 5	160V	99W
Speed 6	240V	182W

Integra® Plus

Ducted MVHR Unit



- Features & Benefits**
- Powered heat recovery unit for larger residential or commercial applications
 - Up to 70% heat recovery
 - Low power consumption
 - Effective condensation control
 - 3 speed control

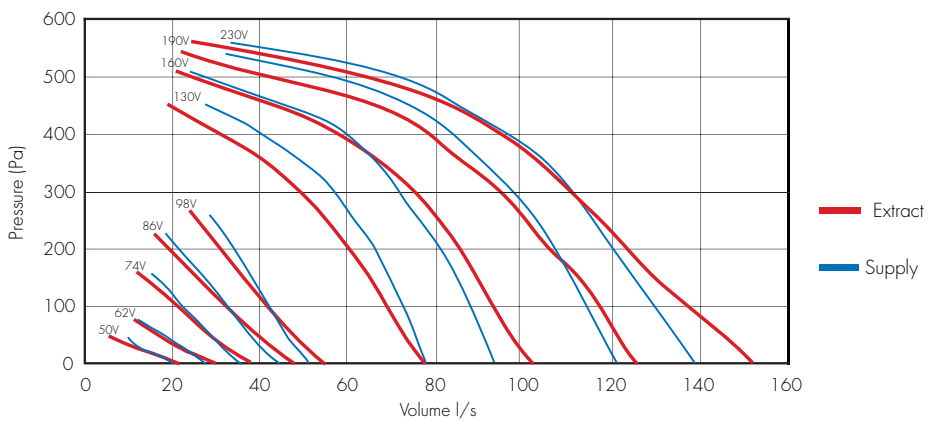
Easy Installation

The Vent-Axia Integra Plus is designed for mounting in ceiling voids, lofts, above a suspended ceiling or vertical wall mounting. Four 150mm spigots are provided for simple connection to insulated flexible or rigid ventilation ducting. The unit comes complete with a 22mm condensate outlet.

Model

Stock Ref
437666

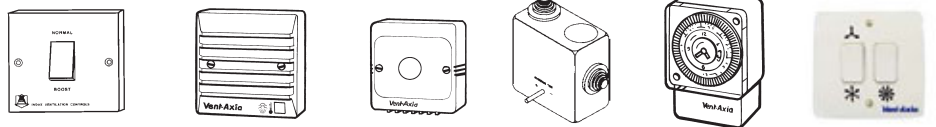
Performance



Units supplied complete with transformer

Motor Speed	1	2	3	4	5	6	7	8	9
Volume l/s (FID)	19.4	29.2	36.1	44.4	50	13.9	91.7	113.9	127.8

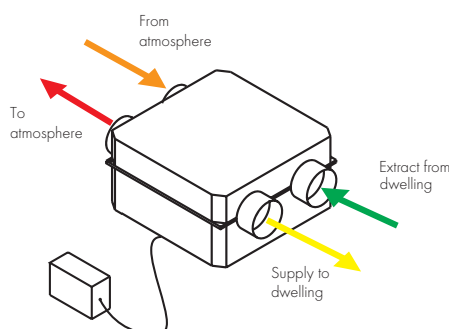
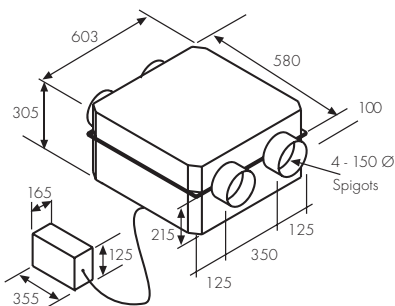
Controllers & Sensors



Trickle Boost Switch	Ambient Response Humidistat	Visionex PIR	TIM2	7 Day TimeSwitch	3 Position Switch
455213	563550A	459623A	370346	563515	5108454

Dimensions (mm)

Weight : 15.5kg fan box, 5kg controller



Power Consumption and noise level

			dB(A) @ 3m
Speed 1	30W	50V	19.2
Speed 2	45W	62V	19.5
Speed 3	66W	74V	20.9
Speed 4	85W	86V	21.9
Speed 5	115W	98V	24.5
Speed 6	188W	130V	30.8
Speed 7	262W	160V	34.3
Speed 8	330W	190V	36.9
Speed 9	425W	230V	39.2

HR100R/RS

Ducted MVHR Unit



Features & Benefits

- Controls condensation and odours - saves energy
- Eliminates mould growth
- Up to 70% Heat Recovery
- Extremely quiet operation
- Two speed settings
- Meets new Building Regulations for bathrooms and toilets

The HR100R and HR100RS are ideal for single bedroom/bathroom applications such as hotel rooms, nursing homes and residential care homes.

The HR100R features top access and is ideal for loft installations.

The HR100RS features bottom access and is ideal for installation on the ceiling slab above a suspended ceiling.

The HR100R/RS is a self-contained heat recovery unit for mounting in lofts and suspended ceilings. The unit is supplied without controls to allow for the unit to be tailored to suit the individual requirements.

Compatible with standard 100mm ducting for connection to internal grilles and external cowl.

The unit comes fitted with a single 2-speed motor, and provides continuous low volume ventilation with a boost option. A variety of control devices are available for manual or automatic speed control.

An integral heat exchanger transfers heat from the outgoing stale air to the fresh air supply, raising the supply air temperature whilst at the same time reducing its relative humidity.

Up to 66m³/h FID capacity. The unit provides superior control of condensation and odours, ideal for bathrooms or small internal rooms.

Models

HR100R

Top access - ideal in loft installations.

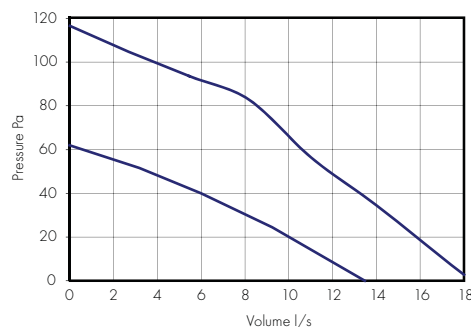
Stock Ref
370377

HR100RS

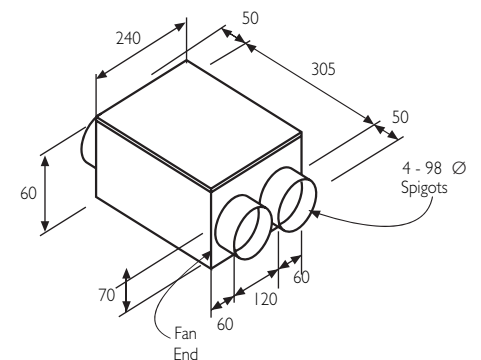
Bottom access - ideal for suspended ceilings.

Stock Ref
435004

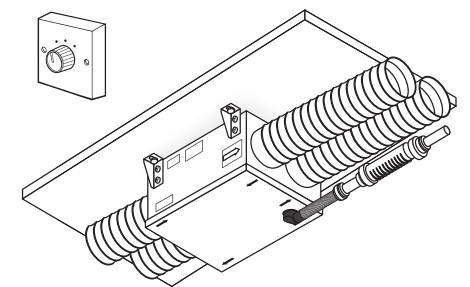
Performance



Dimensions (mm)



HR100RS version



Performance

Model	Weight Kg	Extract Perf. l/s		Watts		dB(A) @ 3m*	
		Boost	Trickle	Boost	Trickle	Boost	Trickle
HR100R	5.6	18.3	13.6	29	19	30	20
HR100RS	5.6	18.3	13.6	29	19	30	20

Mains electrical supply: 230V/50Hz

HR200V

Ducted MVHR Unit



Features & Benefits

- Powered heat recovery module for smaller commercial applications.
- Up to 70% heat recovery.
- With 150mm duct connection.
- Extremely quiet on low speeds.
- Low power consumption.
- Washable heat exchanger.
- Pre-wired to a flexible cable.

A ducted heat recovery unit for internal rooms. Self-contained and includes two mixed flow speed controllable fans. Using a high performance, polymeric heat exchange cube together with two power fans, the HR200V can boast a temperature efficiency of up to 70%. Low speed for trickle ventilation mode.

Specially designed to provide ventilation for small internal rooms in commercial, educational and leisure applications. Ventilation is achieved by using nominal 150mm diameter ducting. The unit includes two mixed flow speed controllable fans plus a high efficiency polymeric heat exchanger.

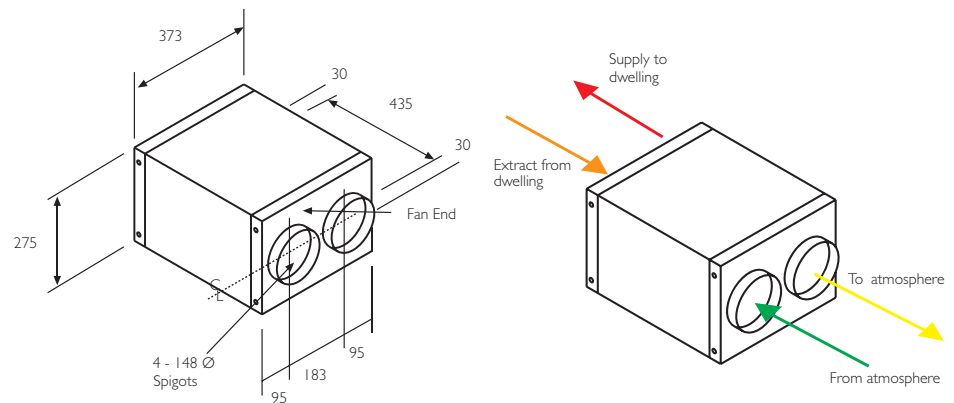
Models

HR200V
Stock Ref
14120010

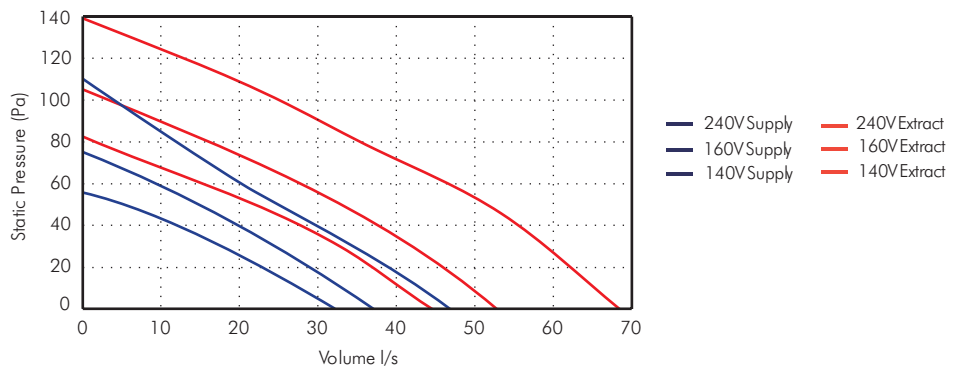
Transformer 150VA
Stock Ref
563538A

Dimensions (mm)

Weight : 15.5kg fan box, 5kg controller



Performance



HR200V to be used with a 150VA Transformer for maximum controllability

Motor Speed	1	2	3
Voltage	140	160	240
Watts	51.5	60	110
Volume l/s (FID) Supply	48.3	55.8	70.3
Extract	241	286	371

HR250

MEV Unit

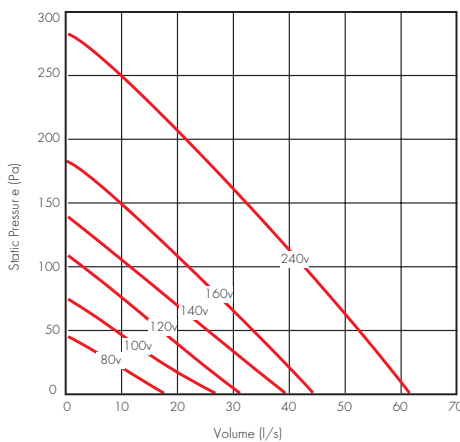


Features & Benefits

- Wholehouse ventilation unit with heat recovery
- Up to 70% heat recovery whilst controlling condensation
- Meets new Building Regulations
- Easy installation using 100mm diameter duct spigots
- Pre-moulded plug and 2 metre long flying lead

Cupboard/loft-mounted intake/extract wholehouse ventilation unit with built-in heat recovery facility. It has twin centrifugal motor/impellers which provide balanced supply and extract ventilation with up to 70% heat recovery. In conjunction with the 150VA Transformer the unit has the facility for matching the performance of the unit to the size of dwelling.

Performance



Performance of HR250: Up to 220m³/h FID capacity (balanced airflow). Unit extracts the moist and polluted air from kitchens, utility rooms, bathrooms and toilets and replenishes other areas of the dwelling with fresh tempered air.

The 150VA Transformer enables the selection of trickle settings to match dwelling volume.

Model

HR250
Stock Ref
14125010

Contoller 150VA

Stock Ref
563538A

Power Consumption

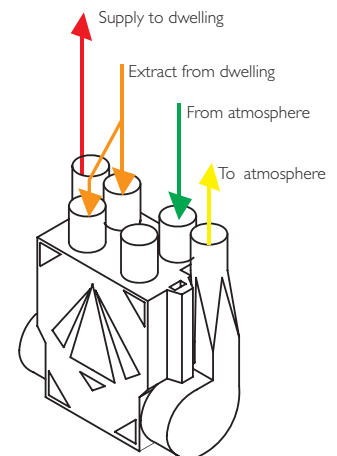
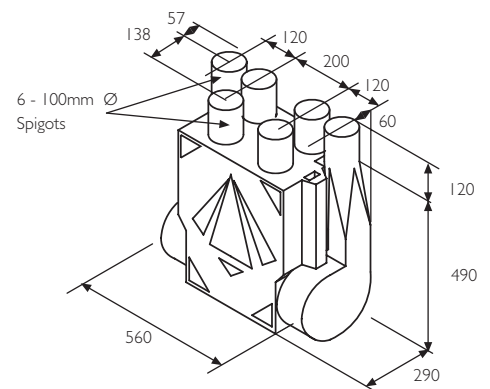
Speed	Voltage	Power
Speed 1	80V	20W
Speed 2	100V	36W
Speed 3	120V	51W
Speed 4	140V	60W
Speed 5	160V	80W
Speed 6	240V	185W

HR250 to be used with a 150VA Transformer for maximum controllability

Motor Speed	1	2	3	4	5	6
Volume m ³ /h (FID)	15.8	25	31.1	37.5	43.1	61.1

Dimenisons (mm)

Weight: 11.5kg



HR500

Single Heat Recovery Unit



Features & Benefits

- Efficient 550m³/h heat recovery ventilation unit or high performance 900m³/h extract fan
- Lightweight, compact and easy to install
- Integral shutters on X type model
- Easy to clean
- 70% heat recovery
- Controller with sensor mode, allows a range of sensors to be used in conjunction with the HR500 and HR500X units
- Rated to IPX5 suitable

Ideal for computer rooms, classrooms, offices and the health and leisure industries. The Vent-Axia HR500 unit is the perfect solution to commercial areas that require a high performance balanced intake/extract scheme. As a heat recovery ventilation unit it moves a useful 550m³/h of air.

The compact heat recovery cube interleaves outgoing warm air with incoming fresh air and allows the heat from one to warm the other without the two streams mixing. Energy is saved on room heating with no power being used by the cube itself.

The HR500 and HR500X consist of a tough telescopic wall sleeve into which the main body of the unit is housed. Walls of up to 670mm thick can be easily accommodated. Behind the neat deflecting fascia grilles are the filters, the heat exchange cube and fan units. All wall sleeve components, the heat exchange cube and the fascia grilles are made of tough polymeric materials.

Electrical

Maximum ambient temperature +40°C.
Supply Voltage 220-240V/1/50Hz.

Models

HR500 Commercial

Wall-mounted intake/extract ventilation unit with built-in heat recovery facility. For commercial and leisure areas. Lightweight, compact and easy to install.

Stock Ref

14101010B

HR500X

As HR500 with shutters.

Stock Ref

14101070

HR500 Controller

Surface mounting. On/Off remote sensor mode. Heat exchange, single fan extract or twin fan extract modes. Infinitely variable speed. Minimum speed setting. Suitable for controlling up to 2x HR500

Stock Ref

W14301010

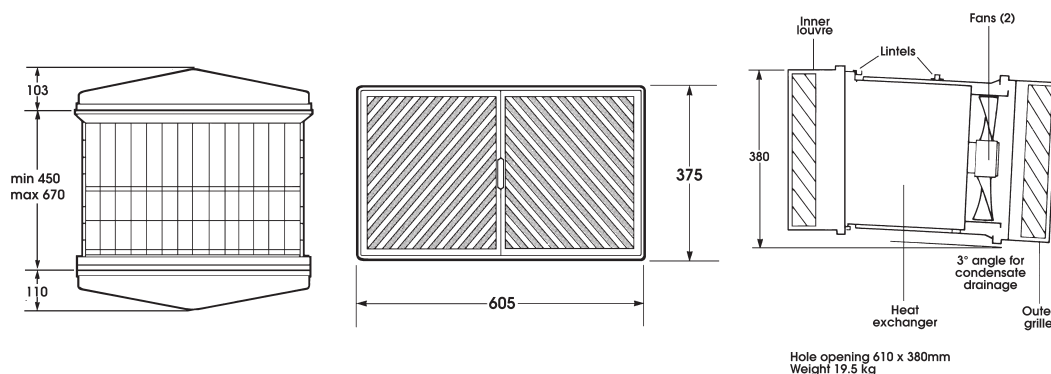
Heat Recovery Ventilation

HR500 heat recovery ventilation units for through wall installation, which exhaust stale air whilst introducing warmed fresh air from the outside.

Performance

Model	Airflow performance (m ³ /h)			Sound
	Heat recovery mode	Extract mode (max)	Watts (max)	dB(A) @ 3m (max)
HR500	550	900	200	53
HR500X	550	900	220	53

HR500 & HR500X



HR500D

Ducted MVHR Unit



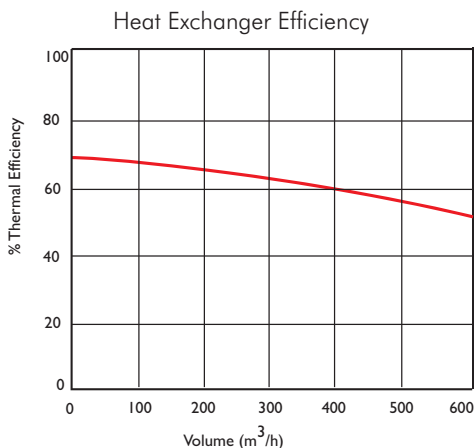
Features & Benefits

- Self-contained unit with integral fans
- Up to 70% heat recovery
- Compatible with 315, 250 and 200mm Ø, ducting and accessories
- External wall mounting
- Speed Controller W14301010

The HR500D is a self-contained unit with integral extract and supply fans to provide balanced ventilation and heat recovery via supply diffusers and extraction grilles. The unit is fully speed controllable.

The compact heat recovery cube interleaves outgoing warm air with incoming fresh air and allows the heat from one to warm the other without the two streams mixing.

Performance



Airflow performance m³/h (max)	Watts (max)	dB(A) @ 3m (max)	Weight kg
625	210	53	19

Energy is saved on room heating with no power being used by the cube itself.

Performance of HR500D: Supply and extract up to 625m³/h FID capacity on heat recovery mode. Ideal for offices, computer rooms, pubs and clubs, etc.

Model

Surface mounting. On/Off remote sensor mode. Heat exchange, single fan extract or twin fan extract modes. Infinitely variable speed. Minimum speed setting. Suitable for controlling up to 2x HR500.

HR500D
Stock Ref
370450

Speed Controller
Stock Ref
W14301010

Spigot Sets

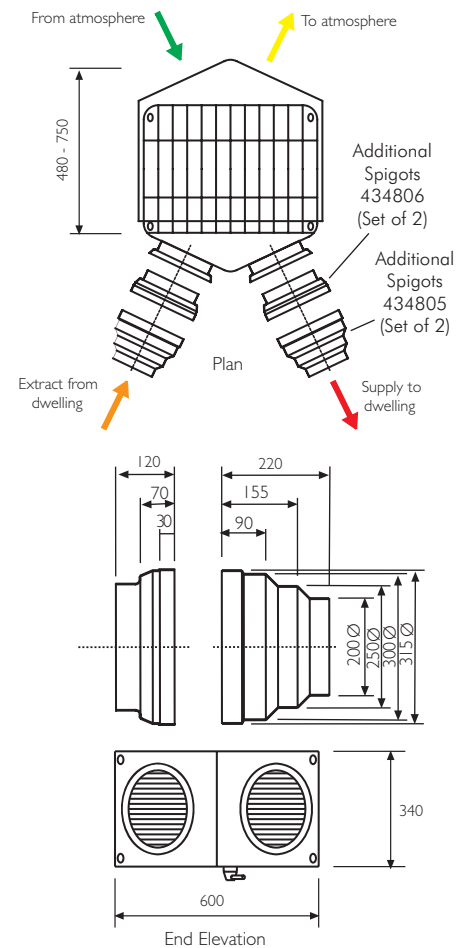
200mm Spigot set
Stock Ref
+ 434806
+ 434805

250mm Spigot set
Stock Ref
+ 434806
+ 434805

315mm Spigot
Stock Ref
434806

Dimensions (mm) D Unit

Hole opening: 610 x 381mm



HR500EP/IP

Passive MVHR



Features & Benefits

- Passive - no fans
- Lightweight - easy installation
- Compatible with 315, 250 and 200mm Ø ducting and accessories
- Saves Heat - 70% heat recovery
- Internal wall mounting
- HR500IP
- External wall mounting HR500EP

The unit is a semi-remote heat exchange unit with 70% heat recovery, designed for mounting in internal walls (HR500IP) and external walls (HR500EP) for installations using ducted extraction and fresh air supply. The HR500 units provides air movement via two independent in-line duct fans to suit length and configuration of ducting systems. The unit is ideal for use with in-line centrifugal type fans and compatible accessories. Performance of HR500EP and HR500IP: Up to 880m³/h FID capacity (balanced airflow Ideal for computer rooms, classrooms, offices and the health & leisure industries.

Model

Model	Stock Ref
HR500IP	370447
HR500EP	370451

Spigot Sets

200mm Spigot set
Stock Ref
+ 434806
+ 434805

250mm Spigot set
Stock Ref
+ 434806
+ 434805

315mm Spigot
Stock Ref
434806

Dimensions (mm)

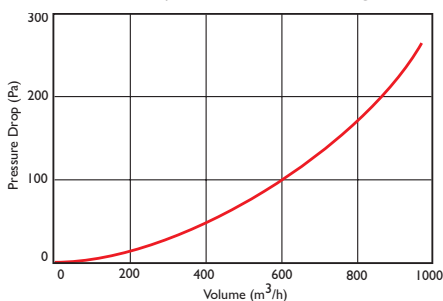
EP & IP Unit

Weight: 9kg

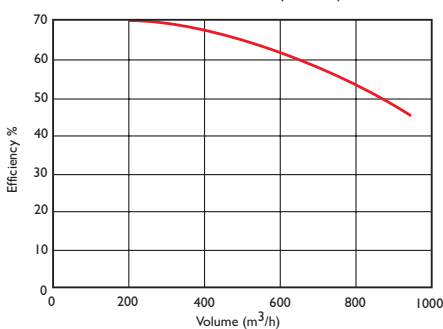
Hole opening: 610 x 381mm

Performance

Pressure Drop over Heat Exchange Unit

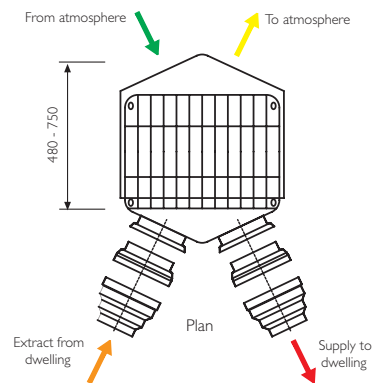


Thermal Efficiency Graph

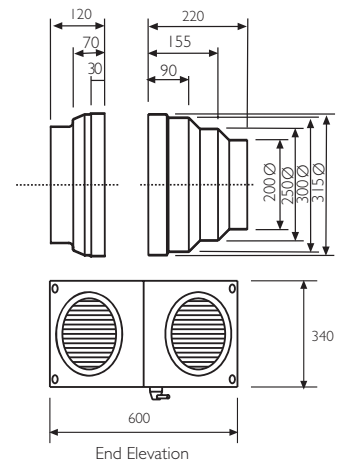
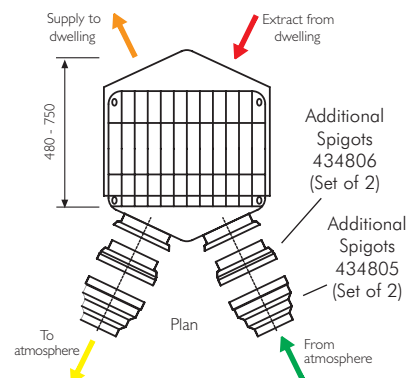


EP Unit

Hole opening: 610 x 381mm



IP Unit



HR500DP

Passive MVHR



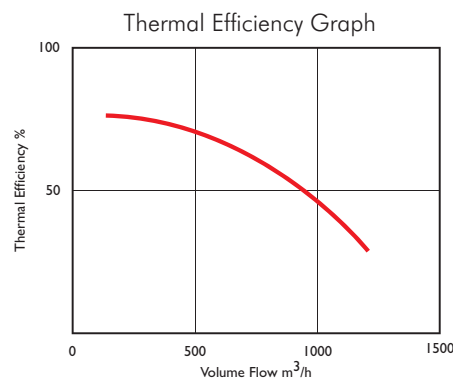
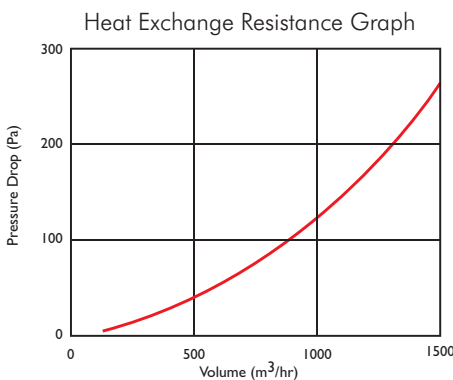
Features & Benefits

- Passive - no fans
- Lightweight, compact and easy to install
- Up to 70% heat recovery
- Easy to clean

A 'stand alone' heat exchange module which will transfer up to 70% of the outgoing heat to incoming air. Polymeric construction with spigots to suit 200, 250 and 315mm Ø flexible ductwork.

Module accessible for routine cleaning. Condensate outlet provided. Ideal for use in air conditioned environments.

Performance

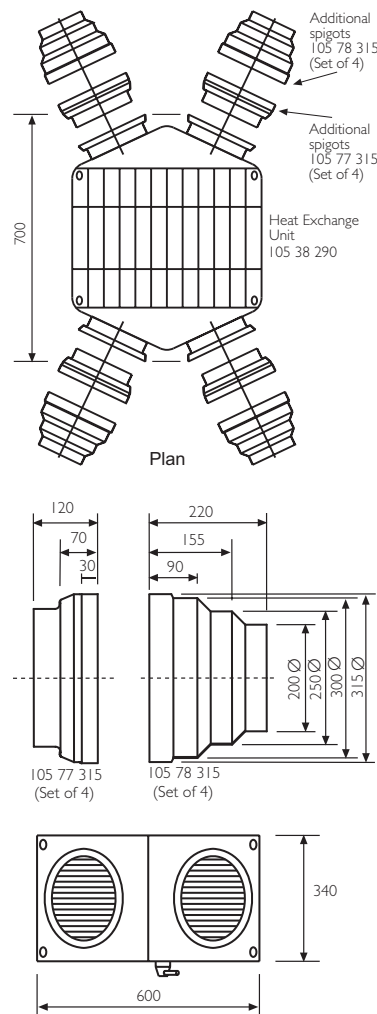


The heat exchanger works at the same high efficiency, automatically keeping a cool room cool.

Performance of the Heat Exchange Unit: At 650m³/h achieves 70% temperature efficiency (balanced airflow). Ideal for schools, pubs, offices and leisure industries.

Dimensions (mm)

Weight: 10kg



Model

HR500DP
Stock Ref
10538290

200mm Spigot sets
Stock Ref
+10577315
+10578315

250mm Spigot sets
Stock Ref
+10577315
+10578315

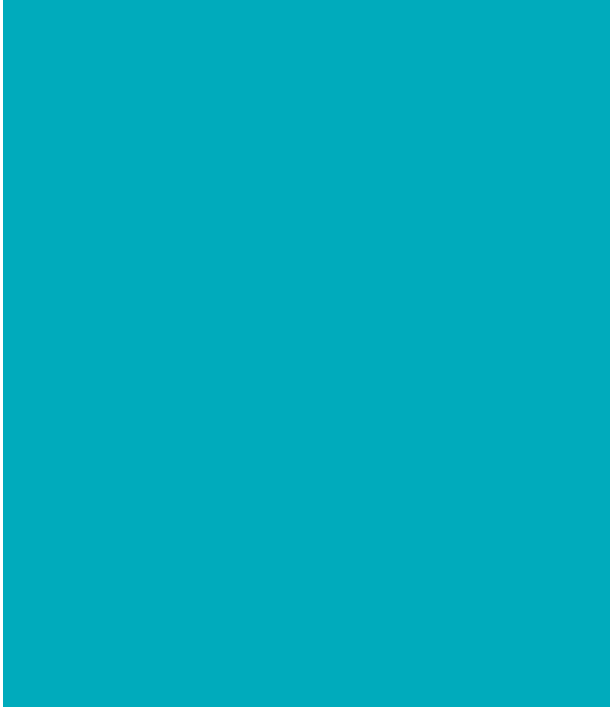
315mm Spigot sets
Stock Ref
+10577315

Ducting & Fittings

Since 1936, Vent-Axia have been known for providing a complete ventilation solution. This has not changed, and now we offer one of the widest ranges of ancillaries available today.

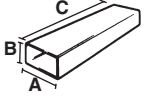
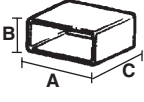
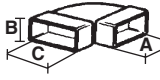
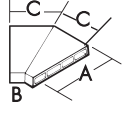
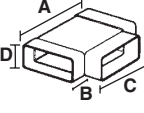
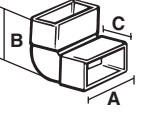
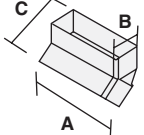

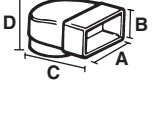
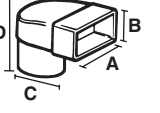
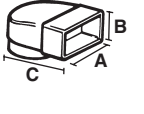
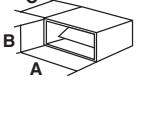


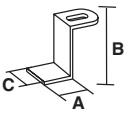
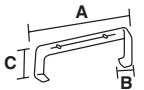
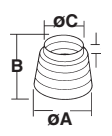
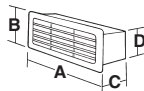
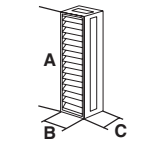
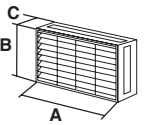
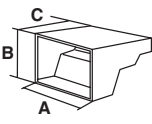
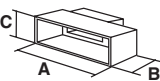
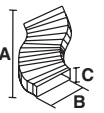
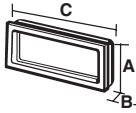
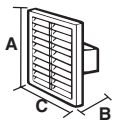
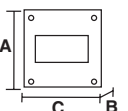
Range



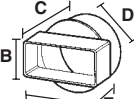
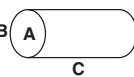
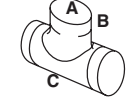
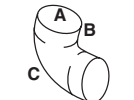
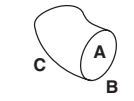
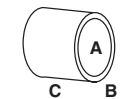
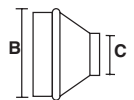
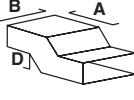
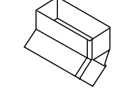


Vent-Axia®

Ducting & Accessories

Description	System 60 204 x 60				System 54 110 x 54				System 25 225 x 25				
	Dimension	Pressure loss Pa			Dimension	Pressure loss Pa			Dimension	Pressure loss Pa			
		15 1/s	30 1/s	60 1/s		15 1/s	30 1/s	60 1/s		15 1/s	30 1/s	60 1/s	
 Flat Channel	A	206	0.75	2.25	7.79	111	2.69	9.75	32.25	236	7.21	24.9	85.8
	B	63				56				29			
	C	1500				1500				1500			
		436617				436599				436632			
 Connector F	A	212	0.11	0.4	1.5	115	0.31	1.4	6.4	240	0	0	0
	B	65				58				34			
	C	100				75				80			
		436623				436605				436639			
 Horizontal 90° Bend F to F	A	212	1.9	8.4	33.8	117	9.9	39.9	162	240	10.2	37.4	139.3
	B	65				60				34			
	C	262				152				289			
		436620				436602				436635			
 Horizontal 45° Bend M to F	A	212	0.71	2.15	13.1					240	7.6	26.4	9.4
	B	65								34			
	C	92								119			
		249944A				-				462195A			
 Horizontal T Piece FFF	A	212	vary on installation			117	vary on installation			240	vary on installation		
	B	65				60				34			
	C	310				184							
	D	259				149							
		436551				436614				-			
 Vertical 90° Bend F TO F	A	115	2.6	10.8	4.4	116	15.7	6.3	251		5.4	20.1	7.3
	B	115				96							
	C	60				60							
		436621				436603				436636			
 Vertical 45° Bend F to F	A	209	0.5	2.6	13.2	116	2.6	12.7	63	240	4.6	8.6	29.7
	B	65				82				34			
	C	95				100				69			
		445196				441655				441656			
 Elbow bend with 100mm Spigot F to M spigot	A	212	7.3	29.2	117	117	8.2	33.1	136.6	240	7.95	31.7	126.1
	B	65				60				54			
	C	212				140				158			
	D	85				91				55			
	DØ	102 (M)				100 (M)				100 (M)			
		436624				436607				436640			
 Elbow bend with 125mm Spigot F to M spigot	A	212	6.2	26	109								
	B	65											
	C	212											
	D	85											
	DØ	125 (M)											
		436625				-				-			
 Elbow bend with 150mm Spigot F to M	A	212	5.2	22	67								
	B	65											
	C	212											
	D	85											
	DØ	150 (M)											
		436626				-				-			
 Elbow bend with 100mm Socket F to F	A					117	8.1	33.1	136.6				
	B					60							
	C					140							
	D					72							
	Ø					102 (F)							
			-				436608				-		
 Flat Channel connector with Damper	A					115	20	21.4	49				
	B					58							
	C					75							
		-				400735				-			

Description	System 60 204 x 60				System 54 110 x 54				System 25 225 x 25				
	(mm)	Pressure loss Pa			(mm)	Pressure loss Pa			(mm)	Pressure loss Pa			
	Dimension	15 l/s	30 l/s	60 l/s	Dimension	15 l/s	30 l/s	60 l/s	Dimension	15 l/s	30 l/s	60 l/s	
 Clip 225 x 25 only	A								30.4				
	B								40.5				
	C								10.8				
		-			-				436638				
 Clip 100 to 125mm	A	60.5			117								
	B	20.5			10								
	C	210			60								
		436622			400745				-				
 Reducer Cone	A	125											
	B												
	C	100											
		466783			-				-				
 *Single Air Brick Horizontal	A	221	7.25	28.1	108.2	221	7.25	28.1	108.2	221	7.25	28.1	108.2
	B	65				65				65			
	C	55.5				55.5				55.5			
	White	370336				436610				436610			
	Terracotta	5107197				436612				436612			
	Brown	372210				436611				436611			
	Beige	372101				436613				436613			
 Single Air Grille Soldier	A				221	5.25	21.2	80.15	221	5.25	21.2	80.15	
	B				65				65				
	C				15				15				
	White	-			438594				438594				
	Terracotta	-			468728A				468728A				
	Brown	-			468730A				468730A				
	Beige	-			468729A				468729A				
 Double Air Brick	A	235	14.8	62	103								
	B	141											
	C	75											
	White	438604				-			-				
	Terracotta	438605				-			-				
	Brown	438606				-			-				
	Beige	438607				-			-				
 Double Air Brick Adaptor	A	228	-	-	44								
	B	132											
	C	86											
		438608				-			-				
 Air Grille Adaptor	A				212	1.2	4.8	17.9	240	7.95	9	24	
	B				65				65				
	C				60				100				
		-			436609				436642				
 Flexible ducting	A	3000											
	B	204											
	C	60											
		5109662			-				-				
 Flat Channel End Cap	A				50.6								
	B				10.4								
	C				111								
		-			400733								
 Louvred Grille with Flyscreen fitting	A				140	20	76	288					
	B				50								
	C				140								
		-			400743				-				
 Flat Channel Wall Plate	A				150								
	B				3								
	C				150								
		-			436606				-				

Description	System 60 204 x 60				System 54 110 x 54				System 25 225 x 25				
	Dimension (mm)	15 l/s	30 l/s	60 l/s	Dimension (mm)	15 l/s	30 l/s	60 l/s	Dimension (mm)	15 l/s	30 l/s	60 l/s	
 Round to Rectangular Adaptor 100mm socket F TO M	A	204	1.9	4.9	14.5	117	4.8	20.5	86.3	240	3.8	14.9	57.4
	B	60				60				34			
	C	290				182				305			
	DØ	125				104				104			
	E	45				45				35			
		441654				400740				425497A			
 Round to Rectangular Adaptor 125mm socket F TO M	A	212	0.71	2.95	11.5								
	B	65											
	C	220											
	DØ	127											
	E	45											
		370127				-				-			
 short Round to Rectangular Adaptor 100mm socket F TO M	A					117	4.8	20.4	86				
	B					60							
	C					65							
	DØ					100							
	E					30							
		-				455035				-			
 Round 2m Ducting length Insulated/uninsulated	A(ID)Ø	103	1.01	2.82	6.2	125	0.41	1.4	3.8	150	0.21	0.8	2.42
	B(OD)Ø	106				129				154			
	C	2000				2000				2000			
			5108250				434715				5108248		
		5108250				434715				5108248			
 Equal Tee Insulated/uninsulated MMM	A(ID)Ø	97	vary on installation			121.11	vary on installation			147.55	vary on installation		
	B(OD)Ø	100				125.09				151.58			
	C	189				212.37				238.96			
			372012				428631				372075		
		372004				427360				370295			
 90° Bend Insulated/uninsulated MM	A(ID)Ø	97	5.61	21.15	80.21	121.18	2.01	8.42	34.9	143.74	1.04	4.21	18.22
	B(OD)Ø	100				125.36				149.27			
	C	123				271.49				327.86			
			372010				428635				372076		
		372010				428635				372076			
 45° Bend Insulated/uninsulated MM	A(ID)Ø	94	2.11	8.24	31.41	120.94	0.72	2.91	12.18	-	-	-	-
	B(OD)Ø	99				123.3							
	C	171				189.34							
			372011				431590				-		
		372005				441657				-			
 Connector Uninsulated MM	A(ID)Ø	96	0.92	4.2	20.44	119.98	0.21	0.92	4.31	146.57	0.1	0.2	1.1
	B(OD)Ø	99				124.92				151.77			
	C	59				58.57				61.37			
			372006				428633				370299		
 Reducer 150 to 125	A					60	0.6	2.2	8.8	60	0.6	2.2	8.8
	BØ					153				153			
	CØ					120				120			
			-				428632				428632		
 Drop down section F to F	A	231											
	B	207											
	C	120											
	D	54											
			442273										
 45° vertical bend F to F													
			442273										

Ducting & Accessories



PVC Flexible Ducting

PVC with wire helix. Used with Single Spigots, and in multi-duct schemes. 6 metre length

Duct Dia	Stock Ref
100mm	436580
125mm	436584
150mm	436588
175mm	566607
200mm	436592
300mm	566612
400mm	566616

T-Series Flexible Ducting

PVC with wire helix. For use with T-Series. 6m length.

Size	Duct Dia	Stock Ref
Size 6	175mm	566607
Size 7	225mm	566609
Size 9	300mm	566612
Size 12	400mm	566616



Aluminium Flexible Ducting

Lightweight, easy to install ducting made of 5 layer aluminium foil/ polyester on a steel wire helix. The strength of the helix resists distortion and damage due to rough handling.

Fire Rating: When assessed against the integrity criterion of BS476: Part 20; 1987, the ducting is capable of providing in excess of 39 minutes integrity from inside to outside. Available in 100, 125, 150m 200, 250, 315 and 400mm diameter sizes to fit spigot sizes on all modular components in the Airtrak range, (except ACP300).

10 metre lengths

Duct Dia	Stock Ref
100mm	10539100
125mm	10539125
150mm	10539150
200mm	10539200
250mm	10539250
315mm	10539315
400mm	10539400



Insulated Flexible Ducting

Insulated ducting should be used when duct passes through an unheated area. Minimized heat loss when used with heat recovery fans. Available in 6 diameters. An additional benefit is that thermally insulated duct offers some measure of acoustic attenuation.

Fire Rating: When assessed against the integrity criterion of BS476: Part 20; 1987, the ducting is capable of providing in excess of 25 minutes integrity from inside to outside.

10 metre lengths

Duct Dia	Stock Ref
100mm	561654
125mm	561655
150mm	561656
200mm	561658
250mm	561660
315mm	561662



Duct Y Pieces

For dividing a ventilation system, providing ducting to multiple supply or extract grilles using only a single fan source.

Stock Ref	2x Into	1x
452081	100mm	100mm
452082	100mm	150mm
455211	125mm	125mm
455212	125mm	150mm
452083	150mm	150mm
452084	150mm	200mm
452085	200mm	200mm
452078	200mm	250mm
452080	200mm	350mm
452076	250mm	250mm
452079	250mm	300mm
452077	300mm	300mm



Acoustic Insulated Ducting

Multiple layer aluminium/polyester laminate with micro perforated flexible core to enhance acoustic performance. Core surrounded by 25mm fibreglass insulation with outer vapour barrier.

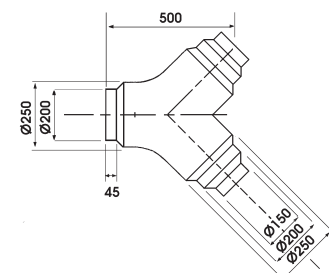
10 metre lengths

Duct Size	Stock Ref
100mm	370172
125mm	370173
150mm	370174
200mm	370175
250mm	370176
315mm	370178

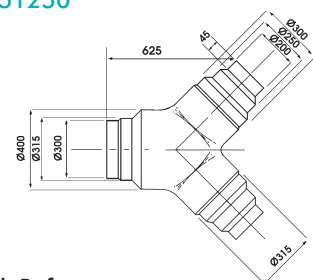


3-Way Splitters

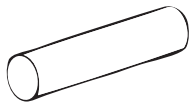
Manufactured from high impact polymeric material which is flame retardant with a maximum operating temperature of +50°C.



Stock Ref.
10551250



Stock Ref.
10553400



Spiral Ductwork - 3 m length

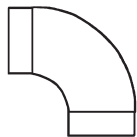
Subject to carriage charge of £20 on orders below £200

Duct Size	Stock Ref
100 Ø	400900
125 Ø	400901
150 Ø	400902
200 Ø	410922
250 Ø	410923
315 Ø	410924



Equal Tee

Duct Size	Stock Ref
100 Ø	400749
125 Ø	400750
150 Ø	400751
200 Ø	370238
250 Ø	370239
315 Ø	410925



90° Bend

Duct Size	Stock Ref
100 Ø	400752
125 Ø	400753
150 Ø	400754
200 Ø	370202
250 Ø	370203
315 Ø	410926



Female Coupler

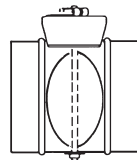
Duct Size	Stock Ref
100 Ø	400755
125 Ø	400756
150 Ø	400757
200 Ø	410927
250 Ø	410928
315 Ø	410929



Joining Piece

In sheet metal. For joining lengths of flexible ducting to give long lasting airtight connection.

Duct Size	Stock Ref
100 Ø	561804
125 Ø	561805
150 Ø	561806
200 Ø	561808
250 Ø	561810
315 Ø	561813



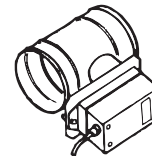
Balancing Damper

Duct Size	Stock Ref
100 Ø	400758
125 Ø	400759
150 Ø	400760
200 Ø	410930
250 Ø	410931
315 Ø	410932



Flanged Spigot

Duct Size	Stock Ref
100 Ø	400761

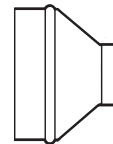


Motorised Valve

Motorised damper for use as heat exchanger by-pass system for summer operation.

Stock Ref
370274

MV100/S



Reducer

Duct Size	Stock Ref
R125/100	370302
R150/100	370303
R150/125	370304
R200/150	370307
R250/200	370309
R300/100	370310
R300/200	370312



Circular Exhaust Diffusers

Manufactured from polypropylene plastic. Suitable for exhausting air and can be fitted directly to the duct or in the ceiling.

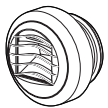
Duct Size	Stock Ref
100 Ø	10544100
125 Ø	10544125
150 Ø	10544150
200 Ø	10544200



Circular Supply Diffusers

Manufactured from polypropylene plastic. Suitable for supplying air and can be fitted directly to the duct or in the ceiling.

Duct Size	Stock Ref
100 Ø	10543100
125 Ø	10543125
150 Ø	10543150
200 Ø	10544200



Aircheck A15/40 - WC

Electrically operated extract grille. Constant airflow of 15m³/h, opening to 40m³/h when electrically operated.

Stock Ref
455207



Aircheck A65/120 - Kitchen

Electrically operated extract grille. Constant airflow of 65m³/h, opening to 120m³/h when electrically operated.

Stock Ref
455208



Aircheck P15/40 - WC

A pullcord operated extract grille. Constant airflow of 15m³/h, opening to 40m³/h when operated.

Stock Ref
455201

Collar for Exhaust & Supply Diffusers

Stock Ref
371301

Aircheck HPT40/70 - Bathroom

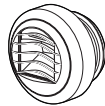
An auto humidity/pullcord/timer operated extract grille. Constant airflow of 40m³/h, opening to 70m³/h when operated.

Stock Ref
455203

Aircheck HPT65/120 - Kitchen/Utility

An auto humidity/pullcord/timer operated extract grille. Constant airflow of 65m³/h, opening to 120m³/h when operated.

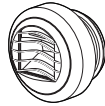
Stock Ref
455205



Aircheck H40/70 - Bathroom

An auto humidity operated extract grille. Constant airflow of 40m³/h, opening to 70m³/h when operated.

Stock Ref
455204



Aircheck H65/120 - Kitchen/Utility

An auto humidity operated extract grille. Constant airflow of 65m³/h, opening to 120m³/h when operated.

Stock Ref
455206



Aircheck Induct (ID45/ID120)

Induct dampers with constant airflow of either 45m³/h or 120m³/h ø 100mm.

Stock Ref	
ID45	455209
ID120	455210
ID125/15	426640
ID125/30	426641
ID125/45	426642

Aircheck Ceiling adaptor - (CA125)

A ceiling adaptor for connection between Aircheck grilles and ducting.

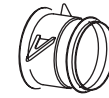
Stock Ref
CA125 455219



Aircheck Corner Diffuser (CD100/125)

Air input grilles for connection to either 100mm or 125mm duct.

Stock Ref
CD100 455220
CD125 455221



External Terminations louvre Grilles with Spigot

Plastic louvre grilles with either 100mm or 150mm diameter spigots.

100mm Ø Stock Ref
RD104TC 370328
RD104BR 370329
RD104WH 370330

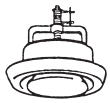
150mm Ø Stock Ref
RD604BR 370337
RD604TC 370338
RD604WH 400742

Unitex Wall Terminals

External weather louvre, wall sleeve and duct connection spigot in one unit. Satin anodised louvre gives full weather protection Brown epoxy powder coated finish, weather louvre available as optional extra (finish to BS08B29). 280mm or 80mm wall sleeve section.

80mm wall sleeve Stock Ref
150mm SA150/80
200mm SA200/80
250mm SA250/80
315mm SA315/80

280mm wall sleeve Stock Ref
150mm SA150/280
200mm SA200/280
250mm SA250/280
315mm SA315/280



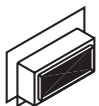
Diffuser with integral Fire Damper (Supply)

Duct Size	Stock Ref
100 Ø	370249



Diffuser with Integral Fire Damper (Extract)

Duct Size	Stock Ref
100 Ø	VHD100
125 Ø	VHD125
150 Ø	VHD150



Intumescent Fire Collar

Intumescent fire collar with stainless steel casing suitable for PVC ducting in timber framed building.

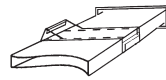
Rectangular Ducting

Duct Size	Stock Ref
110 x 54	435131
204 x 60	435132
225 x 55	435133



Circular Ducting

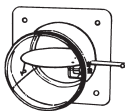
Duct Size	Stock Ref
100mm Ø	435134
125mm Ø	435135
150mm Ø	435136



Intumescent Firewrap

Rectangular PVC ducting

Duct Size	Stock Ref
110 x 54	435137
204 x 60	435138
225 x 25	467790

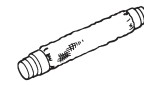


Resettable Fire Dampers

Duct Size	Stock Ref
100 Ø	400788
125 Ø	400789
150 Ø	400790

Flame Retardant Filter

Duct Size	Stock Ref
100 Ø	400776



Flexible Silencer

Flexible silencer unit for use as part of a ducted system for noise reduction. 100mm diameter connections.

	Stock Ref
FS100	370426



Acoustic Mat

25mm thick foam mat for use as a resilient mounting for wholehouse units.

	Stock Ref
ACM/House	370179

Wholehouse Insulation Jacket

Insulated heat recovery jacket. For use with HR800, HR400 and HR250 units only.

	Stock Ref
HR/INJ	370360

100mm & 150mm Accessories



Wall Fitting Kit

A range of VA100mm and VA150mm wall kits. For installing into most walls using the telescopic liners supplied.

White

Model	Stock Ref
VA100	254102
VA140/150	140902A
Silhouette 150	140902A

Brown

Duct Size	Stock Ref
VA100	254100
VA140/150	140903A
Silhouette 150	140903A



Termination Set

Used as a decorative inlet grille or soffit termination set in conjunction with 100mm or 125mm diameter ducting. Two fixing screws supplied to secure grille to the spigot through material up to 25mm thick.

Dimension 155mm x 155mm.

Colour:	White.
Material:	ABS plastic.
Stock Ref	563513



Terminal Connector & Grille

Used for the termination of 100mm flexible ducting to the ceiling or wall of small areas, such as internal toilets.

Connector: manufactured in flame-retardant high impact thermoplastic.

Colour: Grey.

Grille: ABS plastic eggcrate, white finish.

Description	Stock Ref
Grille	560846
Connector	560856



Window Fitting Kit

For use in single or sealed double glazing and most materials up to 40mm thick.

White

Model	Stock Ref
VA100 (105Ø)	254101A
VA100 (110Ø)	443234
Centra/Sil 100	442947
VA140/150	140901A
Solo	11461685A



Decoratation Frame

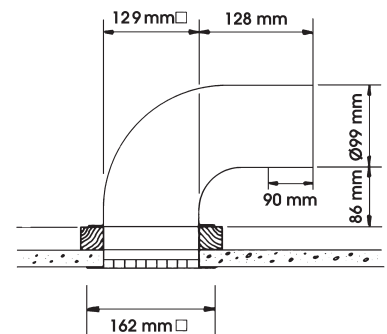
A decoration frame that converts old Centrif to new Centrif Duo without the need to redecorate. The frame can be used with Quadra and Centrif Duo Plus.

The frame is simply installed using two wall fixing screws, allowing the fan to be mounted via its standard mountings. Finished in a high moulded material plastic colour matched to the fan.

White

Size
386mm x 296 x 32 mm deep

Stock Ref
442551



100mm Wind Cowl

Wind baffle for high rise, coasted or exposed areas.

Colour	Stock Ref
White	457845

100mm & 150mm Accessories



Air Grille

Louvre grille for external termination of 100mm diameter rigid ducting. Consists of wall mounting piece and grille with 2 fixing screws.

Colour: White or Brown.

Dimensions: 155 x 155 x 32mm.

Material: ABS plastic.

Colour	Stock Ref
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White	563511
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Brown	563500
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Tamper Proof Window Kit

Tamper proof window kit for use with the VA140/150 fan range.

Stock Ref

459664



Ducting Pack

Consists of 1 x 3 metre length aluminium foil flexible ducting of 100mm diameter, 2 x cable ties and 1 x 100 diameter spigoted fixed grille with built-in

Stock Ref

563517



Quick Fit 100mm Airflow Shutter

Shutter with gravity flaps to protect against backdraught. The spigot connects to 100mm rigid ducting using quick fix grips provided.

Dimensions: 155 x 155 x 20mm.

Material: plastic

Colour	Stock Ref
--------	-----------

White	563522
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Brown	563542
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Quick Fit 100mm Grille

Terminates a rigid duct on an outside wall using the 'quick fix' side grips without the need of further fixings.

Colour	Stock Ref
--------	-----------

White	563521
-------	---------------

Brown	563541
-------	---------------



Quick Fix Termination

The quick fix termination is designed to be installed from inside the building to a nominal 117mm or 165mm diameter core-cut hole, saving time and cost. Four sealing rings assures a weather tight fit to the wall external leaf. Effective length 370mm. For use with centrifugal fans only.

Duct Size	Stock Ref
-----------	-----------

100mm	563535A
-------	----------------

150mm	434656
-------	---------------



Vent Cowl

External termination for 100mm diameter rigid ducting through roofs and walls in exposed situations. Overall diameter 200mm. Not suitable for use with flexible ducting.

Material: Grey PVCu.
Stock Ref **561403**



Wind Baffles

A range of 100mm and 150mm weather baffles. Cowled wall outlet with damper protected gravity grille.

Available in white and brown they are ideal for exposed coastal applications, helping to prevent unwanted backdraughts.

100mm	
Colour	Stock Ref
White	452094
Brown	452095
150mm	
Colour	Stock Ref
White	452096
Brown	452097



Condensation Trap

Condensation trap, for fitting in vertical rigid PVCu pipe ducting. Must be used where pipe ducts pass through unheated roof voids. Fitted with 20mm pipe connection for running off condensate. Not suitable for use with flexible ducting.

Length 85mm
Material: Grey PVCu.

Size	Stock Ref
100mm	563516
125mm	455191
150mm	455190



VA1405/150 Window wind cowl

Wind baffle for exposed areas

Stock Ref
455262

Air replacement Set

Bathroom and toilet ventilation is only effective when there is adequate air replacement into the room. This is often most effectively achieved by fitting a pair of air replacement grilles at low level in a door. Consists of a two piece telescopic set which fits unobtrusively on either side of the door panel.

Minimum fixing thickness: 30mm.
Dimensions: 454 x 90mm.
Hole size: 435 x 76mm.
Material: High impact thermoplastic.
Free area. 115cm²

Colour	Stock Ref
Ivory	561401
Brown	561400

Commercial Range

Lo-Carbon T-Series®

The UK's No. 1 Commercial Fan is also available with a low energy DC motor providing up to 65% energy saving. The motor is designed to provide longer life, improved performance. Lower running costs and maintain the T-Series rugged reliability.



Range



Vent-Axia®

The UK's number one provider of
commercial ventilation solutions

ACM® 100-200

In-Line Mixed Flow Fans



Features & Benefits

- Quietest on the market
- Designed and manufactured in UK
- Two speed selectable motor
- Timer versions available
- Removable motor core assembly
- Rotating motor chassis assembly
- Supplied complete for installation
- Designed to meet IP44
- Aesthetically pleasing with wipe clean polymer

Ducted Ventilation

Vent Axia has designed a complete range of energy efficient Mixed Flow In-Line fans that are now quieter and offer two and half times the pressure of conventional axial fans, are dimensionally more compact making them ideal for many ducted applications.

The ACM Mixed Flow In-Line fan can operate in both horizontal and vertical positions.

Motor

All motors are fitted with Standard Thermal Overload Protection. (S.T.O.P.). Designed for ambient temperatures up to +50°C. All sizes with capacitor run motors. All sizes are Class II appliances. Supply voltage 220-240V/1/50Hz.

These units have a separate footplate for simple location mounting, detachable spigots for simple connection to ducting. The motor body chassis now rotates to provide connection in acute spaces. Cleaning the product has also become simple as all parts can be removed without removing the ducting.

Controller

For optimum performance use a Vent-Axia 1.5 amp electronic controller. Surface mounted providing variable speed control with an On/

Off/sensor slider with neon indicator. There is an adjustable minimum speed setting. The controller and has electrical connections for use with suitable external sensors. Cannot be used with timer models.

1.5 Amp Controller (Suitable for 100mm – 200mm models) Dimensions: 86 x 156 x 53mm (H x W x D)

Stock Ref
W300310

For flush fitting a metal wall box accessory is available.

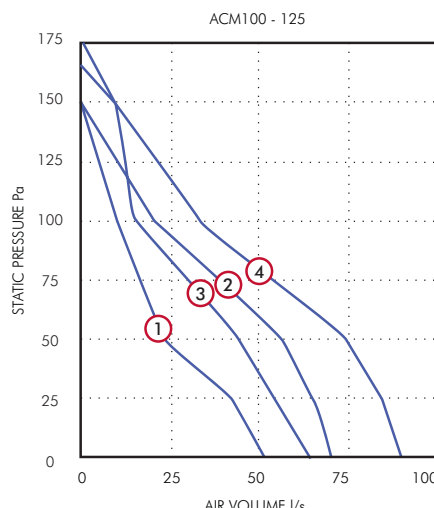
Stock Ref
400144

Hole for wall box: 80x150x150mm (HxWxD).

Models

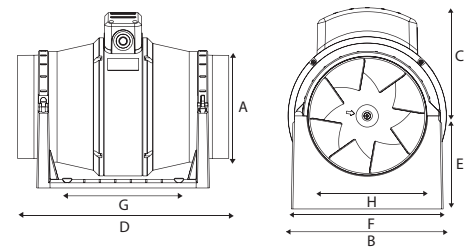
Model	Stock Ref
ACM100	17104010C
ACM100T	17104020E
ACM125	17105010C
ACM125T	17105020A
ACM150	17106010B
ACM150T	17106020C
ACM200	17108010B
ACM200T	17108020A

Performance Curve



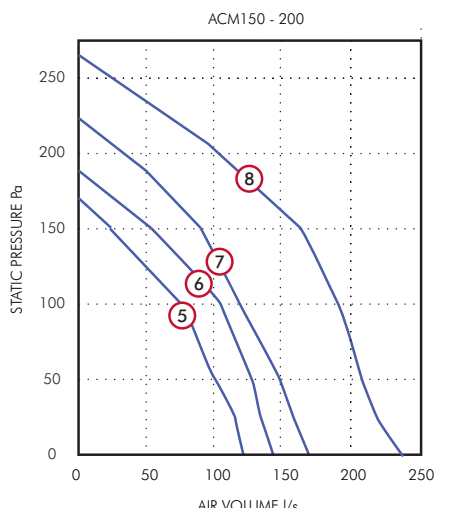
Dimensions (mm)

Size	100	125	150	200
AØ	97	122	147	199.5
BØ	178	178	200	223
C	124	124	138	146
D	298	259	350	300
E	96	96	118	130
F	168	168	192	195
G	120	120	162	100
H	153.5	153.5	178	180



Performance

Size	Curve	Nominal		Watts	Amps at 3m	dB(A)
		r.p.m	l/s @ Pa			
100	①	L 1670	52	18	0.09	20
	②	H 2200	71	23	0.1	23
125	③	L 1800	65	25	0.12	20
	④	H 2400	91	30	0.13	24
150	⑤	L 1870	123	42	0.19	31
	⑥	H 2350	145	48	0.21	35
200	⑦	L 1650	170	114	0.51	32
	⑧	H 2250	240	107	0.48	38



ACM[®] 250-315

In-Line Mixed Flow Fans



Features & Benefits

- Available in two sizes
- Simple Installation
- Supplied complete for installation
- Optimise fan performance by using an approved Vent Axia controller
- Diagonal impeller with stator
- Galvanized metal housing
- Integrated thermal switch
- Includes a mounting bracket
- Designed to meet IP54

Ducted Ventilation

Vent Axia has designed a complete range of energy efficient Mixed Flow In-Line fans that are now quieter than any other product on the market. ACM is now in a range of six products in the range which have been designed for use with rigid and flexible ducting.

In Line Mixed Flow fans offer two and half times the pressure of conventional axial fans, are dimensionally more compact making them ideal for many ducted applications.

The ACM Mixed Flow In-Line fan can operate in both horizontal and vertical positions and can be mounted to meet its optimum performance.

Motor

All motors are fitted with Standard Thermal Overload Protection. (S.T.O.P). Designed for ambient temperatures up to +50°C. All sizes with capacitor run motors. ACM 250 and 315 are Class I appliances. Supply voltage 220-240V/1/50Hz.

Models

Model	Stock Ref
ACM250	17110010B
ACM315	17112010B

Controller

For optimum performance use a Vent-Axia electronic controller. Surface mounted providing variable speed control with an On/Off/sensor slider with neon indicator. There is an adjustable minimum speed setting. The controller is radio suppressed to BS EN 55014 and electrical connections for use with suitable external sensors are provided.

1.5 Amp Controller – Suitable for 250mm model
Dimensions: 86 x 156 x 53mm (H x W x D)

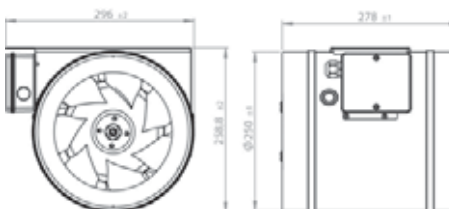
Stock Ref
W300310

Surface mounted electronic controller which provides infinitely variable speed control from preset minimum to maximum. Features an On/Off switch with neon indicator and speed control knob. Built in 'Hard Start' auto maximum speed for a few seconds.

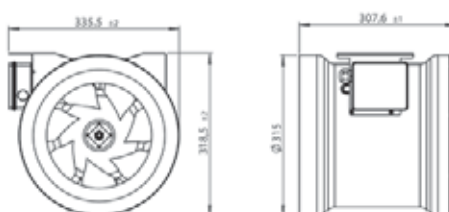
3 Amp Controller – Suitable for 315mm model
(Surface mountable only)
Dimensions: 150 x 90 x 65 (H x W x D)

Stock Ref
10303103A

Dimensions (mm)

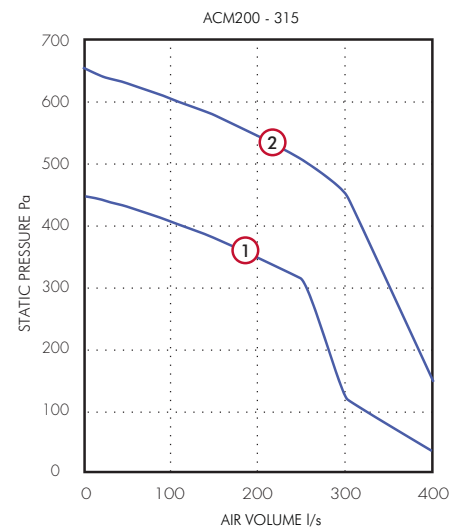


ACM250



ACM315

Performance



Size	Curve	Nominal r.p.m	I/s @ Pa	Watts	Amps at 3m	dB(A)
250	①	H 2720	450	145	0.8	52
315	②	H 2840	653	270	1.2	56

Powerflow

In-Line Duct Fans Models

Features & Benefits

- Tough plastic in-line range in eight models.
- 50-80mm long ribbed spigots.
- Flame retardant casing.
- All models speed controllable.
- Fitted with Standard Thermal Overload Protection (S.T.O.P.).
- For the best performance from your fan, use a Vent-Axia controller.
- IP44 Rated.

Ducted Ventilation

Powerflow models provide a compact yet versatile range designed with the installer in mind, combining the acoustic benefits of a tough plastic casing with the pressure characteristics of a centrifugal fan.

A range of eight models from 100 to 315mm dia. duct sizes. The 315mm dia. model has been specifically developed for use with rigid ductwork. Air volumes from 59l/s to 420l/s in free air and capable of pressure development up to 550 Pa.

Powerflow has 50-80mm long inlet and discharge spigots allowing easy installation and fixing. The adjustable mounting foot allows the terminal box to be rotated to any angle and allows plenty of space and adjustment for screw fixing. The robust fire-retardant polymeric casing combined with internal guide vanes ensures optimum airflow management through the unit.

Electrical

Motors are 220-240V single phase 50Hz. Capacitor start and run. The terminal box is integral with the case moulding. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.).

Motor/Impeller

All models are fitted with an external rotor motor and backward curved impeller assembly for long life and reliability.

All sizes are IP44 according to BS EN 60529. Ball bearings are greased for life and designed to run at any angle. Insulation is Class 'B' (from -30°C to +40°C). Manufacture is controlled to BS EN ISO 9001.

Models

2 Pole In-Line Duct Fan - Single Phase

Stock Ref

ACP10012B

ACP12512B

ACP15012B

ACP16012B

ACP20012B

ACP25012B

ACP31512B

ACP31512HP

2.5A Electronic Controller

On/Off neon indicator. Infinitely variable speed control. Adjustable minimum speed setting and optional sensor mode. The controller is radio-suppressed to BS800 and rated at 2.5 amps.

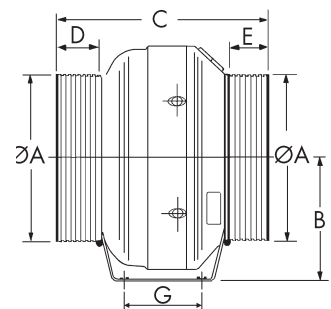
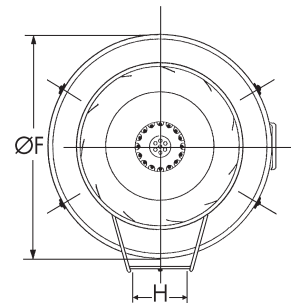
Stock Ref

W10303102M

Dimensions (mm)

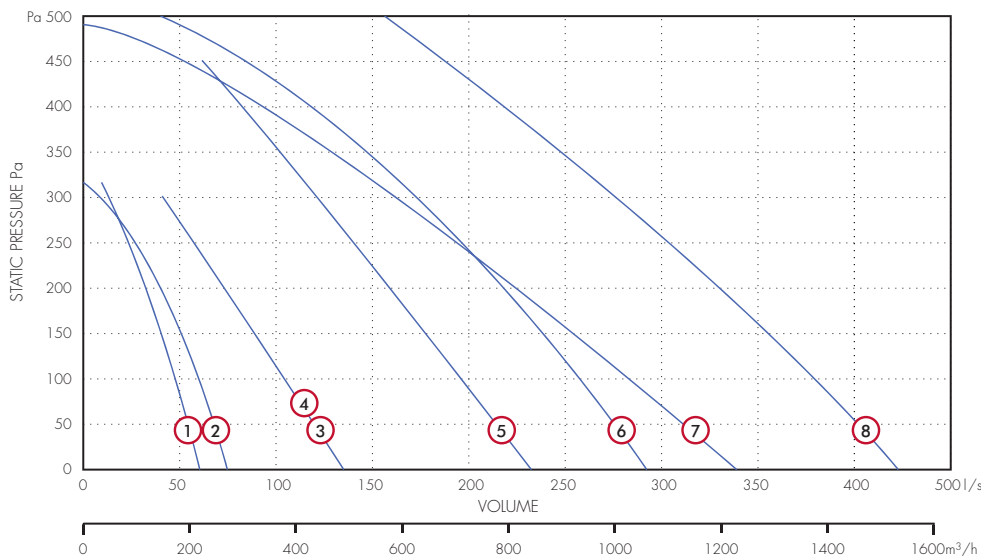
Dia	Øa	b	c	d	e	Øf	g	h	Weight
100	100	146	287	52	52	254	110	270*	2.2
125	125	146	287	60	60	254	110	270*	2.2
150	149	175	287	52	52	301	110	270*	3.1
160	160	175	287	52	52	301	110	270*	3.1
200	200	193	290	47	47	344	92	130	4.3
250	250	218	312	65	65	367	92	130	4.6
315	315	250	366	76	76	405	92	130	5.9
315HP	315	250	366	76	76	405	92	130	6.1

*Sizes 100, 125, 150 & 160 have a flat mounting foot





Performance Curve



Performance Data

Dia.	Curve Ref.	Nominal r.p.m.	I/s @ Pa											Watts	S.C. Amps	F.L.C. Amps	dB(A) at 3m
			0	25	50	100	150	200	250	300	350	400					
100	①	2740	59	56	52	46	39	31	21					83	0.85	0.34	35
125	②	2410	78	73	69	60	50	39	27					86	0.85	0.34	35
150	③	2520	137	130	122	106	89	73	57	39				100	1.10	0.43	45
160	④	2520	137	130	122	106	89	73	57	39				100	1.10	0.43	45
200	⑤	2620	234	224	214	194	177	159	138	119	100	82	150	1.52	0.68	47	
250	⑥	2720	290	283	270	250	234	216	197	177	156	124	185	1.60	0.77	48	
315	⑦	2720	339	329	313	274	244	218	191	161	131	98	182	1.57	0.75	51	
315HP	⑧	2667	420	410	400	380	350	330	300	270	247	222	300	4.00	1.30	52	

Acoustic Sound Power Level

Stock Ref.		63	125	250	500	1K	2K	4K	8K	dB(A) @3m
ACP10012B	INLET	81	84	75	68	61	52	46	40	51
ACP10012B	OUTLET	82	84	77	68	61	52	49	43	52
ACP10012B	BREAKOUT	52	48	57	53	53	48	40	38	35
ACP12512B	INLET	80	79	76	70	61	57	51	45	51
ACP12512B	OUTLET	82	80	76	71	61	54	51	43	52
ACP12512B	BREAKOUT	52	48	57	53	53	48	40	38	35
ACP15012B	INLET	79	84	84	76	69	65	61	52	59
ACP15012B	OUTLET	78	84	83	74	69	65	60	50	58
ACP15012B	BREAKOUT	59	62	66	62	62	58	51	43	45
ACP16012B	INLET	81	81	79	76	66	61	58	49	55
ACP16012B	OUTLET	80	82	81	73	67	62	57	49	54
ACP16012B	BREAKOUT	59	62	66	62	62	58	51	43	45

Stock Ref.		63	125	250	500	1K	2K	4K	8K	dB(A) @3m
ACP20012B	INLET	80	79	74	76	67	65	66	60	57
ACP20012B	OUTLET	79	79	74	71	69	69	65	59	55
ACP20012B	BREAKOUT	54	70	67	66	62	59	53	43	47
ACP25012B	INLET	84	80	74	74	69	69	67	63	57
ACP25012B	OUTLET	75	79	73	72	72	73	68	64	59
ACP25012B	BREAKOUT	60	71	70	66	65	62	55	44	48
ACP31512B	INLET	84	80	74	74	69	69	67	63	56
ACP31512B	OUTLET	75	79	73	72	72	73	68	64	59
ACP31512B	BREAKOUT	72	71	73	71	66	63	55	45	51
ACP31512/HP	INLET	63	72	75	77	79	75	74	67	63
ACP31512/HP	OUTLET	65	73	76	79	76	80	74	68	64
ACP31512/HP	BREAKOUT	61	68	69	71	68	67	58	51	52

Lo-Carbon T-Series® Window Models



Features & Benefits

- Reduces your carbon footprint.
- Extract/intake model in 2 sizes: Size 9 and 12.
- Long life Lo-Carbon motors last twice as long as conventional motors.
- Up to 70% energy saving.
- Designed to comply with International safety standards.
- Wired or Wire-less fan models available.
- Easy fit connector Top Socket, standard on all models.

Instantaneous Shutter

With energy saving in mind units are supplied complete with an integral instantaneous automatic louvre shutter concealed behind the interior grille. It operates on both extract and intake and at any angle of mounting.

The shutter is electronically controlled by an actuator with a damped action giving quiet operation during instant opening and closing. The interlocking edges of the shutter blades provide maximum backdraught protection. When the ventilating unit is used with the Lo-Carbon T-Series controller, the shutter can be set open with the fan motor switched Off to provide natural ventilation without the security risk of an open window.

Controllers



Models	Stock Ref
Wire-less	455874
Wired	455873

Dimensions (mm)

Size Dim.	9 mm	12 mm
A	39	41
B	150	177
C	304	381
D	302	378
E	19	19
F	54	54
Fixing hole Ø	260	337
Weight kg	5.35	7.7

UK's No. 1 Commercial Fan

The Lo-Carbon T-Series range is fitted with a low energy DC motor, developed to improve performance, lower running costs and maintain T-Series' rugged reliability.

Designed for installation through single or double glazing and material up to 32mm thick. Greater thicknesses can be accommodated using extended fixing rod sets. Alternatively, the Lo-Carbon T-Series range can be used in conjunction with Vent-Axia ventilation accessories in flexible and rigid ducting systems to suit individual requirements. The fan can also be mounted in a fixing plate on walls or above ceilings.

Models

Wired Model

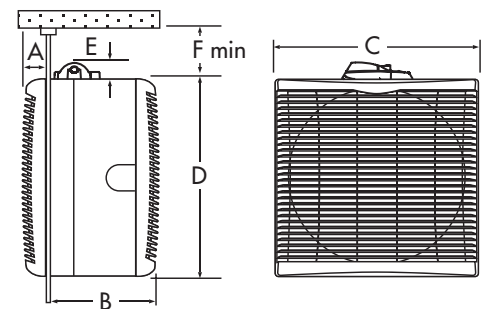
Size	Stock Ref
9" Window	456165A
12" Window	456173A

Wire-less Model

Size	Stock Ref
9" Window	456169A
12" Window	456177A

Designed for use in single or double glazing, most types of glass and materials up to 32mm thick. Greater thicknesses can be accommodated using Extended Fixing Rod Sets. Can also be mounted in a fixing plate or wall, in ducts or above ceilings

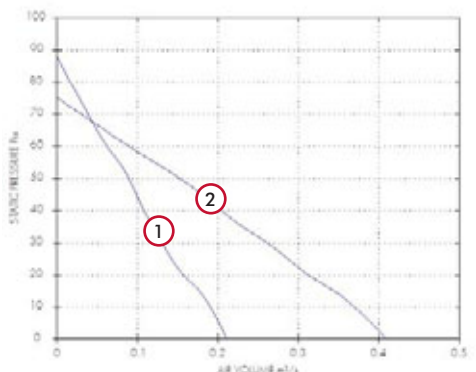
Controller (W x H x D) 97 x 99 x 32



Performance

Model	Curve	Extract performance m³/h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
		low	medium	high			
Lo-Carbon TX9WW - Wire-less	①	332 (90)	571 (160)	761 (210)	30.8	40	0.35
Lo-Carbon TX9WW - Wired	①	332 (90)	571 (160)	761 (210)	30.8	40	0.35
Lo-Carbon TX12WW - Wire-less	②	660 (185)	1295 (360)	1550 (430)	68.6	46	0.73
Lo-Carbon TX12WW - Wired	②	660 (185)	1295 (360)	1550 (430)	68.6	46	0.73

Performance Graph



For further performance details please go to www.vent-axia.com

Lo-Carbon T-Series® Wall Models



Features & Benefits

- Reduces your carbon footprint.
- Extract/intake model in 2 sizes: Size 9 and 12.
- Long life Lo-Carbon motors last twice as long as conventional motors.
- Up to 70% energy saving.
- Designed to comply with International safety standards.
- Wired or Wire-less fan models available.
- Easy fit connector Top Socket, standard on all models.

UK's No. 1 Commercial Fan

Behind the grille of the Lo-Carbon T-Series Wall model is a high performance extract/intake ventilating unit designed to fit through most wall thicknesses using the telescopic liner supplied. For walls of exceptional thickness additional liners can be used. Conduit entry is provided for concealed wiring.

External brick walls

Lo-Carbon T-Series wall models are designed to fit directly into double brick, solid and cavity walls. The two part telescopic liner accommodates wall thicknesses from 240 to 315mm. For thicker walls additional liner sections are available. Lo-Carbon T-Series wall models are provided with internal and external wall frames which fit flush with both faces of the wall.

Performance

Model	Curve	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
		low	medium	high			
Lo-Carbon TX9WL - Wire-less	①	326 (90)	562 (160)	732 (210)	27	39	0.31
Lo-Carbon TX9WL - Wired	①	326 (90)	562 (160)	732 (210)	27	39	0.31
Lo-Carbon TX12WL - Wire-less	②	660 (185)	1355 (360)	1650 (430)	68	48	0.70
Lo-Carbon TX12WL - Wired	②	660 (185)	1355 (360)	1650 (430)	68	48	0.70

For further performance details please go to www.vent-axia.com

Instantaneous Shutter

Lo-Carbon T-Series models are supplied complete with an integral instantaneous automatic louvre shutter which will operate on both intake and extract and at any angle of mounting.

When the ventilating unit is used with a Lo-Carbon T-Series controller, the shutter can be set open with the fan motor switched Off to provide natural ventilation without the security risk of an open window.

Electrical

Motor purpose-designed. Suitable for running at any angle. Quiet running, enclosed. Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).

Supply voltage 220-240V/1/50Hz.

Models

Wired Model

Size	Stock Ref
9" Wall	456166A
12" Wall	456174A

Wire-less Model

Size	Stock Ref
9" Wall	456170A
12" Wall	456178A

Controllers

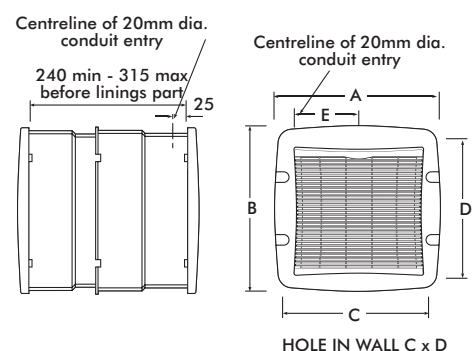


Models	Stock Ref
Wire-less	455874
Wired	455873

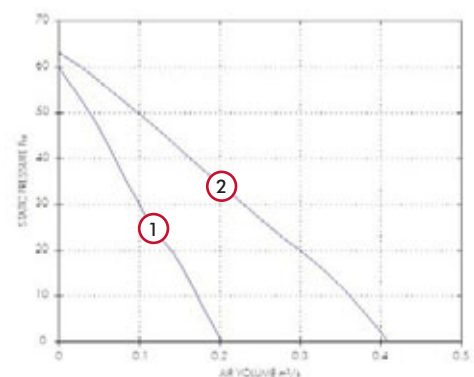
Dimensions (mm)

Size Dim.	9 mm	12 mm
A	391	470
B	388	467
C	365	442
D	375	450
E	143	182
Weight kg	7.77	10.86

Controller (W x H x D) 97 x 99 x 32



Performance Graph



Lo-Carbon T-Series® Roof Models



Features & Benefits

- Reduces your carbon footprint.
- Extract / intake model in 2 sizes: Size 9, and 12.
- Long life Lo-Carbon motor last twice as long as other conventional motors.
- Up to 70% energy saving.
- Designed to comply with international safety standards.
- Wired or wireless fan models available.
- New easy fit connector Top Socket, standard on all models.

It will operate on both intake and extract and at any angle of mounting. The shutter is electronically controlled by an actuator with a damped action giving quiet operation during instant opening and closing.

When the ventilating unit is used with a Lo-Carbon T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Top Socket

A connector Top Socket is now standard on all T-Series fans. This unique system allows for fast and trouble-free mains connection. Just wire it up, then slide and clip into place. This covers all models and sizes including the Lo-Carbon T-Series range.

Electrical

Motor purpose-designed. Suitable for running at any angle. Quiet running, enclosed. Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).
Supply voltage 220-240V/1/50Hz.

Models

Wired Model	Stock Ref
9" Roof	456168A
12" Roof	456176A

Wire-less Model	Stock Ref
9" Roof	456172A
12" Roof	456180A

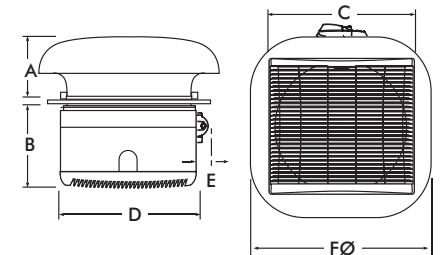


Controllers	Stock Ref
Wire-less	455874
Wired	455873

Dimensions (mm)

Size Dim.	9 mm	12 mm
A	136	171
B	150	177
C	304	381
D	302	378
E	54	54
FØ	400	500
Fixing Hole	260	337
Weight kg	6.22	9.28

Controller (W x H x D) 97 x 99 x 32



UK's No. 1 Commercial Fan

Designing ventilation systems with the fan mounted in a skylight or a flat roof is easy. With a low profile cowling, the Lo-Carbon T-Series Roof model is suitable for installation in horizontal, angled and vertical glass and for fixing plates in roofs. For vertical windows or walls in exposed areas and single and double glazing including most types of glass up to 32mm thick. Greater thicknesses can be accommodated using extended fixing rod sets. Both sizes of Vent-Axia roof plate assemblies can be fitted easily into flat roofs.

Instantaneous Shutter

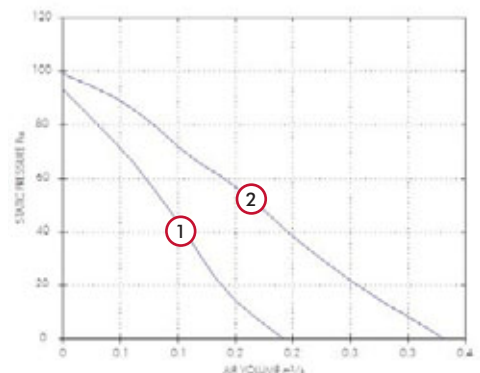
With energy saving in mind Lo-Carbon T-Series models are supplied complete with an integral, instantaneous, automatic louvre shutter concealed behind the interior grille.

Performance

Model	Curve	Extract performance m³/h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
		low	medium	high			
Lo-Carbon TX9RF - Wire-less	①	313 (85)	562 (155)	693 (190)	27	40	0.34
Lo-Carbon TX9RF - Wired	①	313 (85)	562 (155)	693 (190)	27	40	0.34
Lo-Carbon TX12RF - Wire-less	②	518 (143)	1017 (282)	1194 (330)	67	48	0.69
Lo-Carbon TX12RF - Wired	②	518 (143)	1017 (282)	1194 (330)	67	48	0.69

For further performance details please go to www.vent-axia.com

Performance Graph



Lo-Carbon T-Series® Panel Models



Features & Benefits

- Reduces your carbon footprint.
- Extract / intake model in 2 sizes: Size 9 and 12.
- Long life Lo-Carbon motor last twice as long as other conventional motors.
- Up to 70% energy saving.
- Designed to comply with international safety standards.
- Wired or wireless fan models available.
- New easy fit connector Top Socket, standard on all models.

UK's No. 1 Commercial Fan

Lo-Carbon T-Series panel/ceiling models are suitable for mounting at any angle in internal partitions, ceilings, ducts and, with louvre grilles, through external walls. When installed only the louvre grille is visible.

Instantaneous Shutter

With energy saving in mind Lo-Carbon T-Series models are supplied complete with an integral instantaneous automatic louvre shutter concealed behind the interior grille. With a Lo-Carbon T-Series Controller the fan will operate on both extract and intake, suitable for any angle of mounting. When the ventilating unit is used with a Lo-Carbon T-Series controller the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Performance

Model	Curve	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
		low	medium	high			
Lo-Carbon TX9PL - Wire-less	①	357 (100)	601 (166)	799 (221)	30	41	0.33
Lo-Carbon TX9PL - Wired	①	357 (100)	601 (166)	799 (221)	30	41	0.33
Lo-Carbon TX12PL - Wire-less	②	737 (205)	1487 (413)	1761 (490)	67	48	0.70
Lo-Carbon TX12PL - Wired	②	737 (205)	1487 (413)	1761 (490)	67	48	0.70

For further performance details please go to www.vent-axia.com

Wire-less Control

Every Lo-Carbon T-Series Wire-less FM Controller uses unique digital signals to ensure trouble free operation. The controller will transmit through walls and floors allowing complete flexibility of design to control fans up to 30m away.

Top Socket

A connector Top Socket is now standard on all T-Series fans. This unique system allows for fast and trouble-free mains connection.

Electrical

Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P).

Supply voltage: 220-240V/1/50Hz

Easy Cleaning

Integrated component design allows all parts to be dismantled for cleaning without the use of specialist tools.

Models

Wired
9" Panel **Stock Ref 456167A**
12" Panel **456175A**

Wireless
9" Panel **Stock Ref 456171A**
12" Panel **456179A**



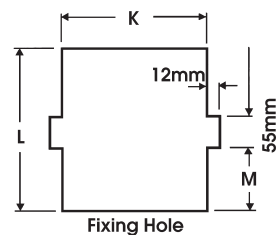
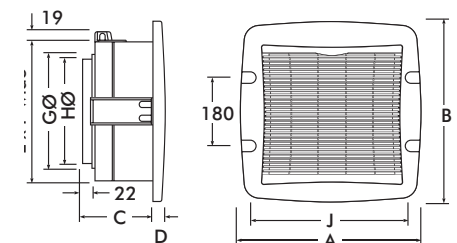
Controllers Stock Ref
Wire-less **455874**
Wired **455873**

Dimensions (mm)

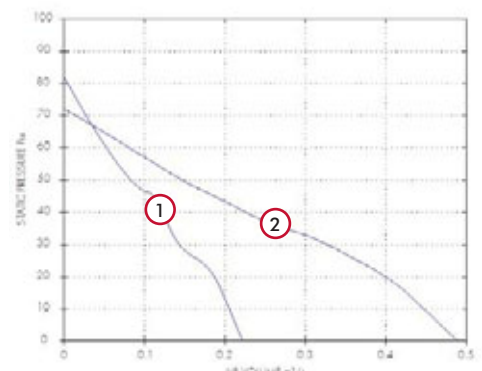
Size	9 mm	12 mm	Size	9 mm	12 mm
A	391	470	GØ	255	334
B	388	467	HØ	247	325
C	129	152	J	345	422
D	39	41	K	309	386
E	302	378	L	326	402
F	304	381	M	126	164

Weight kg: 9mm - 5.13, 12mm - 7.44

Controller (W x H x D) 97 x 99 x 32



Performance Graph



Traditional T-Series® Window Models



Features & Benefits

- Extract/intake fans in 4 sizes: Size 6, 7, 9 and 12.
- Patented electronic shutter system ensures quiet trouble free operation.
- Designed to comply with International safety standards.
- To obtain the best from your fan, use the Ecotronic controller.
- Shutter open/fan 'off' mode.
- Low sound levels.
- Easy fit connector Top Socket, standard on all models.
- Designed for single or double glazing up to 32mm thick.

UK's No. 1 Commercial Fan

T-Series range is fitted with a Vent-Axia M-Tech motor, developed to improve performance and lower running costs, and maintain T-Series' rugged reliability. A patented speed control pack is simply plugged in one of 3 positions to provide low, medium or boost speed matching the fan performance to the requirements of the installation.

Performance

Model	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6WW	245 (68)	315 (88)	360 (100)	30	41	0.24
TX7WW	305 (85)	395 (110)	485 (135)	40	37	0.24
TX9WW	465 (130)	685 (190)	795 (220)	85	43	0.42
TX12WW	1095 (305)	1415 (393)	1615 (449)	105	48	0.51

For further performance details please go to www.vent-axia.com

Instantaneous Shutter

With energy saving in mind TX models are supplied complete with an integral instantaneous automatic louvre shutter concealed behind the interior grille. It operates on both extract and intake and at any angle of mounting.

When the ventilating unit is used with a T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Top Socket

This unique system allows for fast and trouble-free mains connection.

Easy Cleaning

Integrated component design allows all parts to be dismantled for cleaning without the use of specialist tools.

Electrical

Motor purpose-designed. Suitable for running at any angle. Quiet running, enclosed. Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).

Supply voltage 220-240V/1/50Hz.

Models

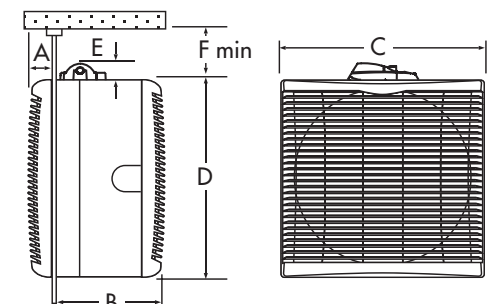
Window Models

Designed for use in single or double glazing, most types of glass and materials up to 32mm thick. Greater thicknesses can be accommodated using Extended Fixing Rod Sets. Can also be mounted in a fixing plate or wall, in ducts or above ceilings.

Model	Stock Ref
TX6WW	W161110B
TX7WW	W162110B
TX9WW	W163110B
TX12WW	W164110B

Dimensions (mm)

Size Dim.	6 mm	7 mm	9 mm	12 mm
A	31	31	39	41
B	130	130	150	177
C	226	265	304	381
D	220	258	302	378
E	19	19	19	19
F	54	54	54	54
Fixing hole Ø	184	222	260	337
Weight kg	3.57	3.93	5.35	7.7



Traditional T-Series® Wall Models



Features & Benefits

- Extract/intake model in 4 sizes: 6, 7, 9 and 12.
- Patented electronic shutter system ensures quiet, trouble free operation.
- Designed to comply with International safety standards.
- For the very best from your fan use the Ecotronic controller.
- Easy fit connector Top Socket, standard on all models.

UK's No. 1 Commercial Fan

Behind the grille of the Vent-Axia T-Series Wall model is a range of high performance extract/intake ventilating units designed to fit through most wall thicknesses using telescopic liners supplied.

T-Series also features a unique speed control pack which enables high, medium or low speed to be preset to suit room size or required duty.

T-Series controllers may be used with this model to obtain a choice of speeds, reversible airflow direction and automatic sensor operation. The Vent-Axia Ecotronic controller gives even greater running economy with its minimum speed setting and 'E' mode.

Performance

Model	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6WL	270 (75)	350 (97)	395 (110)	30	43	0.24
TX7WL	335 (93)	435 (120)	530 (147)	40	39	0.24
TX9WL	515 (143)	755 (210)	870 (241)	85	43	0.42
TX12WL	1185 (329)	1530 (425)	1745 (485)	105	49	0.51

For further performance details please go to www.vent-axia.com

Top Socket

A connector Top Socket is now standard on all T-Series fans. Allowing fast and trouble-free mains connection.

Shutter

TX models are supplied complete with an integral instantaneous automatic louvre shutter which will operate on both intake and extract and at any angle of mounting.

When the ventilating unit is used with a T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Electrical

Motor purpose-designed. Suitable for running at any angle. Quiet running, enclosed. Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).

Supply voltage 220-240V/1/50Hz.

Models

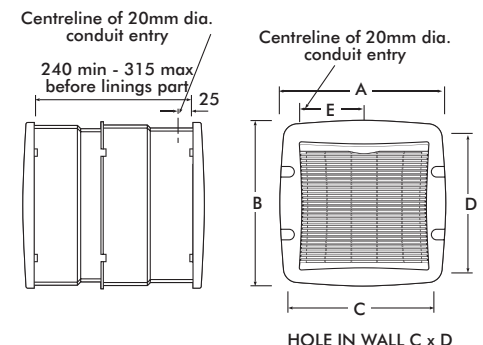
Wall Models

Designed to fit into most double brick walls using the telescopic liners, supplied. Additional liners are available to accommodate exceptional brick walls.

Model	Stock Ref
TX6WL	W161510B
TX7WL	W162510B
TX9WL	W163510B
TX12WL	W164510B

Dimensions (mm)

Size Dim.	6 mm	7 mm	9 mm	12 mm
A	310	352	391	470
B	303	345	388	467
C	290	330	365	442
D	290	330	375	450
E	104	124	143	182
Weight kg	5.54	6.13	7.77	10.86



Traditional T-Series® Roof Models



Features & Benefits

- Extract/intake model in 4 sizes: size 6, 7, 9 and 12.
- Patented electronic shutter system ensures quiet, trouble free operation.
- Designed to comply with International safety standards.
- For the very best from your fan use the Ecotronic controller.
- T-Series controllers and sensors save energy by only switching on the units when you want them to, either manually or automatically.
- Easy fit connector Top Socket, standard on all models.

T-Series ventilating unit and fitted into the 3-pin socket in the back of the controller. The Vent-Axia Ecotronic controller gives even greater running economy with its minimum speed setting and 'E' mode. When using the Ecotronic controller the speed control pack remains in the fan.

Shutter

With energy saving in mind TX models are supplied complete with an integral instantaneous automatic louvre shutter concealed behind the interior grille. It will operate on both intake and extract and at any angle of mounting.

When the ventilating unit is used with a T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Electrical

Motor purpose-designed. Suitable for running at any angle. Quiet running, enclosed. Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).

Supply voltage 220-240V/1/50 Hz .

Models

Model	Stock Ref
TX6RF	W161210B
TX7RF	W162210B
TX9RF	W163210B
TX12RF	W164210B

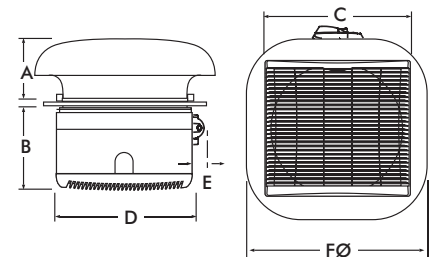
Dimensions (mm)

Size Dim.	6 mm	7 mm	9 mm	12 mm
A	100	136	136	171
B	130	130	150	177
C	226	265	304	381
D	220	258	302	378
E	54	54	54	54
F Ø	285	400	400	500
Fixing Hole Ø	184	222	260	337
Weight kg	3.96	4.89	6.22	9.28

UK's No. 1 Commercial Fan

With a low profile cowl, the T-Series Roof model is suitable for installation in horizontal, angled and vertical glass and for fixing plates in roofs. For vertical windows or walls in exposed areas and single or double glazing including most types of glass up to 32mm thick. Greater thicknesses can be accommodated using extended fixing rod sets. All four sizes of Vent-Axia roof plate assemblies can be fitted easily into flat roofs.

T-Series features a unique speed control pack which enables high, medium or low speed to be preset to suit room size or required duty. When used with a T-Series TSC controller, the speed control pack is removed from the



Performance

Model	Extract performance m³/h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6RF	195 (55)	250 (70)	290 (80)	30	41	0.24
TX7RF	305 (85)	395 (110)	485 (135)	40	37	0.24
TX9RF	465 (130)	685 (190)	795 (220)	85	43	0.42
TX12RF	1010 (280)	1305 (362)	1485 (412)	105	48	0.51

For further performance details please go to www.vent-axia.com

Traditional T-Series® Panel/Ceiling Models



Features & Benefits

- Extract/intake model in 4 sizes: Size 6, 7, 9 and 12.
- Colour: soft tone grey.
- Patented electronic shutter system ensures quiet trouble-free operation.
- Designed to comply with International safety standards.
- For the very best from your fan use the Ecotronic controller.
- East fit connector Top Socket, standard on all models.

controller the speed control pack remains in the fan.

Electrical

Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P).

Supply voltage: 220-240V/1/50Hz.

Top Socket

A connector Top Socket is now standard on all T-Series fans. Allowing fast and trouble-free mains connection.

Shutter

With energy saving in mind TX models are supplied complete with an integral instantaneous automatic louvre shutter concealed behind the interior grille. It will operate on both intake and extract and at any angle of mounting.

When the ventilating unit is used with a T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Models

Model	Stock Ref
TX6PL	W161610B
TX7PL	W162610B
TX9PL	W163610B
TX12PL	W164610B

Dimensions (mm)

Size Dim.	6 mm	7 mm	9 mm	12 mm
A	310	352	391	470
B	303	345	388	467
C	117	117	129	152
D	32	32	39	41
E	220	258	302	378
F	226	265	304	381
GØ	180	218	255	334
HØ	171	210	247	325
J	267	306	345	422
K	231	270	309	386
L	244	282	326	402
M	85	104	126	164
Weight kg	3.50	3.82	5.13	7.44

UK's No. 1 Commercial Fan

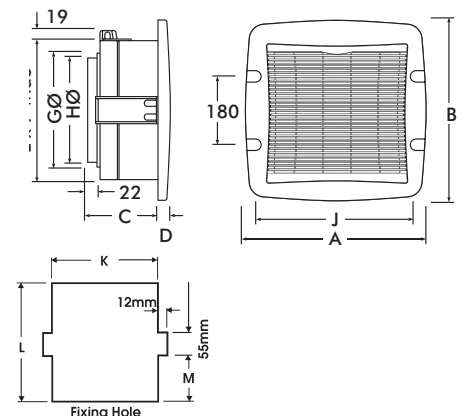
Vent-Axia T-Series Panel/Ceiling models are suitable for mounting at any angle in internal partitions, ceilings, ducts and, with louvre grilles, through external walls. When installed only the louvre grille is visible. The range features a unique speed control pack which enables high, medium or low speed to be preset to suit a specific room size or required duty.

T-Series controllers may be used with this model to obtain a choice of speeds, reversible airflow direction and automatic sensor operation. When used with a controller, the speed control pack is removed from the T-Series ventilating unit and fitted into the 3-pin socket in the back of the controller. The Vent-Axia Ecotronic controller gives even greater running economy with its minimum speed setting on 'E' mode and infinitely variable speed control. For this

Performance

Model	Extract performance m³/h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6PL	295 (81)	380 (105)	435 (120)	30	41	0.24
TX7PL	365 (101)	480 (133)	585 (162)	40	37	0.24
TX9PL	565 (157)	830 (230)	960 (267)	85	43	0.42
TX12PL	1270 (353)	1640 (456)	1885 (524)	105	44	0.51

For further performance details please go to www.vent-axia.com



Traditional T-Series® Darkroom Models



Features & Benefits

- Extract/intake models in 4 sizes: Size 6, 7, 9 and 12.
- Specially designed to provide extract/intake ventilation in darkrooms, X-ray areas, etc.
- Patented electronic shutter system ensures quiet, trouble free operation.
- For the very best from your fan use the Ecotronic controller.
- Integrated component design allows all parts to be dismantled for cleaning without the use of specialist tools.
- Easy fit connector Top Socket, standard on all models.

UK's No. 1 Commercial Fan

A range designed for photographic, medical, dental and veterinarian applications - used also for opticians and other specialist applications. Most darkrooms need a minimum of ten air changes per hour for comfort and efficiency. For rooms containing heat producing equipment (eg: print glazers) a higher rate of air change may be desirable.

The Darkroom model has two cowls, the interior cowl being designed to give light protection. It can be installed in windows, partitions, external walls or roofs. Extended fixing rods for fixing thicknesses up to 370mm are supplied with the unit. Provision should be made for adequate air replacement through Vent-Axia non-vision grilles.

Performance

Model	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6DR	200 (55)	240 (67)	265 (74)	30	43	0.24
TX7DR	330 (92)	415 (115)	530 (147)	40	42	0.24
TX9DR	455 (126)	630 (175)	725 (201)	85	45	0.42
TX12DR	870 (242)	1040 (289)	1130 (314)	100	42	0.51

For further performance details please go to www.vent-axia.com

Shutter

With energy savings in mind TX models are supplied completely with an integral instantaneous automatic louvre shutter concealed behind the interior cowl. Operates on intake and extract at any angle of mounting.

When used with a T-Series controller, the shutter can be set open with the fan motor switched Off to provide natural ventilation without the security risk of an open window.

Top Socket

A revolutionary connector Top Socket is now standard on all T-Series fans. This unique system allows for fast and trouble-free mains connection.

Electrical

Suitable for running at any angle. Quiet running, enclosed. Fitted with self resetting Standard Thermal Overload Protection (S.T.O.P.).

Supply voltage: 220-240V/1/50Hz.

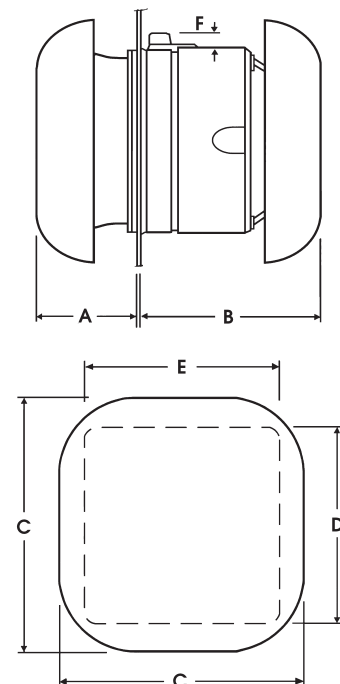
Suitable for operation in ambient temperatures from -40°C to +50°C.

Models

Model	Stock Ref
TX6DR	W161240B
TX7DR	W162240B
TX9DR	W163240B
TX12DR	W164240B

Dimensions (mm)

Size Dim.	6 mm	7 mm	9 mm	12 mm
A	100	136	136	171
B	196	206	229	308
C	285	400	400	500
D	220	258	302	378
E	226	265	304	381
F	19	19	19	19
Fixing Hole Ø	184	222	260	337
Weight kg	4.13	5.33	6.60	10.05



Traditional T-Series® In-Line Models



Features & Benefits

- Extract/intake model in 3 sizes: Size 6, 9 and 12.
- Patented instantaneous electronic shutter system ensures quiet, trouble free operation.
- For the best from your fan use the Ecotronic controller.
- T-Series controllers and sensor save energy by only switching on the units when you want them to, either manually or automatically.
- Easy fit connector Top Socket, standard on all models.

UK's No. 1 Commercial Fan

No other range of high performance in-line duct fan offers a combination of 3 impeller diameters, reversibility, low sound level, speed control and built-in electric shutter. T-Series features a unique speed control pack which enables high, medium or low speed to be preset to suit room size or required duty. Designed for use with rigid or flexible ducting, T-Series In-Line models can be plate mounted or fixed through partitions and in ceiling voids.

T-Series controllers may be used with this model to obtain a choice of speeds, extract/intake airflow direction and automatic sensor operation. The Vent-Axia Ecotronic controller gives even greater running economy with its minimum speed setting and 'E' mode.

Performance

Model	Extract performance m ³ /h (l/s)			Watts (high)	Sound dB(A) (med) @ 3m	Amps @ 240V
	low	medium	high			
TX6IL	318 (88)	398 (110)	444 (123)	30	45	0.24
TX9IL	703 (195)	966 (268)	1050 (292)	85	47	0.42
TX12IL	1674 (465)	2000 (556)	2230 (620)	100	51	0.51

For further performance details please go to www.vent-axia.com

Top Socket

A revolutionary connector Top Socket is now standard on all T-Series fans. This completely unique system allows for fast and trouble-free mains connection. Just wire it up, then slide and clip into place. This covers all models and sizes including the Lo-Carbon T-Series range.

Shutter

The shutter is electronically controlled by an actuator with a damped action giving quiet operation during instant opening and closing. The interlocking edges of the shutter blades provide maximum backdraught protection.

When the ventilating unit is used with a T-Series controller, the shutter can be set open with the fan motor switched off to provide natural ventilation without the security risk of an open window.

Arrangements

Where ducts pass through an unheated roof void, the duct should be insulated. Horizontal ducts should fall away from the fan unit. In circumstances where an excessive amount of moisture is present, a condensation trap should be installed in the exhaust duct. The fan unit should be accessible for regular maintenance.

Electrical

Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with non-self resetting Thermal overload Protection.

Supply voltage 220-240V/1/50 Hz.

Models

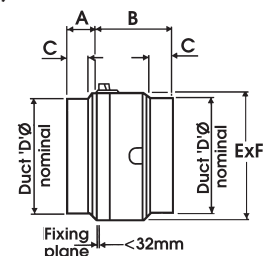
Model	Stock Ref
TX6IL	W161710B
TX9IL	W163710B
TX12IL	W164710B

For use with rigid and flexible ducting. Can be plate-mounted or fixed to partitions and in ceiling voids.

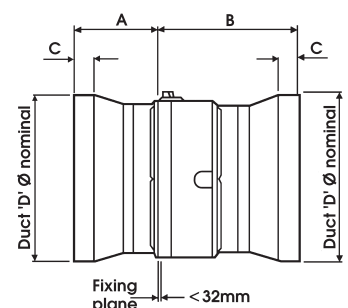
Dimensions (mm)

Size Dim.	6 mm	9 mm	12 mm
A	75	71	200
B	175	183	337
C	45	41	45
D	175	300	400
E	220	302	378
F	226	304	381
Fixing Hole Ø	184	260	337

Sizes 6 & 9



Sizes 12



Super T-Series®

Powerful Heavy Duty Wall Fans



Features & Benefits

- 4 impeller diameters 355, 400, 450, 500mm.
- Complete with telescopic wall sleeve and shutter, ready for installation.
- IP54 motor and terminal box.
- Smart internal grille and external shutter with flange trim.
- Super quiet operation.
- For the very best performance from your fan, use the Vent-Axia 2.5 Amp electronic controller.

Powerful Ventilation

Vent-Axia's Super T-Series 355, 400, 450 and 500mm fans provide efficient, quiet powerful ventilation with performances up to 4940m³/h. Tough heavy duty internal grilles and external weather shutters ensure longevity, performance and peace of mind.

Construction

The axial fan at the heart of the Super T range is based on an integrated impeller and internal rotor motor design which produces a very compact unit. A specially designed bellmouth inlet and mounting plate ensures an excellent performance to sound level ratio.

Electrical

Single phase 220-240V 50Hz. Capacitor start and run. An IP54 terminal box is supplied with all models with conduit entry from the side of the wall liner. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.), which should be wired via the controller.

Models

Super T - Gravity shutters

When installed only the room side aluminium fascia grille is visible. The outside is finished with an external gravity shutter and frame.

	Stock Ref
ST355-16-WL	165510

ST400-16-WL	166510
ST450-16-WL	167510
ST500-16-WL	168510

Super T TX - Electric shutter

Super T TX extract or intake models with powerful, quiet, smooth-operation electric shutters. Provide controllability.

	Stock Ref
STX355	165710
STX400	166710
STX450	167710
STX500	168710

Super T Filtered Air Input

Super T ARX and AR filtered air replacement input unit. Consisting of a wall liner with high capacity high disposable EU4 pleated filter which fits inside the wall liner.

ARX Models

- with electronically controlled integral shutter
AR Models - external louvre fixed blade

	Stock Ref
Units with integral shutter	
STARX355	165810
STARX450	167810
Units with louvre fixed blades	
STAR355	165910
STAR450	167910

Filtered Kitchen Extract - Super T GF

Super T GF extract unit without internal grille, but with matching stainless steel filter housing and tray kit ready for assembly on site and 50mm stainless steel framed mesh grease filter with handles.

	Stock Ref
STGF355	165620
STGF400	166620

Replacement Grease Filters

Super T replacement grease filters 50mm stainless steel mesh filter with handles. Supplied in packs of two.

	Stock Ref
355	452550
400	452551

Replacement Air Filters

High capacity EU4 pleated filter which fits inside wall liner. Supplied in packs of five.

	Stock Ref
355	452814
450	452815

Electronic 2.5A Controller

Provides variable motor speed control. On/Off with neon indicator. Infinitely variable speed slider control. Presettable minimum speed and sensor mode option: can be connected to a range of Vent-Axia sensors. Radio suppressed to BS 800. Includes electric shutter output.

Stock Ref
W10303102M

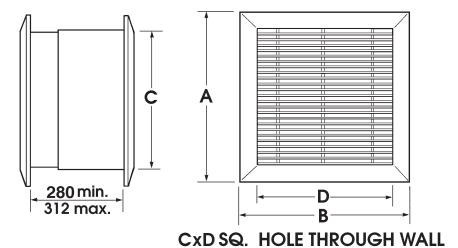
Performance

Model	Extract Performance m ³ /h (l/s)	F.I.D.	Watts	S.C. Amps	F.L.C. Amps	Sound dB(A)@ 3m
355-16	1735 (482)	94	1.25	0.5	40	
400-16	2165 (601)	110	1.4	0.56	45	
450-16	3550 (986)	225	2.58	1.15	48	
500-16	4940 (1372)	295	4.0	1.6	51	
355-14	2150 (597)	203	2.40	0.96	56	
400-14	3500 (972)	340	4.10	1.64	59	

For further performance details please go to www.vent-axia.com

Dimensions (mm)

Impeller dia.	355	400	450	500
A	550	597	657	727
B	550	597	657	727
C	470	520	580	650
D	470	520	580	650
Weight kg	17	22	28	33



Traditional Standard Range® Window Models



Features & Benefits

- Extract / intake model in 4 sizes: Size 6, 7, 9 and 12.
- IPX4 Rated.
- Colour: White.
- Manufactured in weather-resistant polymeric materials.
- For the best performance from your fan, use an Ecotronic controller.
- Suitable for glass or panels up to 10mm thick

Classic Retro-Style Ventilation

This ever popular range of extract/intake ventilating units continues to satisfy the most demanding requirements for efficient ventilation. The Vent-Axia Standard Range unit is supplied without a shutter. The shutter is available as an accessory, which can be easily fitted within the unit.

Standard Range Window fans are suitable for most forms of single glazing or can be wall mounted in a Vent-Axia fixing plate. Vent-Axia's patented spigot and ring method of fixing ensures easy installation and weather proof joint. The simple integrated component design makes installation and servicing easy.

Performance

Model	Extract Performance m ³ /h (l/s) F.I.D.	Watts MAX.	Sound dB(A) @ 3m	Amps @ 240V
S6WW	285 (79)	32	35	0.16
S7WW	425 (118)	34	31	0.16
S9WW	710 (197)	53	39	0.24
S12WW	1560 (433)	84	42	0.36

For further performance details please go to www.vent-axia.com

Motor

Purpose designed enclosed motor. Suitable for running at any angle. Quiet running, enclosed.

Supply voltage 220-240V/1/50 Hz. Suitable for operation in ambient temperatures from -40° to +50°C. Fitted with Standard Thermal Overload Protection (S.T.O.P.).

Shutter Type SD/R

This extract/intake shutter fits inside the Vent-Axia unit and closes against unwanted backdraughts. It can be fitted at the same time as the unit or at a later date if required.

Airflow operated for extract use, cord operated lock for intake use. For all models mounted in vertical surfaces only.

Controller

The Ecotronic controller is recommended for use with this model to provide full function control of the fan plus the option of sensor mode using a selection of electromechanical switches to provide automatic switching of the fan.

Alternatively, single speed extract is achieved using a normal On/Off switch.

Easy Cleaning

Integrated component design allows all parts to be dismantled for cleaning without the use of specialist tools.

Protective Grilles

Where Standard Range units are installed in low positions, finger guards provide extra protection to VDE, DIN 31001.

Models

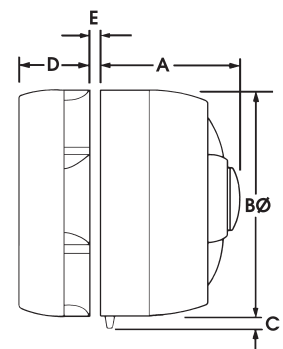
Size	Stock Ref
S6WW	131310B
S7WW	132310B
S9WW	133310B
S12WW	134310B

Shutters

Size	Stock Ref
S6SD/R	231710
S7SD/R	232710
S9SD/R	233710
S12SD/R	234710

Dimensions (mm)

Size	6 mm	7 mm	9 mm	12 mm
A	140	147	166	201
B Ø	216	254	295	381
C	21	21	21	21
D	83	83	92	105
E (max)	10	10	10	13
Fixing hole Ø	184	222	260	337
Weight kg	2.9	3.2	4.6	7.0



Traditional Standard Range® Roof Models



Features & Benefits

- Extract model in 4 sizes: Size 6, 7, 9 and 12.
- IPX4 Rated.
- Colour: White.
- Wide range of sensors available.
- Manufactured in weather-resistant polymeric materials.
- For the best performance from your fan, use an Ecotronic controller.

Classic Retro-Styled Ventilation

A versatile and robust range of roof extract ventilating units designed to satisfy the requirements of efficient ventilation in commercial and industrial applications. The simple, proven design of Standard Range makes installation and routine cleaning easy.

Featuring a low profile cowl, the unit is ready for fitting into horizontal, angled and vertical glass, fixing plates on roofs and in vertical windows or walls in exposed areas. With Vent-Axia roof plate assemblies, all four sizes can be fitted easily into flat roofs. Suitable for roof installation plus window and wall installation

in exposed areas (eg: coastal positions). Vent-Axia's spigot and ring method of fixing ensures easy installation and weather proof joint. We recommend the use of sealing compound under the upper part of the unit when fitted in roofs.

Motor

Purpose designed enclosed motor. Suitable for running at any angle. Quiet running, continuous rated motor with sealed for life ball bearings.

Suitable for operation in ambient temperatures from -40°C to +50°C. Fitted with Standard Thermal Overload Protection. (S.T.O.P.) Supply voltage 220-240V/1/50Hz.

All Standard Range roof models are designed to fit directly into horizontal and sloping windows including wired cast, up to 10mm thick.

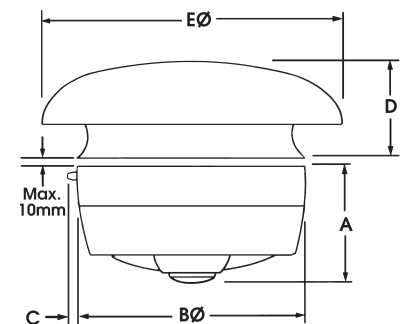
In solid roofs, install using a roof plate assembly and, if required, and eggcrate grille in the ceiling below. A suitable sealing compound should be used between the glass/roof plate and the exterior seal.

Models

Size	Stock Ref
S6RF	131410B
S7RF	132410B
S9RF	133410B
S12RF	134410B

Dimensions (mm)

Size	6 mm	7 mm	9 mm	12 mm
A	140	147	166	201
B Ø	216	254	295	381
C	21	21	21	21
D	95	108	121	146
E Ø	267	330	394	508
Fixing hole Ø	184	222	260	337
Weight kg	3.2	3.9	5.5	8.5



Performance

Model	Extract Performance m³/h (l/s) F.I.D.	Watts MAX.	Sound dB(A) @ 3m	Amps @ 240V
S6RF	240 (67)	32	36	0.16
S7RF	350 (97)	34	31	0.16
S9RF	625 (174)	53	39	0.24
S12RF	1130 (314)	84	42	0.36

For further performance details please go to www.vent-axia.com

Traditional Standard Range® Wall Models



Features & Benefits

- Extract/intake models in 4 sizes: Size 6, 7, 9 and 12.
- IPX4 Rated
- White fascia, wall sleeve and black external weather louvre.
- Optional shutter available
- Manufactured in weather-resistant polymeric materials.
- For the best performance from your fan, use an Ecotronic controller.

Classic Retro-Styled Ventilation

The proven Standard Range Wall models are designed to fit flush into most double brick walls using the rigid wall liner supplied with the unit. Provision is made within the liner for conduit entry. When installed, only the ivory fascia is visible on the internal wall face. The external weather louvre fits flush to the outside.

A shutter is available as an accessory which can be easily fitted within the unit, see below.

On new building work the installation and wiring of the wall liner can be completed prior to the final installation of the unit and controller. Fully shrouded connectors on the fascia automatically connect the wiring to the motor when fitted to the wall liner.

Performance

Model	Extract Performance m ³ /h (l/s) F.I.D.	Watts MAX.	Sound dB(A) @ 3m	Amps @ 240V
S6/WL	340 (94)	32	39	0.16
S7/WL	544 (151)	34	35	0.16
S9/WL	856 (238)	53	43	0.24
S12/WL	1767 (491)	84	46	0.36

For further performance details please go to www.vent-axia.com

Motor

The motor is purpose-designed. Suitable for running at any angle. Quiet running, enclosed, sealed for life ball bearings.

Supply voltage: 220-240V/1/50Hz.

Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with Standard Thermal Overload Protection (S.T.O.P.).

Shutter

Type SD/R

This extract/intake shutter fits inside the Vent-Axia unit and closes against unwanted backdraughts. It can be fitted at the same time as the unit or at a later date if required. Airflow operated for extract use, cord operated lock for intake use.

Controller

The Ecotronic controller is recommended for use with this model to give full function control of the fan including auto mode using an electromechanical sensor from Vent-Axia's sensor range. Alternatively, single speed extract is achieved using a normal On/Off switch.

Models

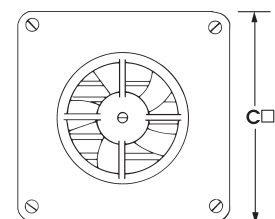
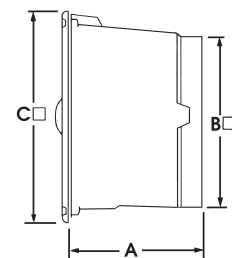
Size	Stock Ref
S6WL	131510B
S7WL	132510B
S9WL	133510B
S12WL	134510B

Shutters

Size	Stock Ref
S6SD/R	231710
S7SD/R	232710
S9SD/R	233710
S12SD/R	234710

Dimensions (mm)

Size	6 mm	7 mm	9 mm	12 mm
A	279	279	279	279
B	203	279	279	356
C	279	362	362	448
Fixing hole Ø	235	311	311	400
Weight kg	4.1	5.7	6.7	10.1



Traditional Standard Range® Panel Models



Features & Benefits

- Extract / intake model in 4 sizes: Size 6, 7, 9 and 12.
- IPX4 Rated.
- Built-in shutter available.
- Colour: White Fascia.
- Pre-wired lead for easy installation.
- Manufactured in weather-resistant polymeric materials.
- For the best performance from your fan, use a Ecotronic controller.

Classic Retro-Styled Ventilation

A versatile range of extract/intake ventilating units designed to satisfy the most demanding requirements of efficient ventilation. Available in four sizes, the Standard Range units can be supplied without a shutter for vertical installations. The shutter is available as an accessory which can be easily fitted within the unit, see below.

Suitable for mounting at any angle, this range may be installed in internal partitions, ceilings, ducts, and (with external louvres) through external walls.

The outer spigot may be connected directly to flexible ducting and other Vent-Axia ventilation accessories to suit individual applications. When installed, only the ivory fascia is visible.

Performance

Model	Extract Performance m ³ /h (l/s) F.I.D.	Watts MAX.	Sound dB(A) @ 3m	Amps @ 240V
S6/PL	354 (98)	32	41	0.16
S7/PL	561 (156)	34	37	0.16
S9/PL	927 (258)	53	45	0.24
S12/PL	1910 (531)	84	48	0.36

For further performance details please go to www.vent-axia.com

Shutter

Type SD/R

This vertical extract/intake shutter fits inside the Vent-Axia unit and closes against unwanted backdraughts. It can be fitted at the same time as the unit or at a later date if required.

Airflow operated for extract use, cord operated for intake use.

For all models mounted in vertical surfaces.

Motor

Purpose-designed enclosed ball bearing motor. Suitable for running at any angle. Quiet running.

Supply voltage 220-240V/1/50 Hz.

Suitable for operation in ambient temperatures from -40°C to +50°C.

Fitted with Standard Thermal Overload Protection. (S.T.O.P)

Controller

The Ecotronic Controller is recommended for use with this model to provide full function control of the fan plus the option of sensor mode using a selection of electromechanical switches to provide automatic switching of the fan. Alternatively, single speed extract is achieved using a normal On/Off switch.

Models

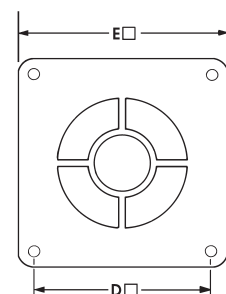
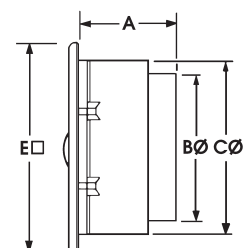
Size	Stock Ref
S6PL	131610B
S7PL	132610B
S9PL	133610B
S12PL	134610B

Shutters

Size	Stock Ref
S6SD/R	231710
S7SD/R	232710
S9SD/R	233710
S12SD/R	234710

Dimensions (mm)

Size	6 mm	7 mm	9 mm	12 mm
A	127	137	156	197
B	171	210	248	324
C	219	250	302	387
D	226	311	311	397
E	254	337	337	419
Fixing Hole Ø	254	337	337	419
Weight kg	2.5	3.0	3.5	5.8



Heating

NEW Bluethermal™ Underfloor Heating

Specifiers Choice

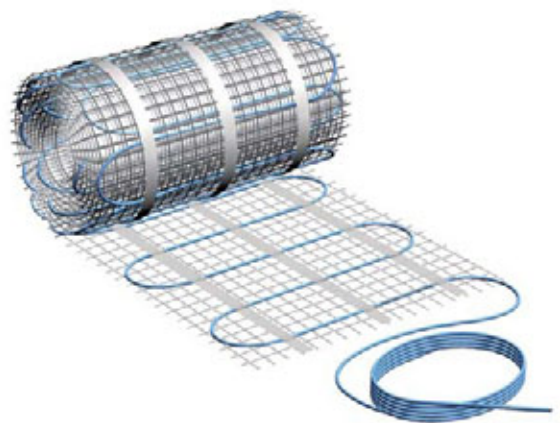
The simplicity of installing electric heating, particularly in high rise apartments means it is the natural choice when renovating properties.

Traditional products with modern controls such as charge and zone control provide energy savings for the occupier without compromising comfort in the home, coupled with low capital outlay for the landlord gives a cost effective solution for both parties.

New from Vent Axia

The new addition of our Bluethermal under floor heating products now gives our range a more complete feeling. These new products offer a modern heating system with the advantages and ease of installation of tradition electric heating, buried in the floor construction are out of site and are maintenance free.

bluethermal™

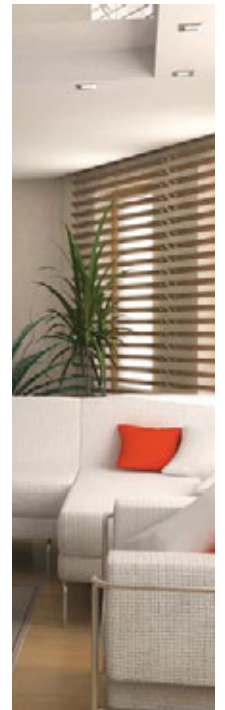


Features and Benefits

- Economical and easy to install
- Invisible, silent in operation
- No yearly maintenance cost
- Thermostatic control for maximum thermal comfort
- Evenly distributed warmth eliminating cold spots
- Suitable for renovation as well as new build projects
- Vent-Axia's lifetime warranty
- Comprehensive design services available



Range



Vent-Axia heating is ideal for residential or commercial applications. So whether it's a bedroom or hallway, office or shop, we can provide the solution.

Vent-Axia®

NEW RANGE

Bluethermal™

Underfloor Heating

Advantages of Electrical Underfloor Heating

Electricity is used the world over for heating homes and is our most common energy source. As the world's supply of oil and gas becomes depleted, many of the world's countries will be searching for renewable and environmentally friendly sources of energy such as, wind, solar, nuclear, and hydro power, we are no different and it is clear in the UK that credible solutions to get us off the fossil fuel habit are required. This is why Vent-Axia has launched our electric underfloor heating range.

Using electricity for heating your home is becoming more and more popular. Once you have made the choice to use electricity to heat your home, your choice of heating appliances is numerous. Underfloor heating is becoming the natural choice for many, for obvious reasons.

The cables are economical and easy to install and incur no yearly maintenance costs, it is invisible, silent in operation, gives you freedom to place furniture where you like as there is no appliances to be mounted on your wall. Our thermostatic controller monitors both the floor and air temperature to give you maximum control over your environment.

Using the large surface area of your floor to heat your room allows the low temperature radiant heat to provide evenly distributed warmth giving much higher levels of comfort

when compared to other more traditional methods. Using this method the thermal output is 2-3 °C lower than using a convection based system where the heat will collect close to the ceiling thus saving 5-10% of the running cost while not producing any drafts or cold spots in the room.

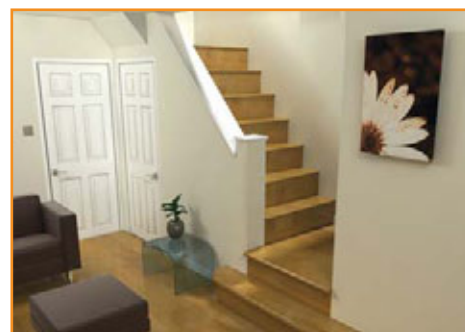
Our products are suitable for renovation projects as well as new building construction to heat your home completely or in combination with other heating sources. Key advantages are flexibility, advanced control and easy integration with other systems.

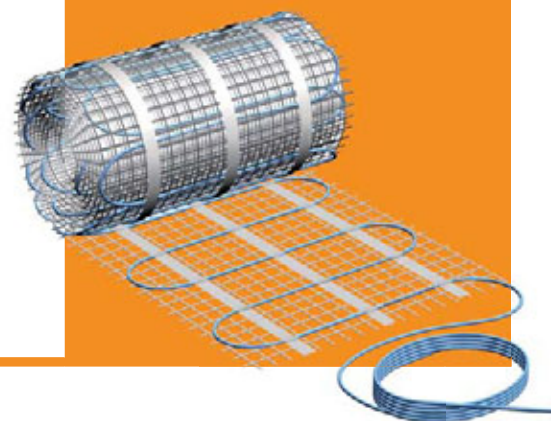
Design Service

We offer a comprehensive design service and will help you make the right choice for your application; this service is available over the phone directly to one of our heating experts in our technical department. To make use of this service please phone 0844 856 0594.

Vent Axia Lifetime Year Warranty

All heating cable products come with a lifetime warranty so you have peace of mind that our cables will stand the test of time. More information on our warranty and correct application of the products can be found on our website.





BLUETHERMAL™ MAT Thin Twin conductor heating mat

Renovating with heating mats

Minimum floor thickness can be important in renovation processes in order to avoid extra work on doors and thresholds. For these projects our Bluethermal™ Mat range is the ideal product. The heating mat consists of a thin twin conductor heating cable attached to an adhesive flexible glass fibre net. The thin heating mat has a total thickness of only 4.5 mm, is delivered with a 2.5 m cold lead and has a width of 50 cm.

The 100 W/m² mat can be installed on any type of levelled and stable sub floor, and can also be used under parquet or other wooden floor coverings where as the 150 W/m² must be installed on a non-combustible levelled and stable sub floor. With all our products we recommend the use of a thermostat with a temperature limiting function such as our Bluethermal™ Cable range.

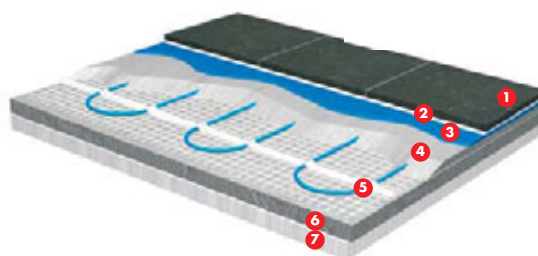
Construction:

- Solid resistance wires
- FEP insulation
- Solid copper earth wire
- Fibre-glass net
- PVC outer jacket
- Aluminium sheath
- Total thickness is 4.5mm (0.18")
- Width 50cm (19.7")

Technical data:

- Area load 100 or 150 W/m² (9.3 or 14.0 W/sq.ft.)
- Loads from 100 W to 1800 W
- Max. continuously operating temperature outer jacket: 65 °C
- Tolerance on conductor resistance: -5 / + 10 %
- Rated voltage: 230 V

Installation Detail



- 1 Tiles/floor covering
- 2 Tile adhesive
- 3 Membrane
- 4 Thin screed/slab
- 5 Bluethermal™ Mat
- 6 Non combustible sub floor
- 7 Insulation

Performance Guide

Model	Stock Ref	Mat Area (m ²)	Output (W)	Mat Length x Width (m)	Element Resistance		
					Min (-5%)	Nom.	Max (10%)
VAUFHM 100	446175	1.0	150	2 x 0.5	502.6	529.0	581.9
VAUFHM 100	446176	1.5	150	3 x 0.5	335.0	352.7	387.9
VAUFHM 100	446177	2.0	200	4 x 0.5	251.3	264.5	291.0
VAUFHM 100	446178	2.5	250	5 x 0.5	201.0	211.6	232.8
VAUFHM 100	446179	3.0	300	6 x 0.5	167.5	176.3	194.0
VAUFHM 100/HS	446180	3.5	350	7 x 0.5	143.6	151.1	166.3
VAUFHM 100/HS	446181	4.0	400	8 x 0.5	125.6	132.3	145.5
VAUFHM 100/HS	446182	5.0	500	10 x 0.5	150.5	105.8	116.4
VAUFHM 100/HS	446183	6.0	600	12 x 0.5	83.8	88.2	97.0
VAUFHM 100/HS	446184	7.0	700	14 x 0.5	71.8	75.6	83.1
VAUFHM 100/HS	446185	8.0	800	16 x 0.5	62.8	66.1	72.7
VAUFHM 100/HS	446186	10.0	1500	20 x 0.5	50.3	52.9	58.2
VAUFHM 100/HS	446187	12.0	1200	24 x 0.5	41.9	44.1	48.5
VAUFHM 150	446188	1.0	150	2 x 0.5	335.0	352.7	381.9
VAUFHM 150	446189	1.5	225	3 x 0.5	223.4	235.1	258.6
VAUFHM 150	446190	2.0	300	4 x 0.5	167.5	176.3	194.0
VAUFHM 150	446191	2.5	375	5 x 0.5	134.0	141.1	155.2
VAUFHM 150	446192	3.0	450	6 x 0.5	111.7	117.6	129.3
VAUFHM 150/HS	446193	3.5	525	7 x 0.5	95.7	100.8	110.8
VAUFHM 150/HS	446194	4.0	600	8 x 0.5	83.8	88.2	97.0
VAUFHM 150/HS	446195	5.0	750	10 x 0.5	67.0	70.5	77.6
VAUFHM 150/HS	446196	6.0	900	12 x 0.5	55.8	58.8	64.7
VAUFHM 150/HS	446197	7.0	1050	14 x 0.5	47.9	50.4	55.4
VAUFHM 150/HS	446198	8.0	1200	16 x 0.5	41.9	44.1	48.5
VAUFHM 150/HS	446199	10.0	1500	20 x 0.5	33.5	35.3	38.8
VAUFHM 150/HS	446200	12.0	1800	24 x 0.5	27.9	29.4	32.3

*HS = hidden splice.

The products are delivered with a 2.5m cold lead

NEW RANGE

Bluethermal™

Underfloor Heating

BLUETHERMAL™ CABLE

Twin conductor cable for direct heating

Renovation with heating cables

When renovating with our Bluethermal™ Cable range, apply the cable to a non-combustible subfloor (minimum thickness 5mm) and take into consideration the placement of permanent installations such as showers, baths, toilets, cupboards, etc. Place the end seal away from potentially wet areas of the floor. See picture illustrating the placement of a free laid heating cable. Note, that the cable is not crossing or touching itself, this is to provide the best possible heat conductivity to the surroundings of the cable.

The heating cable is embedded in a screed/concrete with low overall construction height. After drying and hardening the moisture barrier/membrane can be put on top of the screed/concrete before the floor covering is installed.

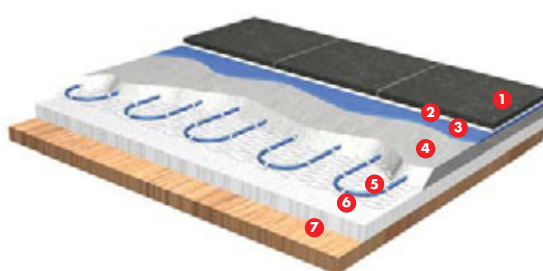
Construction:

- Solid resistance wire
- XLPE insulation
- Tinned copper drain wire
- Aluminium screen
- PVC outer jacket
- Overall diameter: approx 7.0mm (0.3")
- Width 40 and 80cm

Technical data:

- Series resistance, element values from 300 to 3300 W
- Linear load: 17 W/m (5.2 W/ft)
- UV resistant
- Max. cont. operating temperature outer jacket: 65 °C (149 °F)
- Min. bending radius: 5 x cable diameter
- Tolerance on conductor resistance: - 5 / + 10 %
- Highest system voltage: 300/500 V
- Rated voltage: 230 V

Installation Detail

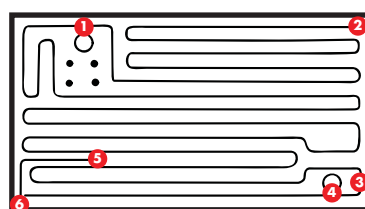


- 1 Ceramic tiles
- 2 Tile adhesive
- 3 Membrane
- 4 40-60mm concrete
- 5 Bluethermal™ Cable
- 6 Min 10mm solid subfloor. Water resistant if room is a wetroom (f.ex. bathroom)
- 7 Lower floor over well insulated wooden beams

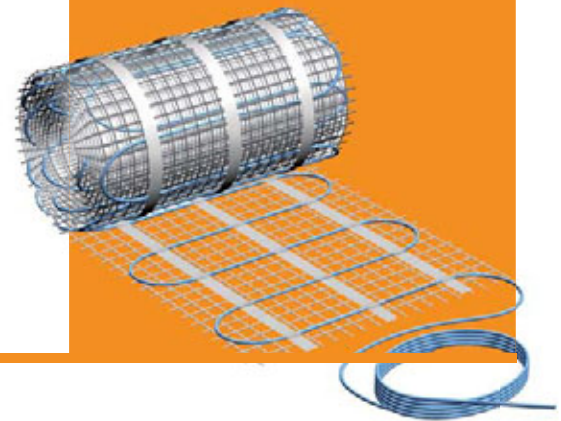
Performance Guide

Model	Stock Ref	Load @ 230V (W)	Element length(*)		Nom element resistance (Ω)	Outer diameter (mm)	Max magnetic flux density (μT)
			(m)	(ft)			
VAUFHC	446201	300	17.6	58	176.30	7.0	0.8
VAUFHC	446202	400	23.5	77	132.30	7.0	1.06
VAUFHC	446203	500	29.3	96	105.80	7.0	1.33
VAUFHC	446204	600	35.2	115	88.20	7.0	1.46
VAUFHC	446205	700	41.0	135	75.60	7.0	1.59
VAUFHC	446206	840	49.7	162	63.00	7.0	1.86
VAUFHC	446207	1500	58.3	191	52.90	7.0	2.23
VAUFHC	446208	1250	72.4	237	42.30	7.0	2.65
VAUFHC	446209	1370	80.8	265	38.60	7.0	3.32
VAUFHC	446210	1700	150.0	328	31.10	7.0	3.63
VAUFHC	446211	2150	123.7	405	25.20	7.0	4.51
VAUFHC	446212	2600	154.5	507	20.30	7.0	5.57
VAUFHC	446213	3300	194.0	615	16.00	7.0	6.9

Installation Example



- 1 Cable laid behind the toilet to dry up condensation
- 2 End seal preferably placed in a dry zone of the floor
- 3 Put some distance between drain and cable to avoid excessive dryness of gully and odour problems
- 4 Drain/gully
- 5 Floor sensor
- 6 Transition between heating cable and cold end attachment



BLUETHERMAL™ THERMOSTATIC CONTROLLER

Applications

Precise and accurate temperature control is important to fully achieve the advantages of under floor heating without using more electric energy than necessary. Heating cables in combination with an accurate thermostat are one of the most energy efficient heating systems one can have in a modern building.

The design of the thermostat is unique. Every detail has been carefully designed, paying special attention to aesthetic appearance, user-friendliness and quality, as required and demanded by both consumers and professional installers.

Features

- Large screen with blue backlighting
- 4-event programme or constant temperature control
- Clock: 12 hours (am/pm) / 24 hours
- Day display: Monday - Sunday
- Celsius or Fahrenheit display selection
- Frost protection
- 5 to 40°C working range (default)

Specifications

- Accuracy: +0.5°C / 1°F
- Maximum load: 16A
- Power supply: 230V
- Dimensions: 86 x 86 13mm (WxHxD)
- IP21

Model
VAUFHTC

Stock Ref
446174



Recommended application guide

Application	Output Max	Normal	Product		
			VAUFHM 100	VAUFHM 150	VAUFHC
Entrance/hall	150	80-150	X		X
Entrance/Porch	150	120-150		X	X
Hall/Coridor	150	80-100	X		X
Living room	100	70-100	X		X
Kitchen	100	70-100	X		X
W/C	150	120-150		X	X
Utility room	150	120-150		X	X
Bedroom	100	70-100	X		X
Bathroom	150	120-150		X	X
Office	100	80-100	X		X
Storage room	100	80-100	X		X
shop	100	80-100	X		X
Workshop	100	80-100	X		X

Optimax[®] Combination Storage Heater



Features & Benefits

- Optimised charge period offers 15% energy saving.
- Reduced installation times.
- Conveniently mounted controls.
- Range of 3 heat outputs.
- Colour RAL 9002.

Classic Retro-Styled Ventilation

Vent-Axia Combination Storage Heaters take advantage of low tariff nighttime electricity in the same way as our domestic storage heaters. IP20 rated.

Vent-Axia Combination Heaters combine the benefit of a domestic storage heater and a convector heater in one casing. The storage heater offers comfortable heat around the clock taking advantage of low tariff electricity.

The convector heater can be switched On at any time to offer additional heat when required, or used outside the normal heating season for instant heating.

Combination Heaters require a permanent supply for immediate convection heating when required. The storage heater section has a separate off-peak supply.

Features such as snap-on feet, simple wall fixings and quick assembly mean that new installations or replacement of existing units are completed with minimum disruption. The cable entry is at the back of the unit on the bottom right hand side.

Automatic models incorporate an ambient thermostat which optimises the charge to suit room conditions, typically saving an additional 15% in energy costs.

Vent-Axia Combination Heaters are slim, compact and aesthetically pleasing. Their attractive neutral finish blends in with a variety of decors.

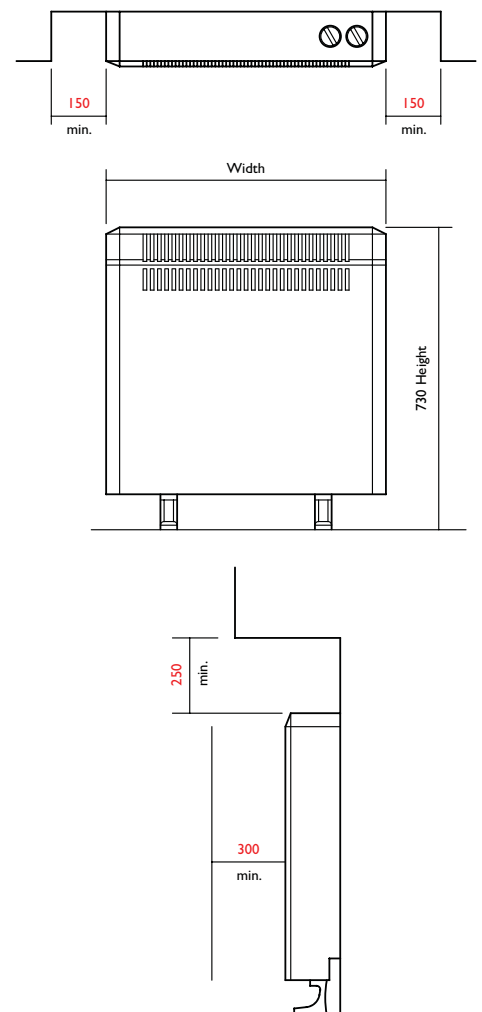
The controls are conveniently positioned on top of the heater for ease of use. Once the optimum settings are selected, no further adjustment is necessary. A separate convector heater On/Off switch is situated on the side of the casing together with a thermostat for temperature control.

Models

Combination Heaters -

Model	Stock Ref
VACSH 12A	438919
VACSH 18A	438920
VACSH 24A	438921

Dimensions (mm)



(A = Automatic)

Specification

Model	Input kW	Width mm	Height mm	Depth mm	Weight kg	Number of Bricks
VACSH 12A	1.70	540	730	185	79	8
VACSH 18A	2.55	765	730	185	116	12
VACSH 24A	3.40	990	730	185	152	16

220-240V-50Hz. BEAB Approved.

Optimax Plus®

Storage Heater



Features & Benefits

- Perfect for offices and homes.
- Optimised charge period offers 15% energy saving.
- Reduced installation times
- Conveniently mounted controls.
- Range of 4 heat outputs.
- Colour RAL 9003.

Stylish Heating

Vent-Axia Storage Heaters are simple to install, economical to run and virtually maintenance free. IP20 rated. Ideal for use in living rooms, hallways, landings.

The range can be installed in bathrooms outside Zone 2, provided that the installation complies with IEE regulations.

Vent-Axia Storage Heaters offer comfortable warmth around the clock taking advantage of low-tariff electricity.

Installation is remarkably simple

Vent-Axia Storage Heaters are often an economic alternative for new build or in existing properties, particularly where no other fuel source is available.

Simple to install wall fixings and quick assembly mean that new installations or replacement of existing units are completed with minimum disruption. The cable entry is at the back of the unit on the bottom right hand side.

Manual models charge throughout the low-tariff period. Automatic models incorporate an ambient thermostat which optimises the charge to suit room conditions, typically saving an additional 15% in energy costs.

Vent-Axia Storage Heaters are slim, compact and aesthetically pleasing. Their attractive neutral finish blends in with furnishings.

The controls are conveniently positioned on top of the storage heater for ease of use. Once the optimum settings are selected, no further adjustment is necessary.

Then just sit back and enjoy comforting warmth day after day after day.

Models

Storage Heaters -

Manual and Automatic versions available.

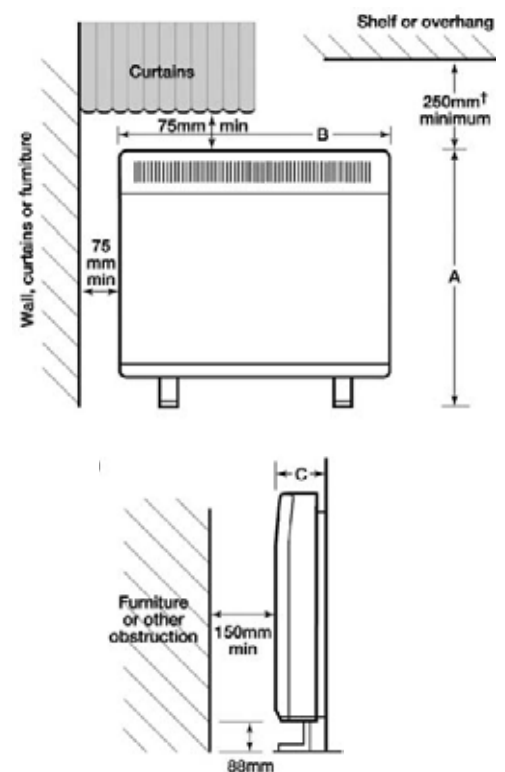
Model	Stock Ref
VASH 6	439355
VASH 12	439356
VASH 12A	439359
VASH 18	439357
VASH 18A	439360
VASH 24	439358
VASH 24A	439361

Specification

Model	Input kW	Width mm	Height mm	Depth mm	Weight kg	Number of Bricks
VASH 6	0.85	332	700	170	41	4
VASH 12/12A	1.70	560	700	170	77	8
VASH18/18A	2.55	788	700	170	110	12
VASH 24/24A	3.40	1016	700	170	145	16

220-240V-50Hz. BEAB Approved.

Dimensions (mm)



Optimax Plus® Panel Heater



Features & Benefits

- Integral adjustable thermostat.
- Optional integral timer.
- Frost protection setting of 5°C.
- BEAB approved.
- Unique quick fix wall bracket.
- Colour RAL 9003.
- Ideal compliment to Storage heaters.
- Brackets for panel included

Models

Thermostat Model

All Vent-Axia Panel Heaters have a built-in adjustable thermostat offering a full temperature range, including a frost protection setting of 5°C.

For maximum safety there is a thermal cut-out on all models to prevent overheating, should the outlet grille be accidentally covered.

Panel Heaters

Manual and Timer versions available.

Model	Stock Ref
VAPH 075	439034
VAPH 075T	439038
VAPH 125	439035
VAPH 125T	439039
VAPH 150	439036
VAPH 150T	439040
VAPH 200	439037
VAPH 200T	439041

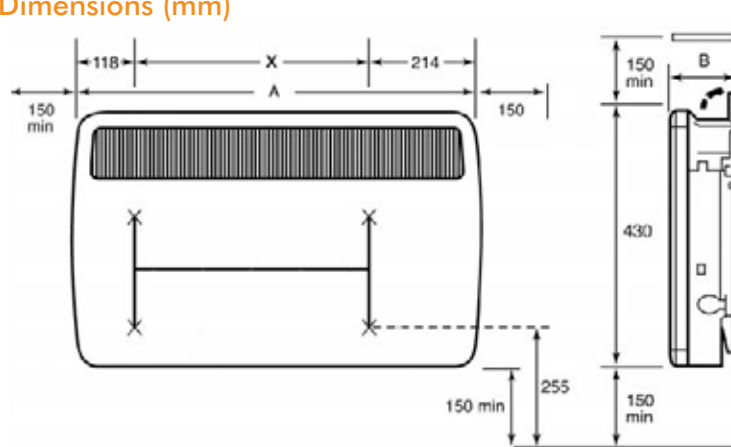
Stylish Heating

Vent-Axia's Standard Panel Heaters are perfect for smaller rooms such as bedrooms, studies, conservatories and loft conversions.

Vent-Axia's Panel Heaters offer a wide range of heat outputs from 750W to 2000W and every model is available with or without a timer. Vent-Axia Panel Heaters look as good as they perform. Stylish and slim, they occupy minimum wall space and are finished in an attractive White finish.

Vent-Axia Panel Heaters are wall mounted and connected to the permanent electrical supply via a fused connection switched outlet. Vent-Axia Panel Heaters are supplied with mounting brackets and one metre of cable connected to the bottom right hand side of the unit.

Dimensions (mm)



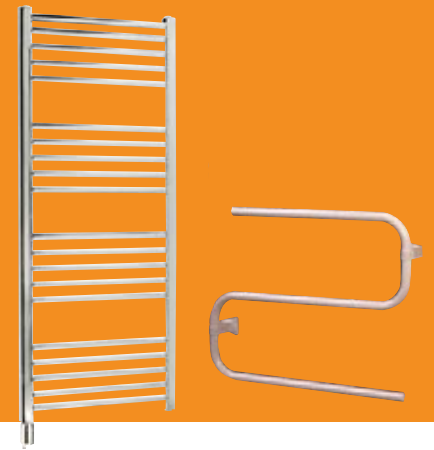
Specification

Model	Output kW	A Width mm	B Depth mm	X Bracket mm	Weight kg
VAPH 075/T	0.75	620	108	288	6.2
VAPH 125/T	1.25	690	108	358	6.6
VAPH 150/T	1.5	690	108	358	6.6
VAPH 200/T	2	860	108	528	8.0

220-240V-50Hz. BEAB Approved.

Optimax®

Towel Rail



Features & Benefits

- Ideal for shower areas and bathrooms.
- Stylish design available in a range of outputs.
- Oil filled for even heat distribution.

Models

Heated Towel Rail -

Manual and Timer versions available.

Model	Stock Ref
VATR40	455696
VATR500C	429973

Stylish Heating

Vent-Axia Heated Towel Rails quickly warm and dry towels. Their presence on the wall also adds to the overall temperature and comfort of the room.

This stylish towel rail comes with a output of 40W in an attractive white finish.

Vent-Axia Towel Rails are fully splash proof for safety and are supplied complete with mains cable and mounting brackets to ensure fast and easy installation.

The maximum surface temperature of a Vent-Axia Towel Rail is 65°C.

The VATR500C is a classic ladder style towel rail. Finished in polished chrome.

Specification

Model	Output W	Width mm	Height mm	Depth mm	Weight kg
VATR 40	40	450	410	85	1.5
VATR500C	500	495	1120	35	15

220-240V-50Hz. BEAB Approved.

Opal®

Zone Controllable Panel Heaters

Features & Benefits

- Optional central controller for zone control.
- Modern attractive design.
- Choice of mechanical or electronic thermostats.
- Slimline design.
- Colour RAL 9002.

Stylish Heating

Vent-Axia's New Opal range of panel heaters is suitable for apartments, houses, student accommodation and hotels.

All heaters are wall mounted and are supplied with simple mounting brackets for easy installation.

For maximum safety there is a thermal cut-out on all models to prevent overheating, should the grille be accidentally covered.

Vent-Axia's Panel convector heaters will heat a room quickly and effectively. Warm air circulation distributes the heat to all parts, not relying on direct radiated heat.

The discreet, slim design will blend with any interior design scheme and a broad range of outputs ensures the correct product is available.

Models



Mechanical Thermostatic Panel Heaters -

A built-in mechanical thermostat includes frost protection and is located by the on/off switch at the top of the heater for easy access.

Model	Stock Ref
VAPH 050MT	436962
VAPH 075MT	436963
VAPH 100MT	436964
VAPH 150MT	436966
VAPH 200MT	436967



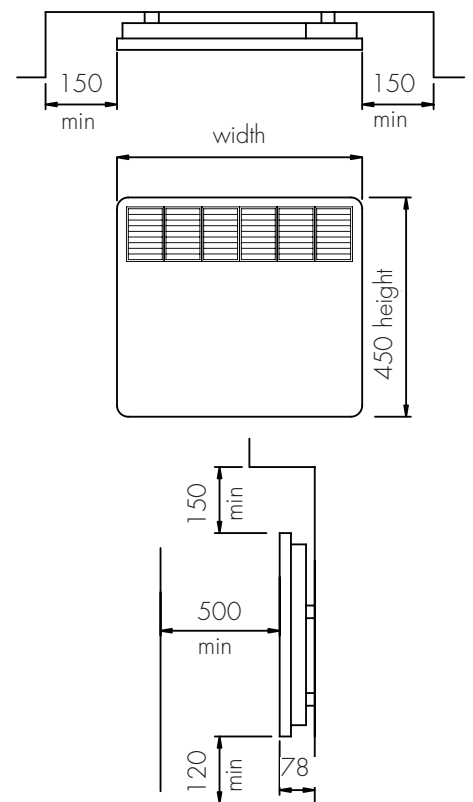
Electronic Panel Heaters -

The electronic thermostat gives closer control of room temperature, accurate to +/- 0.3° C. The rapid response also saves energy by preventing over-run as the room heats up.

These heaters feature Frost Protection, 3°C Night-time Set-back and Normal Thermostat settings. In addition, Central Controllers and Zone Controllers are available.

Model	Stock Ref
VAPH 050ET	436956
VAPH 075ET	436957
VAPH 100ET	436958
VAPH 150ET	436960
VAPH 200ET	436961

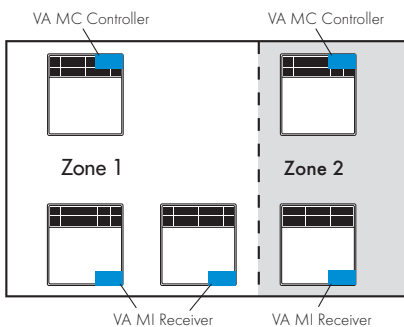
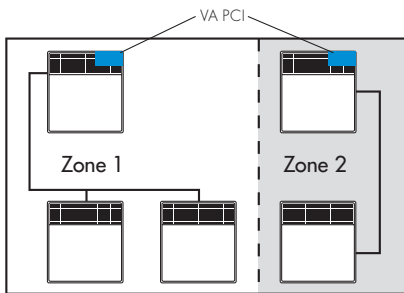
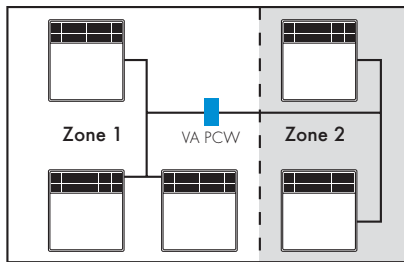
Dimensions (mm)



Specification

Model	Input kW	Width mm	Depth mm	Height mm	Weight kg
VAPH 050MT & VAPH 050ET	0.5	370	78	450	4.1
VAPH 075MT & VAPH 075ET	0.75	370	78	450	4.1
VAPH 100MT & VAPH 100ET	1.0	445	78	450	4.7
VAPH 150MT & VAPH 150ET	1.5	590	78	450	6.1
VAPH 200MT & VAPH 200ET	2.0	740	78	450	7.4

220-240V-50Hz. BEAB Approved.



Pilot Wire (ET range only)

Pilot wire installations require a control wire from the programmer linking each heater. Up to 15 heaters per zone can be connected to one controller.

Pilot wire installations are ideal for new-build applications where the control wire can be installed with the first fix wiring. No additional receivers are required, making this a cost effective central control option.

Discreet Programmer Location



VA PCI and VA MC Programmer slots neatly behind the heater for convenience and ease of use.

Mains Borne Signalling (ET range only)



Mains Borne Signalling (MBS)

MBS is ideal for refurbishment projects where cabling is already installed. The VA MC controller is heater mounted and requires a receiver, VA MI on each

additional heater to be controlled. Up to fifteen heaters can be linked to one VA MC controller.

Control (ET Models only)

VA PCW -

Central controller with pilot wire controlling up to two zones. Configurable to give Time of Day, Comfort/Setback/Off/Frost protection modes. Manual override and Holiday modes

Stock Ref
436968

VA PCI -

Controller with pilot wire controlling individual zones. Configurable to give Time of Day, Comfort/Setback/Off/Frost protection modes. Manual override and Holiday modes. Up to 15 slave heaters can be linked to the Master Controller.

Stock Ref
436970

VA MI -

Panel heater interface required for use with VAMC.

Stock Ref
436971

VA MC -

Mains Borne Signalling Controller for controlling individual zones. Configurable to give Time of Day, Comfort/Setback/Off/Frost protection modes. Manual override and Holiday modes.

Stock Ref
436969

Tamper Proof Controls

Selection switch and temperature can be fixed in one position to prevent adjustment. The temperature control may alternatively be restricted to a max/min range.

Central Control

Central controllers are available in two formats, Pilot Wire and Mains Borne Signalling. Pilot Wire is ideal for new-build installations where a signal cable is installed with the power cable at first fix stage.

Heating



Plinth Heaters

Features & Benefits

- Ideal for where wall space is at a premium.
- Fit neatly into Plinths.
- Finishes: W-White, B-Brown & S - Stainless Steel
- Optional thermostatic control.
- 5-30°C
- Can be used with remote switch VARSU 436494.
- Two heat settings 1kw & 2kw.

Vent-Axia Plinth Heaters are designed for use in kitchens, bedrooms. They fit neatly into most types of fitted furniture, fascias, display units and false walls.

When installed in a corner with an adjacent cupboard to the right, a distance of at least 150mm must be maintained between the right hand end of the heater and the front of the adjacent cupboard door.

Vent-Axia Plinth Heaters are supplied with 1.5m of 1.5mm² 3 core cable, terminating on the right hand side of the unit.

Models

Standard Models

Model	Stock Ref
VAPL2-S	459112
VAPL2-W	459113
VAPL2-B	459114

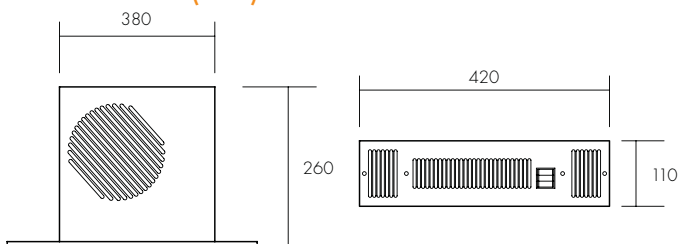


Thermostatic Models

Model	Stock Ref
VAPL2TC-S	459115
VAPL2TC-W	459116
VAPL2TC-B	459117



Dimensions (mm)



Cutout dimensions (mm) (W x H) 390 x 105

Weight 3kg



Warm Air Curtains

Features & Benefits

- Integral Switching for faster installation.
- Three heat settings and fan only mode.
- Models to suit single and double doorways.
- Suitable for use as a high level fan heater.

Vent-Axia Warmair Curtains provide a heated downflow of warm air in doorways of commercial premises such as shops, offices and schools.

The robust outer case is made from painted steel with an off white epoxy finish. Accommodating varying door widths is easily achieved by installing Warmair units 'Side by Side'.

Vent-Axia Warmair Curtains are supplied with 0.75m of 3 core cable, and mounting brackets.

Three Warmair models are available offering heat outputs & fan only :

Warmair 3 - 3 kW, 2 kW, 1 kW
 Warmair 4.5 - 4.5 kW, 3 kW, 1.5 kW
 Warmair 6 - 6kW, 4 kW, 2 kW.

Models

Warmair Curtain Heaters -

Manual and Automatic versions available.

Model	Stock Ref
Warmair 3	456343A
Warmair 4.5	456344A
Warmair 6	456345A

Remote Switch -

Remote Switch unit to control warm air units. Switch allows for fan only & 3 heat settings.

Model	Stock Ref
VARSU	436494

Specification

Model	Rating kW	Width mm	Height mm	Depth mm
Warmair 3	3.0	650	103	210
Warmair 4.5	4.5	650	103	210
Warmair 6	6.0	900	103	210

220-240V-50Hz. BEAB Approved.



Downflow Heater

Features & Benefits

- Stylish compact design
- 2kW Output
- Pull Cord Operation
- Neon running Indicator
- Double Insulated Class II.
- IPX2 rated

Stylish Heating

The Vent Axia Downflow Heater will deliver a welcoming warmth when its most needed in all room applications including bathrooms and living spaces.

The IPX2 rated Downflow Heater operates via a pull cord and is suitable for use within zone 2 of the bathroom. The Downflow Heater has a 2kW power loading and is designed to be permanent wall located for use with an AC electrical supply.

The Downflow Heater is fitted with pre-set step down thermostat which regulates the room temperature and offers an energy saving. It also has a in built thermal cut out safety feature. With a neon indicator running light the Downflow Heater is simple to install.

Model

Downflow Heater



Model	Stock Ref
VADH2	455834A

Specification

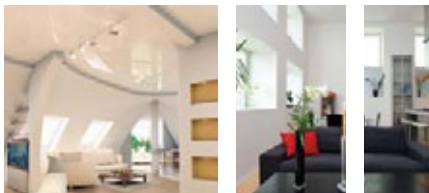
	Rating	Width	Height	Depth	Weight
Model	kW	mm	mm	mm	kg
VADH 2	2	229	242	109	1

220-240V-50Hz.

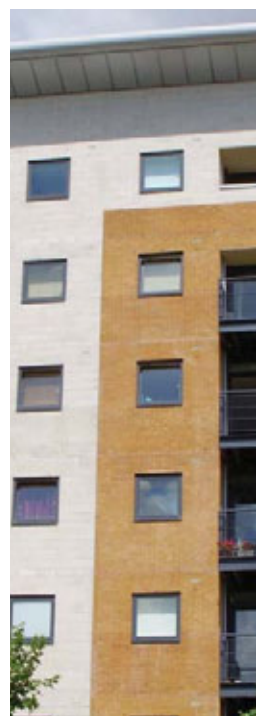
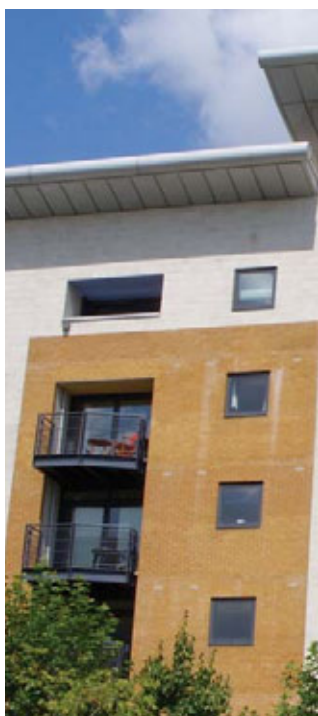
Accessories & Controllers - Residential & Light Commercial

For ventilation systems to be truly efficient it is important for them to operate only when needed. Our range of Sentinel demand ventilation systems along with our controls and sensors help respond to the exact ventilation requirements of a room at any one time. Providing airflow only when it is required and at the level that it is required ensures that only the energy that is needed is used; no more no less.

Approved Document L now recognises the value that controls can offer and you will find Vent-Axia offer a range of solutions to ensure that you can maximise the benefit of automation where ever you chose to use it.



Range



Vent-Axia®

Controllers & Sensors Selection Guide

Controller/Sensor	Lo-Carbon HR204DC	Sentinel Kinetic Range	HR400	Integra
Timespan			•**	•
Air Quality		•		
Ambient Response Humidity Sensor	•	•	•	•
SELV Ambient Response Humidity Sensor		•		
Ecotronic Humidity Sensor	•	•	•	•
Humidistat		•		
7 Day Timeswitch			•	•
Guardian PIR				
Visionex PIR	•	•	•	•
3 speed switch				
VCON100				
Ventwise	•	•		
2 way switch neon				•**
150VA				Optional
VCON77			•	
VCON6				
Electronic speed controller				
TIM2 run-on timer	•	•	•	•

* Not for use with 315 models (ACM/P/H)

** For trickle/boost operation, a relay is required (442030)

*** Excluding MV250H and MVDCH

The solution to the growing issues of poor indoor air quality, caused by increasing air tightness and insulation, is controlled mechanical ventilation using intermittent extract, heat recovery or central extract, wholehouse systems. Controls improve the efficiency and effectiveness of the ventilation systems through close control of the environment in which they are installed.

Vent-Axia has the most comprehensive range of humidity sensors available on the UK market covering conventional AC, SELV and Lo-Carbon fans.

Integra Plus	HR250	HR204	HR205	HR200V	HR100R/RS	Multivent Range***
	•**	•	•		•**	
						•
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	Optional			•		
				•		
				Optional		
•	•	•	•	•	•	•

Controllers & Sensors



Ecotronic Controller Surface mounting

An electronic controller for use with all T-Series and Standard Range models, to give extract/intake and speed variation. Where a controller is used with T-Series, 5-core flexible cord is required.

- 'E' running position for optimum efficiency.
- Finger-tip sliders.
- Infinitely variable speed control.
- Double pole On/Off switching.
- Extract/intake airflow direction.
- Neon indicator.
- Sensor mode for use with suitable electro-mechanical switches, eg. ThermoSwitch, HumidiSwitch to give automatic fan operation.
- Adjustable minimum speed setting.
- Knockouts for recessed wiring.
- Ambient operating temperature range 0°C to +40°C.
- Dimensions: 86 x 156 x 53mm (H x W x D).
- Supply voltage 220-240V/1/50Hz
- Maximum load: Ecotronic - 400 Watts
- Designed to meet IP20.
- BEAB Approved.

Stock Ref
W362320



T-Series® Controller Surface mounting

A single unit controller for use with all T-Series ventilating units. With knockouts for recessed wiring. Where a controller is used with T-Series, 5-core flexible cord is required.

- 3-speed operation. High, medium or low.
- Finger-tip sliders.
- Double pole On/Off switching.
- Extract/intake airflow direction.
- Sensor mode for use with suitable electro-mechanical switches, eg. ThermoSwitch, HumidiSwitch to give automatic fan operation.
- Unique shutter open, fan Off setting.
- Neon indicator on controller.
- Knockouts for recessed wiring.
- Ambient operating temperature range 0°C to +40°C.
- Dimensions: 86 x 156 x 53mm (H x W x D).
- Supply voltage 220-240V/1/50Hz
- Designed to meet IP20.
- BEAB approved.

Stock Ref
W361119 220-240V



TimeSwitch Controller Surface mounting

Adjustable automatic timer for timed ventilation of internal rooms in a variety of domestic and commercial applications.

For use with any Vent-Axia fan, within maximum rating below. The controller can be wired to the lighting circuit. Alternatively it can be connected to a door switch or any other commercially available switch. The ventilating unit is switched On with the light and keeps running for a preset period of between 1 and 35 minutes after the light is switched Off.

- Finger-tip slider.
- Secret adjustable time delay feature on front fascia.
- Off/auto/manual override switch.
- Knockouts for recessed wiring.
- Dimensions: 86 x 156 x 53mm (H x W x D).
- Ambient operating temperature range 0°C to +40°C.
- Maximum load 2 amp resistive (1 amp inductive).
- Supply voltage 220-240V/1/50Hz
- Designed to meet IP20.

Stock Ref
W361310

Flush fitting

All Controllers on this page have the option to be flush mounted using a metal recessed box.

Stock Ref
400144

Registered design numbers: 1 030 207 Surface Mounting controller, 1 030 208 Flush fitting controller. Patented Remote Speed Control Circuit. European Patent number EP 0180311.

Manufacturers of some fluorescent/low energy lighting systems indicate that these can interfere with other electronic/timing circuits. For reliable operation of these circuits we recommend therefore that a tungsten filament light is used.



TimeSpan® Controller

Adjustable timer with overrun facility for fans ventilating W.C's and other small rooms.

For use with any Vent-Axia fan within maximum rating below. The fan is switched on with the light and keeps running for a pre-set period after the light is switched off.

- Fits to any single gang box.
- Adjustable time delay 5-25 minutes from the back.
- Ambient operating temperature range 0°C to + 40°C.
- Maximum load 250W inductive.
- BEAB Approved.
- Dimensions Controller only: 87 x 87 x 33mm (H x W x D).
- Supply voltage 220-240V/1/50Hz.

Stock Ref
563519

A surface mounting back box is available.

Stock Ref
410020



Air Quality Sensor

Automatically reacts to the depletion of air quality, sensing tobacco smoke, smells and toilet odours to regulate mechanically ventilated areas such as cinemas, pubs, clubs, restaurants, kitchens, toilets and conference rooms. This is not a CO₂ sensor.

The sensor switches the fan On when the air quality declines below an adjustable preset level. This is registered by the ceramic sensing head which is self-cleaning, a process which occurs every time the unit is triggered. When the atmosphere has returned to normal, the fan will continue to run for a pre-set period (adjustable between 1-25 minutes) and then switch Off.

The air quality sensor should not be used for the detection of combustible gases and is not designed for use as a smoke detector in an alarm system.

For use with various Vent-Axia fans within maximum rating below.

The AQS is also able to switch between trickle and boost speed on the appropriate ventilation units.

- Ambient operating temperature range 0°C to +50°C..
- Dimensions: 87 x 157 x 47mm (H x W x D).
- Maximum switched load:
- 2A inductive at 240V.
- Sensor consumption: 25mA at 240V.
- DEMKO Approved.
- Supply voltage 240V/1/50Hz

Stock Ref
563506B



Electronic 1.5A Controller

Surface mounting. It will provide infinitely variable speed control and features an On/Off/sensor slider with neon indicator. There is an adjustable minimum speed setting. The controller is radio suppressed to BS EN 55014 and electrical connections for use with suitable external sensors are provided.

86 x 156 x 53mm (H x W x D). For flush fitting a metal wall box accessory is available.

Hole for wall box:
80x150x150mm (HxWxD)

Stock Ref
W300310

Hole for wall box:
80x150x50mm (HxWxD)

Flush fitting box
Stock Ref
400144

Controllers & Sensors



Ambient Response Humidity Sensor

The latest self programming electronic On/Off wall mounted humidity sensor which reacts to any rapid increase in humidity and temperature by switching a Vent-Axia fan 'On' for rapid removal of moisture laden air, in domestic bathrooms and kitchens. Can be wired into controller "Auto" mode connections. Night time RH increment setback feature suppresses nuisance tripping when the humidity level gradually rises as the temperature falls.

- Pullcord override and neon indicator.
- Changeover relay switch
- Operating range: 30%-90%RH operating range.
- Ambient operating temperature +5°C to +40°C.
- Dimensions Controller only: 87 x 87 x 33mm (H x W x D).
- Will fit single gang box for surface mounting

Stock Ref
563550A

European Patent No: 2298057



Ambient Response SELV 12 Humidity Sensor

12V Safety Extra Low Voltage version for use with VA100 SELV, Solo SELV, LuminAir SELV and HR100 SELV range.

The latest self programming electronic On/Off wall mounted humidity sensor which reacts to any rapid increase in humidity and temperature by switching a Vent-Axia fan 'On' for rapid removal of moisture laden air, in domestic bathrooms and kitchens. Can be wired into controller "Auto" mode connections. Night time RH increment setback feature suppresses nuisance tripping when the humidity level gradually rises as the temperature falls.

- Pullcord override and neon indicator.
- Changeover relay switch
- Operating range: 30%-90%RH operating range.
- Ambient operating temperature +5°C to +40°C.
- Dimensions Controller only: 87 x 87 x 33mm (H x W x D).
- Will fit single gang box for surface mounting.

Stock Ref
563551A



Lo-Carbon Ambient Response Humidity Sensor

Designed specifically for the Lo-Carbon product range. The latest self programming electronic On/Off wall mounted humidity sensor which reacts to any rapid increase in humidity and temperature by switching a Vent-Axia fan 'On' for rapid removal of moisture laden air, in domestic bathrooms and kitchens. Night time RH increment setback feature suppresses nuisance tripping when the humidity level gradually rises as the temperature falls.

- Pullcord override and neon indicator.
- Changeover relay switch
- Operating range: 30%-90%RH operating range.
- Ambient operating temperature +5°C to +40°C.
- Dimensions Controller only: 87 x 87 x 33mm (H x W x D).
- Will fit single gang box for surface mounting.

Stock Ref
563552A

All of these Sensors can be wired for either On/Off or Trickle/Boost operation.

Manufacturers of some fluorescent/low energy lighting systems indicate that these can interfere with other electronic/timing circuits. For reliable operation of these circuits we recommend therefore that a tungsten filament light is used.



Ecotronic Humidity Sensor Surface Mounting

An adjustable set point, solid state On/Off sensor. A pullcord provides manual override, indicated by lamp. Adjustable from 65 to 90%RH. Can be wired into controller "Auto" mode connections. Incorporates changeover switch to select low/high speed.

- Setting range 65% - 90%RH.
- Maximum switching load 1 amp inductive.
- Pullcord override indicated by lamp.
- Ambient operating temperature 0°C to +40°C.
- Dimensions: 87 x 87 x 33mm. (H x W x D)
- Supply voltage 220-240V/1/50Hz.

Stock Ref
563532A



Ecotronic® SELV 12 Humidity Sensor

12V Safety Extra Low Voltage version for use with VA100 SELV, Solo SELV, and LuminAir SELV range. Incorporates changeover switch to select low/high speed.

- Setting range 65% - 90%RH.
- Maximum switching load 5.6A @
- 12V ac.
- Pullcord override indicated by lamp.
- Ambient operating temperature 0°C to +40°C.
- Dimensions: 87 x 87 x 33mm. (H x W x D).
- Supply voltage 12V ac.

Stock Ref
563531A

Although suitable for siting within reach of a shower or bath we recommend this model is located out of the spray zone of a bath or shower.



Vent-Axia HumidiSwitch

Operates Vent-Axia ventilating units on either a rise or a fall in humidity to control the damaging effects of condensation.

- Concealed adjustment.
- Setting range 20% to 80% RH.
- Ambient 0°C to +50°C.
- 82 x 132 x 40mm (H x W x D).
- Rating 2A (1A inductive).
- Switching range 120-240V.
- Designed for use with controllers with 'Auto' mode facility.
- Single pole changeover contacts.

Stock Ref
563501D

The Ecotronic and Ecotronic SELV 12 Sensor can be wired for either On/Off or Trickle/Boost operation.

Controllers & Sensors



7 Day TimeSwitch

For applications where regular switching is required at fixed periods or at different times on different days of the week, eg: offices, shops, pubs and restaurants.

The 7-day TimeSwitch gives twelve On or Off positions per day and can be set for 7 days. The cycle will repeat until changed.

- Analogue clock display and integral time switches for ease of setting.
- Manual override.
- Removable clear plastic cover protects timeswitch face.
- Volt free changeover contacts.
- Time base: 7 days.
- Shortest switching time: 2 hours.
- Maximum load: 16amp resistive (8amp inductive).
- Ambient operating temperature range -20°C to +85°C.
- Dimensions: 104 x 74 x 52mm (H x W x D).
- Supply voltage 220-240V/1/50Hz

Stock Ref
563515



Vent-Axia ThermoSwitch

Automatically switches On fans on either a rise or fall in air temperature. The ThermoSwitch can be used with all Vent-Axia fans (via switchgear if appropriate) for the removal of warm air from buildings. It can also be used to switch On Hi-Line ceiling fans for Summer cooling and to move high level warm air down to the working level during Winter.

- Setting range: +6°C to +30°C.
- Two internal range limit/locking rings are included to allow setting within a limited temperature range or locking at a fixed set-point.
- IP20 rated.
- Sealed sensing mechanism.
- Snap-action, single pole, changeover contacts.
- Mounting direct on surface only.
- Electrical connection to screw type terminals with rear or side cable entry.
- Dimensions: 80 x 104 x 36mm (H x W x D).
- Contact rating: 1.5 Amp (inductive).
- 16 Amps (resistive)
- Maximum voltage 250V

Stock Ref
563502B



Guardian Personnel Detector (PIR Sensor)

Suitable for controlling a range of Vent-Axia fans. Continuously monitors an area and activates when a moving body is detected.

- Supplied complete with wall mounting bracket.
- Adjustable timer overrun (5 seconds to 20 minutes).
- Supplied with lens to provide 15m (max) range, 200° detection area.
- Designed to meet IP55.
- Ambient operating temperature range -20°C to +50°C.
- Maximum load: 10 amp resistive (5 amp inductive). Suitable for use with fluorescent lighting up to 500W.
- Internal/External use
- Supply voltage 220-240V/1/50Hz

Stock Ref
563548A



Vent-Axia Visionex PIR

A wall or ceiling mounted movement detector for use with any domestic Vent-Axia mains voltage product. Also suitable for use with Vent-Axia T-Series controllers on 'Auto' setting and ITC controllers on sensor mode.

- Fits any UK single gang mounting box.
- Adjustable timer overrun (5-25 minutes).
- Range of detection up to 10 metres.
- Designed to meet IP43.
- Ambient operating temperature range 0°C to +50°C.
- Maximum load: 2.5 Amps/600W inductive. Not suitable for use with lighting.
- Internal use only.
- No switched live required for internal rooms and toilets.
- Double insulated.
- Volt-free contacts.
- Supply voltage 220-240V/1/50Hz

Stock Ref
459623A

Surface fitting wall mounting box

Stock Ref
410020

Vent-Axia Visionex SELV 12 PIR

A wall or ceiling mounted movement detector for use with any domestic Vent-Axia SELV 12 product.

- Fits any UK single gang mounting box.
- Adjustable timer overrun (5-25 minutes).
- Range of detection up to 10 metres.
- Designed to meet IP43.
- Ambient operating temperature range 0°C to +50°C.
- Maximum load: 5.6 Amps inductive @ 12V.
- Internal use only.
- No switched live required for internal rooms and toilets.
- Class III product.
- Volt-free contacts.
- Supply voltage 12V/1/50Hz

Stock Ref
459624A

Surface fitting wall mounting box

Stock Ref
410020

3 Pole Isolator

Isolates Live, Neutral and Switched Live for integral timer fans. 6 amp, 3 pole isolator complying to the 3mm contact separation requirement for routine maintenance repair.

Stock Ref
563518



Remote Delay Timer

A remote delay timer for use with all domestic products gives the option of offering a 2 minute delay before the fan starts. Once the fan has started the overrun timer is adjustable between 5-25 minutes.

Stock Ref
457986

Controllers & Sensors



Fan Speed Adjuster

5 step speed adjuster for domestic kitchen extract fans, that can reduce the speed to 40% of its maximum performance.

Stock Ref
458153



Push Button Timer

The Vent-Axia Push Button Timer is ideal for applications that require an accurate timing period. Pushing the button activates the circuit, and starts the timing period. The timer has been designed for general purpose loads, a neutral feed is required at the switch position. This will allow the timer to be used in various applications from incandescent, fluorescent and compact fluorescent lighting to heating and ventilation loads. Adjustable timing range between 1 second and 2 hours.

Three different modes of operation can be set on the timer to provide a variety of options to suit particular applications.

On/Off Mode: Operating the unit will start the timing sequence. Operating the unit again during operation will stop the sequence immediately. If the unit is not pressed again after initial operation, the timer will switch off after the adjustable preset time period has elapsed.

Resetting Mode: Operating the unit will start the timing sequence. Operating the unit again during operation will restart the timing sequence.

Non-Resetting Mode: Operating the unit will start the timing sequence. Operating the unit again during operation will have no effect.

Stock Ref
426416A



5 Step Auto Controller

Used in conjunction with speed controllable fans to provide 5 stepped speed without electronic motor 'hum'. Several fans can be connected to one transformer provided their combined load does not exceed the controller rating.

Single phase: 3.0, 5.0 and 7.5amp. Rotary switch giving On/Off and five speeds. Output voltages at 240V/1PH/50Hz 0, 90, 115, 140, 175, 240 volts. Neon indicator. Enclosures are protected to IP54.

Dimensions	Stock Ref
135x170x117	10314103
167x219x108	10314105
200x253x170	10314107



PIR Timer Switch

The Vent-Axia PIR Timer has been designed to control heating and ventilation. When body heat is no longer detected. Adjustable timing range between 10 seconds and 1 hours. As these timers have been designed for general purpose loads, a neutral feed is required at the switch position. Incandescent, fluorescent and compact fluorescent lighting, heating and ventilation loads. Electric heating can be controlled, either directly or via the heater control circuit. Several timers can be wired in parallel to control the same load if required.

Stock Ref
426418A



Vent Wise Controller

The award winning Vent Wise controller has been designed to fully automate a ventilation system. The unit can be used on intermittent or continuous systems, switching a fan between off and on or from trickle to boost speed. The controller saves energy by only switching when cooking is taking place or condensation is being generated. The current sensor detects when the power supply to an oven or hob is switched on. The temperature sensor detects the rise in temperature in the hot feed to a bath or shower. A combination of up to three sensors may be used with one controller. Suitable for 240V single phase, the Vent Wise is capable of switching 2 amps or 500 watts. Ideal for student accommodation, social and sheltered housing, the Vent Wise maintains indoor air quality without the need for manual switching.

Stock Ref
435960

Current Sensors

4m cable

Stock Ref
435994

6m cable

Stock Ref
435956

12m cable

Stock Ref
435957

Temperature Sensors

4m cable

Stock Ref
435995

6m cable

Stock Ref
435958

12m cable

Stock Ref
435959



Weatherproof Touch Activated Timer

The Vent-Axia Weatherproof Touch Activated Timer is designed for outdoor applications, with a 103 x 103 x 65mm smooth wall enclosure. This timer can accommodate general purpose loads, and will require a Neutral feed at the switch position. This will allow the unit to be used on various applications from incandescent, fluorescent or compact fluorescent lighting to heating and ventilation loads.

The unit has two functions; it can either be used as a Timer, or as a conventional switch.

Two different modes of operation can be set on the unit:- Timing Mode: Pressing the touch plate will start the timing sequence. Pressing the touch plate again during operation will stop the sequence immediately.

Switch Mode: Pressing the touch plate will switch the unit on. Pressing the touch plate again will switch the unit off. The timer function is disabled in this mode.

Output is via a Single Pole Change Over Relay Contact, giving the option of a normally open or normally closed contact for switching purposes. The 'temporary' neon indicator is only illuminated when the unit is timing out. IP65 rated enclosure.

Stock Ref
434720A

Controllers & Sensors



VCON6

A double gang switch to boost from high to low speeds.
85 x 145 x 10mm (H x W x D)

Stock Ref
370356



Normal Boost Switch

A single gang switch to boost from high to low speeds on all heat recovery systems.
85 x 85 x 10mm (H x W x D)

Stock Ref
455213



Normal Boost Purge Switch

A single gang switch to operate between normal, boost and purge speeds.
85 x 85 x 10mm (H x W x D)

Stock Ref
5108454



2-Way Switch and Neons

A double gang switch to boost from high to low speeds on all heat recovery systems, incorporating neon lights to indicate speed settings. Suitable changeover relay required. 85 x 145 x 10mm (H x W x D).

Stock Ref
459746



3 Speed Controller

A three position rotary control which enables the unit to be manually switched from permanent trickle ventilation to either medium or boost speed.

85 x 85 x 25mm (H x W x D)
85 x 85 x 37mm (H x W x D): with rotary switch

Stock Ref
563533



VCON77 Transformer

Surface mounted Transformer with multiple voltage settings for optimum speed control of the HR400 heat recovery unit. Provides five trickle settings to match various dwelling sizes when interfaced with either a manual switch or automatic sensors. Boost speed available at full speed only (240V).

95 x 218 x 75mm (H x W x D)

Stock Ref
370357



HR500 Controller

Surface mounting. On/Off remote sensor mode. Heat exchange, single fan extract or twin fan extract modes. Infinitely variable speed. Minimum speed setting.

Stock Ref
W14301010



150VA Transformer

Surface Mounting Transformer with six voltage selections for trickle settings to match dwelling volume. Provides Boost/Trickle ventilation when used with humidity sensors or a manual switch.

95 x 225 x 75mm (H x W x D)

Stock Ref
563538



TIM2 Overrun Timer

The TIM2 is a remote mounting electronic overrun timer with a relay output. 2 Amp indication load maximum. Adjustable overrun 2-30 mins. Ideal for where fans are to be controlled in conjunction with a lighting circuit or activated by remote sensors. Adjustable overrun 2-30 mins.

76 x 76 x 41mm. (H x W x D)

Stock Ref
370346

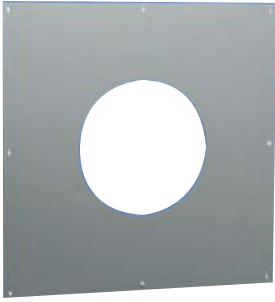


Isolator Relay Controller

Allows fan unit to be isolated from other mains circuit when used with TIM2, Trickle/boost switch or light switch control

Stock Ref
442030

Ventilation Accessories

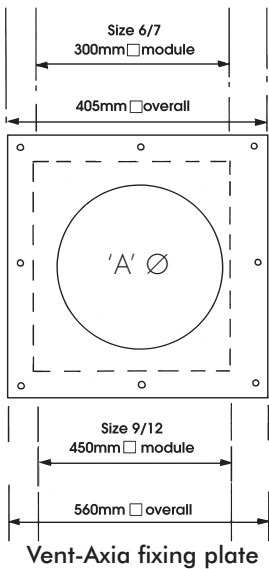


Fixing Plates

A single plate available in 300mm and 450mm square modular sizes for permanent fixing on walls or for use with other modular components.

Manufactured in high impact recyclable thermoplastic.

Unit Size	Stock Ref
6	561136
7	561137
9	561139
12	561142



Unit size	'A' Ø	Module size
Size 6	184mm	300 mm □
Size 7	222mm	300 mm □
Size 9	260mm	450 mm □
Size 12	337mm	450 mm □

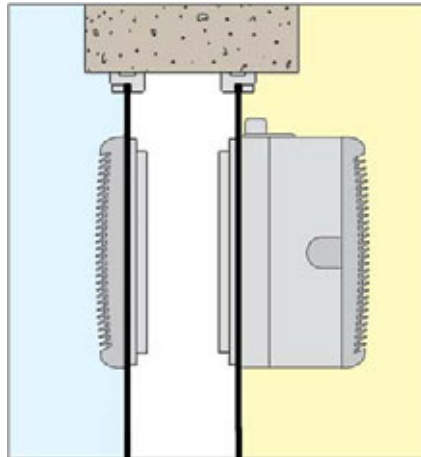


T-Series Adaptor Kits

Used for T-Series Window models in secondary double glazing, Roof models in secondary double glazing in exposed areas, Roof models through roofs and Darkroom models installed through either roof or walls. Adaptor kits allow units to be installed on two surfaces.

T-Series Adaptor kits consist of two Mounting plates with weather-tight seals and a set of fixing screws.

Unit Size	Stock Ref
6	W561031
7	W561032
9	W561033
12	W561034



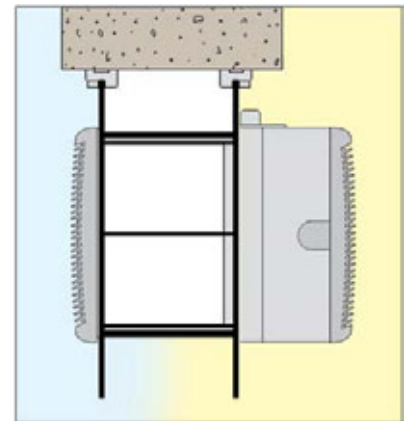
T-Series Extended Fixing Rod Sets

For use with T-Series Window and Roof models fitted through walls. Consists of a set of rods which are cut to suit the wall thickness.

Maximum thickness of wall 370mm.

Rod thread 3.5mm.

Unit Size	Stock Ref
6, 7 & 9	568104
12	568106



T-Series extended fixing rod set	
Unit size	Ref of Rods
6	4
7	4
9	4
12	6



Wall Liner Section

Designed for T-Series units installed in walls thicker than 315mm, each liner section provides a maximum extension of 150mm. Wall liner section can also form a frame for Panel models in walls.

T-Series Wall Liner's

Unit Size	Stock Ref
size 6	460094
size 7	460095
size 9	460096
size 12	460086



Mounting Boxes

A flanged sleeve in 300mm and 450mm square modular sizes used as an interconnecting sleeve between other modular accessories.

Mounting boxes will accept the depth of a unit and can be mounted in conjunction with a Fixing plate and Eggcrate grille for ventilation through ceilings.

Manufactured in flame retardant high impact recyclable thermoplastic.

Duct length 200mm.

Unit Size	Stock Ref
6/7	560236
9/12	560239

Vent-Axia mounting box

Unit size	Modular size
6/7	300 mm □
9/12	450 mm □

Joining Bolt Set

Set of 8 nuts, bolts and washers

Stock Ref
563000



Single Spigots

Single spigots in 300mm and 450mm square modular sizes. Used to connect Flexible ducting to Mounting boxes and other modular accessories or can be fixed directly to walls.

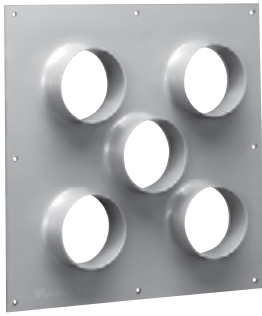
Manufactured in flame retardant high impact thermoplastic.

Unit Size	Nom Dia	Stock Ref
6	175mm(B)	560637
6/7	225mm(B)	560639
7	250mm(A)	560640
9	300mm(A)	560642
9	300mm(B)	566142
12	400mm(B)	566146

Vent-Axia single spigot

Unit size	Spigot Ø	Module size
6	B 175 mm	300 mm
6	B 225 mm	300 mm
7	B 225 mm	300 mm
7	A 250 mm	300 mm
9	A 300 mm	300 mm
9	B 300 mm	450 mm
12	B 400 mm	450 mm

Ventilation Accessories



Multi-Spigot Plates

Available with 2, 3, 4 or 5 circular spigots of 100mm diameter. Multi-spigot plates are used in conjunction with 100mm Flexible ducting and other modular accessories to ventilate several small areas especially internal lavatories. For use with Size 6 units only. Manufactured in flame retardant high impact recyclable thermoplastic.

Available in 300mm square modular size.

Description	Stock Ref
2-3-4 Spigots	560734
5 Spigots	560735



T-Series Direct Mount Spigots

Used to connect Flexible ducting directly to the inlet side of all T-Series models and the outlet side of T-Series Window models.

Manufactured in flame-retardant high impact recyclable thermoplastic.

Unit Size	Stock Ref
6 All models	560501
7 All models	560502
9 WW/RF	560503
9 WL/PL	560504
12 All models	560505



T-Series Darkroom Cowl Assembly

For use with all T-Series fans for Darkroom applications. Designed to give light protection.

Can also be used in other light sensitive areas such as medical, dental and veterinarian applications.

Unit Size	Stock Ref
6	460585
7	460586
9	460587
12	460588

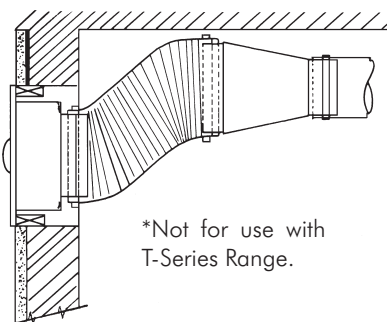


Cone Connectors

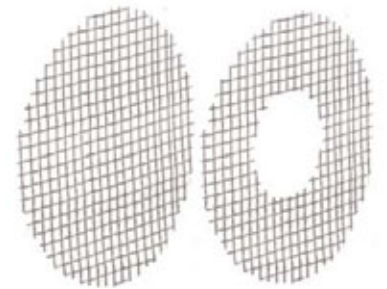
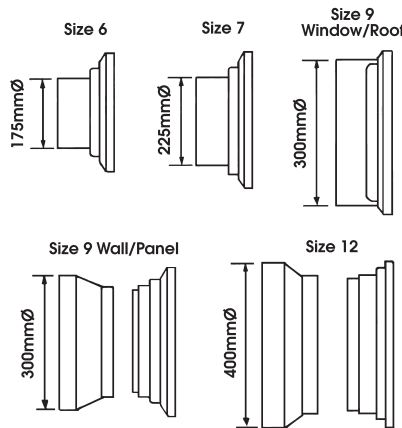
Used in conjunction with a Size 6 *Standard Panel model to reduce the outlet spigot (175mm Ø) to 100mm Ø flexible or rigid ducting.

The Cone connector is 280mm long and incorporates a splitter for improved performance. Manufactured in flame retardant, high impact thermoplastic. Colour: Grey.

Unit Size	Stock Ref
6	560936



*Not for use with T-Series Range.



Standard Range Protective Grilles

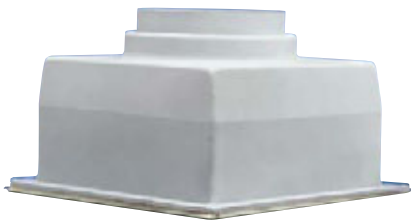
Where Standard Range units are installed in low positions, finger guards provide extra protection to VDE, DIN 31001.

Standard Range internal grille (all models)

Unit size	Stock Ref
6	563106
7	563107
9	563109
12	563112

Standard Range external grille (window models)

Unit size	Stock Ref
6	563406
7	563407
9	563409
12	563412

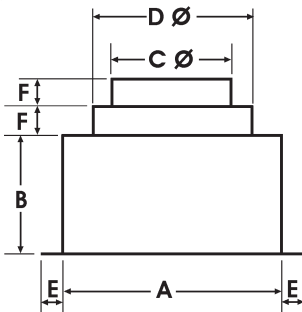


Plenum Boxes

The Plenum box allows square grilles and diffusers to connect to circular duct. Each box size has a two diameter circular spigot for maximum versatility. The box is deep enough to accommodate both a double deflection grille and opposed blade damper.

Manufactured in flame retardant high impact recyclable thermoplastic.

Size	Stock Ref	Nom. Ø
200	560601	125/150
250	560602	150/175
300	560603	200/225
300	560604	250/300
450	560605	315/400



Dimensions (mm)

Stock Ref.	A	B	C Ø	D Ø	E	F
560601	200	130	125	150	25	25
560602	250	130	150	175	25	25
560603	300	130	200	225	25	25
560604	300	130	250	300	25	25
560605	450	130	315	400	25	25



Single Deflection Grilles

Single deflection grilles are suitable for either side wall or exposed duct applications.

The Single deflection grille has a single row of blades which permit up to 45° deflection of the air in one plane.

Satin silver finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Module size	Stock Ref
200mm sq	561370
250mm sq	561371
300mm sq	561372
450mm sq	561373



Double Deflection Grilles

Double deflection grilles are suitable for supply air for either side wall or exposed duct applications.

The Double deflection grille has two rows of blades set at 90° apart which permit up to 45° deflection of the air in two planes.

Satin silver finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Module size	Stock Ref
200mm sq	561380
250mm sq	561381
300mm sq	561382
450mm sq	561383

Ventilation Accessories



Eggcrate Grilles

Eggcrate grilles can be used for air replacement or air extract purposes.

Used underneath Roof plate assemblies with Roof models, underneath Single spigots in ceilings, underneath Mounting boxes and on the inside faces of walls that have units in Fixed and Removable wall plates on the outside of the wall.

Comprising a 13mm square by 13mm deep mesh eggcrate core housed in a frame which has a satin silver or white finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Size 6/7 - 785cm² free area
Size 9/12 - 1810cm² free area

200mm Sq - 340 cm²
250mm Sq - 530 cm²

Satin finish.

Module size	Stock Ref
200mm sq	561303
250mm sq	561305
300mm sq	561301
450mm sq	561302

White finish.

Module size	Stock Ref
125mm sq	560846
200mm sq	560847
250mm sq	560848
300mm sq	560849
450mm sq	560850



Opposed Blade Dampers

Opposed blade dampers are used to regulate air flow through all Vent-Axia grilles and diffusers. Key operated.

This action ensures that the downstream airflow is non-directional when the damper is in the partially closed position. Opposed blade dampers have aluminium blades and the frame is left in natural mill finish.

Can be used in conjunction with Eggcrate, Single deflection and Double deflection grilles.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Module size	Stock Ref
200mm sq	561341
250mm sq	561342
300mm sq	561343
450mm sq	561344



Filtered Inlet Grille

For ceiling, panel or glass mounting. Consists of a size 6 grille, washable filter, adaptor kit and a stepped spigot to suit 100, 125 or 150mm diameter ducting.

Grille size: 226mm x 220mm
Spigot depth: 100mm
Fixing hole diameter 184mm

Stock Ref
W563536



4-Way Diffusers

Manufactured in polypropylene plastic. Four diffuser cassettes can be set for downward or 45° discharge in any of sixteen directional combinations.

Colour: Ivory

Neck Size	Stock Ref
225mm	10546230A
300mm	10546300A
350mm	10546350A
400mm	10546400
450mm	10546450
500mm	10546500

500mm fits ceiling grid size 600mm □, 595mm □ overall diffuser size



Neck Adaptor

Used to connect Flexible ducting directly to 4-way diffusers. Integral volume control damper for duct sizes up to 300mm.

Diffuser Duct Size	4-Way Neck Size	Stock Ref
150mm Ø	225mm	10547150A
200mm Ø	225mm	10547200A
250mm Ø	300mm	10547250A
300mm Ø	350mm	10547300
400mm Ø	400mm	10547400
400mm Ø	450mm	10548400
400mm Ø	500mm	10548000



Window/Wall/Ceiling Termination Sets

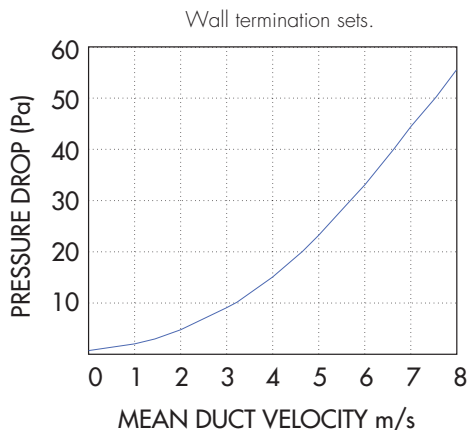
Used to terminate Flexible ducting at windows. Can be used with the Extended fixing rod set or Fixing plates for termination at walls. Used with Flexible ducting and Worm drive clips.

Consists of: Direct mount spigot, Adaptor kit, Window grille and all screws.

Unit Size	Spigot DiaØ	Stock Ref
6	175mm	W560151
7	225mm	W560152
9	300mm	W560153
12	400mm	W560154

Other sizes

Spigot DiaØ	Stock Ref
125	W10554150
200	W10554200
250	W10554250
315	W10554315



Air Replacement Non-Vision Grilles

Satin finish
Non-vision grilles consist of a single row of overlapping chevron vanes. Used as transfer grilles for doors or partitions, the overlapping vanes prevent through-vision.

Satin finish

Module size	Stock Ref
300mm sq	561311
450mm sq	561312

Black finish
In addition to preventing through-vision the black finish also limits light transference. Use two grilles back to back for darkroom applications.

Black finish

Module size	Stock Ref
300mm sq	561321
450mm sq	561322



Fire Dampers

Available in 300mm and 450mm square modular sizes. For use with other modular accessories when a duct passes through a ceiling or wall requiring a damper to be fitted. 107mm deep.

Concertina type with 71°C fusible link 2 hour rated.

Manufactured in stainless steel.

Size	Stock Ref
6/7	561901
9/12	561902



Roof Termination Sets

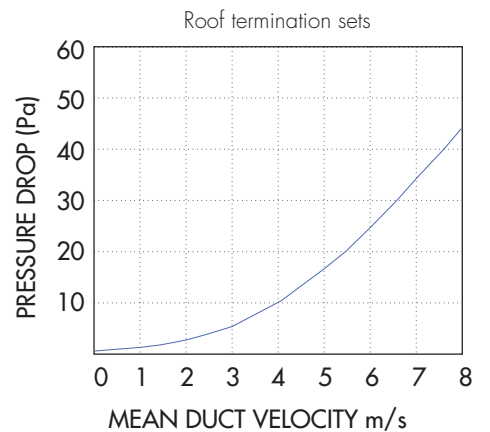
Used to terminate Flexible ducting at roofs. Consists of: Direct mount spigot, Adaptor kit, Roof cowl, Deflector and all screws.

T-series units

Size	Spigot Ø	Stock Ref
6	175	560161
7	225	560162
9	300	560163
12	400	560164

Vent-Axia roof termination

Diameter	Stock Ref
100/125/150mm	10555150
200mm	10555200
250mm	10555250
315mm	10555315



Ventilation Accessories



Air Replacement Non-Vision Door Grilles with Matching Flanges

Non-vision grilles consist of a single row of overlapping chevron vanes to prevent through-vision, supplied with matching flanges. The grille is fitted to one side of the door with the matching flange on the other side.

Suitable for door thicknesses of 19-49mm.

Available in Silver or Brown finish, in two sizes, 600 x 150 and 600 x 300mm.

Satin finish

Size	Stock Ref
600 x 150mm	561390
600 x 300mm	561391

Brown finish

Size	Stock Ref
600 x 150mm	560900
600 x 300mm	560901



Heavy Duty T-Series Wall Grilles

Tough aluminum construction for accessible public areas. Fits T-Series wall models in place of existing external grille. Finish T-Series grey.

Size	Stock Ref
6	452725
7	452726
9	452727
12	452728



External Louvres Mill and Brown Finish

Weather resistant external louvres are suitable for air intake or discharge and for use with ducting on external walls.

The narrow blade construction has a 38mm pitch set at 45° with a depth of 41mm and an integral rain lip.

Standard 32mm wide undrilled outer flanges in aluminium have fully welded mitre corners as standard.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Size 6/7 - 345cm² free area
Size 9/12 - 824cm² free area

Satin finish

Size	Stock Ref
225mm sq	561350
300mm sq	561351
400mm sq	561355
450mm sq	561352

Brown finish

Size	Stock Ref
225mm sq	560910
300mm sq	560911
400mm sq	560912
450mm sq	560913



Louvre Grilles

Louvre grilles can be used for air replacement, for extract purposes and as an external louvre. Available in four sizes, the assembly fits over rather than into the aperture making it especially useful where there are space restrictions within the duct.

Manufactured in thermoplastic. Choice of three colours: White, Brown and Grey.

Size 6	- 190cm ² free area
Size 7	- 335cm ² free area
Size 9	- 415cm ² free area
Size 12	- 705cm ² free area

Grille Dimensions (mm)

Size	w x h
Size 6	= 310 x 303
Size 7	= 352 x 345
Size 9	= 391 x 388
Size 12	= 470 x 467

The grilles and surrounds are moulded in ABS plastic to tone with building materials, therefore an equivalent BS or RAL colour reference cannot be given.

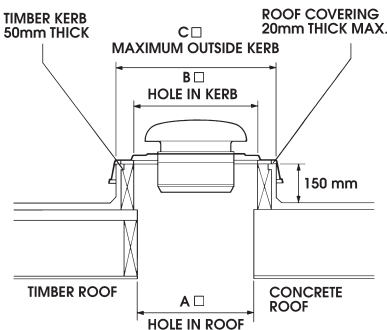
Unit Size	Colour	Stock Ref
6	Grey	W561431
6	Brown	561411
6	White	561421
7	Grey	W561432
7	Brown	561412
7	White	561422
9	Grey	W561433
9	Brown	561413
9	White	561423
12	Grey	W561434
12	Brown	561414
12	White	561424



Roof Plate Assemblies

Vent-Axia roof plate assemblies are manufactured in high impact recyclable thermoplastic. They consist of a strong one piece moulded plate with extended sides to assist flashing and weather protection. A separate sub-frame is provided for permanent fixing to the roof kerb. The Vent-Axia Roof model is then fitted to the plate using a suitable sealing compound between the Cowl and plate, ensuring a weather-tight seal.

Size	Stock Ref
6	560136
7	560137
9	560139
12	560142



Size	A	B	C
6	300mm	335mm	65mm
7	300mm	335mm	65mm
9	450mm	490mm	15mm
12	450mm	490mm	15mm

In addition to the size 6, 7, 9 & 12 Roof Termination Sets, the Roof Plate Assemblies can also be used with the following Roof Terminations part numbers.

- 10555150 use size 6 Roof Plate Assembly
- 10555200 use size 7 Roof Plate Assembly
- 10555250 use size 9 Roof Plate Assembly
- 10555315 use size 12 Roof Plate Assembly



5-Core Flexible Cord

Multi-core flexible cord specially manufactured for use with all Vent-Axia Standard and T-Series units. White sheath with colour coded cores. Available by the metre (minimum 5m) or by the 50 metre coil. Cable size: 0.75mm²

	Stock Ref
Per 50 metre	562031
Cut length (per metre min 5m)	562030



Joining Pieces

Used to join lengths of flexible ducting to give a long-lasting airtight connection.

Duct Size	Stock Ref
100mm Ø	561804
125mm Ø	561805
150mm Ø	561806
175mm Ø	561807
200mm Ø	561808
225mm Ø	561809
250mm Ø	561810
300mm Ø	561812
315mm Ø	561813
400mm Ø	561816



Standard Range Adaptor Kits

Used for Standard Range Window models in secondary double glazing, Roof models in secondary double glazing in exposed areas and Roof models through roofs.

Adaptor kits allow units to be installed on two surfaces.

Adaptor kits consist of an additional shroud and gasket, locking ring and seal. The shroud and gasket fit to the outside part of the unit, the locking ring and seal going to the inside part.

Fitting through holes in both Fixing Plates or glass, Vent-Axia's spigot and ring method of fixing allows simple installation separately to both parts.

Unit size	Stock Ref
6	561011
7	561012
9	561013
12	561014

Colour: Ivory.



Worm Drive Clips

Stainless steel tightening band with quick-fix screwed ends for securing flexible ducting.

Max. Ø	Stock Ref
110mm	561704
215mm	561707
270mm	561710
380mm	561715
525mm	561720
660mm	561726

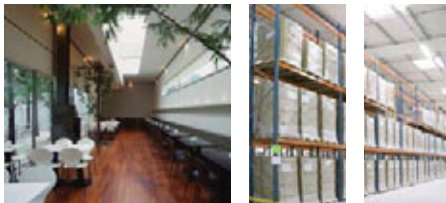
Plate & Case Fans

Vent-Axia Plate and case axial fans result from a detailed understanding of air movement within the European market. The products are designed to meet the exacting demands of both modern building services as well as the replacement market.

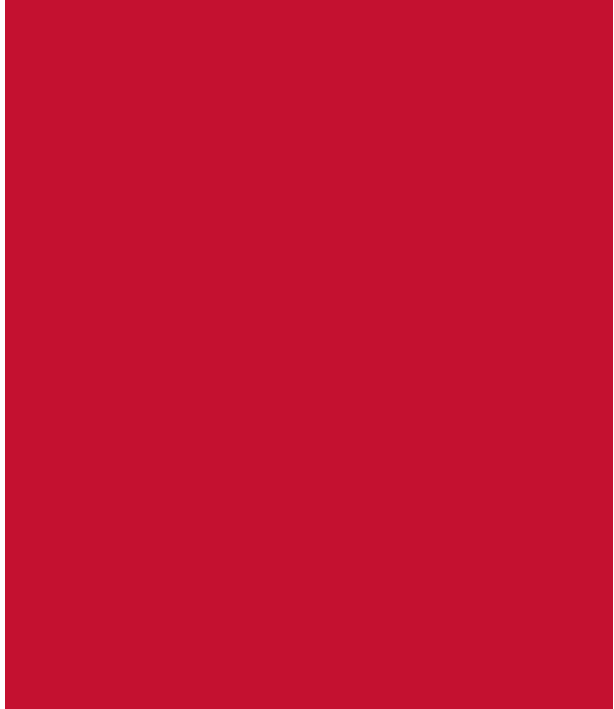
The fans are supplied fully assembled and ready for installation in any application together with a comprehensive range of accessories and controllers.

Our new range of VSP and VSC fans have been designed using external rotor motor technology, which combined with the unique single shot diecast impeller assembly provide smooth vibration free running and long maintenance free life. Range extended to 1000mm diameter for wider application range.

Cased axial fans are designed for kitchens and high temperature applications.



Range



Vent-Axia®

Vent-Axia Sabre® Plate Mounted Sickle Fans (VSP)

Features and Benefits

- One shot die cast impeller, dynamically balanced for smoother operation
- External Rotor Motors on all models for compact efficient design
- All models speed controllable and can be wired for reverse running
- Guards fitted as standard on all models
- Thermal Overload Protection for motor protection
- Maintenance free sealed for life bearings
- 2 Year Guarantee

Sabre Plated Mounted Sickle Fans

SABRE Sickle bladed fans are the latest addition to the Vent-Axia range offering improved pressure characteristics over axial units and lower sound levels. The advanced blade design and purpose built motor ensure excellent reliability and speed control.

Construction

SABRE Plate mounted sickle fans are based on an integrated impeller and external rotor motor design, which produces a very compact unit. Together with a specially designed bell mouth inlet and mounting plate, the complete fan is lightweight and ensures an excellent performance to sound level ratio.

The mounting plate is formed from a single sheet, protected with a tough epoxy paint finish. Inlet finger guards and motor supports are manufactured from steel rod, electro welded for extra strength. Sizes 250 to 710 finger guards give protection to BS 848 Part 5. Manufacture is controlled to BS EN ISO 9001 Standards.

Impellers

The motors and impellers are factory matched, statically and dynamically balanced to ISO 1940, part 1 Quality Class G.6.3

Motors

The external rotor motors are specifically designed and styled for this range of fan. Ball bearings are greased for life. Sizes 315 - 710 motors are protected to IP54, against dust and moisture complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling with Motor insulation to Class 'F' (from -40.C to + 70.C). Speed controlled sizes 450 to 710, 6 & 8 pole motors are only suitable for operating temperatures of up to 40.C.

Electrical

The Sabre range is available for either single phase 220-240V 50 Hz capacitor start and run or three phase 380-415V 50Hz. Motors are fitted with Thermal Overload Protection which should be wired into all controller circuits and into starter contactors to prevent motor damage due to overloading / overheating. Units are suitable for speed control by either electronic, voltage reduction or frequency inverters where permissible.

Form of Running

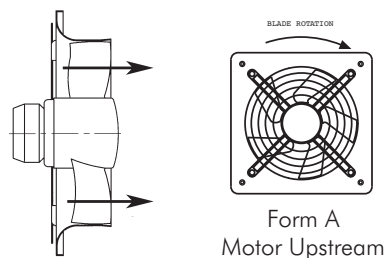


Plate mounted fans (ex-stock) are supplied for extract use (Form 'A' running).

Terminal Box

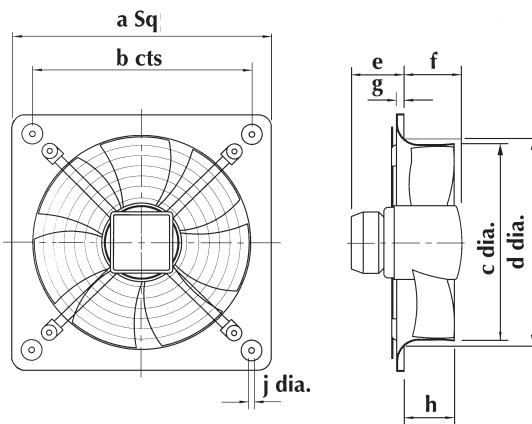
An IP54 terminal box is supplied with all models with M20 x 1.5mm gland entry offering protection against dust and water.

Performance

The fan performance, is in accordance with tests to ISO 5801.



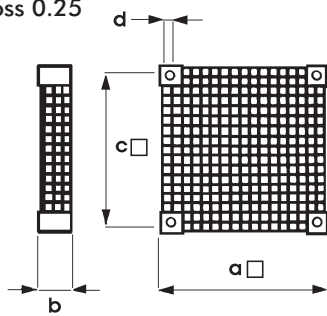
Fan Dimensions (mm)



Dia	a	b	Øc	Ød	e	f	g	h	Øj	Kg
250	370	320	256.5	264.5	84	80	6	80	9	3.4
315	430	380	320	328	84	84	19	70	9	6.3
355	485	435	367	372	86	97	21	75	9	7.3
400	540	490	412	420	93	100	12	88	9	10.2
450	575	535	463	480	86	139	14	96	11	15.8
500	655	615	517	528	84	141	16	104	11	17.3
560	725	675	568	589	81	142.5	16	119	11	24
630	805	750	643	664	82	142.5	20	130	11	45
710	850	810	720	763	37	176.5	20	150	14.5	31

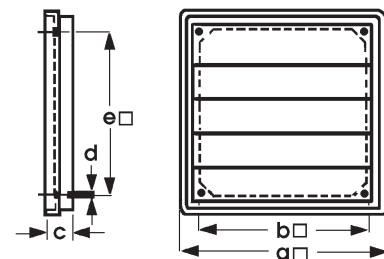
Accessories Dimensions

Discharge Guard
'K' factor loss 0.25



Stock Ref	a	b	c	Ød
10502325	397	64	351	8
10502375	449	64	403	8
10502450	501	64	455	8
10502525	553	64	507	8
10502630	808	150	735	8
10502800	1010	140	-	8

Louvre Shutter

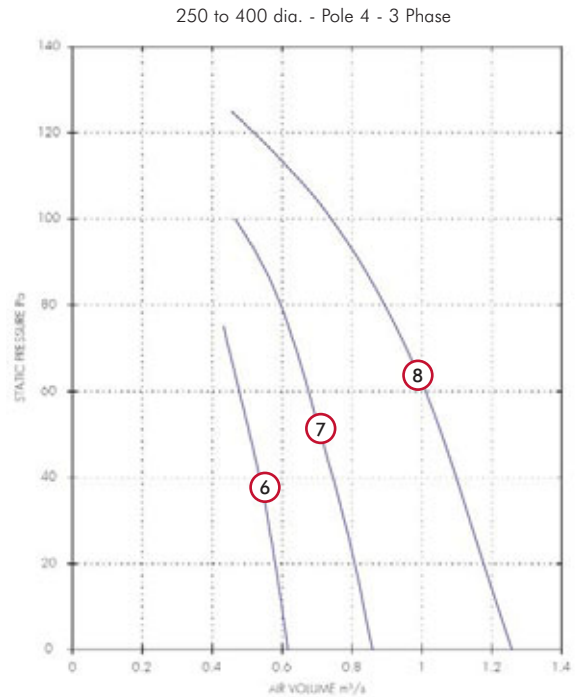
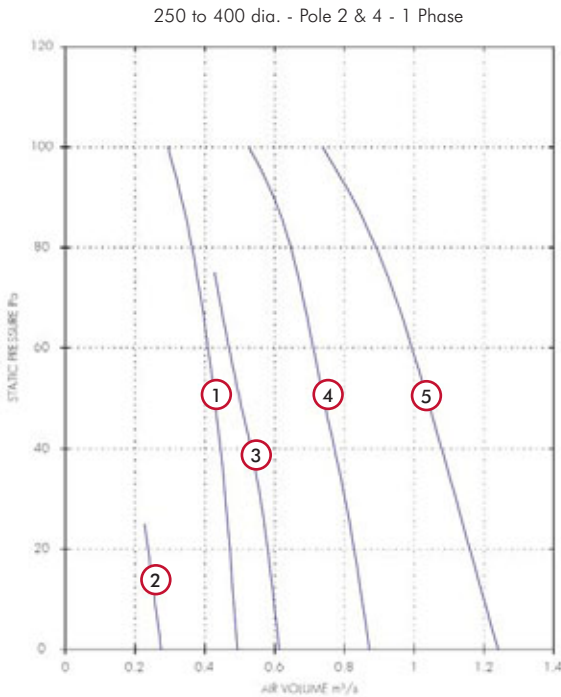


Stock Ref	a	b	c	Ød
LS250	294	265	25	6
LS315	344	276	26	6
LS355	398	312	26	6
LS400	458	365	26	6
LS450	499	395	31	6
LS500	544	444	31	6
LS560	605	533	31	6
LS630	694	627	31	6
LS710	790	722	43	6

If a discharge guard is required with a louvre shutter the next size up discharge guard should be selected.

Vent-Axia Sabre® Plate Mounted Sickle Fans (VSP)

Performance Curves



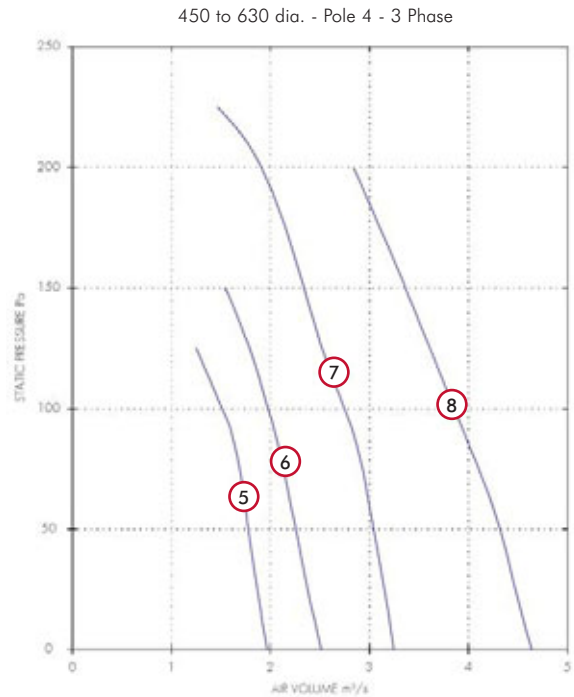
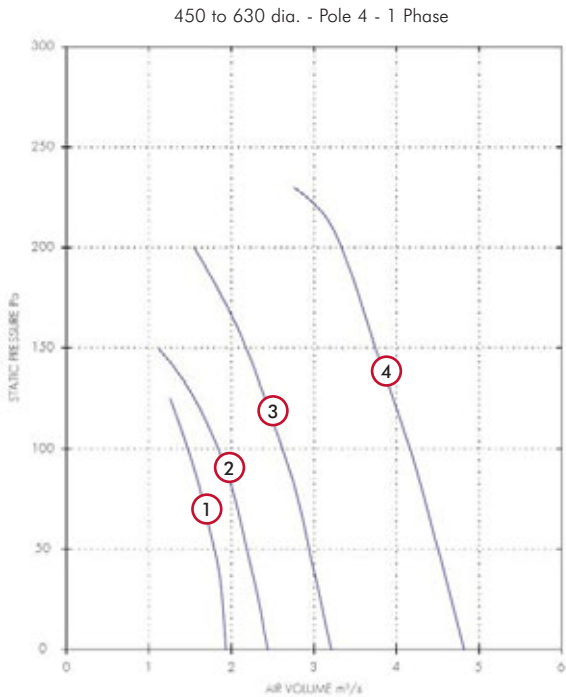
Performance Guide

Dia.	Phase	Stock Ref	Poles	Performance Curves	IP	m³/s at Pa				Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
						0	25	50	75					100
250	1	VSP25012	2	①	IP44	0.49	0.47	0.43	0.38	0.3	0.14	0.84	0.59	57
250	1	VSP25014	4	②	IP44	0.28	0.23				0.14	0.4	0.24	57
315	1	VSP31514	4	③	IP54	0.61	0.57	0.5	0.43		0.13	1.5	0.59	49
315	3	VSP31534	4	⑥	IP54	0.62	0.57	0.51	0.43		0.12	1	0.29	48
355	1	VSP35514	4	④	IP54	0.87	0.82	0.74	0.67	0.53	0.20	2.5	0.9	50
355	3	VSP35534	4	⑦	IP54	0.86	0.79	0.71	0.62	0.47	0.18	1	0.35	48
400	1	VSP40014	4	⑤	IP54	1.24	1.14	1.04	0.92	0.74	0.29	2.9	1.35	49
400	3	VSP40034	4	⑧	IP54	1.26	1.16	1.06	0.93	0.74	0.17	1.35	0.47	52

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia	Phase	Stock Ref	Poles	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
250	1	VSP25012	2	73	79	77	72	68	67	63	57	57
250	1	VSP25014	4	25	42	43	50	51	53	50	40	40
315	1	VSP31514	4	70	68	66	61	60	61	58	51	49
315	3	VSP31534	4	67	68	63	60	60	60	56	49	48
355	1	VSP35514	4	70	70	68	64	65	66	62	54	50
355	3	VSP35534	4	65	68	63	62	63	63	60	54	48
400	1	VSP40014	4	70	72	65	64	65	64	63	56	49
400	3	VSP40034	4	64	72	64	66	66	63	62	53	52

Performance Curves



Performance Guide

Dia.	Phase	Stock Ref	Performance Curves	Poles	r.p.m.	IP	Rating	m³/s at Pa								Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
								0	25	50	75	100	125	150	200					225
450	1	VSP45014	①	4	1310	IP54	1.94	1.89	1.74	1.65	1.48	1.26					0.61	7	2.8	59
450	3*	VSP45034	⑤	4	1360	IP54	1.97	1.87	1.78	1.69	1.52	1.25					0.38	4	1.05	57
500	1	VSP50014	②	4	1250	IP54	2.45	2.33	2.17	2.05	1.84	1.65	1.11				0.78	7.1	3.4	55
500	3*	VSP50034	⑥	4	1330	IP54	2.51	2.38	2.26	2.14	1.98	1.79	1.55				0.49	5.2	1.45	58
560	1	VSP56014	③	4	1350	IP54	3.21	3.08	2.92	2.81	2.62	2.41	2.18	1.55			1.10	15	5.1	66
560	3*	VSP56034	⑦	4	1280	IP54	3.25	3.15	3.04	2.93	2.75	2.52	2.34	1.91	1.47		0.65	7	2.4	63
630	1	VSP63014	④	4	1370	IP54	4.83	4.66	4.51	4.35	4.17	3.95	3.73	3.33	2.78		1.75	21	7.7	69
630	3*	VSP63034	⑧	4	1380	IP54	4.64	4.48	4.32	4.11	3.86	3.61	3.36	2.84			1.15	9	3.1	66

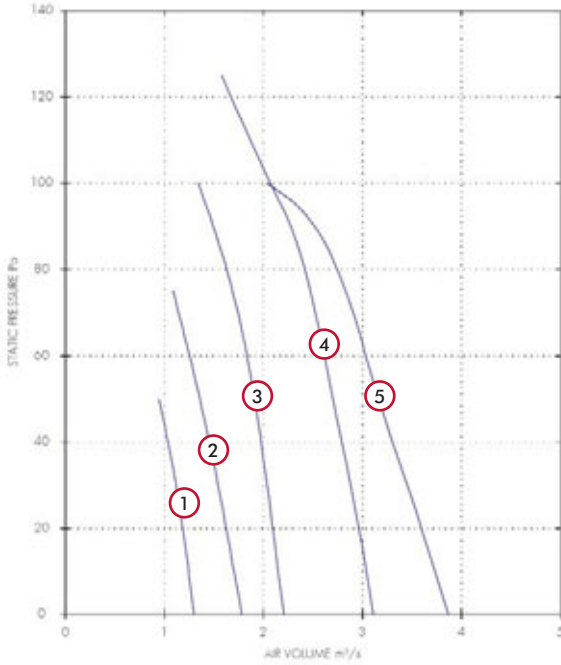
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia	Phase	Stock Ref	Poles	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
450	1	VSP45014	4	69	81	72	72	74	70	63	56	59
450	3	VSP45034	4	63	76	67	68	69	70	66	59	57
500	1	VSP50014	4	80	78	72	70	71	69	63	57	55
500	3	VSP50034	4	76	77	74	73	75	72	65	58	58
560	1	VSP56014	4	73	76	80	76	79	78	74	67	66
560	3	VSP56034	4	83	80	74	74	77	75	70	61	63
630	1	VSP63014	4	88	85	82	82	82	80	75	68	69
630	3	VSP63034	4	84	83	78	77	79	79	74	67	66

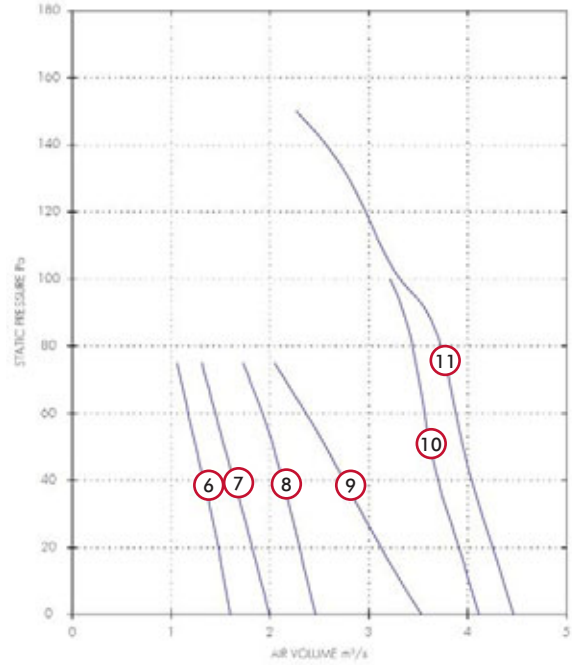
Vent-Axia Sabre® Plate Mounted Sickle Fans (VSP)

Performance Curves

450 to 710 dia. - Pole 6 - 1 Phase



450 to 710 dia. - Pole 6 & 8 - 3 Phase



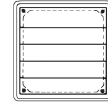
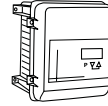
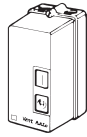
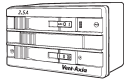
Performance Guide

Dia.	Phase	Stock Ref	Performance			IP Rating	m³/s at Pa							Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m		
			Curves	Poles	r.p.m.		0	25	50	75	100	125	150						
450	1	VSP45016	1	6	910	IP54	1.3	1.15	0.95							0.19	1.95	0.84	50
450	3*	VSP45036	6	6	1030	IP54	1.6	1.45	1.25	1.07						0.38	1.35	0.68	51
500	1	VSP50016	2	6	890	IP54	1.78	1.59	1.36	1.09						0.29	2.5	1.25	47
500	3*	VSP50036	7	6	980	IP54	2	1.78	1.54	1.31						0.49	1.85	0.89	53
560	1	VSP56016	3	6	920	IP54	2.21	2.07	1.91	1.69	1.34					0.51	5.3	2.3	58
560	3*	VSP56036	8	6	880	IP54	2.46	2.26	2.04	1.73						0.65	2.3	1.25	53
630	1	VSP63016	4	6	900	IP54	3.11	2.93	2.7	2.48	2.07	1.58				0.78	7.5	3.5	58
630	3*	VSP63036	11	6	1140	IP54	4.47	4.2	3.96	3.78	3.31	2.89	2.27		1.15	6	2	63	
710	1	VSP71016	5	6	790	IP54	3.87	3.53	3.17	2.83	2.03					0.76	10	3.4	59
710	3*	VSP71036	10	6	900	IP54	4.11	3.86	3.63	3.48	3.22					0.88	6.1	1.65	59
710	3*	VSP71038	9	8	690	IP54	3.53	3.03	2.57	2.05						0.62	2	1.05	58

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia	Phase	Stock Ref	Poles	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
450	1	VSP45016	6	64	72	64	62	64	61	54	48	50
450	3	VSP45036	6	73	68	65	64	65	63	56	48	51
500	1	VSP50016	6	64	67	66	64	63	61	56	48	47
500	3	VSP50036	6	72	71	69	68	71	68	60	53	53
560	1	VSP56016	6	77	75	74	71	71	69	64	56	58
560	3	VSP56036	6	77	70	67	65	68	64	57	49	53
630	1	VSP63016	6	63	70	64	66	69	64	56	49	58
630	3	VSP63036	6	72	80	80	76	77	75	70	62	63
710	1	VSP71016	6	71	76	76	73	73	69	63	55	59
710	6	VSP71036	6	69	81	76	71	75	70	64	57	59
710	3	VSP71038	8	72	69	66	64	66	64	56	48	58

Accessories



Stock Ref.	Electronic controller	5 Step Auto transformer	D.O.L. starters & overload	*eDemand Controller		Louvre shutter	Discharge guard
	Stock Ref.	Stock Ref.	Stock Ref.	Voltage Control	3 Phase Inverter	Stock Ref.	Stock Ref.
VSP25012	W10303102M	-	444744 + 444699	444164	-	LS250	10502325
VSP25014	W10303102M	10314103	444744 + 444697	444164	-	LS250	10502325
VSP31514	W10303102M	10314103	444744 + 444699	444164	-	LS315	10502325
VSP31534	-	10314301	444747 + 444697	444166	444172	LS315	10502325
VSP35514	W10303102M	10314103	444744 + 444700	444164	-	LS355	10502375
VSP35534	-	10314301	444747 + 444697	444166	444172	LS355	10502375
VSP40014	W10303102M	10314103	444744 + 444700	444164	-	LS400	10502450
VSP40034	-	10314301	444747 + 444698	444166	444172	LS400	10502450
VSP45014	10303103A	10314103	444744 + 444702	444164	-	LS450	10502525
VSP45034	-	10314301	444744 + 444699	444166	444172	LS450	10502525
VSP50014	10303106A	10314105	444747 + 444700	444164	-	LS500	10502525
VSP50034	-	10314304	444747 + 444699	444166	444172	LS500	10502525
VSP56014	10303106A	10314107	444744 + 444702	444164	-	LS560	10502630
VSP56034	-	10314304	444744 + 444700	444166	444172	LS560	10502630
VSP63014	-	10314113	444747 + 444701	444165	-	LS630	10502630
VSP63034	-	10314304	444747 + 444699	444166	444173	LS630	10502630
VSP45016	W10303102M	10314103	444744 + 444703	444164	-	LS450	10502525
VSP45036	-	10314301	444744 + 444702	444166	444172	LS450	10502525
VSP50016	W10303102M	10314103	444747 + 444702	444164	-	LS500	10502525
VSP50036	-	10314301	444747 + 444700	444166	444172	LS500	10502525
VSP56016	10303103A	10314103	444744 + 444705	444164	-	LS560	10502630
VSP56036	-	10314301	444744 + 444703	444166	444172	LS560	10502630
VSP63016	10303106A	10314105	444747 + 444702	444164	-	LS630	10502630
VSP63036	-	10314304	444747 + 444701	444166	444172	LS630	10502630
VSP71016	10303106A	10314105	444744 + 444702	444164	-	LS710	10502800
VSP71036	-	10314304	444747 + 444701	444166	444172	LS710	10502800
VSP71038	-	10314301	444747 + 444700	444166	444172	LS710	10502800

*For full range of speed controller options & inverters, see Accessories & Controllers Section

NOTE:- When low noise levels are required a 5-step auto transformer is recommended.

NOTE:- All * models are supplied with 2 speed delta/star connection motors, as standard. [Sizes 450 to 630 are 4/6 Pole].

Guards: Some installations may occur where additional safety parts are needed, to ensure safety in operation. For example, the unit may be fitted at the inlet or outlet end of a ducted ventilation system, thereby exposing the impeller/motor to unguarded access. In this event, the installer must fit a safety guard complying to current regulations. These guards are available as an optional extra.

Vent-Axia Sabre Sickle Short Case Fans (VSC)

Features and Benefits

- One shot die cast impeller, dynamically balanced for smoother operation
- External Rotor Motors on all models for compact efficient design
- All models are speed controllable and can be wired for reverse running
- Thermal Overload Protection for motor protection
- Maintenance free sealed for life bearings
- 2 Year Guarantee

Sabre Case Mounted Sickle Fans

SABRE Sickle bladed fans are the latest addition to the Vent-Axia range offering improved pressure characteristics over axial units and lower sound levels. The advanced blade design and purpose built motor ensure excellent reliability and speed control.

Construction

The Black Sabre range share the same case lengths as the EUROSERIES Cased axial range making them fully interchangeable and total compatibility with the full range of Vent-Axia Accessories. The strong and compact short case is constructed from rolled steel plate, and protected with a tough, epoxy paint finish. Casing dimensions are to DIN 24151 and flange dimensions are to ISO 6580. Manufacture is controlled to BS EN ISO 9001. The compact motor/impeller unit is robustly supported within the casing by electro welded and epoxy coated steel rod mounting supports for ease of installation and service access. Suitable for all weather outdoor environments.

Impellers

The motors and impellers are factory matched, statically and dynamically balanced to ISO 1940, part 1 Quality Class G.6.3.

Motors

The external rotor motors are specifically designed and styled for this range of fan. Ball bearings are greased for life. Sizes 315 - 710 are protected to IP54, against dust and moisture complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling with Motor insulation to Class 'F' (from -40°C to + 70°C). Speed controlled sizes 450 to 710 6 & 8 pole motors are only suitable for operating temperatures of up to 40°C.

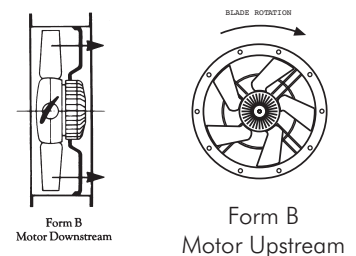
Electrical

The Sabre range is available for either single phase 220-240V 50 Hz capacitor start and run or three phase 380-415V 50Hz. Motors are fitted with Thermal Overload Protection which should be wired into all controller circuits and into starter contactors to prevent motor damage due to overloading / overheating. All units are suitable for speed control by either electronic, voltage reduction or frequency inverters.

Terminal Box

An IP54 terminal box is supplied with all models with M20 x 1.5mm gland entry offering protection against dust and water.

Form of Running



Cased mounted fans (ex-stock) are supplied for extract use (Form 'B' running).

Performance

The fan performance, is in accordance with tests to ISO 5801.

Sound Levels

Fan sound levels, measured in a reverberant chamber in accordance with ISO 3744 Part 1. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10-12 Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

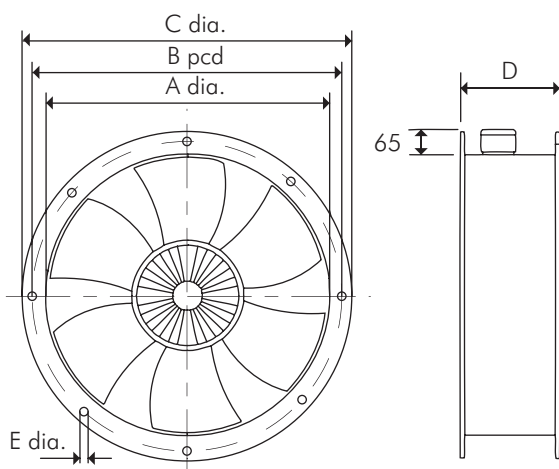
Accessories

A full range of accessories is available with the Sabre Short Case Sickle fans:

- Electronic Speed Controllers.
- Auto Transformer Speed Controllers. Inverter Speed Controller, where permissible.
- D.O.L. Starters.
- Ancillary Packs.
- Flexible Connections.
- Mounting Feet.
- Coupling Flanges.
- Anti-Vibration Mounts.
- Attenuators.



Fan Dimensions (mm)

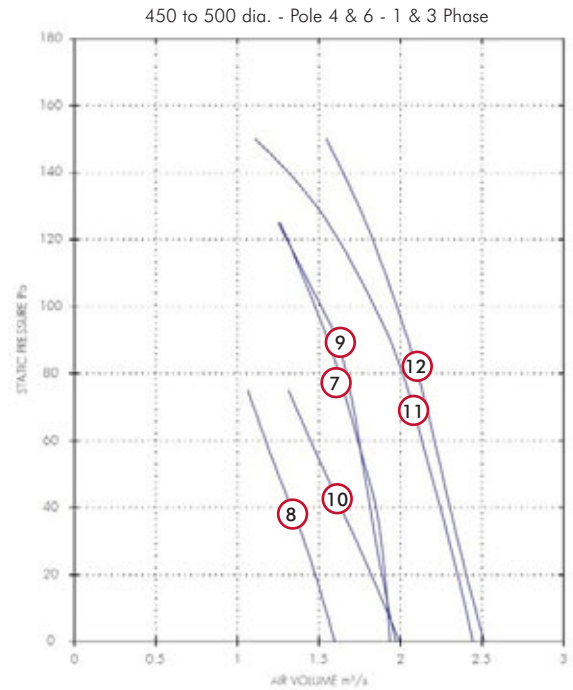
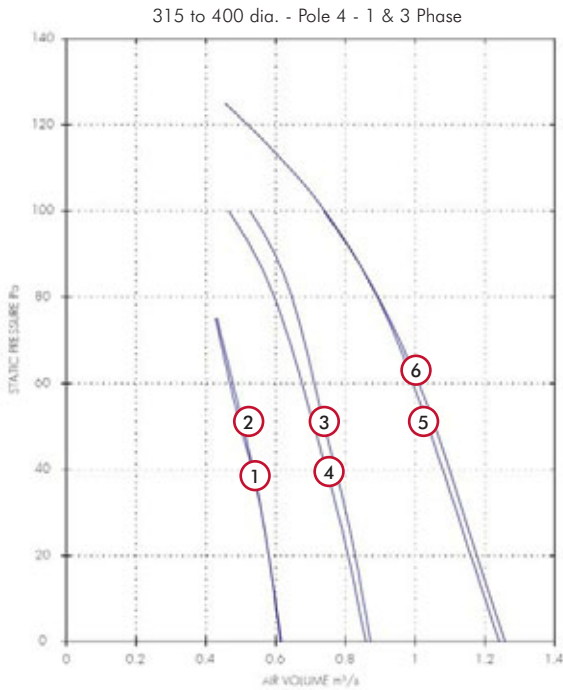


Dia	ØA	ØB	ØC	D	ØE	n	Kg
315	316.5	356	382	135	9.5	8	6.1
355	356	395	421	135	9.5	8	7.1
400	400	438	466	155	9.5	12	8.1
450	451	487	515	160	9.5	12	13.4
500	503	541	567	166	9.5	12	15.7
560	559	605	635	210	11.5	16	20.1
630	634	674	707	220	11.5	16	44
710	711	751	785	260	11.5	16	31

n = number of holes

Vent-Axia Sabre[®] Sickle Short Case Fans (VSC)

Performance Curves



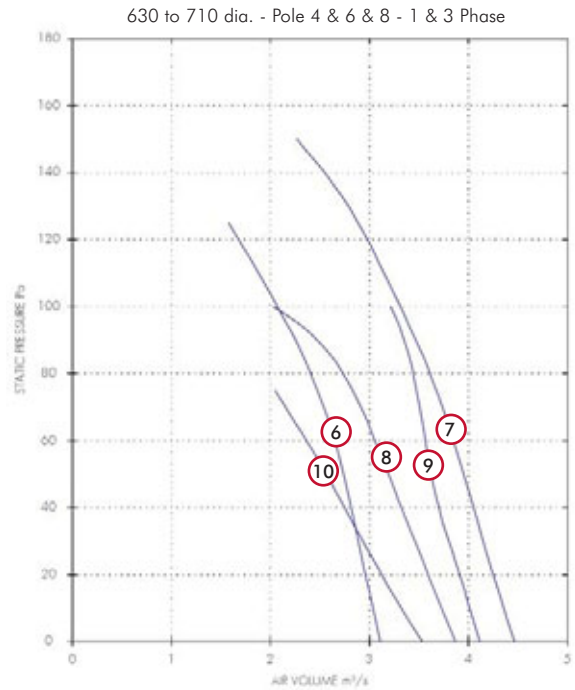
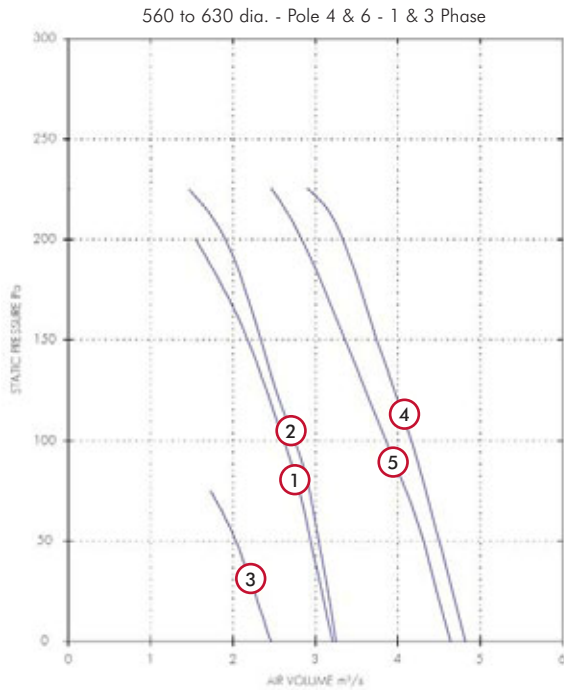
Performance Guide

Motor		IP	Curve	m³/s at Pa										Motor	S.C.	F.L.C	dBA	
Dia.	Phase			Stock Ref	Poles	r.p.m	Rating	Ref.	0	25	50	75	100					125
315	1	VSC31514	4	1400	IP54	1	0.61	0.57	0.5	0.43					0.13	1.5	0.59	49
315	3	VSC31534	4	1410	IP54	2	0.62	0.57	0.51	0.43					0.12	1	0.29	48
355	1	VSC35514	4	1400	IP54	3	0.87	0.82	0.74	0.67	0.53				0.2	2.5	0.9	50
355	3	VSC35534	4	1360	IP54	4	0.86	0.79	0.71	0.62	0.47				0.18	1	0.35	48
400	1	VSC40014	4	1280	IP54	5	1.24	1.14	1.04	0.92	0.74				0.29	2.9	1.35	49
400	3	VSC40034	4	1250	IP54	6	1.26	1.16	1.06	0.93	0.74	0.46			0.17	1.35	0.47	52
450	1	VSC45014	4	1310	IP54	7	1.94	1.89	1.8	1.65	1.48	1.26			0.61	7	2.8	59
450	3	VSC45036	6	1030	IP54	8	1.6	1.45	1.25	1.07					0.38	1.35	0.68	51
450	3	VSC45034	4	1360	IP54	9	1.97	1.87	1.78	1.69	1.52	1.25			0.38	4	1.05	57
500	3	VSC50036	6	980	IP54	10	2	1.78	1.54	1.31					0.49	1.85	0.89	53
500	1	VSC50014	4	1250	IP54	11	2.45	2.33	2.19	2.05	1.84	1.56	1.11		0.78	7.1	3.4	55
500	3	VSC50034	4	1330	IP54	12	2.51	2.38	2.26	2.14	1.98	1.79	1.55		0.49	5.2	1.45	58

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia	Phase	Stock Ref	Poles	63	125	250	500	1k	2k	4k	8k	dBA @3m
315	1	VSC31514	4	70	68	66	61	60	61	58	51	49
315	3	VSC31534	4	67	68	63	60	60	60	56	49	48
355	1	VSC35514	4	70	70	68	64	65	66	62	54	50
355	3	VSC35534	4	65	68	63	62	63	63	60	54	48
400	1	VSC40014	4	70	72	65	64	65	64	63	56	49
400	3	VSC40034	4	64	72	64	66	66	63	62	53	52
450	1	VSC45014	4	69	81	72	72	74	70	63	56	59
450	3	VSC45034	4	63	76	67	68	69	70	66	59	57
450	3	VSC45036	6	73	68	65	64	65	63	56	48	51
500	1	VSC50014	4	80	78	72	70	71	69	63	57	55
500	3	VSC50034	4	76	77	74	73	75	72	65	58	58
500	3	VSC50036	6	72	71	69	68	71	68	60	53	57

Performance Curves



Performance Guide

Motor		IP	Curve	m³/s at Pa										Motor	S.C.	F.L.C	dBA	
Dia.	Phase			Stock Ref	Poles	r.p.m	Rating	Ref.	0	50	75	100	125					150
560	1	VSC56014	4	1350	IP54	1	3.21	2.94	2.81	2.62	2.41	2.18	1.55		1.1	15	5.1	66
560	3	VSC56034	4	1280	IP54	2	3.25	3.04	2.93	2.75	2.52	2.34	1.91	1.47	0.65	7	2.4	63
560	3	VSC56036	6	880	IP54	3	2.46	2.04	1.73						0.65	2.3	1.25	53
630	1	VSC63014	4	1370	IP54	4	4.83	4.51	4.34	4.17	3.96	3.75	3.34	2.92	1.75	21	7.7	69
630	3	VSC63034	4	1380	IP54	5	4.64	4.32	4.1	3.86	3.61	3.36	2.84	2.47	1.15	9	3.1	66
630	1	VSC63016	4	900	IP54	6	3.11	2.74	2.48	2.07	1.58				0.78	7.5	3.5	58
630	3	VSC63036	6	1140	IP54	7	4.47	3.96	3.68	3.31	2.89	2.27			1.15	6	2	63
710	1	VSC71016	6	790	IP54	8	3.87	3.19	2.83	2.03					0.76	10	3.4	59
710	3	VSC71036	6	900	IP54	9	4.11	3.63	3.48	3.22					0.88	6.1	1.65	59
710	3	VSC71038	8	690	IP54	10	3.53	2.57	2.05						0.62	2	1.05	58

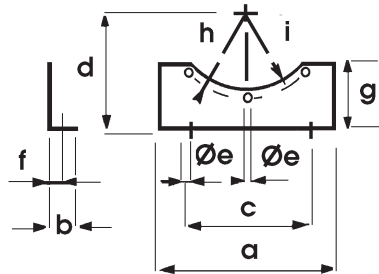
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia	Phase	Stock Ref	Poles	63	125	250	500	1k	2k	4k	8k	dBA @3m
560	1	VSC56014	4	73	76	80	76	79	78	74	67	66
560	3	VSC56034	4	83	80	74	74	77	75	70	61	63
630	1	VSC63014	4	63	70	64	66	69	64	56	49	58
630	3	VSC63034	4	84	83	78	77	79	79	74	67	66
450	3	VSC45036	6	73	68	65	64	65	63	56	48	51
500	3	VSC50036	6	72	71	69	68	71	68	60	53	53
560	3	VSC56036	6	77	70	67	65	68	64	57	49	53
630	1	VSC63016	6	63	70	64	66	69	64	56	49	58
630	3	VSC63036	6	72	80	80	75	77	75	70	62	63
710	1	VSC71016	6	71	76	76	73	73	69	63	55	59
710	3	VSC71036	6	69	81	76	71	75	70	64	57	59
710	3	VSC71038	8	72	69	66	64	66	64	56	48	58

Vent-Axia Sabre[®] Sickle Short Case Fans (VSC)

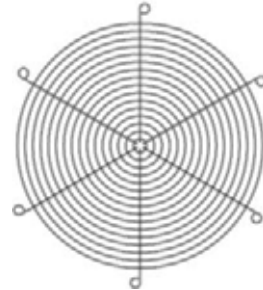
Accessories Dimensions (mm)

Mounting Feet (Pack of 2)



Stock Ref.	a	b	c	d	$\varnothing e$	f	g	h	i
MFZ315	315	40	265	200	10	20	71	178	166
MFZ355	350	40	300	225	10	20	81.5	197.5	186
MFZ400	250	40	220	250	10	20	78	219	205
MFZ450	275	40	240	275	10	20	82	243.5	230
MFZ500	315	50	280	315	1	25	100	270.5	255
MFZ560	355	50	320	355	12	25	97	302.5	285
MFZ630	400	50	360	400	12	25	108.5	337	320
MFZ710	465	50	415	450	12	25	118.5	375.5	362

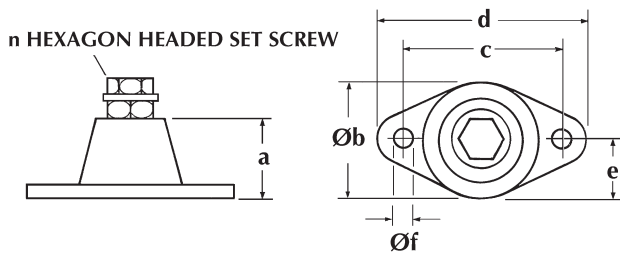
Inlet Wire Guard 'K' factor loss 0.25



Stock Ref. No.	Dia
WGZ315	375
WGZ355	414
WGZ400	461
WGZ450	506
WGZ500	560
WGZ560	626.5
WGZ630	695.5
WGZ710	772.5

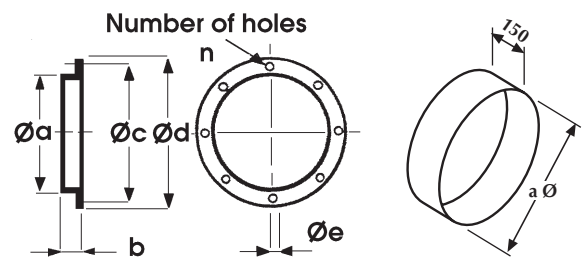
For more information on the 'K' factor, refer to General Information Section

Anti-Vibration Mounts (Pack of 4) - All Models



Stock Ref.	a	$\varnothing b$	c	d	e	$\varnothing f$	n	load kg
10523033	27	37	54	67	18.5	7	M8	23

Coupling Flange



Stock Ref.	$\varnothing a$	b	$\varnothing c$	$\varnothing d$	$\varnothing e$	$\varnothing f$	n
CFZ315	313	40	356	382	10	319	8
CFZ355	353	40	395	421	10	359	8
CFZ400	398	45	438	466	10	404	12
CFZ450	448	45	487	515	10	454	12
CFZ500	498	45	541	567	10	504	12
CFZ560	558	45	605	635	12	564	16
CFZ630	628	45	674	707	12	634	16
CFZ710	708	50	751	785	12	714	16

Accessories

Fan Stock Ref.	Electronic controller	Auto transformer	D.O.L starters & overload	*eDemand Controller	
	Stock Ref.	Stock Ref.	Stock Ref.	Voltage Control Stock Ref.	3 Phase Inverter Stock Ref.
VSC31514	W10303102M	10314103	444744 + 444699	444164	-
VSC35514	W10303102M	10314103	444744 + 444700	444164	-
VSC35534	-	10314301	444747 + 444697	444166	444172
VSC40014	W10303102M	10314103	444744 + 444700	444164	-
VSC40034	-	10314301	444747 + 444698	444166	444172
VSC45014	10303103A	10314103	444744 + 444702	444164	-
VSC45034	-	10314301	444744 + 444699	444166	444172
VSC50014	10303106A	10314105	444747 + 444700	444164	-
VSC50034*	-	10314304	444747 + 444699	444166	444172
VSC56014	10303106A	10314107	444744 + 444702	444164	-
VSC56034*	-	10314304	444744 + 444700	444166	444172
VSC63014	-	10314113	444747 + 444701	444165	-
VSC63034*	-	10314304	444747 + 444699	444166	444173
VSC45036*	-	10314301	444744 + 444702	444166	444172
VSC50036*	-	10314301	444747 + 444700	444166	444172
VSC56036*	-	10314301	444744 + 444703	444166	444172
VSC63016*	10303106A	10314105	444747 + 444702	444164	-
VSC63036*	-	10314304	444747 + 444701	444166	444172
VSC71016	10303106A	10314105	444744 + 444702	444164	-
VSC71036*	-	10314304	444747 + 444701	444166	444172
VSC71038*	-	10314304	444747 + 444700	444166	444172

*For full range of speed controller options & inverters, see Accessories & Controllers Section

Fan Stock Ref.	Mounting feet wire (pack of 2) Stock Ref.	Inlet wire guard Stock Ref.	Coupling flange Stock Ref.	Axial ancillary pack Stock Ref.	Cased axial attenuator Stock Ref.	Cased axial attenuator pod 1D Stock Ref.	Cased axial pod 2D Stock Ref.
VSC31514	MFZ315	WGZ315	CFZ315	APZ315	ACZ3151D	ACZ3151DP	ACZ3152DP
VSC35514	MFZ355	WGZ355	CFZ355	APZ355	ACZ3551D	ACZ3551DP	ACZ3552DP
VSC35534	MFZ400	WGZ400	CFZ400	APZ400	ACZ4001D	ACZ4001DP	ACZ4002DP
VSC40014	MFZ400	WGZ400	CFZ400	APZ400	ACZ4001D	ACZ4001DP	ACZ4002DP
VSC40034	MFZ450	WGZ450	CFZ450	APZ450	ACZ4501D	ACZ4501DP	ACZ4502DP
VSC45014	MFZ450	WGZ450	CFZ450	APZ450	ACZ4501D	ACZ4501DP	ACZ4502DP
VSC45034	MFZ500	WGZ500	CFZ500	APZ500	ACZ5001D	ACZ5001DP	ACZ5002DP
VSC50014	MFZ500	WGZ500	CFZ500	APZ500	ACZ5001D	ACZ5001DP	ACZ5002DP
VSC50034*	MFZ560	WGZ560	CFZ560	APZ560	ACZ5601D	ACZ5601DP	ACZ5602DP
VSC56014	MFZ560	WGZ560	CFZ560	APZ560	ACZ5601D	ACZ5601DP	ACZ5602DP
VSC56034*	MFZ630	WGZ630	CFZ630	APZ630	ACZ6301D	ACZ6301DP	ACZ6302DP
VSC63014	MFZ630	WGZ630	CFZ630	APZ630	ACZ6301D	ACZ6301DP	ACZ6302DP
VSC63034*	MFZ450	WGZ450	CFZ450	APZ450	ACZ4501D	ACZ4501DP	ACZ4502DP
VSC45036*	MFZ450	WGZ450	CFZ450	APZ450	ACZ4501D	ACZ4501DP	ACZ4502DP
VSC50036*	MFZ500	WGZ500	CFZ500	APZ500	ACZ5001D	ACZ5001DP	ACZ5002DP
VSC56036*	MFZ560	WGZ560	CFZ560	APZ560	ACZ5601D	ACZ5601DP	ACZ5602DP
VSC63016*	MFZ630	WGZ630	CFZ630	APZ630	ACZ6301D	ACZ6301DP	ACZ6302DP
VSC63036*	MFZ630	WGZ630	CFZ630	APZ630	ACZ6301D	ACZ6301DP	ACZ6302DP
VSC71016	MFZ710	WGZ710	CFZ710	APZ710	ACZ7101D	ACZ7101DP	ACZ7102DP
VSC71036*	MFZ710	WGZ710	CFZ710	APZ710	ACZ7101D	ACZ7101DP	ACZ7102DP
VSC71038*	MFZ710	WGZ710	CFZ710	APZ710	ACZ7101D	ACZ7101DP	ACZ7102DP

NOTE:- When low noise levels are required a 5-step auto transformer is recommended.

NOTE:- All * models are supplied with 2 speed delta/star connection motors, as standard. [Sizes 450 to 630 are 4/6 Pole].

Guards: Some installations may occur where additional safety parts are needed, to ensure safety in operation. For example, the unit may be fitted at the inlet or outlet end of a ducted ventilation system, thereby exposing the impeller/motor to unguarded access. In this event, the installer must fit a safety guard complying to current regulations. These guards are available as an optional extra.

NEW RANGE Long Case Axial Fans (LCA)

Features and Benefits

- Motors protected to IP55
- Motor insulation Class 'F'
- Maximum ambient temp. 54°C
- Speed controllable via transformer or inverter
- IP55 terminal box
- Adjustable factory set die cast aluminium impeller
- Suitable for relative humidity levels up to 95% R.H
- Manufactured to BS EN ISO 9001
- Performance tested to BS 848 parts 1, 2 and ISO 5801
- 2 Year Guarantee

The Long Case Axial range of fans incorporates manually adjustable pitch impellers which provide a comprehensive range of duties offering high performance and pressure characteristics.

Available in thirteen sizes ranging from 250 to 1250mm diameter and performances from 0.24m³/s to 36m³/s with pressure development up to 1500Pa. The casing is constructed from rolled steel plate complete with flanges and protected with a tough, galvanised finish.

The Long Case Axial range has a range of accessories available which include: Axial Ancillary Pack, Attenuators, Mounting Feet, Wire Inlet Guard, Coupling Flange & Speed Controllers.

Sound Levels

All measurements of the sound that the fans generate have been taken strictly in accordance with BS 848 part 2, test method 1. Published sound power level spectra figures are dBW with a reference of 10⁻¹² Watts (1 Pico watt).

Motors

The motors are specially selected for optimum performance and efficiency. Ball bearings are greased for life and allow the fan to be installed at any angle. Suitable for continuous operation in relative humidity up to 95% Motors are protected to IP55 against dust and water jets complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling. Motor insulation is Class 'F' (from -35°C to +54°C). Star/delta starting is recommended for motor output above 7.5kW.

Axial Impellers

Impeller blades are clamped in a split cast aluminium hub, with a keywayed mild steel insert enabling positive locking of the impeller assembly

to the motor shaft, this also allows manual adjustment of the pitch angle giving a wide selection of performance details.



Terminal Box

To IP55, protected against dust and water jets from any angle, allowing outside applications.

Declaration of Conformity

All models are supplied with an EC Declaration of Conformity as defined by the EC Council Directive on Machinery 98/37/EC. This declares that all the models, on the basis of their design and construction in the form brought onto the market by Vent-Axia, are in accordance with the Machinery Directive.

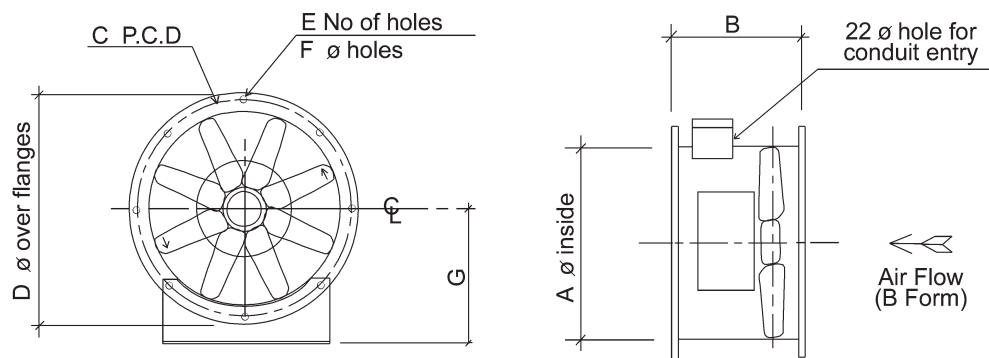
Electrical

Single phase 220-240V 50 Hz permanent capacitor. Three phase 380-415V 50Hz. Protection of the motor must be provided by an overload current sensing device (eg. D.O.L Starter or Star/Delta starter where appropriate) or the guarantee will be invalidated. All models are available with 4 pole motors for 250 up to 1250mm diameter with additional 2 pole motors available from 250 up to 630mm diameter.

All units are manufactured to order with 7 working days delivery (uk mainland).



Fan Dimensions (mm)

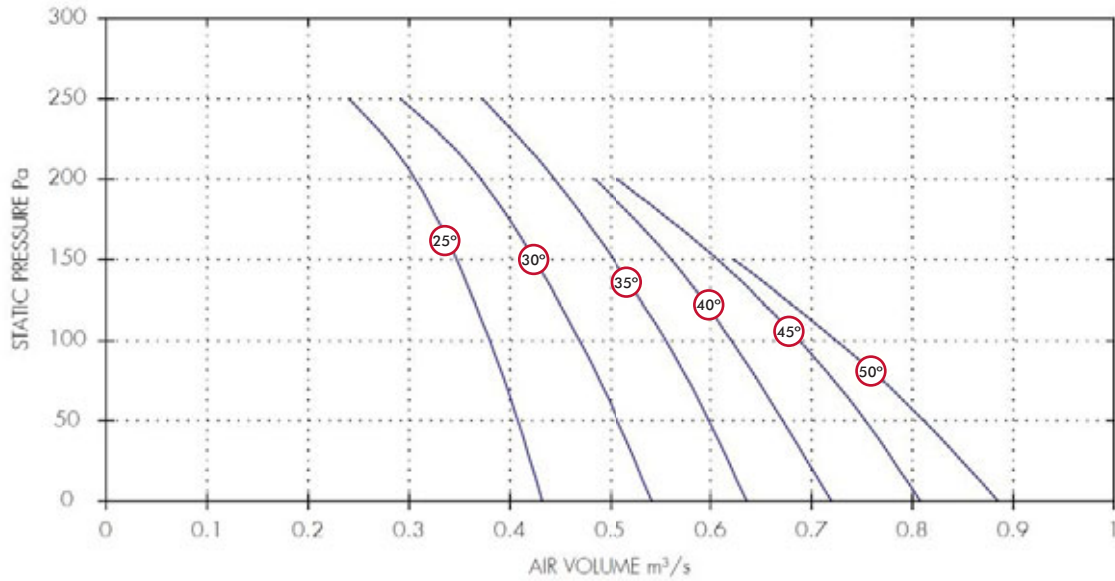


Model No.	Pole	Phase	Pitch Angle	A	B	C	D	E	F	G	Max Weight kg
LCA25	2 & 4	1 & 3	25-50	250	300	295	335	8	10	200	15
LCA31	2 & 4	1 & 3	10-40	315	420	355	385	8	10	224	23
LCA35	2 & 4	1 & 3	10-40	355	420	395	425	8	10	250	25
LCA40	2 & 4	1 & 3	10-40	400	435	450	480	8	12	280	38
LCA45	2 & 4	1 & 3	10-40	450	435	500	530	8	12	315	49
LCA50	2	3	10-31	500	470	560	590	12	12	315	86
LCA50	2	3	32-40	500	565	560	590	12	12	315	86
LCA50	4	1 & 3	10-40	500	470	560	590	12	12	315	86
LCA56	2	3	10-15	560	470	620	650	12	12	355	94
LCA56	2	3	16-24	560	565	620	650	12	12	355	94
LCA56	4	1 & 3	10-40	560	470	620	650	12	12	355	94
LCA63	2	3	10-22	630	565	690	720	12	12	400	96
LCA63	4	1	10-26	630	470	690	720	12	12	400	96
LCA63	4	3	10-40	630	470	690	720	12	12	400	96
LCA71	4	3	10-36	710	470	770	800	16	12	435	92
LCA80	4	3	10-20	800	470	860	890	16	12	480	131
LCA80	4	3	21-34	800	565	860	890	16	12	480	131
LCA90	4	3	10-26	900	565	970	1038	16	14	535	214
LCA90	4	3	28-40	900	700	970	1038	16	14	535	214
LCA100	4	3	10-22	1000	565	1070	1138	16	14	555	274
LCA100	4	3	24-32	1000	700	1070	1138	16	14	555	274
LCA100	4	3	34-40	1000	790	1070	1138	16	14	555	274
LCA125	4	3	20-34	1250	950	1320	1390	20	15	868	903

Long Case Axial Fans (LCA)

Performance Curves

LCA25 - 1 & 3 Phase - 2 Pole



Performance Guide

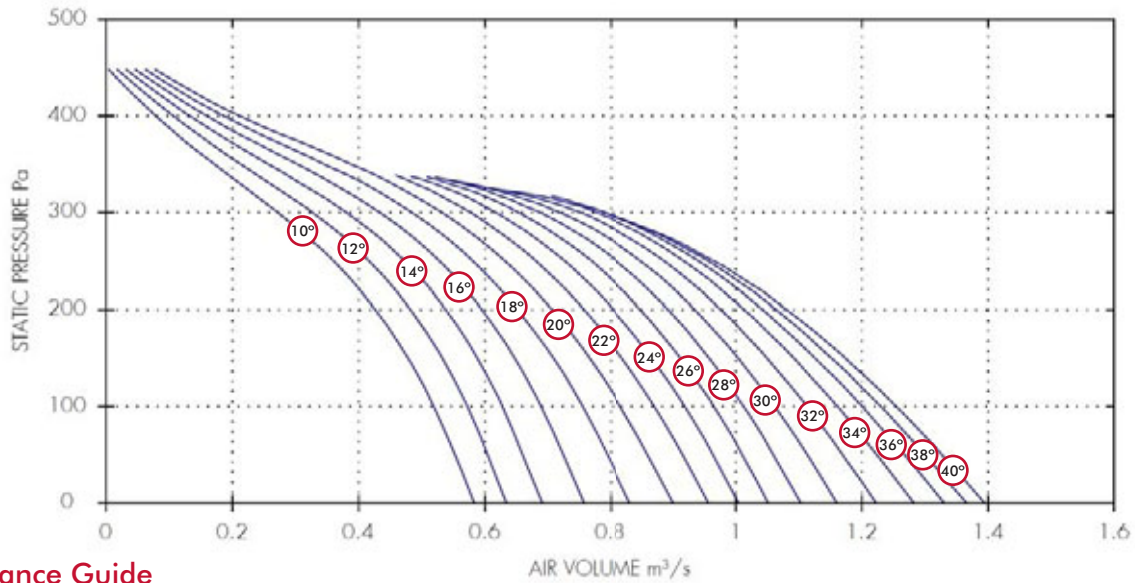
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	50	100	150	200	250		
250	LCA251225	LCA253225	2	2800	IP55	25°	0.43	0.41	0.38	0.35	0.31	0.24	0.37	58
250	LCA251230	LCA253230	2	2800	IP55	30°	0.54	0.51	0.47	0.42	0.37	0.29	0.37	57
250	LCA251235	LCA253235	2	2800	IP55	35°	0.64	0.6	0.56	0.5	0.44	0.37	0.37	58
250	LCA251240	LCA253240	2	2800	IP55	40°	0.72	0.67	0.62	0.56	0.48		0.37	59
250	LCA251245	LCA253245	2	2800	IP55	45°	0.81	0.75	0.69	0.61	0.51		0.37	59
250	LCA251250	LCA253250	2	2800	IP55	50°	0.88	0.81	0.72	0.62			0.37	60

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB								dBA @ 3m
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k	
250	LCA251225	LCA253225	2	Inlet/Outlet	73	74	82	75	73	70	67	64	58	
250	LCA251230	LCA253230	2	Inlet/Outlet	72	73	81	74	72	69	66	63	57	
250	LCA251235	LCA253235	2	Inlet/Outlet	73	74	82	75	73	70	67	64	58	
250	LCA251240	LCA253240	2	Inlet/Outlet	74	75	83	76	74	71	68	65	59	
250	LCA251245	LCA253245	2	Inlet/Outlet	74	75	83	76	74	71	68	65	59	
250	LCA251250	LCA253250	2	Inlet/Outlet	75	76	84	77	75	72	69	66	60	

Performance Curves

LCA31 - 1 & 3 Phase - 2 Pole



Performance Guide

Dia.	1 Phase		3 Phase		Poles	r.p.m	IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Stock Ref	Stock Ref					0	100	200	300	400		
315	LCA311210	LCA313210	LCA313210	LCA313210	2	2800	IP55	10°	0.58	0.52	0.43	0.27	0.08	0.37	65
315	LCA311212	LCA313212	LCA313212	LCA313212	2	2800	IP55	12°	0.63	0.57	0.48	0.33	0.11	0.37	65
315	LCA311214	LCA313214	LCA313214	LCA313214	2	2800	IP55	14°	0.69	0.63	0.54	0.38	0.13	0.37	65
315	LCA311216	LCA313216	LCA313216	LCA313216	2	2800	IP55	16°	0.76	0.69	0.6	0.43	0.16	0.37	63
315	LCA311218	LCA313218	LCA313218	LCA313218	2	2800	IP55	18°	0.83	0.76	0.65	0.48	0.19	0.37	61
315	LCA311220	LCA313220	LCA313220	LCA313220	2	2800	IP55	20°	0.9	0.82	0.71	0.53	0.21	0.37	61
315	LCA311222	LCA313222	LCA313222	LCA313222	2	2800	IP55	22°	0.96	0.87	0.76	0.58		0.37	62
315	LCA311224	LCA313224	LCA313224	LCA313224	2	2800	IP55	24°	1	0.92	0.8	0.62		0.37	63
315	LCA311226	LCA313226	LCA313226	LCA313226	2	2800	IP55	26°	1.05	0.97	0.85	0.65		0.55	63
315	LCA311228	LCA313228	LCA313228	LCA313228	2	2800	IP55	28°	1.1	1.01	0.89	0.69		0.55	63
315	LCA311230	LCA313230	LCA313230	LCA313230	2	2800	IP55	30°	1.16	1.06	0.94	0.72		0.55	64
315	LCA311232	LCA313232	LCA313232	LCA313232	2	2800	IP55	32°	1.22	1.11	0.98	0.75		0.55	66
315	LCA311234	LCA313234	LCA313234	LCA313234	2	2800	IP55	34°	1.28	1.16	1.01	0.78		0.75	66
315	LCA311236	LCA313236	LCA313236	LCA313236	2	2800	IP55	36°	1.33	1.2	1.04	0.79		0.75	66
315	LCA311238	LCA313238	LCA313238	LCA313238	2	2800	IP55	38°	1.37	1.23	1.06	0.79		0.75	66
315	LCA311240	LCA313240	LCA313240	LCA313240	2	2800	IP55	40°	1.39	1.25	1.08			1.1	66

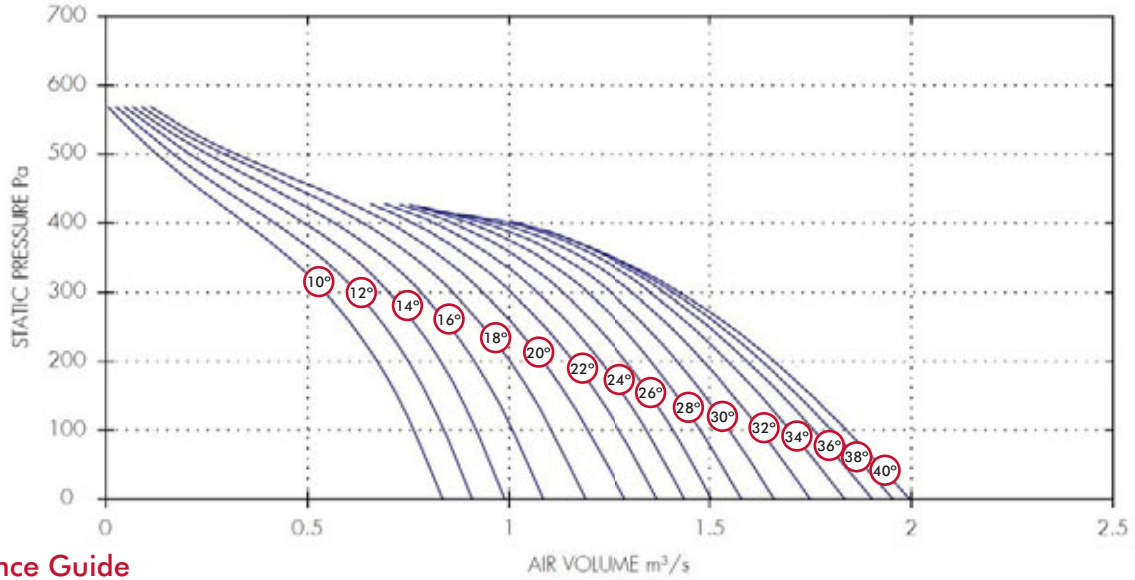
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Poles	Spectrum	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
	Stock Ref	Stock Ref	Stock Ref	Stock Ref											
315	LCA311210	LCA313210	LCA313210	LCA313210	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65
315	LCA311212	LCA313212	LCA313212	LCA313212	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65
315	LCA311214	LCA313214	LCA313214	LCA313214	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65
315	LCA311216	LCA313216	LCA313216	LCA313216	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
315	LCA311218	LCA313218	LCA313218	LCA313218	2	Inlet/Outlet	79	78	78	75	77	76	72	64	61
315	LCA311220	LCA313220	LCA313220	LCA313220	2	Inlet/Outlet	79	78	78	75	77	76	72	64	61
315	LCA311222	LCA313222	LCA313222	LCA313222	2	Inlet/Outlet	80	79	79	76	78	77	73	65	62
315	LCA311224	LCA313224	LCA313224	LCA313224	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
315	LCA311226	LCA313226	LCA313226	LCA313226	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
315	LCA311228	LCA313228	LCA313228	LCA313228	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
315	LCA311230	LCA313230	LCA313230	LCA313230	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
315	LCA311232	LCA313232	LCA313232	LCA313232	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
315	LCA311234	LCA313234	LCA313234	LCA313234	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
315	LCA311236	LCA313236	LCA313236	LCA313236	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
315	LCA311238	LCA313238	LCA313238	LCA313238	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
315	LCA311240	LCA313240	LCA313240	LCA313240	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66

Long Case Axial Fans (LCA)

Performance Curves

LCA35 - 1 & 3 Phase - 2 Pole



Performance Guide

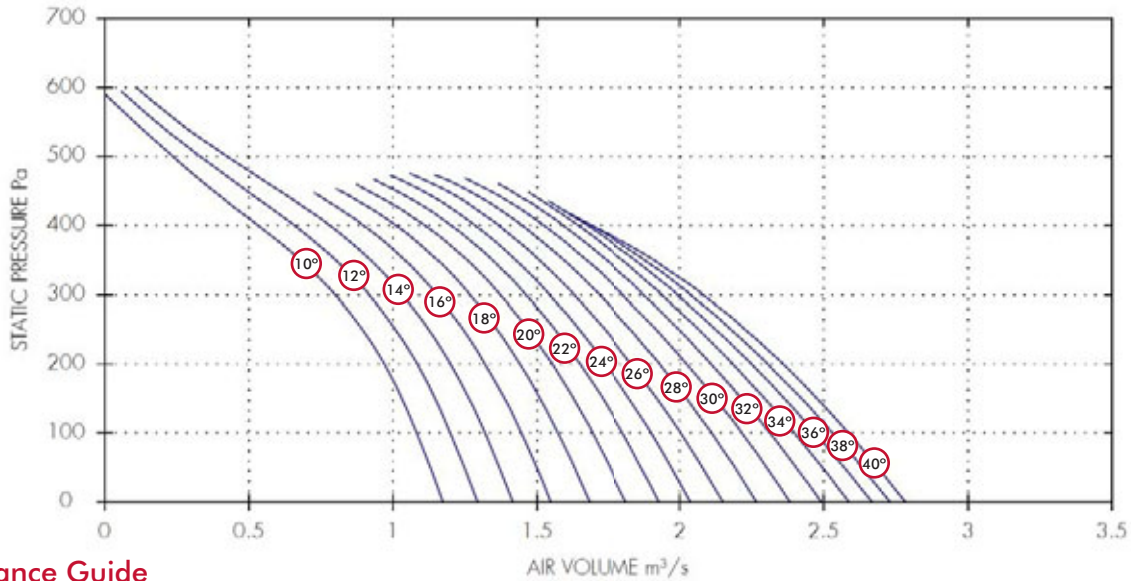
Dia.	1 Phase	3 Phase	Poles	r.p.m	IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Stock Ref					0	100	200	300	400	500		
355	LCA351210	LCA353210	2	2800	IP55	10°	0.84	0.76	0.67	0.54	0.34	0.13	0.37	65
355	LCA351212	LCA353212	2	2800	IP55	12°	0.91	0.84	0.75	0.62	0.42	0.17	0.37	66
355	LCA351214	LCA353214	2	2800	IP55	14°	0.99	0.92	0.83	0.7	0.49	0.21	0.55	66
355	LCA351216	LCA353216	2	2800	IP55	16°	1.08	1.01	0.92	0.78	0.56	0.25	0.55	66
355	LCA351218	LCA353218	2	2800	IP55	18°	1.19	1.1	1	0.86	0.64	0.29	0.55	66
355	LCA351220	LCA353220	2	2800	IP55	20°	1.29	1.2	1.09	0.93	0.7	0.32	0.55	66
355	LCA351222	LCA353222	2	2800	IP55	22°	1.37	1.28	1.16	1	0.76		0.75	61
355	LCA351224	LCA353224	2	2800	IP55	24°	1.44	1.34	1.23	1.07	0.81		0.75	62
355	LCA351226	LCA353226	2	2800	IP55	26°	1.51	1.41	1.29	1.13	0.86		0.75	63
355	LCA351228	LCA353228	2	2800	IP55	28°	1.58	1.48	1.36	1.19	0.9		1.1	63
355	LCA351230	LCA353230	2	2800	IP55	30°	1.66	1.55	1.42	1.25	0.93		1.1	64
355	LCA351232	LCA353232	2	2800	IP55	32°	1.75	1.63	1.49	1.31	0.97		1.1	64
355	LCA351234	LCA353234	2	2800	IP55	34°	1.84	1.7	1.55	1.35	1		1.1	64
355	LCA351236	LCA353236	2	2800	IP55	36°	1.9	1.76	1.59	1.39	1.02		1.5	64
355	LCA351238	LCA353238	2	2800	IP55	38°	1.96	1.8	1.63	1.41			1.5	64
355	-	LCA353240	2	2800	IP55	40°	2	1.84	1.66	1.43			2.2	64

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase	3 Phase	Poles	Spectrum	dB @ 3m								
	Stock Ref	Stock Ref			63	125	250	500	1k	2k	4k	8k	
355	LCA351210	LCA353210	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65
355	LCA351212	LCA353212	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
355	LCA351214	LCA353214	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
355	LCA351216	LCA353216	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
355	LCA351218	LCA353218	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
355	LCA351220	LCA353220	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66
355	LCA351222	LCA353222	2	Inlet/Outlet	79	78	78	75	77	76	72	64	61
355	LCA351224	LCA353224	2	Inlet/Outlet	80	79	79	76	78	77	73	65	62
355	LCA351226	LCA353226	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
355	LCA351228	LCA353228	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63
355	LCA351230	LCA353230	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
355	LCA351232	LCA353232	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
355	LCA351234	LCA353234	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
355	LCA351236	LCA353236	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
355	LCA351238	LCA353238	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64
355	LCA351240	LCA353240	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64

Performance Curves

LCA40 - 1 & 3 Phase - 2 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	100	200	300	400	500		
400	LCA401210	LCA403210	2	2800	IP55	10°	1.17	1.08	0.97	0.8	0.53	0.23	0.55	71
400	LCA401212	LCA403212	2	2800	IP55	12°	1.29	1.2	1.09	0.92	0.66	0.33	0.55	71
400	LCA401214	LCA403214	2	2800	IP55	14°	1.42	1.32	1.2	1.03	0.78	0.42	0.75	71
400	LCA401216	LCA403216	2	2800	IP55	16°	1.55	1.45	1.32	1.15	0.9		0.75	71
400	LCA401218	LCA403218	2	2800	IP55	18°	1.68	1.57	1.44	1.27	1.01		0.75	71
400	LCA401220	LCA403220	2	2800	IP55	20°	1.81	1.69	1.55	1.37	1.11		1.1	71
400	LCA401222	LCA403222	2	2800	IP55	22°	1.93	1.8	1.65	1.46	1.2		1.1	66
400	LCA401224	LCA403224	2	2800	IP55	24°	2.04	1.9	1.74	1.54	1.28		1.1	66
400	LCA401226	LCA403226	2	2800	IP55	26°	2.15	2	1.83	1.63	1.37		1.1	67
400	LCA401228	LCA403228	2	2800	IP55	28°	2.27	2.11	1.93	1.72	1.45		1.5	68
400	LCA401230	LCA403230	2	2800	IP55	30°	2.38	2.22	2.03	1.8	1.52		1.5	68
400	LCA401232	LCA403232	2	2800	IP55	32°	2.49	2.31	2.11	1.88	1.59		1.5	68
400	-	LCA403234	2	2800	IP55	34°	2.59	2.4	2.19	1.94	1.64		2.2	67
400	-	LCA403236	2	2800	IP55	36°	2.67	2.47	2.25	1.99	1.67		2.2	66
400	-	LCA403238	2	2800	IP55	38°	2.73	2.53	2.31	2.04	1.69		2.2	66
400	-	LCA403240	2	2800	IP55	40°	2.78	2.59	2.36	2.08	1.69		3	66

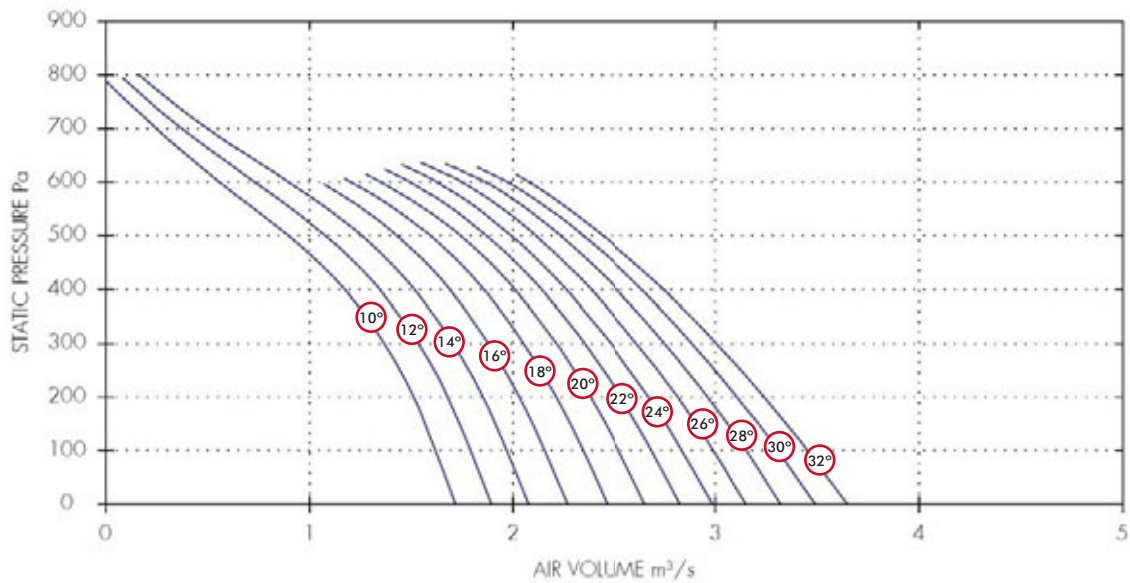
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @							
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
400	LCA401210	LCA403210	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401212	LCA403212	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401214	LCA403214	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401216	LCA403216	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401218	LCA403218	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401220	LCA403220	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	LCA401222	LCA403222	2	Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	LCA401224	LCA403224	2	Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	LCA401226	LCA403226	2	Inlet/Outlet	85	82	85	82	83	80	77	70	67
400	LCA401228	LCA403228	2	Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	LCA401230	LCA403230	2	Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	LCA401232	LCA403232	2	Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	-	LCA403234	2	Inlet/Outlet	85	82	85	82	83	80	77	70	67
400	-	LCA403236	2	Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	-	LCA403238	2	Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	-	LCA403240	2	Inlet/Outlet	84	81	84	81	82	79	76	69	66

Long Case Axial Fans (LCA)

Performance Curves

LCA45 - 3 Phase - 2 Pole



Performance Guide

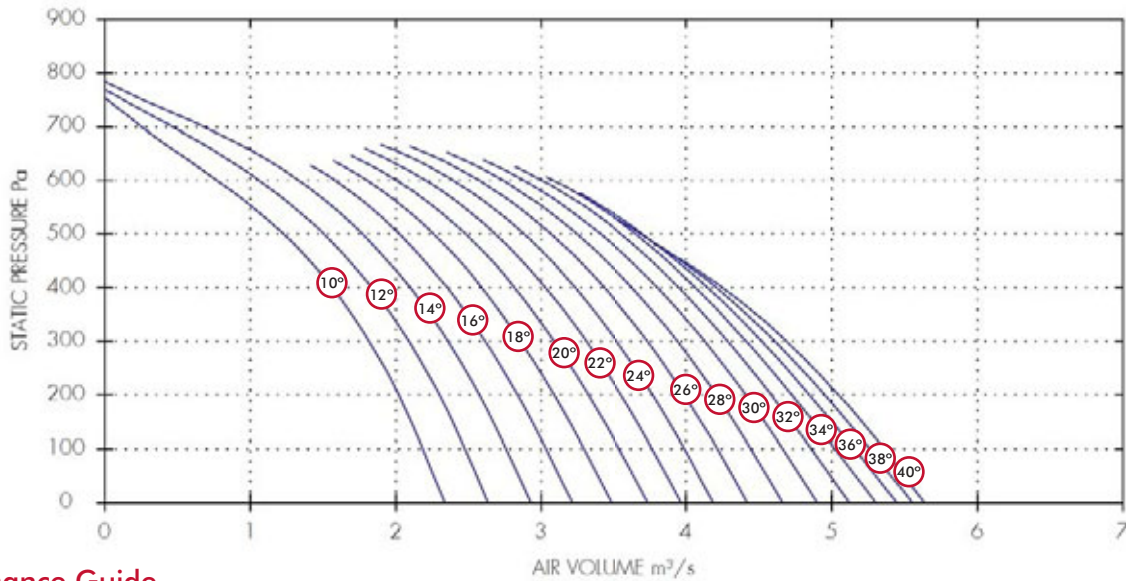
Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Poles				0	100	200	300	400	500	600	700		
450	LCA453210	2	2880	IP55	10°	1.72	1.62	1.51	1.37	1.17	0.89	0.56	0.25	1.1	74
450	LCA453212	2	2880	IP55	12°	1.89	1.79	1.68	1.54	1.34	1.08	0.73	0.37	1.1	73
450	LCA453214	2	2880	IP55	14°	2.08	1.97	1.85	1.7	1.51	1.26	0.9	0.5	1.5	72
450	LCA453216	2	2880	IP55	16°	2.27	2.16	2.03	1.88	1.69	1.43			1.5	71
450	LCA453218	2	2880	IP55	18°	2.47	2.35	2.21	2.05	1.86	1.59	1.2		1.5	70
450	LCA453220	2	2880	IP55	20°	2.65	2.53	2.38	2.21	2.01	1.74	1.35		2.2	70
450	LCA453222	2	2880	IP55	22°	2.82	2.69	2.53	2.35	2.14	1.87	1.49		2.2	70
450	LCA453224	2	2880	IP55	24°	2.99	2.84	2.67	2.48	2.26	1.99	1.62		2.2	70
450	LCA453226	2	2880	IP55	26°	3.15	2.99	2.82	2.61	2.38	2.11	1.75		2.2	70
450	LCA453228	2	2880	IP55	28°	3.32	3.15	2.96	2.75	2.51	2.23	1.86		3	70
450	LCA453230	2	2880	IP55	30°	3.49	3.31	3.11	2.89	2.64	2.35	1.97		3	70
450	LCA453232	2	2880	IP55	32°	3.65	3.45	3.24	3.01	2.74	2.44	2.08		3	70

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB @ 3m								
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
450	LCA453210	2	Inlet/Outlet	92	89	92	89	90	87	84	77	74
450	LCA453212	2	Inlet/Outlet	91	88	91	88	89	86	83	76	73
450	LCA453214	2	Inlet/Outlet	90	87	90	87	88	85	82	75	72
450	LCA453216	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
450	LCA453218	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453220	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453222	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453224	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453226	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453228	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453230	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	LCA453232	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70

Performance Curves

LCA50 - 3 Phase - 2 Pole



Performance Guide

Dia.	Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s at Pa								Motor kW	dBA @3m
						0	100	200	300	400	500	600	700		
500	LCA503210	2	2880	IP55	10°	2.34	2.19	2.02	1.82	1.56	1.23	0.77	0.25	1.5	74
500	LCA503212	2	2880	IP55	12°	2.64	2.48	2.3	2.09	1.83	1.51	1.06	0.46	1.5	73
500	LCA503214	2	2880	IP55	14°	2.93	2.76	2.57	2.36	2.1	1.77	1.33	0.68	2.2	72
500	LCA503216	2	2880	IP55	16°	3.21	3.04	2.84	2.62	2.35	2.03	1.58		2.2	71
500	LCA503218	2	2880	IP55	18°	3.48	3.29	3.09	2.86	2.59	2.26	1.8		2.2	71
500	LCA503220	2	2880	IP55	20°	3.73	3.54	3.33	3.09	2.82	2.48	2.01		3	71
500	LCA503222	2	2880	IP55	22°	3.96	3.77	3.55	3.31	3.03	2.69	2.21		3	71
500	LCA503224	2	2880	IP55	24°	4.19	3.99	3.77	3.52	3.24	2.88	2.4		3	71
500	LCA503226	2	2880	IP55	26°	4.42	4.21	3.99	3.73	3.44	3.07	2.58		4	71
500	LCA503228	2	2880	IP55	28°	4.66	4.45	4.21	3.94	3.63	3.25	2.74		4	72
500	LCA503230	2	2880	IP55	30°	4.9	4.67	4.41	4.13	3.8	3.41	2.88		4	72
500	LCA503232	2	2880	IP55	32°	5.12	4.86	4.58	4.28	3.95	3.55	3		5.5	72
500	LCA503234	2	2880	IP55	34°	5.3	5.02	4.73	4.41	4.07	3.66	3.08		5.5	72
500	LCA503236	2	2880	IP55	36°	5.45	5.16	4.85	4.52	4.15	3.7			5.5	72
500	LCA503238	2	2880	IP55	38°	5.55	5.26	4.95	4.61	4.21	3.69			7.5	72
500	LCA503240	2	2880	IP55	40°	5.64	5.36	5.05	4.69	4.25				7.5	72

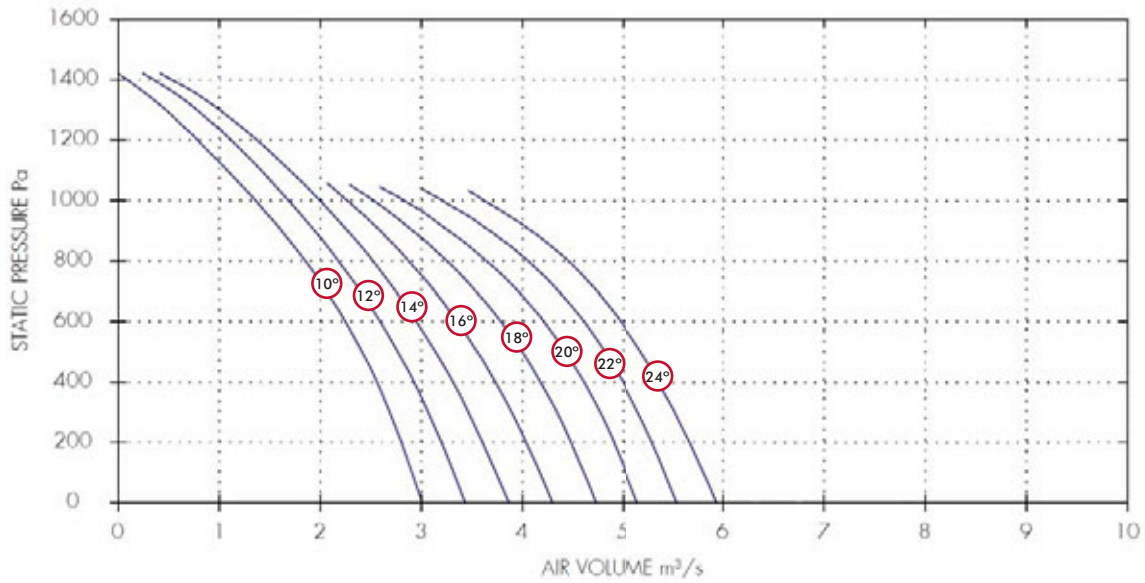
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	Stock Ref	Poles	Spectrum	dB								dBA @ 3m
				63	125	250	500	1k	2k	4k	8k	
500	LCA503210	2	Inlet/Outlet	93	84	91	91	91	87	85	78	74
500	LCA503212	2	Inlet/Outlet	92	83	90	90	90	86	84	77	73
500	LCA503214	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503216	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503218	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503220	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503222	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503224	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503226	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	LCA503228	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503230	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503232	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503234	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503236	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503238	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	LCA503240	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72

Long Case Axial Fans (LCA)

Performance Curve

LCA56 - 3 Phase - 2 Pole



Performance Guide

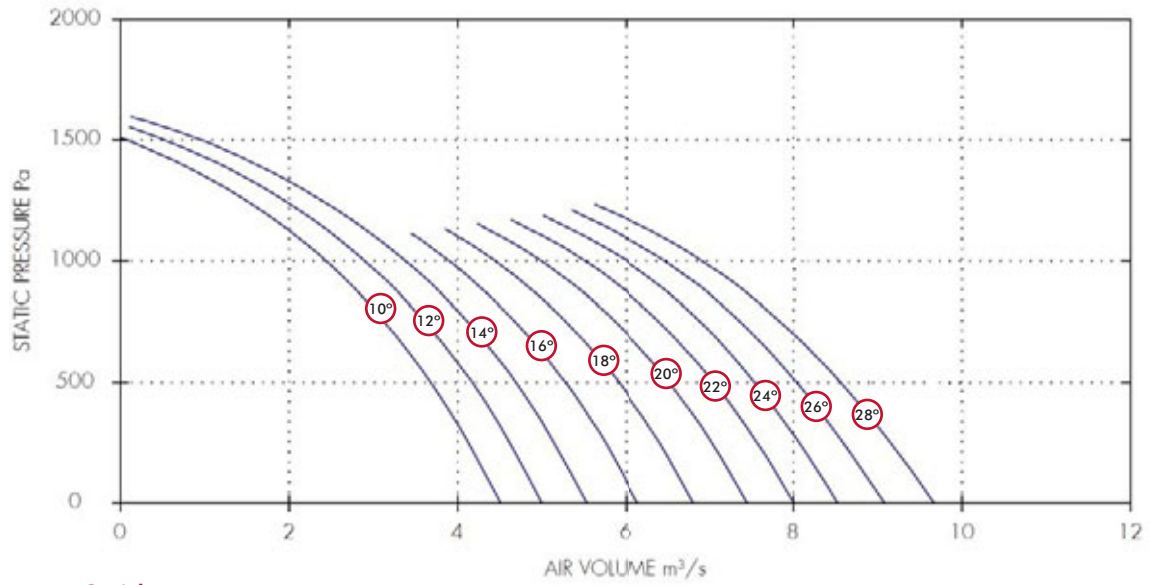
Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Poles	r.p.m			0	200	400	600	800	1000	1200	1400		
560	LCA563210	2	2880	IP55	10°	3.01	2.8	2.56	2.25	1.85	1.36	0.79	0.09	4	79
560	LCA563212	2	2880	IP55	12°	3.44	3.2	2.93	2.59	2.18	1.69	1.11	0.35	4	79
560	LCA563214	2	2880	IP55	14°	3.87	3.61	3.31	2.95	2.52	1.99	1.37	0.53	4	79
560	LCA563216	2	2880	IP55	16°	4.3	4.04	3.73	3.36	2.88	2.27			5.5	79
560	LCA563218	2	2880	IP55	18°	4.73	4.48	4.18	3.79	3.25	2.53			5.5	79
560	LCA563220	2	2880	IP55	20°	5.15	4.91	4.61	4.21	3.65	2.83			7.5	79
560	LCA563222	2	2880	IP55	22°	5.54	5.3	5	4.61	4.05	3.21			7.5	79
560	LCA563224	2	2880	IP55	24°	5.94	5.67	5.36	4.98	4.45	3.62			7.5	79

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB @ 3m							
	Stock Ref	Poles	Inlet/Outlet		63	125	250	500	1k	2k	4k	8k
560	LCA563210	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563212	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563214	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563216	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563218	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563220	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563222	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79
560	LCA563224	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79

Performance Curve

LCA63 - 3 Phase - 2 Pole



Performance Guide

Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m	
	Stock Ref	Poles				0	200	400	600	800	1000	1200			1400
630	LCA633210	2	2940	IP55	10°	4.51	4.2	3.87	3.47	3.01	2.44	1.7	0.72	5.5	84
630	LCA633212	2	2940	IP55	12°	5	4.7	4.36	3.96	3.48	2.9	2.16	1.17	5.5	84
630	LCA633214	2	2940	IP55	14°	5.53	5.22	4.88	4.48	3.98	3.38	2.61	1.6	7.5	84
630	LCA633216	2	2940	IP55	16°	6.15	5.84	5.48	5.06	4.54	3.89			7.5	84
630	LCA633218	2	2940	IP55	18°	6.81	6.5	6.13	5.68	5.14	4.44			11	84
630	LCA633220	2	2940	IP55	20°	7.46	7.12	6.74	6.28	5.72	4.98			11	84
630	LCA633222	2	2940	IP55	22°	8.01	7.67	7.27	6.82	6.25	5.51			11	84
630	LCA633224	2	2940	IP55	24°	8.53	8.17	7.76	7.3	6.74	6			15	84
630	LCA633226	2	2940	IP55	26°	9.08	8.7	8.27	7.79	7.22	6.47	5.41		15	84
630	LCA633228	2	2940	IP55	28°	9.67	9.26	8.81	8.3	7.69	6.92	5.85		15	84

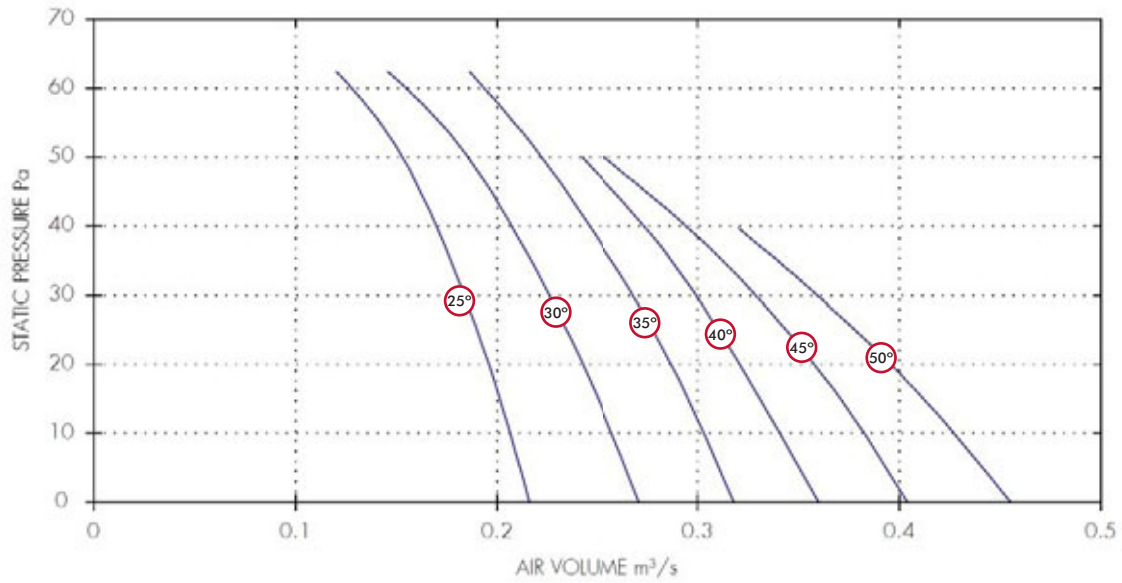
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	Stock Ref	Poles	Spectrum	dB								dBA @ 3m
				63	125	250	500	1k	2k	4k	8k	
630	LCA633210	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633212	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633214	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633216	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633218	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633220	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633222	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633224	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633226	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	LCA633228	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84

Long Case Axial Fans (LCA)

Performance Curve

LCA25 - 1 & 3 Phase - 4 Pole



Performance Guide

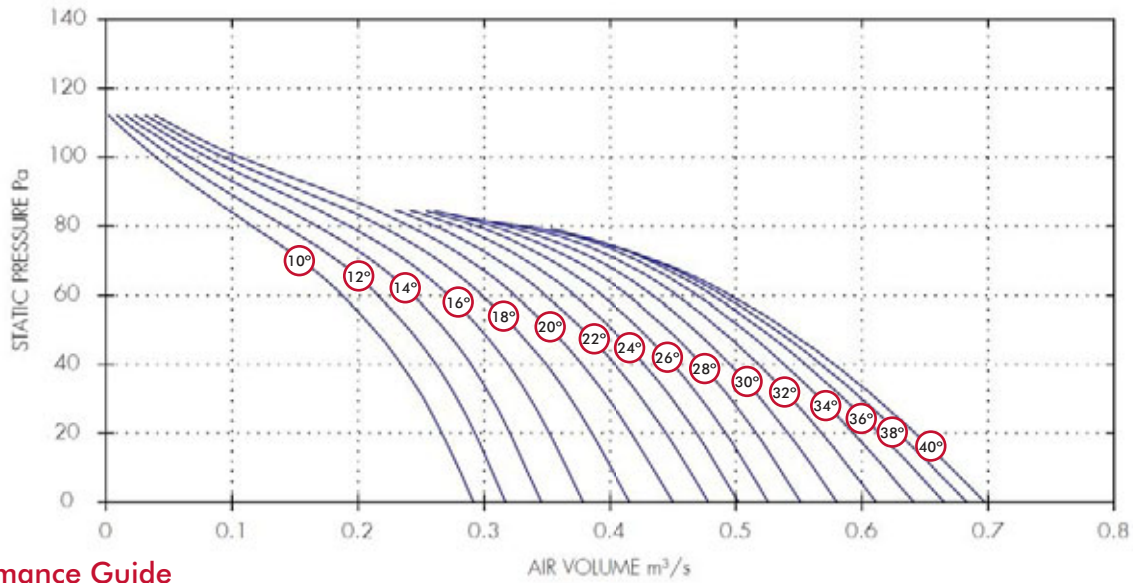
Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	10	20	30	40	50		
250	LCA251425	LCA253425	4	1400	IP55	25°	0.22	0.21	0.2	0.18	0.17	0.15	0.13	0.25	46	
250	LCA251430	LCA253430	4	1400	IP55	30°	0.27	0.26	0.24	0.23	0.21	0.19	0.15	0.25	45	
250	LCA251435	LCA253435	4	1400	IP55	35°	0.32	0.3	0.29	0.27	0.25	0.22	0.19	0.25	46	
250	LCA251440	LCA253440	4	1400	IP55	40°	0.36	0.34	0.32	0.3	0.27	0.24		0.25	46	
250	LCA251445	LCA253445	4	1400	IP55	45°	0.4	0.38	0.36	0.33	0.29	0.25		0.25	46	
250	LCA251450	LCA253450	4	1440	IP55	50°	0.46	0.43	0.4	0.36				0.25	46	

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB								dBA @3m
	Stock Ref	Stock Ref	Poles	Rating		63	125	250	500	1k	2k	4k	8k	
250	LCA251425	LCA253425	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46	
250	LCA251430	LCA253430	4	Inlet/Outlet	60	67	63	62	60	57	54	51	45	
250	LCA251435	LCA253435	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46	
250	LCA251440	LCA253440	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46	
250	LCA251445	LCA253445	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46	
250	LCA251450	LCA253450	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46	

Performance Curve

LCA31 - 1 & 3 Phase - 4 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	20	40	60	80	100		
315	LCA311410	LCA313410	4	1400	IP55	10°	0.29	0.27	0.23	0.19	0.12	0.04	0.25	49
315	LCA311412	LCA313412	4	1400	IP55	12°	0.32	0.29	0.26	0.22	0.14	0.05	0.25	49
315	LCA311414	LCA313414	4	1400	IP55	14°	0.35	0.32	0.29	0.24	0.17	0.07	0.25	49
315	LCA311416	LCA313416	4	1400	IP55	16°	0.38	0.35	0.32	0.27	0.19	0.08	0.25	44
315	LCA311418	LCA313418	4	1400	IP55	18°	0.42	0.39	0.35	0.3	0.22	0.09	0.25	44
315	LCA311420	LCA313420	4	1400	IP55	20°	0.45	0.42	0.38	0.32	0.24	0.11	0.25	44
315	LCA311422	LCA313422	4	1400	IP55	22°	0.48	0.45	0.4	0.35	0.26		0.25	44
315	LCA311424	LCA313424	4	1400	IP55	24°	0.5	0.47	0.43	0.37	0.28		0.25	46
315	LCA311426	LCA313426	4	1400	IP55	26°	0.53	0.49	0.45	0.39	0.29		0.25	46
315	LCA311428	LCA313428	4	1400	IP55	28°	0.55	0.52	0.47	0.41	0.31		0.25	46
315	LCA311430	LCA313430	4	1400	IP55	30°	0.58	0.54	0.5	0.43	0.32		0.25	46
315	LCA311432	LCA313432	4	1400	IP55	32°	0.61	0.57	0.52	0.45	0.32		0.25	48
315	LCA311434	LCA313434	4	1400	IP55	34°	0.64	0.59	0.54	0.47	0.33		0.25	48
315	LCA311436	LCA313436	4	1400	IP55	36°	0.67	0.61	0.56	0.48			0.25	48
315	LCA311438	LCA313438	4	1400	IP55	38°	0.68	0.63	0.57	0.49			0.25	48
315	LCA311440	LCA313440	4	1400	IP55	40°	0.7	0.64	0.58	0.5			0.25	48

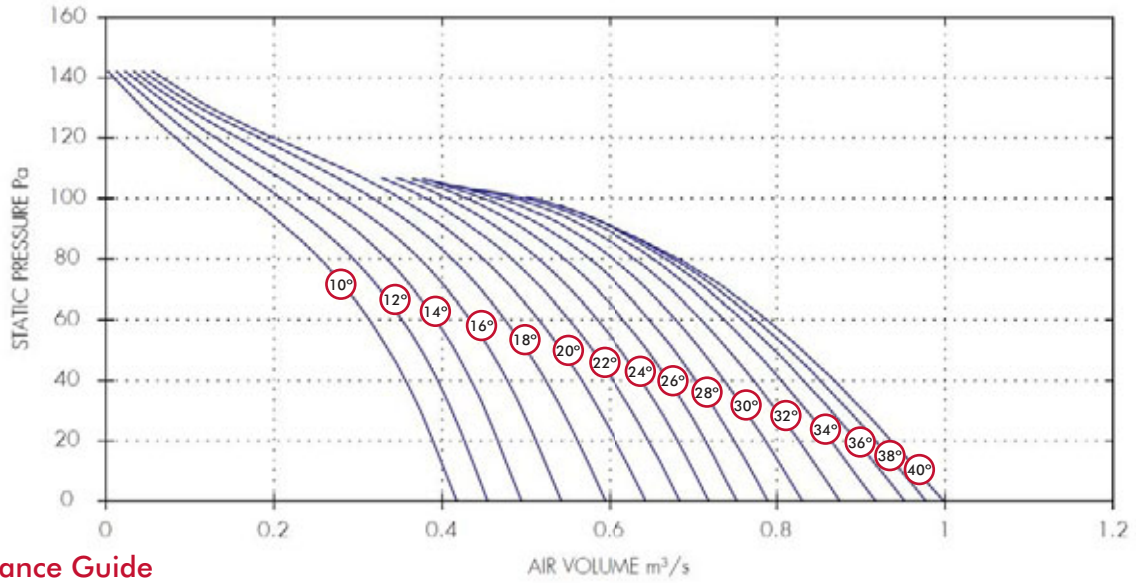
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB							
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
315	LCA311410	LCA313410	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49
315	LCA311412	LCA313412	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49
315	LCA311414	LCA313414	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49
315	LCA311416	LCA313416	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44
315	LCA311418	LCA313418	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44
315	LCA311420	LCA313420	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44
315	LCA311422	LCA313422	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44
315	LCA311424	LCA313424	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46
315	LCA311426	LCA313426	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46
315	LCA311428	LCA313428	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46
315	LCA311430	LCA313430	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46
315	LCA311432	LCA313432	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48
315	LCA311434	LCA313434	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48
315	LCA311436	LCA313436	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48
315	LCA311438	LCA313438	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48
315	LCA311440	LCA313440	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48

Long Case Axial Fans (LCA)

Performance Curve

LCA35 - 1 & 3 Phase - 4



Performance Guide

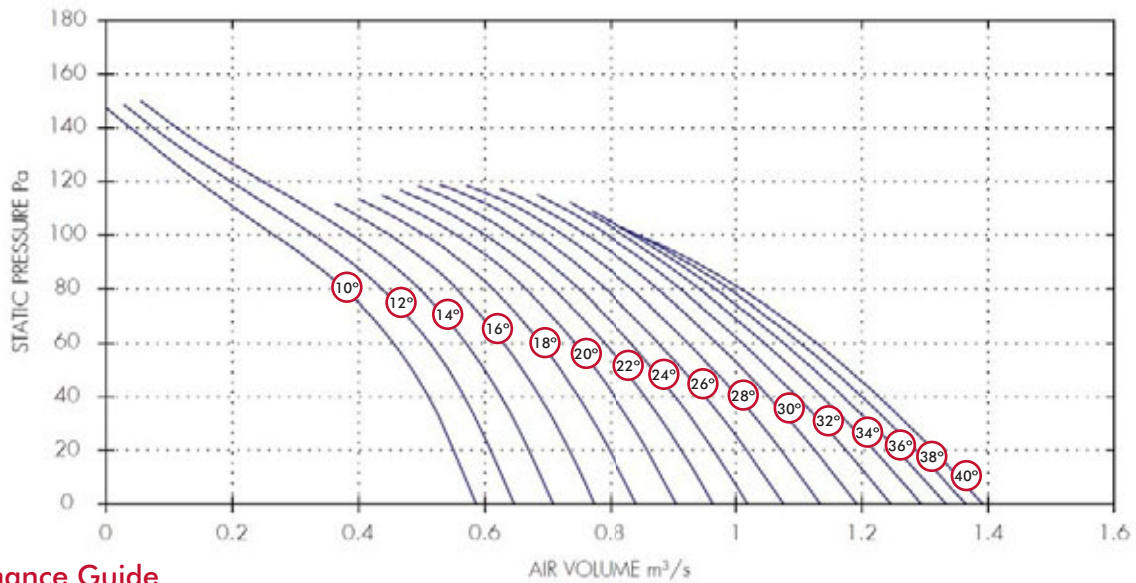
Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa								Motor	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	20	40	60	80	100		
355	LCA351410	LCA353410	4	1400	IP55	10°	0.42	0.39	0.36	0.31	0.25	0.17	0.08	0.01	0.25	50
355	LCA351412	LCA353412	4	1400	IP55	12°	0.45	0.43	0.39	0.35	0.29	0.21	0.11	0.02	0.25	50
355	LCA351414	LCA353414	4	1400	IP55	14°	0.49	0.47	0.43	0.39	0.33	0.25	0.13	0.03	0.25	50
355	LCA351416	LCA353416	4	1400	IP55	16°	0.54	0.51	0.48	0.43	0.37	0.28	0.16	0.04	0.25	50
355	LCA351418	LCA353418	4	1400	IP55	18°	0.6	0.56	0.52	0.48	0.41	0.32	0.18	0.06	0.25	50
355	LCA351420	LCA353420	4	1400	IP55	20°	0.64	0.61	0.57	0.52	0.45	0.35	0.2	0.07	0.25	50
355	LCA351422	LCA353422	4	1400	IP55	22°	0.68	0.65	0.6	0.55	0.48	0.38			0.25	45
355	LCA351424	LCA353424	4	1400	IP55	24°	0.72	0.68	0.64	0.59	0.51	0.41			0.25	45
355	LCA351426	LCA353426	4	1400	IP55	26°	0.75	0.72	0.67	0.62	0.55	0.43			0.25	46
355	LCA351428	LCA353428	4	1400	IP55	28°	0.79	0.75	0.7	0.65	0.58	0.45			0.25	47
355	LCA351430	LCA353430	4	1400	IP55	30°	0.83	0.79	0.74	0.68	0.6	0.47			0.25	47
355	LCA351432	LCA353432	4	1400	IP55	32°	0.87	0.83	0.77	0.71	0.63	0.48			0.25	48
355	LCA351434	LCA353434	4	1400	IP55	34°	0.92	0.86	0.81	0.74	0.65	0.5			0.25	48
355	LCA351436	LCA353436	4	1400	IP55	36°	0.95	0.89	0.83	0.76	0.67	0.51			0.25	48
355	LCA351438	LCA353438	4	1400	IP55	38°	0.98	0.92	0.85	0.78	0.68				0.25	48
355	LCA351440	LCA353440	4	1400	IP55	40°	1	0.94	0.87	0.79	0.68				0.25	48

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB								dBA @3m
	Stock Ref	Stock Ref	Poles	Rating		63	125	250	500	1k	2k	4k	8k	
355	LCA351410	LCA353410	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351412	LCA353412	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351414	LCA353414	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351416	LCA353416	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351418	LCA353418	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351420	LCA353420	4	Inlet/Outlet	67	70	68	65	66	64	59	49	50	
355	LCA351422	LCA353422	4	Inlet/Outlet	62	65	63	60	61	59	54	44	45	
355	LCA351424	LCA353424	4	Inlet/Outlet	62	65	63	60	61	59	54	44	45	
355	LCA351426	LCA353426	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46	
355	LCA351428	LCA353428	4	Inlet/Outlet	64	67	65	62	63	61	56	46	47	
355	LCA351430	LCA353430	4	Inlet/Outlet	64	67	65	62	63	61	56	46	47	
355	LCA351432	LCA353432	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48	
355	LCA351434	LCA353434	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48	
355	LCA351436	LCA353436	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48	
355	LCA351438	LCA353438	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48	
355	LCA351440	LCA353440	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48	

Performance Curve

LCA40 - 1 & 3 Phase - 4 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	20	40	60	80	100		
400	LCA401410	LCA403410	4	1400	IP55	10°	0.59	0.55	0.51	0.46	0.38	0.27	0.15	0.04	0.25	54
400	LCA401412	LCA403412	4	1400	IP55	12°	0.65	0.61	0.57	0.51	0.44	0.33	0.2	0.08	0.25	54
400	LCA401414	LCA403414	4	1400	IP55	14°	0.71	0.67	0.63	0.57	0.5	0.39	0.25	0.11	0.25	54
400	LCA401416	LCA403416	4	1400	IP55	16°	0.77	0.73	0.69	0.63	0.56	0.45			0.25	54
400	LCA401418	LCA403418	4	1400	IP55	18°	0.84	0.8	0.75	0.69	0.61	0.5			0.25	54
400	LCA401420	LCA403420	4	1400	IP55	20°	0.91	0.86	0.81	0.74	0.66	0.55			0.25	54
400	LCA401422	LCA403422	4	1400	IP55	22°	0.96	0.91	0.86	0.79	0.71	0.6			0.25	48
400	LCA401424	LCA403424	4	1400	IP55	24°	1.02	0.97	0.9	0.83	0.75	0.64			0.25	48
400	LCA401426	LCA403426	4	1400	IP55	26°	1.08	1.02	0.95	0.88	0.79	0.68			0.25	50
400	LCA401428	LCA403428	4	1400	IP55	28°	1.13	1.07	1	0.92	0.83	0.72			0.25	51
400	LCA401430	LCA403430	4	1400	IP55	30°	1.19	1.13	1.05	0.97	0.88	0.76			0.25	52
400	LCA401432	LCA403432	4	1400	IP55	32°	1.25	1.18	1.1	1.01	0.91	0.79			0.25	52
400	LCA401434	LCA403434	4	1400	IP55	34°	1.29	1.22	1.14	1.05	0.94	0.82			0.25	51
400	LCA401436	LCA403436	4	1400	IP55	36°	1.33	1.26	1.17	1.08	0.97	0.84			0.25	51
400	LCA401438	LCA403438	4	1400	IP55	38°	1.36	1.29	1.2	1.1	0.99	0.84			0.25	50
400	LCA401440	LCA403440	4	1400	IP55	40°	1.39	1.31	1.23	1.13	1.01	0.84			0.37	50

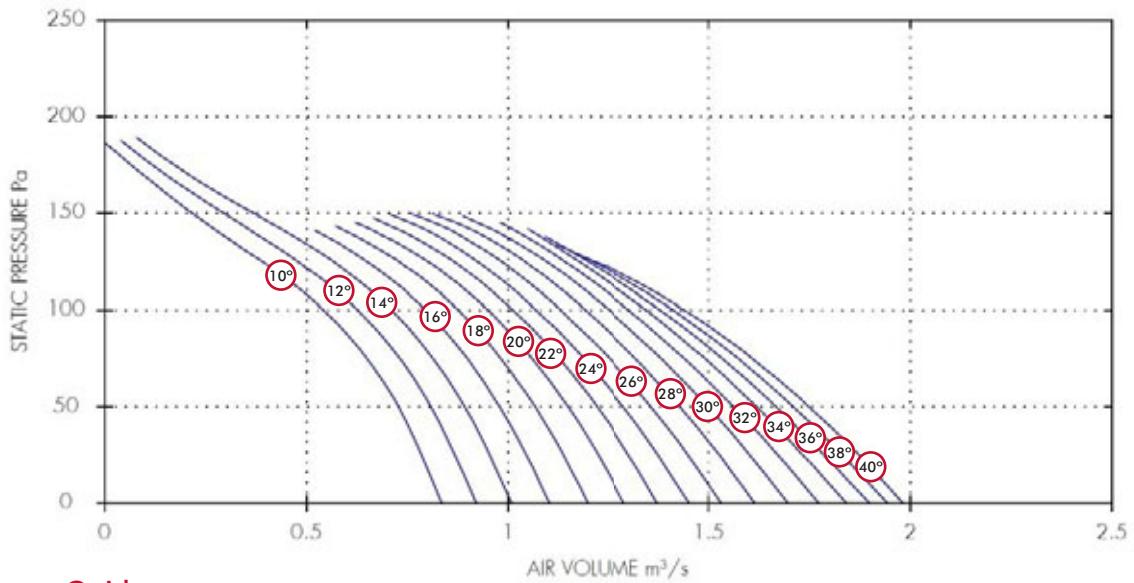
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB								dBA @3m
	Stock Ref	Stock Ref	Poles	Rating		63	125	250	500	1k	2k	4k	8k	
400	LCA401410	LCA403410	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401412	LCA403412	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401414	LCA403414	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401416	LCA403416	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401418	LCA403418	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401420	LCA403420	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	LCA401422	LCA403422	4	Inlet/Outlet	66	68	67	63	64	61	57	48	48	
400	LCA401424	LCA403424	4	Inlet/Outlet	66	68	67	63	64	61	57	48	48	
400	LCA401426	LCA403426	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	
400	LCA401428	LCA403428	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	LCA401430	LCA403430	4	Inlet/Outlet	70	72	71	67	68	65	61	52	52	
400	LCA401432	LCA403432	4	Inlet/Outlet	70	72	71	67	68	65	61	52	52	
400	LCA401434	LCA403434	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	LCA401436	LCA403436	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	LCA401438	LCA403438	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	
400	LCA401440	LCA403440	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	

Long Case Axial Fans (LCA)

Performance Curve

LCA45 - 1 & 3 Phase - 4 Pole



Performance Guide

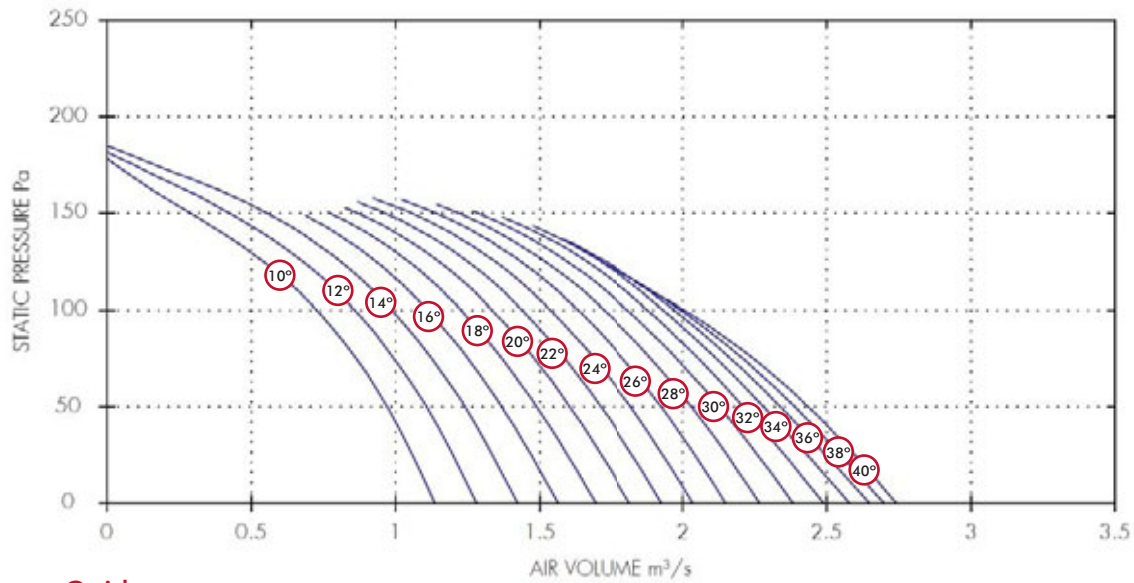
Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	40	80		
450	LCA451410	LCA453410	4	1400	IP55	10°	0.83	0.75	0.63	0.42	0.15	0.25	59
450	LCA451412	LCA453412	4	1400	IP55	12°	0.92	0.83	0.71	0.51	0.22	0.25	59
450	LCA451414	LCA453414	4	1400	IP55	14°	1.01	0.92	0.8	0.6	0.28	0.25	59
450	LCA451416	LCA453416	4	1400	IP55	16°	1.1	1.01	0.88	0.68		0.25	59
450	LCA451418	LCA453418	4	1400	IP55	18°	1.2	1.1	0.96	0.76		0.25	54
450	LCA451420	LCA453420	4	1400	IP55	20°	1.29	1.18	1.04	0.83		0.25	55
450	LCA451422	LCA453422	4	1400	IP55	22°	1.37	1.25	1.11	0.9		0.25	54
450	LCA451424	LCA453424	4	1400	IP55	24°	1.45	1.32	1.17	0.96		0.25	54
450	LCA451426	LCA453426	4	1400	IP55	26°	1.53	1.4	1.23	1.01		0.37	54
450	LCA451428	LCA453428	4	1400	IP55	28°	1.61	1.47	1.29	1.07		0.37	54
450	LCA451430	LCA453430	4	1400	IP55	30°	1.7	1.54	1.36	1.13		0.37	54
450	LCA451432	LCA453432	4	1400	IP55	32°	1.77	1.61	1.41	1.17		0.37	54
450	LCA451434	LCA453434	4	1400	IP55	34°	1.84	1.67	1.46	1.21		0.55	54
450	LCA451436	LCA453436	4	1400	IP55	36°	1.9	1.72	1.51	1.24		0.55	54
450	LCA451438	LCA453438	4	1400	IP55	38°	1.94	1.76	1.54	1.25		0.55	54
450	LCA451440	LCA453440	4	1400	IP55	40°	1.98	1.8	1.58	1.27		0.55	54

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB							
	Stock Ref	Stock Ref	Poles	Rating		63	125	250	500	1k	2k	4k	8k
450	LCA451410	LCA453410	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59
450	LCA451412	LCA453412	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59
450	LCA451414	LCA453414	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59
450	LCA451416	LCA453416	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59
450	LCA451418	LCA453418	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451420	LCA453420	4	Inlet/Outlet	73	75	74	70	71	68	64	55	55
450	LCA451422	LCA453422	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451424	LCA453424	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451426	LCA453426	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451428	LCA453428	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451430	LCA453430	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451432	LCA453432	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451434	LCA453434	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451436	LCA453436	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451438	LCA453438	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54
450	LCA451440	LCA453440	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54

Performance Curve

LCA50 - 1 & 3 Phase - 4 Pole



Performance Guide

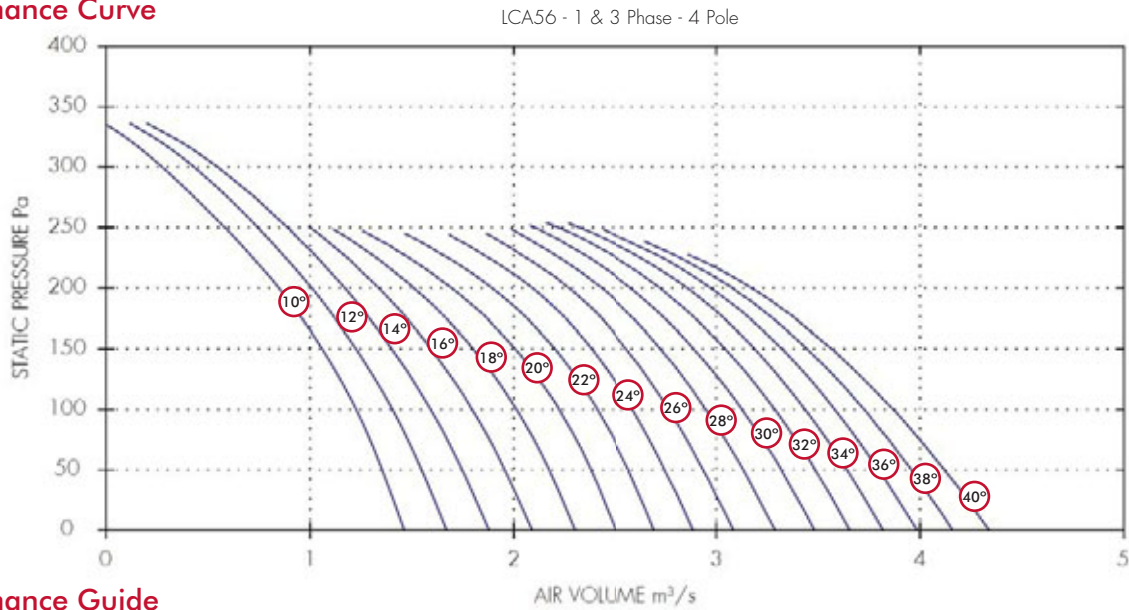
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	40	80	120	160		
500	LCA501410	LCA503410	4	1400	IP55	10°	1.14	1.01	0.84	0.58	0.18	0.25	58
500	LCA501412	LCA503412	4	1400	IP55	12°	1.28	1.15	0.97	0.72	0.3	0.25	58
500	LCA501414	LCA503414	4	1400	IP55	14°	1.42	1.28	1.1	0.85	0.42	0.25	58
500	LCA501416	LCA503416	4	1400	IP55	16°	1.56	1.41	1.22	0.97		0.25	58
500	LCA501418	LCA503418	4	1400	IP55	18°	1.69	1.53	1.34	1.09		0.25	58
500	LCA501420	LCA503420	4	1400	IP55	20°	1.82	1.65	1.45	1.19		0.37	58
500	LCA501422	LCA503422	4	1400	IP55	22°	1.93	1.76	1.56	1.29		0.37	58
500	LCA501424	LCA503424	4	1400	IP55	24°	2.04	1.87	1.66	1.39		0.37	58
500	LCA501426	LCA503426	4	1400	IP55	26°	2.15	1.97	1.76	1.48		0.37	60
500	LCA501428	LCA503428	4	1400	IP55	28°	2.27	2.08	1.86	1.56		0.55	60
500	LCA501430	LCA503430	4	1400	IP55	30°	2.38	2.18	1.95	1.64		0.55	61
500	LCA501432	LCA503432	4	1400	IP55	32°	2.49	2.27	2.02	1.71		0.55	61
500	LCA501434	LCA503434	4	1400	IP55	34°	2.58	2.34	2.08	1.76		0.55	61
500	LCA501436	LCA503436	4	1400	IP55	36°	2.65	2.4	2.13	1.78		0.75	61
500	LCA501438	LCA503438	4	1400	IP55	38°	2.7	2.46	2.17	1.77		0.75	61
500	LCA501440	LCA503440	4	1400	IP55	40°	2.74	2.5	2.2			0.75	61

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB							
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
500	LCA501410	LCA503410	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501412	LCA503412	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501414	LCA503414	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501416	LCA503416	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501418	LCA503418	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501420	LCA503420	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501422	LCA503422	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501424	LCA503424	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58
500	LCA501426	LCA503426	4	Inlet/Outlet	78	80	76	77	76	73	70	60	60
500	LCA501428	LCA503428	4	Inlet/Outlet	78	80	76	77	76	73	70	60	60
500	LCA501430	LCA503430	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61
500	LCA501432	LCA503432	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61
500	LCA501434	LCA503434	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61
500	LCA501436	LCA503436	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61
500	LCA501438	LCA503438	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61
500	LCA501440	LCA503440	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61

Long Case Axial Fans (LCA)

Performance Curve



Performance Guide

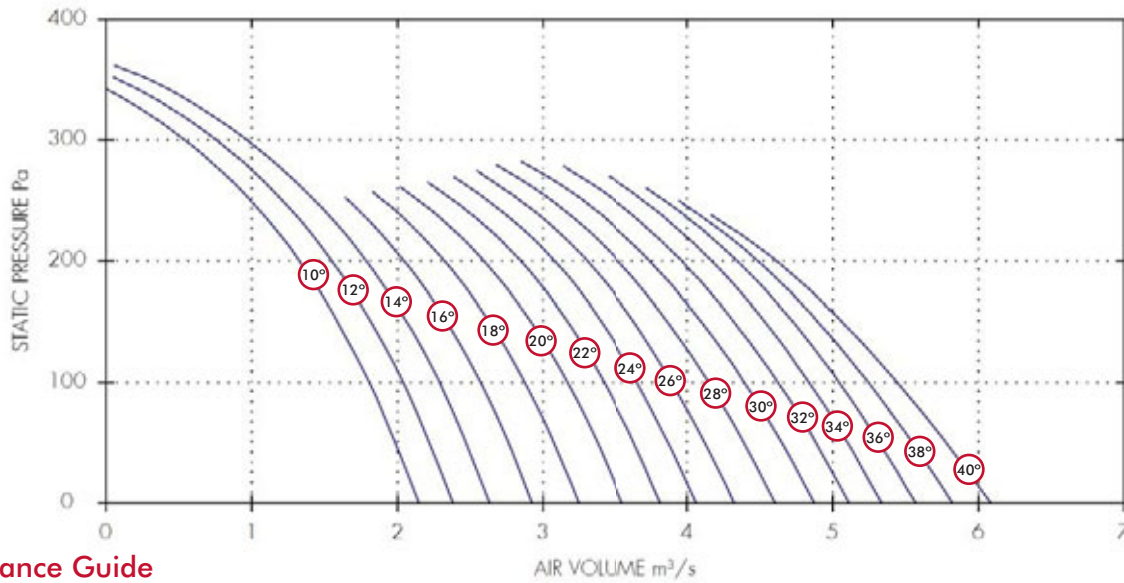
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	50	100	150	200	250	300		
560	LCA561410	LCA563410	4	1400	IP55	10°	1.46	1.36	1.23	1.06	0.85	0.58	0.28	0.55	64
560	LCA561412	LCA563412	4	1400	IP55	12°	1.67	1.55	1.41	1.23	1.01	0.74	0.43	0.55	64
560	LCA561414	LCA563414	4	1400	IP55	14°	1.88	1.75	1.59	1.4	1.17	0.89	0.55	0.55	64
560	LCA561416	LCA563416	4	1400	IP55	16°	2.09	1.96	1.8	1.59	1.34			0.55	64
560	LCA561418	LCA563418	4	1400	IP55	18°	2.3	2.17	2.01	1.8	1.51			0.75	64
560	LCA561420	LCA563420	4	1400	IP55	20°	2.5	2.38	2.22	2.01	1.69			0.75	64
560	LCA561422	LCA563422	4	1400	IP55	22°	2.7	2.57	2.41	2.2	1.89			0.75	64
560	LCA561424	LCA563424	4	1400	IP55	24°	2.89	2.75	2.59	2.38	2.09			1.1	64
560	LCA561426	LCA563426	4	1400	IP55	26°	3.08	2.94	2.77	2.56	2.27			1.1	64
560	LCA561428	LCA563428	4	1400	IP55	28°	3.29	3.13	2.95	2.73	2.43			1.1	64
560	LCA561430	LCA563430	4	1400	IP55	30°	3.48	3.32	3.13	2.89	2.58	2.1		1.1	64
560	LCA561432	LCA563432	4	1400	IP55	32°	3.66	3.49	3.29	3.04	2.72	2.21		1.5	64
560	LCA561434	LCA563434	4	1400	IP55	34°	3.82	3.64	3.44	3.19	2.85	2.32		1.5	64
560	LCA561436	LCA563436	4	1400	IP55	36°	3.99	3.8	3.58	3.32	2.97			1.5	64
560	-	LCA563438	4	1400	IP55	38°	4.16	3.96	3.73	3.45	3.08			2.2	64
560	-	LCA563440	4	1400	IP55	40°	4.34	4.12	3.87	3.57	3.17			2.2	64

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB							
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
560	LCA561410	LCA563410	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561412	LCA563412	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561414	LCA563414	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561416	LCA563416	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561418	LCA563418	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561420	LCA563420	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561422	LCA563422	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561424	LCA563424	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561426	LCA563426	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561428	LCA563428	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561430	LCA563430	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561432	LCA563432	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561434	LCA563434	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	LCA561436	LCA563436	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	-	LCA563438	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	-	LCA563440	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64

Performance Curve

LCA63 - 1 & 3 Phase - 4 Pole



Performance Guide

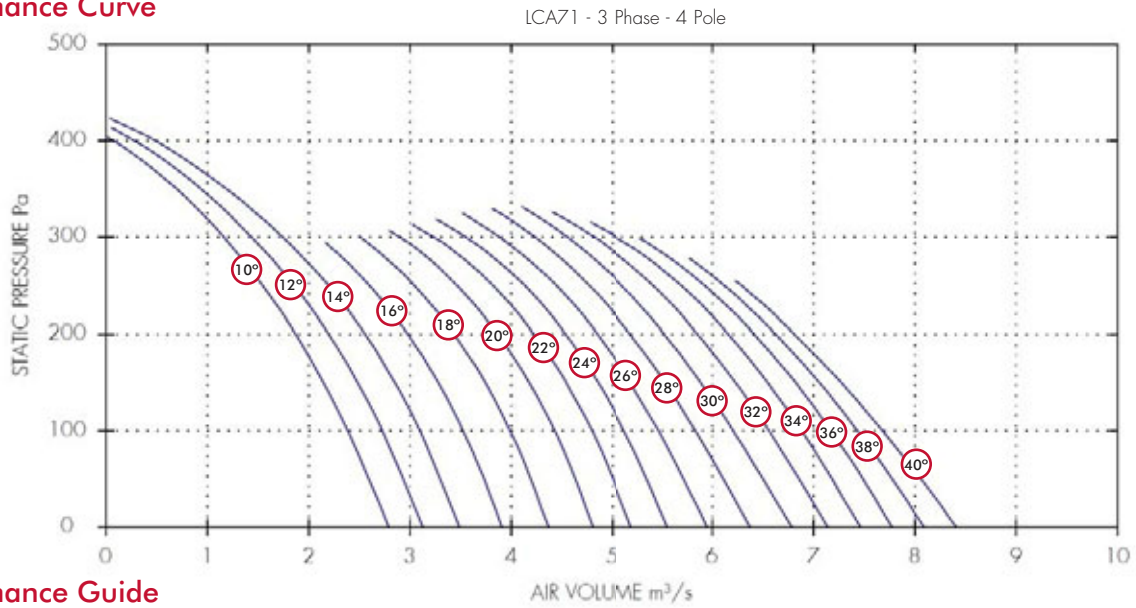
Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa							Motor	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	50	100	150	200		
630	LCA631410	LCA633410	4	1400	IP55	10°	2.15	1.99	1.81	1.59	1.33	0.99	0.54	0.55	64
630	LCA631412	LCA633412	4	1400	IP55	12°	2.38	2.22	2.04	1.82	1.55	1.21	0.76	0.75	64
630	LCA631414	LCA633414	4	1400	IP55	14°	2.64	2.47	2.29	2.06	1.79	1.43	0.97	0.75	64
630	LCA631416	LCA633416	4	1400	IP55	16°	2.93	2.76	2.57	2.34	2.05	1.66		1.1	64
630	LCA631418	LCA633418	4	1400	IP55	18°	3.24	3.08	2.88	2.63	2.32	1.9		1.1	64
630	LCA631420	LCA633420	4	1400	IP55	20°	3.55	3.37	3.17	2.92	2.59	2.14		1.1	64
630	LCA631422	LCA633422	4	1400	IP55	22°	3.82	3.63	3.42	3.17	2.85	2.38		1.5	65
630	LCA631424	LCA633424	4	1400	IP55	24°	4.06	3.87	3.66	3.4	3.08	2.62		1.5	65
630	LCA631426	LCA633426	4	1400	IP55	26°	4.32	4.12	3.9	3.63	3.3	2.84		1.5	65
630	-	LCA633428	4	1400	IP55	28°	4.61	4.39	4.15	3.87	3.52	3.06		2.2	65
630	-	LCA633430	4	1400	IP55	30°	4.88	4.65	4.4	4.1	3.74	3.27		2.2	65
630	-	LCA633432	4	1400	IP55	32°	5.11	4.89	4.63	4.32	3.96	3.5		2.2	65
630	-	LCA633434	4	1400	IP55	34°	5.34	5.1	4.84	4.54	4.17	3.7		2.2	65
630	-	LCA633436	4	1400	IP55	36°	5.57	5.32	5.04	4.73	4.34	3.84		3	65
630	-	LCA633438	4	1400	IP55	38°	5.82	5.55	5.25	4.9	4.48			3	65
630	-	LCA633440	4	1400	IP55	40°	6.09	5.78	5.44	5.06	4.61			3	65

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @3m											
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k	@3m			
630	LCA631410	LCA633410	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631412	LCA633412	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631414	LCA633414	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631416	LCA633416	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631418	LCA633418	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631420	LCA633420	4		Inlet/Outlet	75	71	79	82	81	77	74	66	64			
630	LCA631422	LCA633422	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	LCA631424	LCA633424	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	LCA631426	LCA633426	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633428	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633430	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633432	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633434	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633436	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633438	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			
630	-	LCA633440	4		Inlet/Outlet	76	72	80	83	82	78	75	67	65			

Long Case Axial Fans (LCA)

Performance Curve



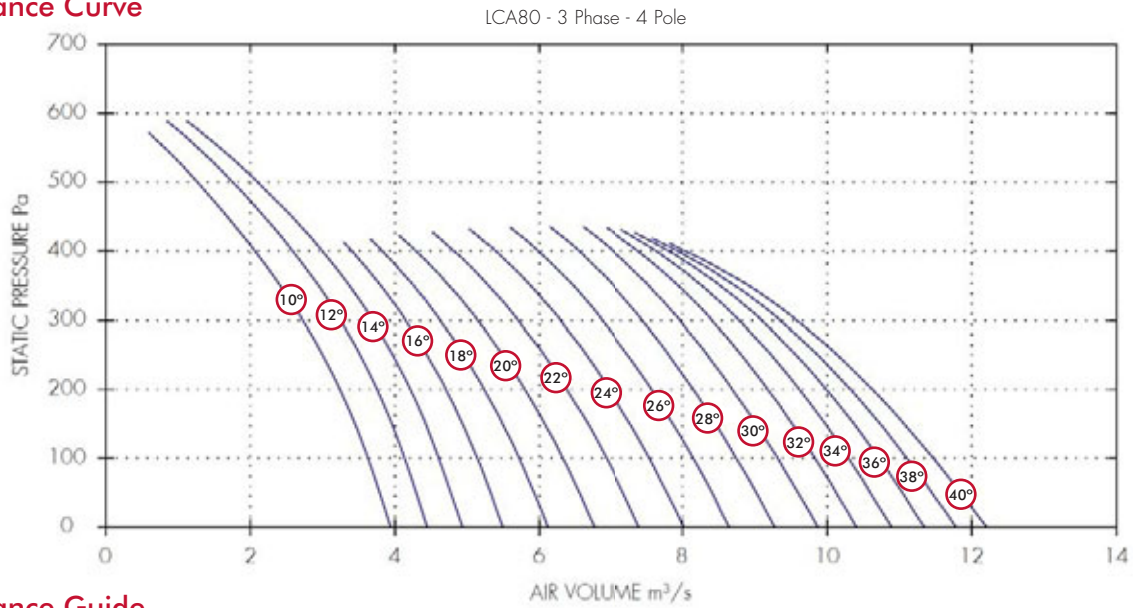
Performance Guide

Dia.	3 Phase		IP Rating	Curve Ref.	m ³ /s at Pa					Motor kW	dBA @3m	
	Stock Ref	Poles			r.p.m	0	100	200	300			400
710	LCA713410	4	1420	IP55	10°	2.79	2.39	1.87	1.16	0.07	0.75	74
710	LCA713412	4	1420	IP55	12°	3.12	2.73	2.2	1.44	0.28	1.1	74
710	LCA713414	4	1420	IP55	14°	3.49	3.1	2.56	1.74	0.48	1.1	74
710	LCA713416	4	1420	IP55	16°	3.91	3.53	2.98			1.5	74
710	LCA713418	4	1420	IP55	18°	4.37	3.99	3.44	2.5		1.5	74
710	LCA713420	4	1420	IP55	20°	4.81	4.43	3.87	2.89		2.2	71
710	LCA713422	4	1420	IP55	22°	5.19	4.8	4.23	3.23		2.2	71
710	LCA713424	4	1420	IP55	24°	5.56	5.13	4.54	3.55		2.2	71
710	LCA713426	4	1420	IP55	26°	5.95	5.47	4.85	3.88		3	71
710	LCA713428	4	1420	IP55	28°	6.37	5.84	5.19	4.23		3	71
710	LCA713430	4	1420	IP55	30°	6.78	6.21	5.53	4.55		3	71
710	LCA713432	4	1420	IP55	32°	7.14	6.56	5.86	4.82		4	71
710	LCA713434	4	1420	IP55	34°	7.46	6.88	6.16	5.04		4	71
710	LCA713436	4	1420	IP55	36°	7.77	7.17	6.42			4	71
710	LCA713438	4	1420	IP55	38°	8.09	7.44	6.63			5.5	71
710	LCA713440	4	1420	IP55	40°	8.41	7.68	6.81			5.5	71

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB @3m								
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
710	LCA713410	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	LCA713412	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	LCA713414	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	LCA713416	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	LCA713418	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	LCA713420	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713422	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713424	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713426	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713428	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713430	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713432	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713434	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713436	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713438	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	LCA713440	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71

Performance Curve



Performance Guide

Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Poles				0	100	200	300	400	500		
800	LCA803410	4	1420	IP55	10°	3.94	3.63	3.24	2.73	2.06	1.27	2.2	80
800	LCA803412	4	1440	IP55	12°	4.45	4.14	3.76	3.25	2.58	1.75	2.2	80
800	LCA803414	4	1440	IP55	14°	4.94	4.61	4.21	3.69	2.99	2.1	3	80
800	LCA803416	4	1440	IP55	16°	5.49	5.14	4.71	4.15	3.4		3	80
800	LCA803418	4	1440	IP55	18°	6.12	5.72	5.24	4.63	3.82		3	80
800	LCA803420	4	1440	IP55	20°	6.77	6.33	5.8	5.14	4.29		3	77
800	LCA803422	4	1440	IP55	22°	7.4	6.94	6.38	5.7	4.82		4	78
800	LCA803424	4	1440	IP55	24°	8.02	7.54	6.98	6.29	5.39		4	78
800	LCA803426	4	1440	IP55	26°	8.65	8.15	7.57	6.88	5.98		5.5	78
800	LCA803428	4	1440	IP55	28°	9.28	8.75	8.15	7.44	6.55		5.5	79
800	LCA803430	4	1440	IP55	30°	9.88	9.32	8.69	7.96	7.03		7.5	79
800	LCA803432	4	1440	IP55	32°	10.41	9.84	9.19	8.41	7.38		7.5	79
800	LCA803434	4	1440	IP55	34°	10.89	10.3	9.62	8.78	7.63		7.5	79
800	LCA803436	4	1440	IP55	36°	11.34	10.72	10	9.09	7.8		11	79
800	LCA803438	4	1440	IP55	38°	11.78	11.11	10.33	9.35	7.93		11	79
800	LCA803440	4	1440	IP55	40°	12.21	11.47	10.63	9.58	8.04		11	79

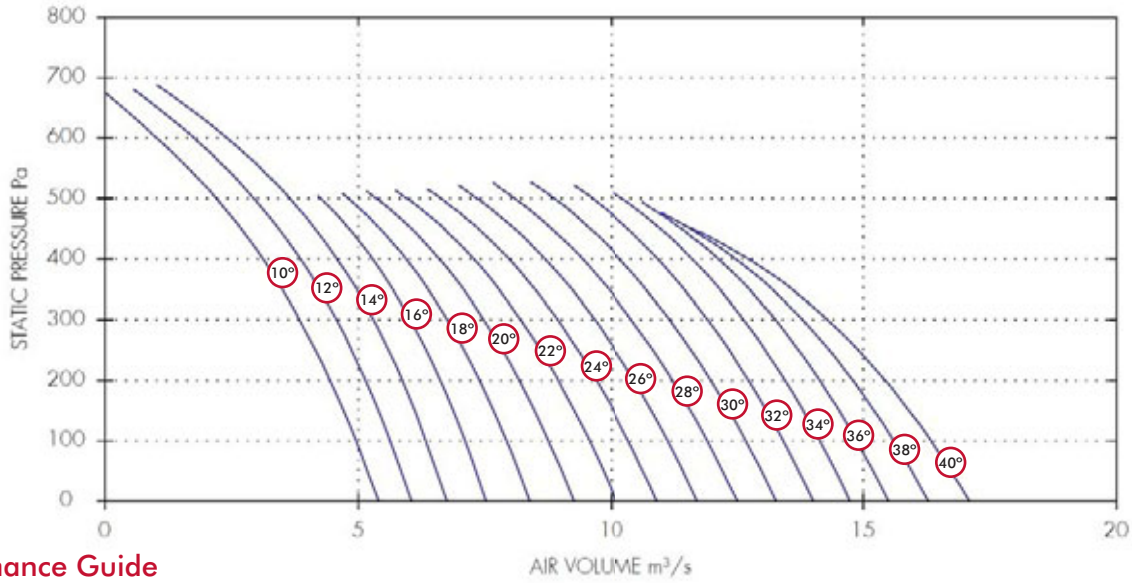
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB @3m								
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
800	LCA803410	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	LCA803412	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	LCA803414	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	LCA803416	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	LCA803418	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	LCA803420	4	Inlet/Outlet	90	84	90	95	93	90	85	77	77
800	LCA803422	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	LCA803424	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	LCA803426	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	LCA803428	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803430	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803432	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803434	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803436	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803438	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	LCA803440	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79

Long Case Axial Fans (LCA)

Performance Curve

LCA90 - 3 Phase - 4 Pole



Performance Guide

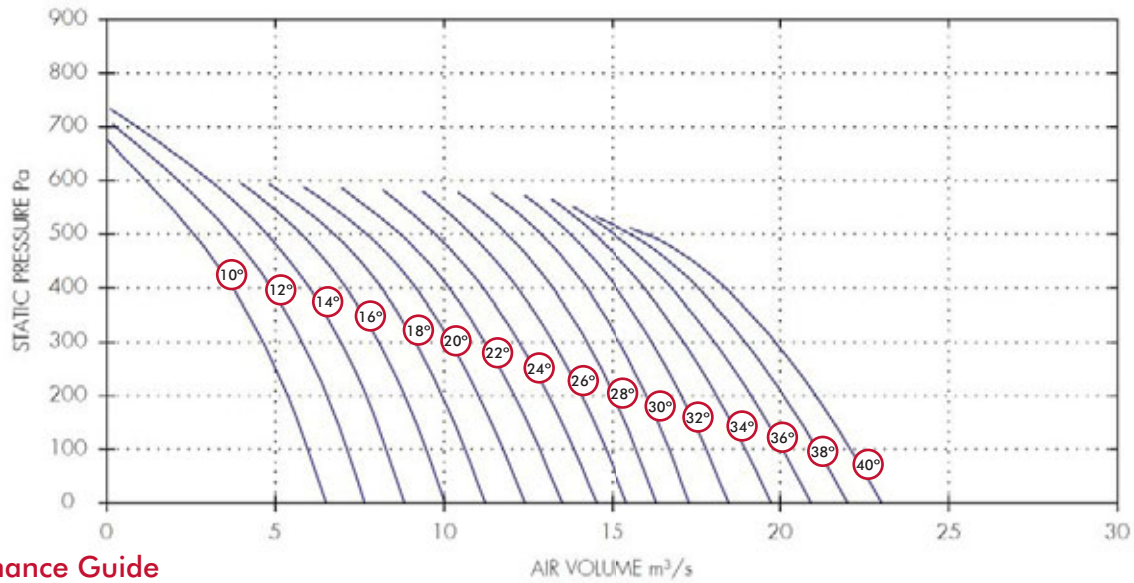
Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m
	Stock Ref	Poles				0	100	200	300	400	500	600		
900	LCA903410	4	1440	IP55	10°	5.4	4.95	4.45	3.84	3.11	2.19	1.02	3	79
900	LCA903412	4	1440	IP55	12°	6.05	5.63	5.15	4.57	3.85	2.94	1.75	4	80
900	LCA903414	4	1440	IP55	14°	6.74	6.34	5.87	5.3	4.58	3.64	2.41	4	80
900	LCA903416	4	1440	IP55	16°	7.52	7.11	6.62	6.03	5.27	4.26		4	80
900	LCA903418	4	1440	IP55	18°	8.38	7.93	7.4	6.75	5.94	4.8		5.5	81
900	LCA903420	4	1440	IP55	20°	9.26	8.76	8.18	7.48	6.6	5.35		5.5	81
900	LCA903422	4	1440	IP55	22°	10.1	9.57	8.95	8.21	7.27	5.96		7.5	81
900	LCA903424	4	1440	IP55	24°	10.92	10.35	9.71	8.94	7.97	6.62		7.5	81
900	LCA903426	4	1440	IP55	26°	11.72	11.14	10.47	9.67	8.68	7.34		7.5	82
900	LCA903428	4	1440	IP55	28°	12.51	11.92	11.23	10.42	9.42	8.09		11	82
900	LCA903430	4	1440	IP55	30°	13.28	12.69	11.99	11.18	10.17	8.86		11	82
900	LCA903432	4	1440	IP55	32°	14.02	13.42	12.74	11.93	10.94	9.62		11	82
900	LCA903434	4	1440	IP55	34°	14.74	14.15	13.46	12.64	11.62	10.22		15	82
900	LCA903436	4	1440	IP55	36°	15.5	14.87	14.14	13.27	12.14			15	82
900	LCA903438	4	1440	IP55	38°	16.29	15.6	14.8	13.81	12.47			15	82
900	LCA903440	4	1440	IP55	40°	17.1	16.34	15.44	14.3	12.72			15	82

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB								dBA @3m
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
900	LCA903410	4	Inlet/Outlet	89	83	91	97	95	92	87	79	79
900	LCA903412	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	LCA903414	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	LCA903416	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	LCA903418	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	LCA903420	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	LCA903422	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	LCA903424	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	LCA903426	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903428	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903430	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903432	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903434	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903436	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903438	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	LCA903440	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82

Performance Curve

LCA100 - 3 Phase - 4 Pole



Performance Guide

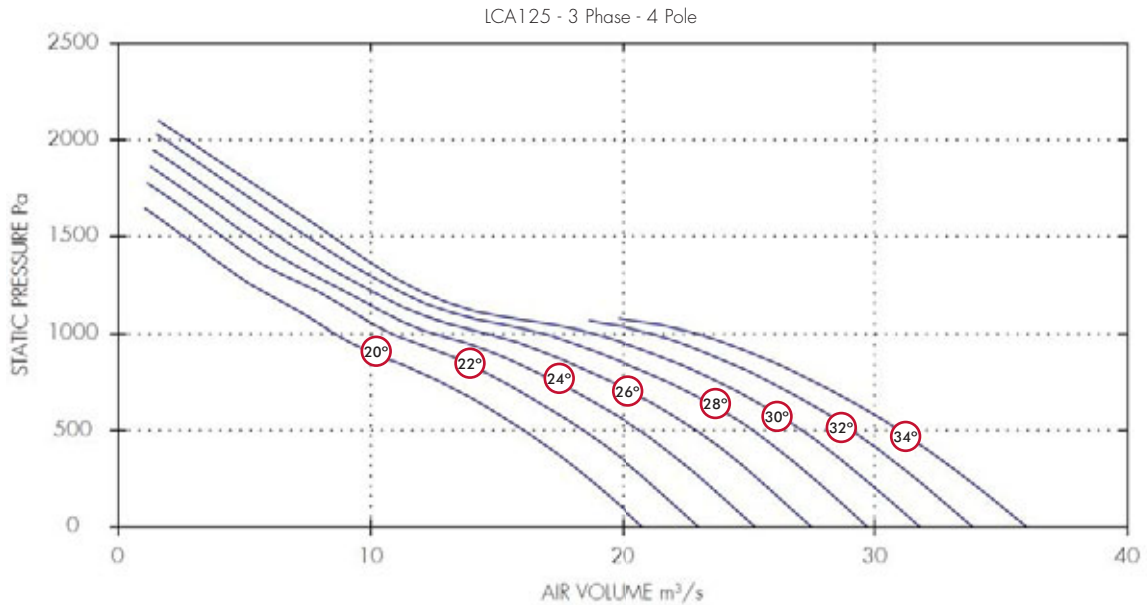
Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Poles				0	150	300	450	600		
1000	LCA1003410	4	1440	IP55	10°	6.5	5.68	4.63	3.18	1.14	4	89
1000	LCA1003412	4	1440	IP55	12°	7.66	6.85	5.79	4.31	2.11	4	89
1000	LCA1003414	4	1440	IP55	14°	8.83	8.01	6.94	5.41	3.04	5.5	89
1000	LCA1003416	4	1440	IP55	16°	10.02	9.17	8.06	6.48		5.5	89
1000	LCA1003418	4	1440	IP55	18°	11.23	10.3	9.15	7.51		7.5	89
1000	LCA1003420	4	1440	IP55	20°	12.4	11.41	10.2	8.5		7.5	89
1000	LCA1003422	4	1440	IP55	22°	13.51	12.47	11.22	9.49		7.5	89
1000	LCA1003424	4	1440	IP55	24°	14.53	13.5	12.23	10.49		11	89
1000	LCA1003426	4	1440	IP55	26°	15.45	14.47	13.23	11.53		11	89
1000	LCA1003428	4	1440	IP55	28°	16.33	15.41	14.24	12.6		15	89
1000	LCA1003430	4	1440	IP55	30°	17.31	16.4	15.24	13.6		15	89
1000	LCA1003432	4	1440	IP55	32°	18.48	17.47	16.21	14.48		15	89
1000	LCA1003434	4	1440	IP55	34°	19.74	18.58	17.15	15.26		18.5	89
1000	LCA1003436	4	1440	IP55	36°	20.93	19.64	18.07	16		18.5	89
1000	LCA1003438	4	1440	IP55	38°	22.01	20.64	18.98	16.71		18.5	89
1000	LCA1003440	4	1440	IP55	40°	23.03	21.6	19.87	17.41		22	89

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB								dBA @3m
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
1000	LCA1003410	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003412	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003414	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003416	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003418	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003420	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003422	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003424	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003426	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003428	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003430	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003432	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003434	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003436	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003438	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	LCA1003440	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89

Long Case Axial Fans (LCA)

Performance Curve



Performance Guide

Dia.	3 Phase			IP Rating	Curve Ref.	m ³ /s at Pa										Motor kW	dBA @3m	
	Stock Ref	Poles	r.p.m			0	250	500	750	1000	1250	1500	1750	2000				
1250	LCA1253420	4	1475	IP55	20°	20.81	18.64	16.07	12.79	8.59	5.26	2.6					22	83
1250	LCA1253422	4	1475	IP55	22°	23.03	20.92	18.43	15.28	10.86	7.33	4.1	1.46				30	84
1250	LCA1253424	4	1475	IP55	24°	25.27	23.16	20.69	17.37	12.55	8.47	5.18	2.51				30	85
1250	LCA1253426	4	1475	IP55	26°	27.51	25.39	22.96	19.57	14.61	9.54	6.33	3.58				37	86
1250	LCA1253428	4	1475	IP55	28°	29.72	27.6	25.18	21.83	16.82	10.6	7.46	4.64	1.84			37	87
1250	LCA1253430	4	1475	IP55	30°	31.81	29.62	27.15	23.86	18.86	11.45	8.46	5.62	2.71			37	87
1250	LCA1253432	4	1475	IP55	32°	33.89	31.63	29.13	25.88	21.13							45	88
1250	LCA1253434	4	1475	IP55	34°	36.01	33.63	30.98	27.66	22.97							45	88

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB								dBA @3m
	Stock Ref	Poles	Inlet/Outlet		63	125	250	500	1k	2k	4k	8k	
1250	LCA1253420	4	Inlet/Outlet	98	105	101	100	98	95	92	89	83	
1250	LCA1253422	4	Inlet/Outlet	99	106	102	101	99	96	93	90	84	
1250	LCA1253424	4	Inlet/Outlet	100	107	103	102	100	97	94	91	85	
1250	LCA1253426	4	Inlet/Outlet	101	108	104	103	101	98	95	92	86	
1250	LCA1253428	4	Inlet/Outlet	102	109	105	104	102	99	96	93	87	
1250	LCA1253430	4	Inlet/Outlet	102	109	105	104	102	99	96	93	87	
1250	LCA1253432	4	Inlet/Outlet	103	110	106	105	103	100	97	94	88	
1250	LCA1253434	4	Inlet/Outlet	103	110	106	105	103	100	97	94	88	

Electrical Details

1 Phase 2 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	*eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA25	2800	25°-50°	0.37	8	2.6	D.O.L.	444744	444702	-	-	-	-
LCA31	2800	10°-24°	0.37	8	2.6	D.O.L.	444744	444702	-	-	-	-
LCA31	2800	26°-32°	0.55	14	3.6	D.O.L.	444744	444703	-	-	-	-
LCA31	2800	34°-38°	0.75	16	4.5	D.O.L.	444744	444703	-	-	-	-
LCA31	2800	40°	1.1	23	6.6	D.O.L.	444744	444704	-	-	-	-
LCA35	2800	10°-12°	0.55	14	3.6	D.O.L.	444744	444703	-	-	-	-
LCA35	2800	22°-26°	0.75	16	4.5	D.O.L.	444744	444703	-	-	-	-
LCA35	2800	28°-34°	1.1	23	6.6	D.O.L.	444744	444704	-	-	-	-
LCA35	2800	36°-38°	1.5	31	8.5	D.O.L.	444744	444705	-	-	-	-
LCA40	2800	10°-12°	0.55	14	3.6	D.O.L.	444744	444703	-	-	-	-
LCA40	2800	14°-18°	0.75	16	4.5	D.O.L.	444744	444704	-	-	-	-
LCA40	2800	20°-24°	1.1	23	6.6	D.O.L.	444744	444704	-	-	-	-
LCA40	2800	26°-32°	1.5	31	8.5	D.O.L.	444744	444705	-	-	-	-

*1 phase 2 pole is not speed controllable

3 Phase 2 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA25	2800	25°-50°	0.37	5.82	0.97	D.O.L.	444747	444700	-	-	444177	444172
LCA31	2800	10°-24°	0.37	5.82	0.97	D.O.L.	444747	444700	-	-	444177	444172
LCA31	2800	26°-32°	0.55	8.52	1.42	D.O.L.	444747	444701	-	-	444177	444172
LCA31	2800	34°-38°	0.75	10.62	1.77	D.O.L.	444747	444701	-	-	444177	444172
LCA31	2800	40°	1.1	15.06	2.51	D.O.L.	444747	444702	-	-	444177	444173
LCA35	2800	10°-12°	0.37	5.82	0.97	D.O.L.	444747	444700	-	-	444177	444172
LCA35	2800	14°-20°	0.55	8.52	1.42	D.O.L.	444747	444701	-	-	444177	444172
LCA35	2800	22°-26°	0.75	10.62	1.77	D.O.L.	444747	444701	-	-	444177	444172
LCA35	2800	28°-34°	1.1	15.06	2.51	D.O.L.	444747	444702	-	-	444177	444173
LCA35	2800	36°-38°	1.5	19.68	3.28	D.O.L.	444747	444702	-	-	444177	444173
LCA35	2800	40°	2.2	27.66	4.61	D.O.L.	444747	444703	-	-	-	444174
LCA40	2800	10°-12°	0.55	8.52	1.42	D.O.L.	444747	444701	-	-	444177	444172
LCA40	2800	14°-18°	0.75	10.62	1.77	D.O.L.	444747	444701	-	-	444177	444172
LCA40	2800	20°-26°	1.1	15.06	2.51	D.O.L.	444747	444702	-	-	444177	444173
LCA40	2800	28°-32°	1.5	19.68	3.28	D.O.L.	444747	444702	-	-	444177	444173
LCA40	2800	34°-38°	2.2	27.66	4.61	D.O.L.	444744	444703	-	-	-	444174
LCA40	2800	40°	3	42.2	6.03	D.O.L.	444747	444704	-	-	-	444174
LCA45	2880	10°-12°	1.1	15.06	2.51	D.O.L.	444747	444702	-	-	444177	444173
LCA45	2880	14°-18°	1.5	19.68	3.28	D.O.L.	444747	444702	-	-	444177	444173
LCA45	2880	20°-26°	2.2	27.66	4.61	D.O.L.	444747	444703	-	-	444177	444173
LCA45	2880	28°-32°	3	42.2	6.03	D.O.L.	444747	444704	-	-	-	444174
LCA50	2880	10°-12°	1.5	19.68	3.28	D.O.L.	444747	444702	-	-	444177	444173
LCA50	2880	14°-18°	2.2	27.66	4.61	D.O.L.	444747	444703	-	-	-	444174
LCA50	2880	20°-24°	3	42.2	6.03	D.O.L.	444747	444704	-	-	-	444174
LCA50	2880	26°-30°	4	59.1	7.88	D.O.L.	444747	444705	-	-	-	444175
LCA50	2880	32°-36°	5.5	78.8	10.5	D.O.L.	444748	444706	-	-	-	444175
LCA50	2880	38°-40°	7.5	106	14.1	D.O.L.	444748	444707	-	-	-	444176

Speed Controllers

Used in conjunction with speed controllable fans Vent-Axia offers a choice of speed controllers, the traditional Five-Step Auto Transformer or the Inverter Speed Controller.

The **Five-Step-Auto** Transformer provides five stepped speed settings without the electronic motor harmonic noise associated with all electronic or solid state type Speed Controllers.

eDemand Speed Controllers & Inverters see Accessories & Controllers Section

Long Case Axial Fans (LCA)

Electrical Details

3 Phase 2 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA50	2880	38°-40°	7.5	106	14.1	D.O.L.	444748	444707	-	-	-	444176
LCA56	2880	10°-14°	4	59.1	7.88	D.O.L.	444747	444705	-	-	-	444175
LCA56	2880	16°-18°	5.5	78.8	10.5	D.O.L.	444748	444706	-	-	-	444175
LCA56	2880	20°-24°	7.5	106	14.1	D.O.L.	444748	444707	-	-	-	444176
LCA56	2880	26°-32°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	444176
LCA56	2880	34°-38°	15	75.3	30.1	D.O.L.	-	-	-	-	-	444176
LCA63	2940	10°-12°	5.5	78.8	10.5	D.O.L.	444748	444706	-	-	-	444175
LCA63	2940	14°-16°	7.5	106	14.1	D.O.L.	444748	444707	-	-	-	444176
LCA63	2940	18°-22°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
LCA63	2940	24°-28°	15	75.3	30.1	Star Delta	-	-	-	-	-	-

1 Phase 4 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA25	1400	25°-50°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA31	1400	10°-40°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA35	1400	10°-40°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA40	1400	10°-36°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA40	1400	38°-40°	0.37	7	2.9	D.O.L.	444744	444702	10314105	444164	-	-
LCA45	1400	10°-24°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA45	1400	26°-32°	0.37	7	2.9	D.O.L.	444744	444702	10314105	444164	-	-
LCA45	1400	34°-40°	0.55	11	3.9	D.O.L.	444744	444703	10314105	444164	-	-
LCA50	1400	10°-18°	0.25	5	2	D.O.L.	444744	444701	10314103	444164	-	-
LCA50	1400	20°-26°	0.37	7	2.9	D.O.L.	444744	444702	10314105	444164	-	-
LCA50	1400	28°-34°	0.55	11	3.9	D.O.L.	444744	444703	10314105	444164	-	-
LCA50	1400	36°-40°	0.75	15	5.3	D.O.L.	444744	444704	10314107	444165	-	-
LCA56	1400	10°-16°	0.55	11	3.9	D.O.L.	444744	444703	10314105	444164	-	-
LCA56	1400	18°-22°	0.75	15	5.3	D.O.L.	444744	444704	10314107	444165	-	-
LCA56	1400	24°-30°	1.1	22	7	D.O.L.	444744	444705	10314120	444165	-	-
LCA56	1400	32°-36°	1.5	32	9.3	D.O.L.	444744	444706	10314120	-	-	-
LCA63	1400	10°-12°	0.55	11	3.9	D.O.L.	444744	444703	10314105	444164	-	-
LCA63	1400	14°-16°	0.75	15	5.3	D.O.L.	444744	444704	10314107	444165	-	-
LCA63	1400	18°-24°	1.1	22	7	D.O.L.	444744	444705	10314120	444165	-	-
LCA63	1400	22°-26°	1.5	32	9.3	D.O.L.	444744	444706	10314120	-	-	-

3 Phase 4 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA25	1400	25°-50°	0.25	4.26	0.71	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA31	1400	10°-40°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA35	1400	10°-40°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA40	1400	10°-26°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172

Speed Controllers

Used in conjunction with speed controllable fans Vent-Axia offers a choice of speed controllers, the traditional Five-Step Auto Transformer or the Inverter Speed Controller.

The **Five-Step-Auto** Transformer provides five stepped speed settings without the electronic motor harmonic noise associated with all electronic or solid state type Speed Controllers.

eDemand Speed Controllers & Inverters see Accessories and Controls Section.

Electrical Details

3 Phase 4 Pole

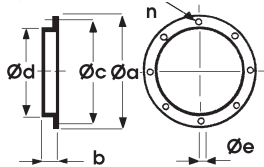
Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
LCA40	1400	28°-38°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA40	1400	40°	0.37	6.66	1.11	D.O.L.	444747	444700	10314301	444166	444177	444172
LCA45	1400	10°-24°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA45	1400	26°-32°	0.37	6.66	1.11	D.O.L.	444747	444700	10314301	444166	444177	444172
LCA45	1400	34°-40°	0.55	9.48	1.58	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA50	1400	10°-18°	0.25	5.04	0.84	D.O.L.	444747	444699	10314301	444166	444177	444172
LCA50	1400	20°-26°	0.37	6.66	1.11	D.O.L.	444747	444700	10314301	444166	444177	444172
LCA50	1400	28°-34°	0.55	9.48	1.58	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA50	1400	36°-40°	0.75	11.58	1.93	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA56	1400	10°-16°	0.55	9.48	1.58	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA56	1400	18°-22°	0.75	11.58	1.93	D.O.L.	444747	444702	10314304	444166	444177	444172
LCA56	1400	24°-30°	1.1	15.84	2.64	D.O.L.	444747	444702	10314304	444166	444177	444173
LCA56	1400	32°-36°	1.5	20.7	3.45	D.O.L.	444747	444702	10314304	444166	444177	444173
LCA56	1400	38°-40°	2.2	33.9	4.84	D.O.L.	444747	444703	10314307	444167	-	444174
LCA63	1400	10°	0.55	9.48	1.58	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA63	1400	12°-14°	0.75	11.58	1.93	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA63	1400	16°-18°	1.1	15.84	2.64	D.O.L.	444747	444702	10314304	444166	444177	444173
LCA63	1400	22°-26°	1.5	20.7	3.45	D.O.L.	444747	444702	10314307	444166	444177	444173
LCA63	1400	28°-34°	2.2	33.9	4.84	D.O.L.	444747	444703	10314307	444167	-	444174
LCA63	1400	36°-40°	3	45.3	6.47	D.O.L.	444747	444704	10314311	444167	-	444174
LCA71	1420	10°	0.75	11.58	1.93	D.O.L.	444747	444701	10314304	444166	444177	444172
LCA71	1420	12°-14°	1.1	15.84	2.64	D.O.L.	444747	444702	10314304	444166	444177	444173
LCA71	1420	16°-18°	1.5	20.7	3.45	D.O.L.	444747	444702	10314304	444166	444177	444173
LCA71	1420	20°-24°	2.2	33.9	4.84	D.O.L.	444747	444703	10314307	444167	-	444174
LCA71	1420	26°-30°	3	45.3	6.47	D.O.L.	444747	444704	10314311	444167	-	444174
LCA71	1420	32°-36°	4	57.8	8.26	D.O.L.	444747	444705	10314311	444167	-	444175
LCA71	1420	38°-40°	5.5	77	11	D.O.L.	444748	444706	-	444168	-	444175
LCA80	1420	10°-12°	2.2	33.9	4.84	D.O.L.	444747	444703	10314307	444167	-	444174
LCA80	1440	14°-20°	3	45.3	6.47	D.O.L.	444747	444704	10314311	444167	-	444174
LCA80	1440	22°-24°	4	57.8	8.26	D.O.L.	444747	444705	10314311	444167	-	444175
LCA80	1440	26°-28°	5.5	77	11	D.O.L.	444748	444706	-	444168	-	444175
LCA80	1440	30°-34°	7.5	102.2	14.6	D.O.L.	444748	444707	-	-	-	444176
LCA80	1440	36°-40°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
LCA90	1440	10°	3	45.3	6.47	D.O.L.	444747	444704	10314311	444167	-	444174
LCA90	1440	12°-16°	4	57.8	8.26	D.O.L.	444747	444705	10314311	444167	-	444175
LCA90	1440	18°-20°	5.5	77	11	D.O.L.	444748	444706	-	444168	-	444175
LCA90	1440	22°-26°	7.5	102.2	14.6	D.O.L.	444748	444707	-	-	-	444176
LCA90	1440	28°-32°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
LCA90	1440	34°-40°	15	75.3	30.1	Star Delta	-	-	-	-	-	-
LCA100	1440	10°-12°	4	57.8	8.26	D.O.L.	444747	444705	10314311	444167	-	444175
LCA100	1440	14°-16°	5.5	77	11	D.O.L.	444748	444706	-	444168	-	444175
LCA100	1440	18°-22°	7.5	102.2	14.6	D.O.L.	444748	444707	-	-	-	444176
LCA100	1440	24°-26°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
LCA100	1440	28°-32°	15	75.3	30.1	Star Delta	-	-	-	-	-	-
LCA100	1440	34°-38°	18.5	86	34.3	Star Delta	-	-	-	-	-	-
LCA100	1440	40°	22	102	40.6	Star Delta	-	-	-	-	-	-
LCA125	1475	20°	22	102	40.6	Star Delta	-	-	-	-	-	-
LCA125	1475	22°-24°	30	131	54.7	Star Delta	-	-	-	-	-	-
LCA125	1475	26°-30°	37	159	66.4	Star Delta	-	-	-	-	-	-
LCA125	1475	32°-34°	45	193	80.5	Star Delta	-	-	-	-	-	-

Long Case Axial Fans (LCA)

Accessory Dimensions (mm)

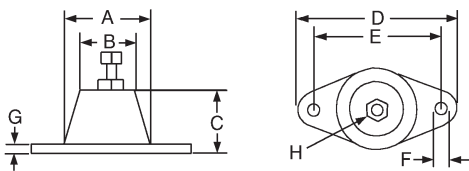
Coupling Flange

Rolled from mild steel. Dimensionally matched to fan flange and fixing holes



Stock Ref. No.	overall a	spigot b	pcd c	int dia d	hole dia e	No. holes
10506250	335	30	295	250	10	8
10506315	385	30	355	315	10	8
10506355	425	45	395	355	10	8
10506400	480	45	450	400	12	8
10506450	530	60	500	450	12	8
10506500	590	0	560	500	12	12
10506560	650	75	620	560	12	12
10506630	720	75	690	630	12	12
10506710A	800	40	770	710	12	16
10506800A	890	40	860	800	12	16
10506900A	1038	50	970	900	14	16
105061000A	1138	50	1070	1000	14	16
105061250A	1390	83	1320	1250	15	20

Anti-Vibration Mounts



Max. Load

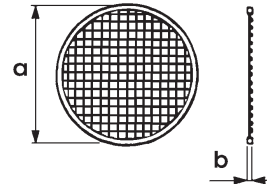
*Stock Ref.	A	B	C	D	E	F	G	H	kg
10523033	37	26	27	67	54	7	3	M 8	23
10523055	37	26	27	67	54	7	3	M8	36
10523133	57	46	35	95	76	10.5	4	M12	91
10523165	57	46	35	95	76	10.5	4	M12	245

*1 A/V mount, a set of 4 would be required for the relevant fan

Inlet Wire Guard

'K' factor loss 0.25

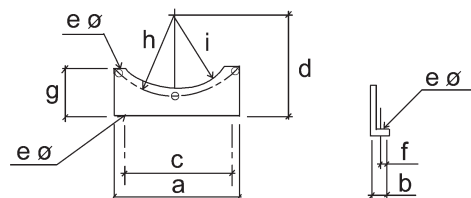
Available for direct fixing to either side of the fan using flange sizing holes. Constructed to meet BS 848 Part 5



Stock Ref. No.	a	b
10505250	330	3
10505315	380	3
10505355	420	3
10505400	475	3
10505450	525	3
10505500	595	3
10505560	655	3
10505630	725	3
10505710	784	10
10505800	870	10
10505900	970	10
105051000	1090	10
105051250	1370	10

For more information on the 'K' factor, refer to General Information Section

Mounting Feet



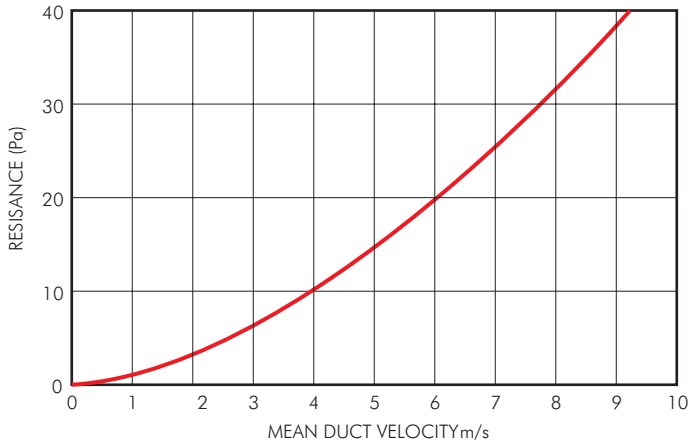
*Stock Ref.	a	b	c	d	e	f	g	h	i
10503250	232	24	180	240	10	14	115	146	130
10503315	275	24	224	240	10	14	115	177.5	167
10503355	303	24	250	250	10	14	125	197.5	187
10503400	348	24	280	300	12	14	135	225	213
10503450	384	24	315	360	12	14	155	250	238
10503500	425	24	315	360	12	14	135	280	268
10503560	475	24	355	355	12	14	155	310	298
10503630	520	24	400	400	12	14	175	345	333
10503710A	710	40	610	435	13	18	240	385	365
10503800A	800	40	700	480	13	18	262	430	410
10503900A	900	40	800	535	13	18	288	485	460
105031000A	1000	40	900	580	15	18	314	535	510
105031250A	1250	80	1150	868	15	26	366	660	640

*Set of 2 feet

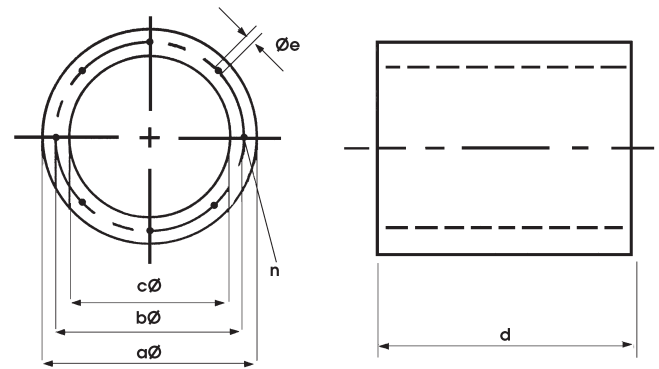
Fan Attenuator Details

An attenuator without pod offers negligible resistance to air flow, and therefore the pressure loss can be considered to be the same as that for the equivalent length of ducting.

Resistance Graph for Axial Attenuator with Pod



Attenuator Dimensions (mm)



Attenuator Insertion Loss Data

Dia	Stock Ref.	63	125	250	500	1k	2k	4k	8k	kg approx
250	10514250	2	3	6	11	16	11	10	6	20
315	10514315	2	3	6	11	16	11	10	6	22
355	10514355	2	3	6	12	16	11	10	6	30
400	10514400	2	3	6	13	16	12	10	6	41
450	10514450	2	4	6	14	17	12	10	6	50
500	10514500	3	4	7	14	17	14	11	7	59
560	10514560	2	4	8	15	18	14	11	7	70
630	10514630	3	4	8	16	18	14	11	7	82
710	10514710A	1	2	6	9	12	10	6	2	90
800	10514800A	1	2	6	9	12	10	6	2	100
900	10514900A	1	2	6	9	12	10	6	2	145
1000	10514000A	1	2	6	9	12	10	6	2	184
1250	105141250A	1	2	6	9	12	10	6	2	150

Melinex lined attenuators are available on request

Case Axial Attenuator Fitted with Pod Insertion Losses

Dia	Stock Ref.	63	125	250	500	1k	2k	4k	8k	kg approx + POD
315	10500315	6	7	12	18	27	25	22	19	32
355	10500355	3	8	12	18	28	26	22	19	44
400	10500400	3	8	12	18	28	26	23	19	60
450	10500450	4	8	14	20	28	26	23	19	73
500	10500500	4	8	14	20	29	26	23	19	87
560	10500560	4	9	14	20	29	26	23	19	102
630	10500630	4	9	14	20	29	26	23	19	120
710	10500710A	6	10	20	30	35	28	25	22	134
800	10500800A	6	10	20	30	35	28	25	22	149
900	10500900A	6	10	20	30	35	28	25	22	211

Attenuator without Pod

Model	Stock Ref. No.	Dia a	Dia b	Dia c	Length d	Dia e	No. holes
LCA25	10514250	350	292	254	375	M8	4
LCA31	10514315	415	355	315	475	M8	8
LCA35	10514355	455	395	355	540	M8	8
LCA40	10514400	500	450	400	600	M10	8
LCA45	10514450	550	500	450	675	M10	8
LCA50	10514500	600	560	500	750	M10	12
LCA56	10514560	660	620	560	810	M10	12
LCA63	10514630	730	690	630	940	M10	12
LCA71	10514710A	814	700	710	1070	M10	16
LCA80	10514800A	900	860	796	1200	M10	16
LCA90	10514900A	999	970	893	1350	M10	16
LCA100	105141000A	1108	1070	1070	1500	M10	16
LCA125	105141250A	1350	1320	1250	1875	M10	16

Attenuator with Pod

Model	Stock Ref. No.	Dia a	Dia b	Dia c	Length d	Dia e	No. holes
LCA25	10500250	350	292	254	375	M8	4
LCA31	10500315	415	355	315	475	M8	8
LCA35	10500355	455	395	355	540	M8	8
LCA40	10500400	500	450	400	600	M10	8
LCA45	10500450	550	500	450	675	M10	8
LCA50	10500500	600	560	500	750	M10	12
LCA56	10500560	660	620	560	810	M10	12
LCA63	10500630	730	690	630	940	M10	12
LCA71	10500710A	814	700	710	1070	M10	16
LCA80	10500800A	900	860	796	1200	M10	16
LCA90	10500900A	999	970	893	1350	M10	16
LCA100	105001000A	1108	1070	1070	1500	M10	16
LCA125	105001250A	1350	1320	1250	1875	M10	16

Long Case Axial Fans (LCA)

Accessories

Stock Ref.	Mounting Feet - set of 2	Inlet Wire Guard	Coupling Flange	*Ancillary Pack	Axial Attenuator	Attenuator inc. Pod	**Anti Vibration Mount
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
LCA25	10503250	10505250	10506250	10513250	10514250	-	10523033
LCA31	10503315	10505315	10506315	10513315	10514315	10500315	10523033
LCA35	10503355	10505355	10506355	10513355	10514355	10500355	10523033
LCA40	10503400	10505400	10506400	10513400	10514400	10500400	10523033
LCA45	10503450	10505450	10506450	10513450	10514450	10500450	10523033
LCA50	10503500	10505500	10506500	10513500	10514500	10500500	10523033
LCA56	10503560	10505560	10506560	10513560	10514560	10500560	10523033
LCA63	10503630	10505630	10506630	10513630	10514630	10500630	10523033
LCA71	10503710A	10505710	10506710A	10513710A	10514710A	10500710	10523055
LCA80	10503800A	10505800	10506800A	10513800A	10514800A	10500800	10523055
LCA90	10503900A	10505900	10506900A	10513900A	10514900A	10500900	10523133
LCA100	105031000A	105051000	105061000A	105131000A	105141000A	105001000	10523133
LCA125	105031250A	105051250	105061250A	105131250A	105141250A	105001250	10523165

** 4 required per fan

Imperial Accessories Sizes 315, 400, 500, 630

*Axial Accessory Pack

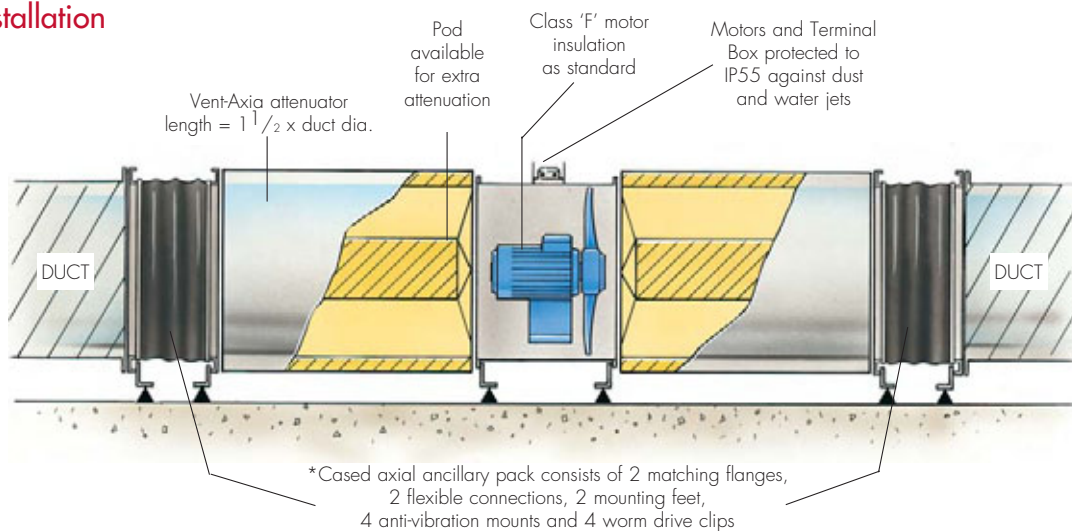
consists of:

- 2 Matching flanges
- 2 Flexible connectors
- 2 Mounting feet
- 4 Anti vibration mounts
- 4 Worm drive clips

Model	a Metric Size Accessories	b Imperial Size Accessories	Imperial Flexible Connector Stock Ref. No.	Worm Drive Clips Stock Ref. No
LCA 315	315	12"	10506012	*561715
LCA 400	400	15"	10506015	*561715
LCA 500	500	19"	10506019	*571720
LCA 630	630	24"	10506024	*571726

* Two clips are required per Flexible

Typical Installation



eTurboProp™ High Pressure Axial Fans (ETP)

Features and Benefits

- Die cast aluminium impellers.
- Compact in size, equivalent to standard long case axial fans.
- Available from 450 to 630 diameter, 1 or 3 phase.
- All models are speed controllable by either voltage control or frequency inverter (see electrical section for details)
- All units fully protected to IP65.
- Motor insulation Class H, suitable for operating temperatures from -40°C to +70°C.
- Motors protected with Standard Thermal Overload Protection.
- Manufacture controlled to BS EN ISO 9001.
- Performance tested to BS 848 Parts 1 & 2.

More efficient kitchen filtration systems and ever larger duct runs have created a need for a new generation of high performance Axial fans, suitable for higher working pressures.

The range offers a new alternative to the H & V industry. The all-new eTurboProp is a revolutionary design cased axial. Equivalent in size to the old unit, but developing more pressure/airflow performance, higher efficiency & offering substantial running cost reductions. Available in four sizes: 450, 500, 560 and 630mm diameter with a performance from 0.65m³/s to 5.93m³/s and pressure development up to 600 Pa. Ensuring a compact design, the units have been constructed from a single sheet of steel, with a single 2 pole motor and axial impeller mounted within the length of the unit casing. The unit is manufactured from electro welded

steel with an epoxy paint finish. Factory assembled to BS EN ISO 9001 ensuring a quiet and vibration free unit.

All sizes are protected with a tough black epoxy paint finish for those harsh environmental conditions, internally or externally. Ensuring ease of installation the motor is wired directly into a single IP65 terminal box.

Axial Impellers

The impeller is manufactured in die-cast aluminium and fitted with narrow profiled blades, which provide the maximum efficiency at the maximum airflow.

Motors

Specifically designed and styled for this range of fans. Ball bearings are greased for life and allow the fans to be installed at any angle. Rotors are dynamically balanced to ISO 1940. Motors are protected to IP65 against dust and water jets complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling. Motor insulation is Class 'H' (from -40°C to +70°C). All models are speed controllable by either voltage control or frequency inverter (see electrical section for details).

Electrical

Single phase 220-240V/50 Hz. Capacitor start and run. Three phase 380V-415V/50Hz. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P), which should be wired into all controller circuits and into starter contactors.

Terminal Box

IP65 terminal box is supplied with all models with 20mm PGII entry.

Performance

The fan performance is in accordance with tests to BS 848 Part 1 1980.

Sound Levels

Fan sound levels, measured in a reverberant chamber in accordance with BS848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10-12 Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Accessories

- eDemand Controllers
- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- Inverter Speed Controllers
- Ancillary Packs
- Cased Attenuators
- Mounting Feet
- Wire Inlet Guard
- Coupling Flanges

Warranty*

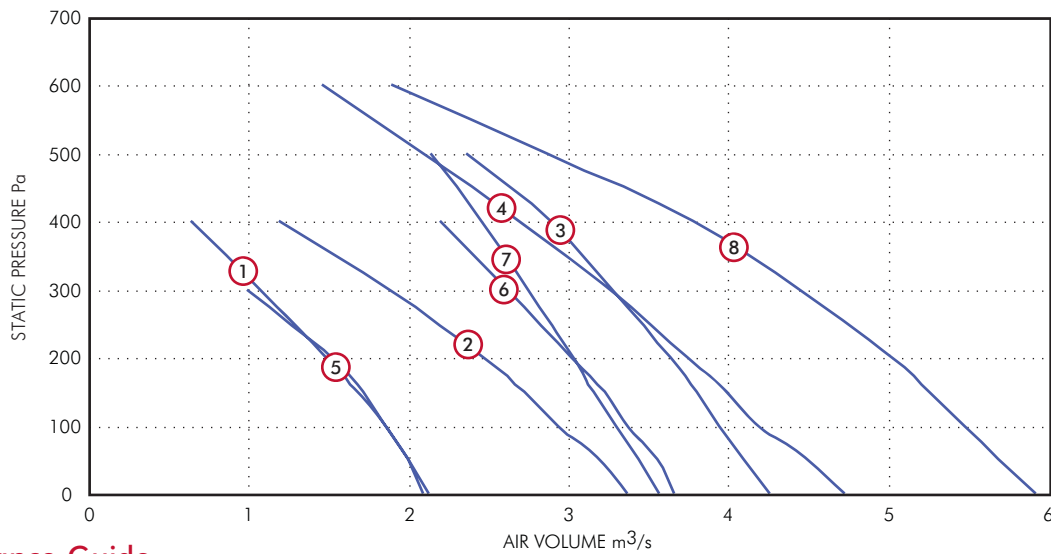
Standard 2 year warranty, extendable to 5 years by registration subject to installation and maintenance in accordance with fitting and operating instructions supplied with product.



***5 year warranty**

Performance Curve

450 to 630 dia. - 2 Pole - 1 & 3 Phase



Performance Guide

Unit Code	Nom. RPM	Phase	Pole	Performance Curve	m³/s at Pa								Motor kW	Amps S.C.	Amps F.L.C.	
					0	50	100	150	200	300	400	500				600
ETP45012	2896	1	2	①	2.1	2	1.86	1.69	1.49	1.08	0.65			1.1	29	7.3
ETP50012	2610	1	2	②	3.38	3.2	2.94	2.73	2.47	1.89	1.2			1.5	38	9.1
ETP56012	2884	1	2	③	4.27	4.1	3.95	3.81	3.64	3.28	2.89	2.37		2.2	66	15.3
ETP63012	2884	1	2	④	4.74	4.5	4.2	4	3.75	3.27	2.7	2.1	1.47	3	80	18
ETP45032	2887	3	2	⑤	2.13	2	1.86	1.72	1.52	1				1.1	11	2.6
ETP50032	2859	3	2	⑥	3.67	3.56	3.38	3.23	3.02	2.63	2.2			1.5	17	3.5
ETP56032	2876	3	2	⑦	3.57	3.45	3.3	3.16	3.03	2.75	2.46	2.15		2.2	32	4.9
ETP63032	2886	3	2	⑧	5.93	5.69	5.49	5.26	5.03	4.45	3.78	2.87	1.9	4	66	8.7

S.C. = STARTING CURRENT, F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹²Watts)

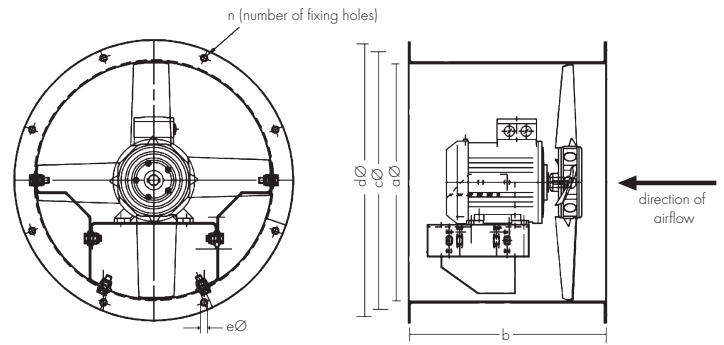
Unit Code	Phase	Pole	125	250	500	1k	2k	4k	8k	dBA @ 3m	
ETP45012	Inlet/Outlet	1	2	70	71	79	82	82	79	74	67
ETP50012	Inlet/Outlet	1	2	70	76	79	81	81	80	75	67
ETP56012	Inlet/Outlet	1	2	79	94	97	99	98	94	86	78
ETP63012	Inlet/Outlet	1	2	79	90	98	99	98	97	91	81
ETP45032	Inlet/Outlet	3	2	63	73	80	82	83	81	76	68
ETP50032	Inlet/Outlet	3	2	69	80	83	84	85	84	80	70
ETP56032	Inlet/Outlet	3	2	86	98	97	97	92	87	80	75
ETP63032	Inlet/Outlet	3	2	79	90	98	98	99	97	91	81

Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2x 105 Pa. The free field sound power level spectra figure are dB with reference of 1012 Watts. To ensure minimum noise levels during speed control an auto transformer or inverter speed controller is recommended.

eTurboprop - High Pressure Axial Fans (ETP)

Fan Dimensions (mm)

Size	øa	b	øc	ød	øe	n	kg approx
450	450	375	500	537	12	8	41
500	500	375	560	595	12	12	46
560	560	520	620	655	12	12	59
630	630	520	690	725	12	12	64



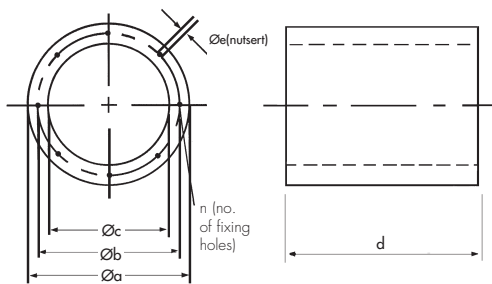
Attenuator Insertion Losses

Dia	63	125	250	500	1k	2k	4k	8k
450	2	4	6	14	17	12	10	6
500	3	4	7	14	17	14	11	7
560	3	4	8	15	18	14	11	7
630	3	4	8	16	18	14	11	7

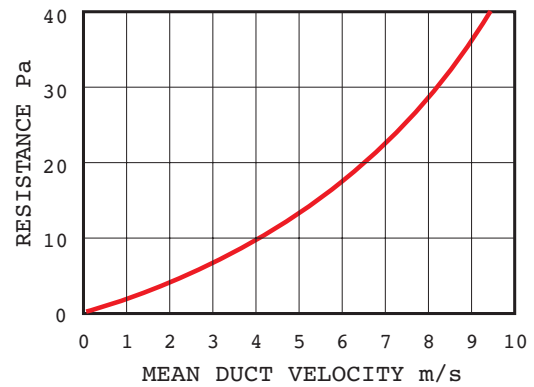
Attenuator Fitted with Pod Insertion Losses

Dia	63	125	250	500	1k	2k	4k	8k
450	4	8	14	20	28	26	23	19
500	4	8	14	20	29	26	23	19
560	4	9	14	20	29	26	23	19
630	4	9	14	20	29	26	23	19

Accessories Dimensions (mm)



Resistance Graph For Case Attenuator Fitted With Pod

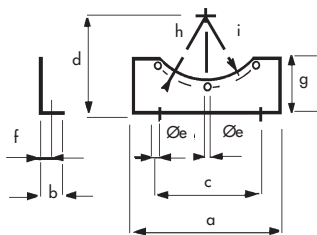


Case Axial Attenuator

Dia	øa	bø	øc	d	øe*	n	kg approx	Fitted with pod kg approx	Free area m ² without pod
450	550	500	450	675	M10	8	50	73	0.159
500	600	560	500	750	M10	12	59	87	0.196
560	660	620	560	840	M10	12	70	102	0.246
630	730	690	630	940	M10	12	82	120	0.312

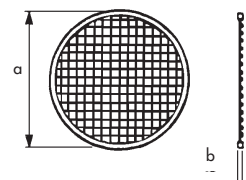
*Threaded hole to take bolt

Mounting Feet



Stock Ref.	a	b	c	d	øe	f	g	h	i
10503450	384	24	315	315	12	14	155	250	238
10503500	425	24	315	315	12	14	135	280	268
10503560	475	24	355	355	12	14	155	310	298
10503630	520	24	400	400	12	14	175	345	333

Inlet Wire Guard



'K' factor loss 0.25

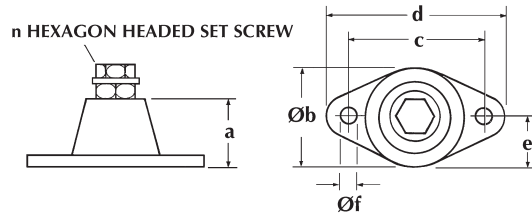
Stock

Ref. No.	øa	b
10505450	525	3
10505500	595	3
10505560	655	3
10505 630	725	3

For more information on the 'K' factor, refer to General Information Section

Accessories Dimensions (mm)

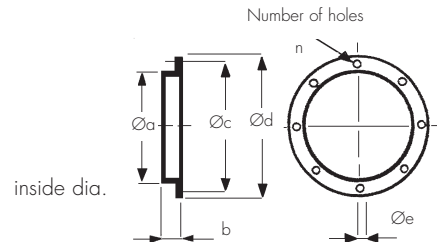
Anti-Vibration Mounts



*Stock Ref. No.	a	Øb	c	d	e	Øf	n	Max load kg
10523033	27	37	54	67	18.5	7	M8	23

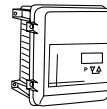
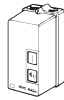
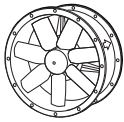
* 4 required per fan

Coupling Flange



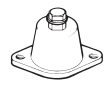
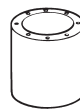
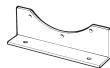
Stock Ref. No.	Øa	b	Øc	Ød	Øe	n
10506450	450	60	500	537	12	8
10506500	500	60	560	595	12	12
10506560	560	75	620	655	12	12
10506630	630	75	690	725	12	12

Accessories



Stock Ref. No.	Auto Transformer Stock Ref. No.	D.O.L. Starter Overload Stock Ref. No.	eDemand Controller			*Ancillary Pack Stock Ref. No.
			Voltage Control Stock Ref.	1 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.	
ETP45012	10314110	444744 + 444705	444165	444171	-	10513450
ETP45032	10314304	444747 + 444702	444166	-	444173	10513450
ETP50012	10314113	444744 + 444706	-	-	-	10513500
ETP50032	10314304	444747 + 444702	444166	-	444173	10513500
ETP56012	-	444744 + 444707	-	-	-	10513560
ETP56032	10314307	444747 + 444703	444167	-	444174	10513560
ETP63012	-	444744 + 444708	-	-	-	10513630
ETP63032	10314311	444747 + 444705	444167	-	444175	10513630

*Ancillary Packs consist of 4 Anti-Vibration Mounts, 2 Matching Flanges, 2 Mounting Feet and 2 Flexible Connections
 ^ For full range of speed controller options, see Accessories & Controllers Section



Stock Ref. No.	Mounting Feet (pair) Stock Ref. No.	Coupling Flange Stock Ref. No.	Inlet Wire Guard Stock Ref. No.	Case Axial Attenuator Stock Ref. No.	Case Axial Attenuator incl. Pod Stock Ref. No.	*Anti-Vibration Mounts Stock Ref. No.
ETP45012	10503450	10506450	10505450	10514450	10500450	10523033
ETP45032	10503450	10506450	10505450	10514450	10500450	10523033
ETP50012	10503500	10506500	10505500	10514500	10500500	10523033
ETP50032	10503500	10506500	10505500	10514500	10500500	10523033
ETP56012	10503560	10506560	10505560	10514560	10500560	10523033
ETP56032	10503560	10506560	10505560	10514560	10500560	10523033
ETP63012	10503630	10506630	10505630	10514630	10500630	10523033
ETP63032	10503630	10506630	10505630	10514630	10500630	10523033

* 4 required per fan

Guards: Some installations may occur where additional safety parts are needed, to ensure safety in operation. For example, the unit may be fitted at the inlet or outlet end of a ducted ventilation system, thereby exposing the impeller/motor to unguarded access. In this event, the installer must

NEW RANGE

Bifurcated Case Axial Fans (BIFA)

Features and Benefits

- Sizes 250 to 1000 dia
- Motors protected to IP55
- Motor insulation Class 'F'
- Maximum ambient temperature 200°C
- Speed controllable via transformer or inverter (when the ambient air temperature is not higher than 60°C)
- IP55 terminal box
- Suitable for relative humidity levels up to 95% R.H
- Manufactured to BS EN ISO 9001
- Performance tested to BS 848 parts 1, 2 and ISO 5801
- 2 Year Guarantee

The Bifurcated Case Axial range has been specifically developed to meet the need for an axial fan which can handle atmospheres normally detrimental to the life of the fan motor.

By isolating the motor from the system airstream, the bifurcated fan can handle a wide variety of saturated and dust-laden atmospheres, heated air and hot gases.

The range has a split airway with a direct driven motor operating in ambient air within the motor compartment. They are suitable, as standard, for handling air temperatures up to +200°C.

The Bifurcated Case Axial range has a range of accessories available which include: Axial Ancillary Pack, Attenuator, Wire Inlet Guard, Coupling Flanges, Mounting Feet, AV Mounts and Speed Controllers.

Motors

The motors are specially selected to operate within the motor compartment with the airstream in the duct system, at an elevated temperature.

Motors are of the B3 foot mounting type, totally enclosed and fan cooled. Being foot mounted the motors can, in the event of a failure, be readily interchanged with a comparable frame size from a wide range of manufacturers to cover temperatures of up to 200°C.

Where indicated, the motor is suitable for speed control by either an inverter or a 5-step auto transformer speed controller when the ambient air temperature is not higher than 60°C.

Electrical

Single phase 220-240V/50 Hz supply are available in two sizes 250 and 315 dia. in either 2 or 4 pole versions. Three phase 380-440V/50Hz supply are available in nine sizes 250, 315, 400, 500, 630, 710, 800, 900 and 1000 dia. in either 2 or 4 pole versions (710, 800, 900 and 1000 dia are only available as 4 pole).

Impellers and Casing

The aluminium alloy impellers are die cast and have an adjustable pitch which allows a wide range of air outputs to be selected. All the casings are manufactured in steel and hot dipped galvanised to BS EN ISO 1461 after fabrication. Motor mountings and fixings used in the assembly of the fan are zinc plated and passivated.

Form of Running

Bifurcated fans have arrows showing the direction of the impeller rotation and airflow. All models are Form B running.

Terminal Box

To IP55, protected against dust and water jets from any angle, allowing outside applications.

Performance

Tested to BS 848 Part 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt).

Cooling

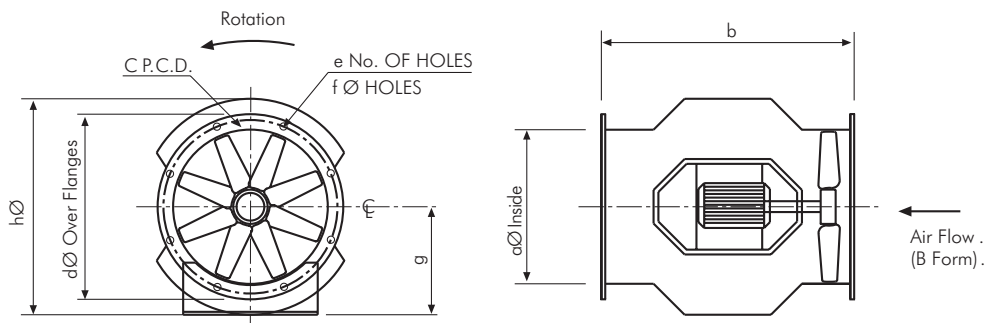
External cooling is provided by a fan mounted at the non-drive end of the motor, protected by a cover with a grid air intake. The airflow, guided by the fan cover, is directed longitudinally on the entire periphery of the motor in the channels formed by the frame ribs.

Adequate space is provided within the motor compartment to ensure a plentiful supply of cooling air. The air within the motor compartment must not exceed 40°C. For ambients in excess of this, please consult our Technical Services Department for further information.



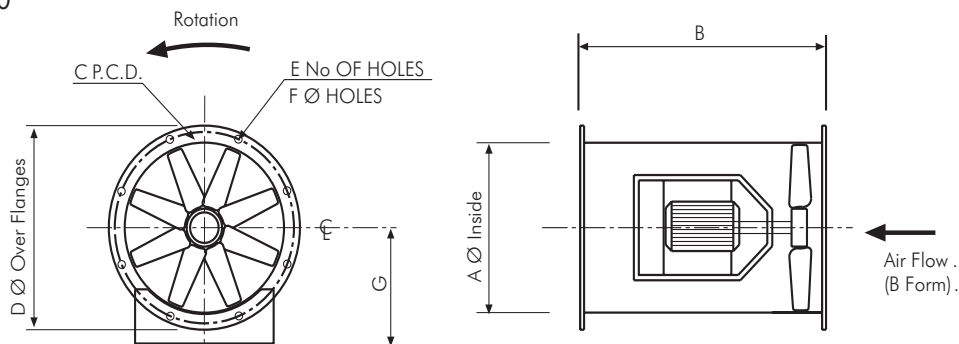
Fan Dimensions (mm)

BIFA25 - BIFA50



Model No.	Pole	Phase	Pitch Angle	aØ	b	c	d	e	f	g	hØ	Approx. Weight Kg
BIFA25	2&4	1&3	25-50	250	535	302	328	8	10	240	452	30
BIFA31	2&4	1&3	10-40	315	535	355	385	8	10	240	452	35
BIFA40	2&4	1&3	10-40	400	625	450	480	8	10	335	585	49
BIFA45	2&4	1&3	10-40	450	625	500	535	8	12	360	650	60
BIFA50	4	1&3	10-40	500	660	560	590	12	12	360	695	66
BIFA50	2	3	10-40	500	710	560	590	12	12	360	695	87

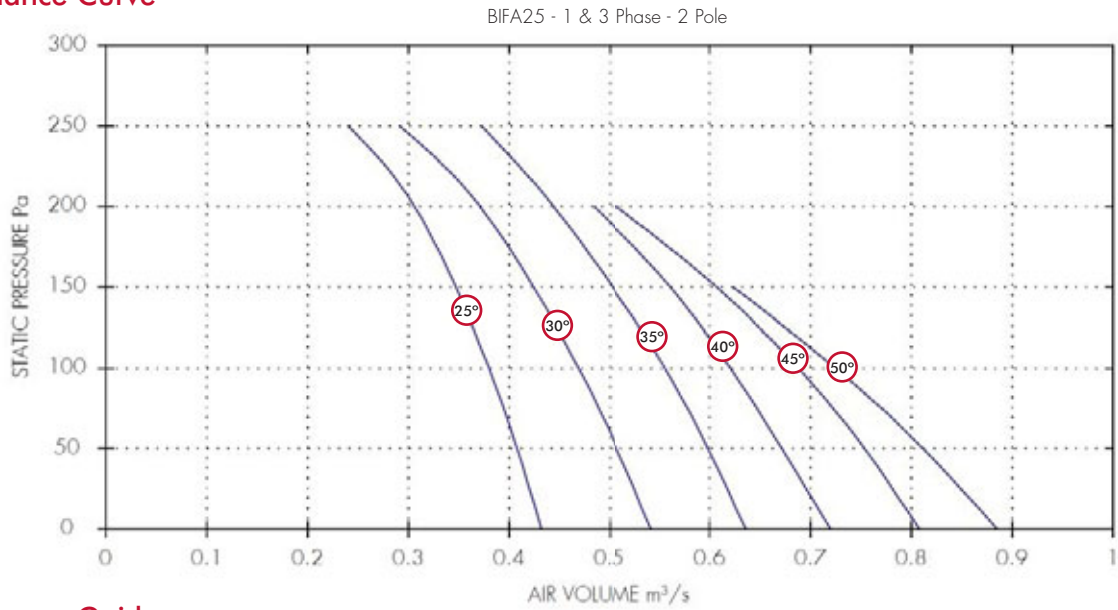
BIFA63 - BIFA100



Model No.	Pole	Phase	Pitch Angle	a	b	c	d	e	f	g	Approx. Weight Kg
BIFA56	2&4	3	10-40	560	800	604	644	12	12	350	80
BIFA63	2&4	3	10-40	630	790	690	728	12	12	400	106
BIFA71	4	3	10-40	710	800	754	784	16	12	435	120
BIFA80	4	3	10-40	800	880	860	890	16	12	450	155
BIFA90	4	3	10-40	900	900	970	1038	16	14	535	170
BIFA100	4	3	10-40	1000	1000	1070	1138	16	14	575	275

Bifurcated Case Axial Fans (BIFA)

Performance Curve



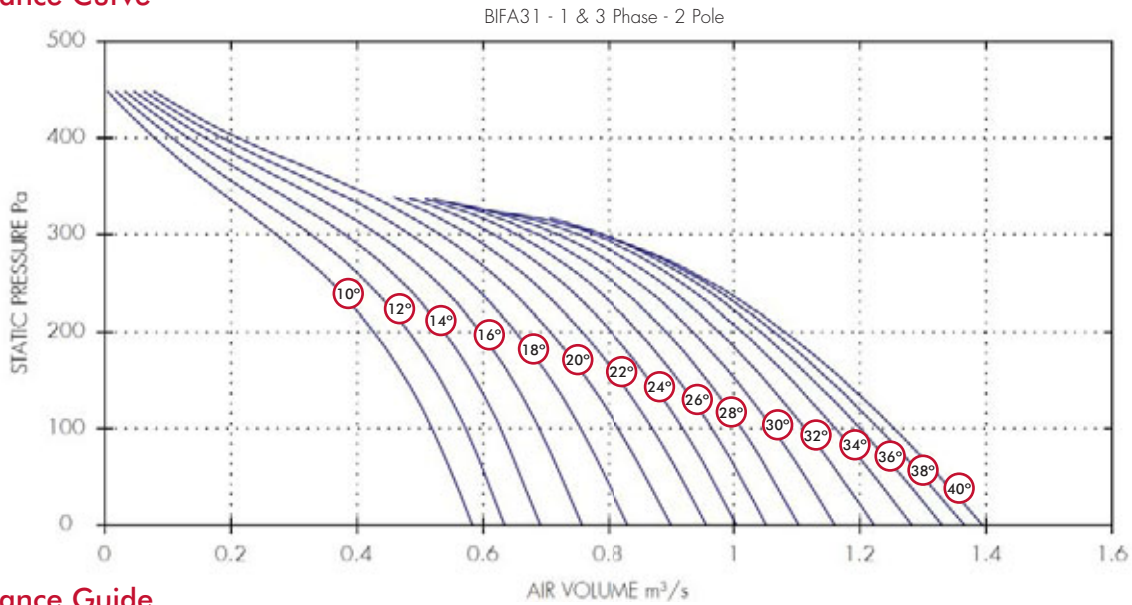
Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	50	100	150	200	250		
250	BIFA251225	BIFA253225	2	2800	IP55	25°	0.43	0.41	0.38	0.35	0.31	0.24	0.37	58
250	BIFA251230	BIFA253230	2	2800	IP55	30°	0.54	0.51	0.47	0.42	0.37	0.29	0.37	57
250	BIFA251235	BIFA253235	2	2800	IP55	35°	0.64	0.6	0.56	0.5	0.44	0.37	0.37	58
250	BIFA251240	BIFA253240	2	2800	IP55	40°	0.72	0.67	0.62	0.56	0.48		0.37	59
250	BIFA251245	BIFA253245	2	2800	IP55	45°	0.81	0.75	0.69	0.61	0.51		0.37	59
250	BIFA251250	BIFA253250	2	2800	IP55	50°	0.88	0.81	0.72	0.62			0.37	60

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @ 3m							
	Stock Ref	Stock Ref	Poles	Spectrum		63	125	250	500	1k	2k	4k	8k
250	BIFA251225	BIFA253225	2	Inlet/Outlet	73	74	82	75	73	70	67	64	58
250	BIFA251230	BIFA253230	2	Inlet/Outlet	72	73	81	74	72	69	66	63	57
250	BIFA251235	BIFA253235	2	Inlet/Outlet	73	74	82	75	73	70	67	64	58
250	BIFA251240	BIFA253240	2	Inlet/Outlet	74	75	83	76	74	71	68	65	59
250	BIFA251245	BIFA253245	2	Inlet/Outlet	74	75	83	76	74	71	68	65	59
250	BIFA251250	BIFA253250	2	Inlet/Outlet	75	76	84	77	75	72	69	66	60

Performance Curve



Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	100	200	300	400		
315	BIFA311210	BIFA313210	2	2800	IP55	10°	0.58	0.52	0.43	0.27	0.08	0.37	65
315	BIFA311212	BIFA313212	2	2800	IP55	12°	0.63	0.57	0.48	0.33	0.11	0.37	65
315	BIFA311214	BIFA313214	2	2800	IP55	14°	0.69	0.63	0.54	0.38	0.13	0.37	65
315	BIFA311216	BIFA313216	2	2800	IP55	16°	0.76	0.69	0.6	0.43	0.16	0.37	63
315	BIFA311218	BIFA313218	2	2800	IP55	18°	0.83	0.76	0.65	0.48	0.19	0.37	61
315	BIFA311220	BIFA313220	2	2800	IP55	20°	0.9	0.82	0.71	0.53	0.21	0.37	61
315	BIFA311222	BIFA313222	2	2800	IP55	22°	0.96	0.87	0.76	0.58		0.37	62
315	BIFA311224	BIFA313224	2	2800	IP55	24°	1	0.92	0.8	0.62		0.37	63
315	BIFA311226	BIFA313226	2	2800	IP55	26°	1.05	0.97	0.85	0.65		0.55	63
315	BIFA311228	BIFA313228	2	2800	IP55	28°	1.1	1.01	0.89	0.69		0.55	63
315	BIFA311230	BIFA313230	2	2800	IP55	30°	1.16	1.06	0.94	0.72		0.55	64
315	BIFA311232	BIFA313232	2	2800	IP55	32°	1.22	1.11	0.98	0.75		0.55	66
315	BIFA311234	BIFA313234	2	2800	IP55	34°	1.28	1.16	1.01	0.78		0.75	66
315	BIFA311236	BIFA313236	2	2800	IP55	36°	1.33	1.2	1.04	0.79		0.75	66
315	BIFA311238	BIFA313238	2	2800	IP55	38°	1.37	1.23	1.06	0.79		0.75	66
315	BIFA311240	BIFA313240	2	2800	IP55	40°	1.39	1.25	1.08			1.1	66

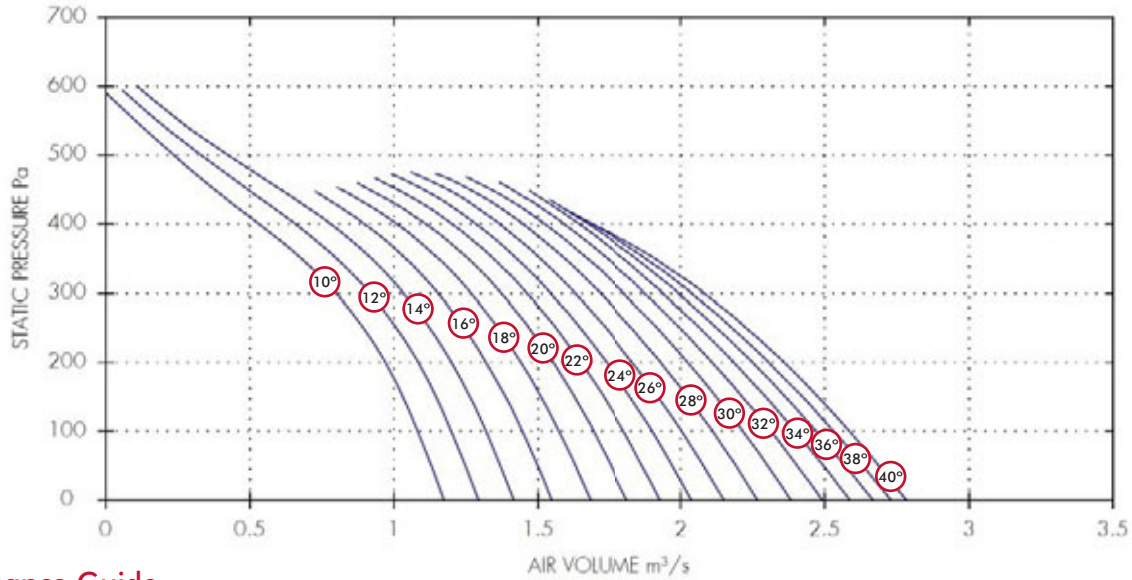
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase Stock Ref		3 Phase Stock Ref		Poles	Spectrum	dB							dBA @ 3m
	63	125	250	500			1k	2k	4k	8k				
315	BIFA311210	BIFA313210	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65	
315	BIFA311212	BIFA313212	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65	
315	BIFA311214	BIFA313214	2	Inlet/Outlet	83	82	82	79	81	80	76	68	65	
315	BIFA311216	BIFA313216	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63	
315	BIFA311218	BIFA313218	2	Inlet/Outlet	79	78	78	75	77	76	72	64	61	
315	BIFA311220	BIFA313220	2	Inlet/Outlet	79	78	78	75	77	76	72	64	61	
315	BIFA311222	BIFA313222	2	Inlet/Outlet	80	79	79	76	78	77	73	65	62	
315	BIFA311224	BIFA313224	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63	
315	BIFA311226	BIFA313226	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63	
315	BIFA311228	BIFA313228	2	Inlet/Outlet	81	80	80	77	79	78	74	66	63	
315	BIFA311230	BIFA313230	2	Inlet/Outlet	82	81	81	78	80	79	75	67	64	
315	BIFA311232	BIFA313232	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66	
315	BIFA311234	BIFA313234	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66	
315	BIFA311236	BIFA313236	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66	
315	BIFA311238	BIFA313238	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66	
315	BIFA311240	BIFA313240	2	Inlet/Outlet	84	83	83	80	82	81	77	69	66	

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA40 - 1 & 3 Phase - 2 Pole



Performance Guide

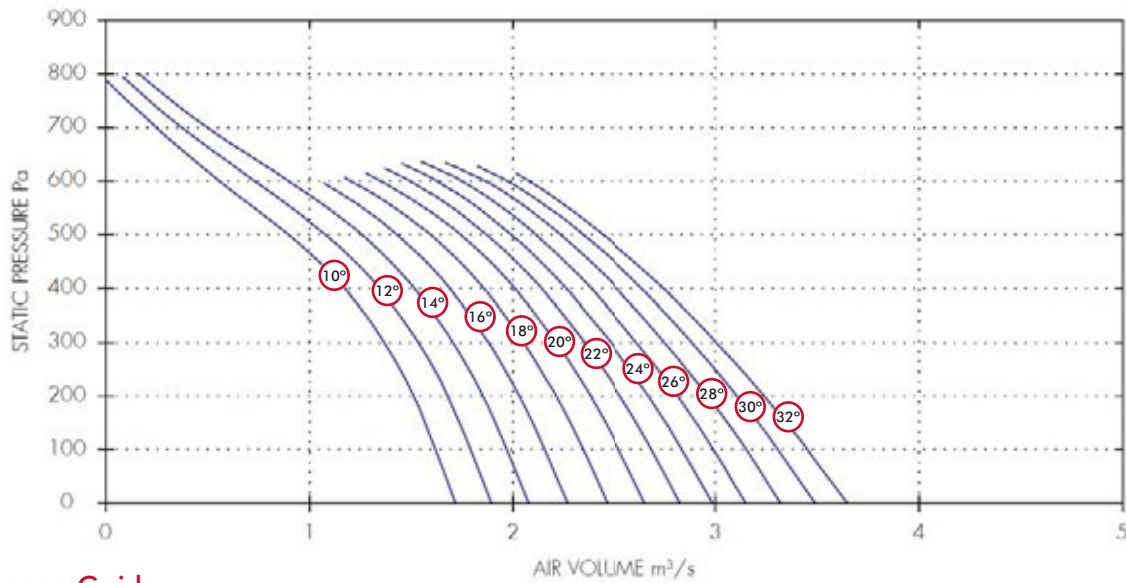
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m	
	Stock Ref	Stock Ref	Poles	r.p.m			0	100	200	300	400			500
400	BIFA401210	BIFA403210	2	2800	IP55	10°	1.17	1.08	0.97	0.8	0.53	0.23	0.55	71
400	BIFA401212	BIFA403212	2	2800	IP55	12°	1.29	1.2	1.09	0.92	0.66	0.33	0.55	71
400	BIFA401214	BIFA403214	2	2800	IP55	14°	1.42	1.32	1.2	1.03	0.78	0.42	0.75	71
400	BIFA401216	BIFA403216	2	2800	IP55	16°	1.55	1.45	1.32	1.15	0.9		0.75	71
400	BIFA401218	BIFA403218	2	2800	IP55	18°	1.68	1.57	1.44	1.27	1.01		0.75	71
400	BIFA401220	BIFA403220	2	2800	IP55	20°	1.81	1.69	1.55	1.37	1.11		1.1	71
400	BIFA401222	BIFA403222	2	2800	IP55	22°	1.93	1.8	1.65	1.46	1.2		1.1	66
400	BIFA401224	BIFA403224	2	2800	IP55	24°	2.04	1.9	1.74	1.54	1.28		1.1	66
400	BIFA401226	BIFA403226	2	2800	IP55	26°	2.15	2	1.83	1.63	1.37		1.1	67
400	BIFA401228	BIFA403228	2	2800	IP55	28°	2.27	2.11	1.93	1.72	1.45		1.5	68
400	BIFA401230	BIFA403230	2	2800	IP55	30°	2.38	2.22	2.03	1.8	1.52		1.5	68
400	BIFA401232	BIFA403232	2	2800	IP55	32°	2.49	2.31	2.11	1.88	1.59		1.5	68
400	-	BIFA403234	2	2800	IP55	34°	2.59	2.4	2.19	1.94	1.64		2.2	67
400	-	BIFA403236	2	2800	IP55	36°	2.67	2.47	2.25	1.99	1.67		2.2	66
400	-	BIFA403238	2	2800	IP55	38°	2.73	2.53	2.31	2.04	1.69		2.2	66
400	-	BIFA403240	2	2800	IP55	40°	2.78	2.59	2.36	2.08	1.69		3	66

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @ 3m								
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k	
400	BIFA401210	BIFA403210	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401212	BIFA403212	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401214	BIFA403214	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401216	BIFA403216	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401218	BIFA403218	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401220	BIFA403220	2		Inlet/Outlet	89	86	89	86	87	84	81	74	71
400	BIFA401222	BIFA403222	2		Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	BIFA401224	BIFA403224	2		Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	BIFA401226	BIFA403226	2		Inlet/Outlet	85	82	85	82	83	80	77	70	67
400	BIFA401228	BIFA403228	2		Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	BIFA401230	BIFA403230	2		Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	BIFA401232	BIFA403232	2		Inlet/Outlet	86	83	86	83	84	81	78	71	68
400	-	BIFA403234	2		Inlet/Outlet	85	82	85	82	83	80	77	70	67
400	-	BIFA403236	2		Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	-	BIFA403238	2		Inlet/Outlet	84	81	84	81	82	79	76	69	66
400	-	BIFA403240	2		Inlet/Outlet	84	81	84	81	82	79	76	69	66

Performance Curve

BIFA45 - 3 Phase - 2 Pole



Performance Guide

Dia.	3 Phase		r.p.m	IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Poles				0	150	300	450	600	750		
450	BIFA453210	2	2880	IP55	10°	1.72	1.57	1.37	1.04	0.56	0.11	1.1	74
450	BIFA453212	2	2880	IP55	12°	1.89	1.74	1.54	1.22	0.73	0.21	1.1	73
450	BIFA453214	2	2880	IP55	14°	2.08	1.91	1.7	1.4	0.9	0.32	1.5	72
450	BIFA453216	2	2880	IP55	16°	2.27	2.1	1.88	1.57			1.5	71
450	BIFA453218	2	2880	IP55	18°	2.47	2.28	2.05	1.74	1.2		1.5	70
450	BIFA453220	2	2880	IP55	20°	2.65	2.46	2.21	1.88	1.35		2.2	70
450	BIFA453222	2	2880	IP55	22°	2.82	2.61	2.35	2.01	1.49		2.2	70
450	BIFA453224	2	2880	IP55	24°	2.99	2.76	2.48	2.13	1.62		2.2	70
450	BIFA453226	2	2880	IP55	26°	3.15	2.91	2.61	2.25	1.75		2.2	70
450	BIFA453228	2	2880	IP55	28°	3.32	3.06	2.75	2.38	1.86		3	70
450	BIFA453230	2	2880	IP55	30°	3.49	3.21	2.89	2.5	1.97		3	70
450	BIFA453232	2	2880	IP55	32°	3.65	3.35	3.01	2.6	2.08		3	70

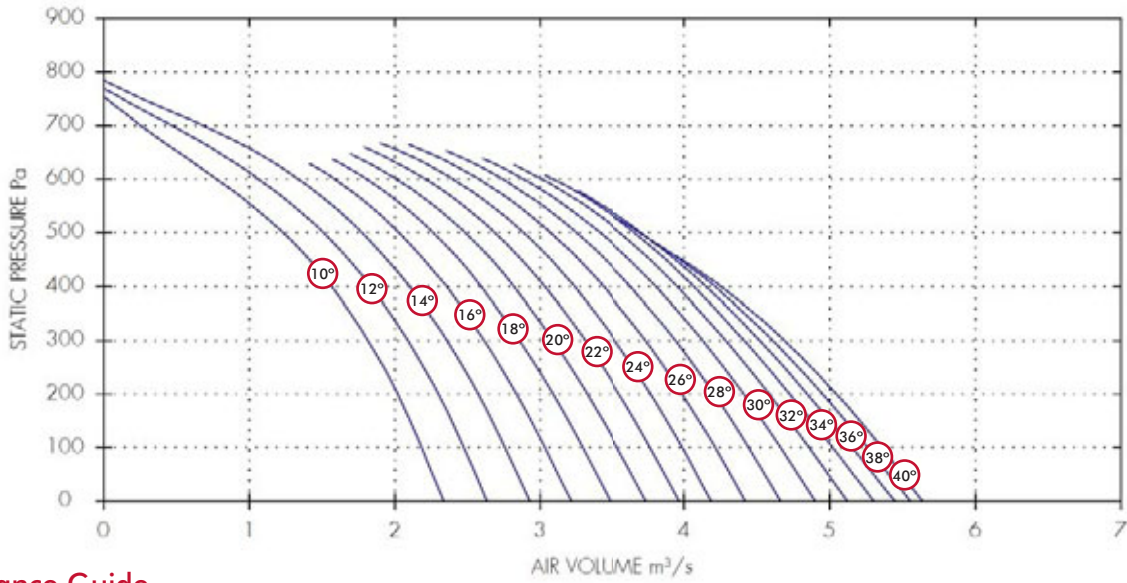
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB @ 3m								
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
450	BIFA453210	2	Inlet/Outlet	92	89	92	89	90	87	84	77	74
450	BIFA453212	2	Inlet/Outlet	91	88	91	88	89	86	83	76	73
450	BIFA453214	2	Inlet/Outlet	90	87	90	87	88	85	82	75	72
450	BIFA453216	2	Inlet/Outlet	89	86	89	86	87	84	81	74	71
450	BIFA453218	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453220	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453222	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453224	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453226	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453228	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453230	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70
450	BIFA453232	2	Inlet/Outlet	88	85	88	85	86	83	80	73	70

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA50 - 3 Phase - 2 Pole



Performance Guide

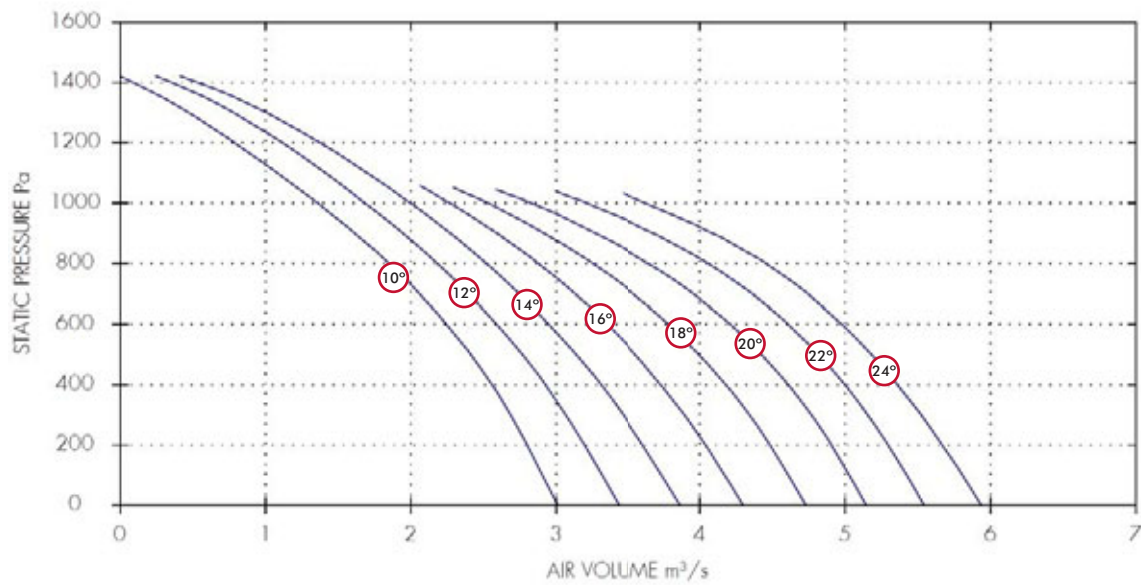
Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
	Stock Ref	Poles	r.p.m			0	150	300	450	600	750		
500	BIFA503210	2	2880	IP55	10°	2.34	2.11	1.82	1.41	0.77	0.02	1.5	74
500	BIFA503212	2	2880	IP55	12°	2.64	2.39	2.09	1.68	1.06	0.12	1.5	73
500	BIFA503214	2	2880	IP55	14°	2.93	2.67	2.36	1.95	1.33	0.26	2.2	72
500	BIFA503216	2	2880	IP55	16°	3.21	2.94	2.62	2.2	1.58		2.2	71
500	BIFA503218	2	2880	IP55	18°	3.48	3.19	2.86	2.44	1.8		2.2	71
500	BIFA503220	2	2880	IP55	20°	3.73	3.43	3.09	2.66	2.01		3	71
500	BIFA503222	2	2880	IP55	22°	3.96	3.66	3.31	2.87	2.21		3	71
500	BIFA503224	2	2880	IP55	24°	4.19	3.88	3.52	3.07	2.4		3	71
500	BIFA503226	2	2880	IP55	26°	4.42	4.11	3.73	3.26	2.58		4	71
500	BIFA503228	2	2880	IP55	28°	4.66	4.33	3.94	3.45	2.74		4	72
500	BIFA503230	2	2880	IP55	30°	4.9	4.54	4.13	3.62	2.88		4	72
500	BIFA503232	2	2880	IP55	32°	5.12	4.72	4.28	3.76	3		5.5	72
500	BIFA503234	2	2880	IP55	34°	5.3	4.88	4.41	3.87	3.08		5.5	72
500	BIFA503236	2	2880	IP55	36°	5.45	5	4.52	3.94			5.5	72
500	BIFA503238	2	2880	IP55	38°	5.55	5.11	4.61	3.97			7.5	72
500	BIFA503240	2	2880	IP55	40°	5.64	5.21	4.69	3.98			7.5	72

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB @ 3m							
	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
500	BIFA503210	2	Inlet/Outlet	93	84	91	91	91	87	85	78	74
500	BIFA503212	2	Inlet/Outlet	92	83	90	90	90	86	84	77	73
500	BIFA503214	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503216	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503218	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503220	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503222	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503224	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503226	2	Inlet/Outlet	90	81	88	88	88	84	82	75	71
500	BIFA503228	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503230	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503232	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503234	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503236	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503238	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72
500	BIFA503240	2	Inlet/Outlet	91	82	89	89	89	85	83	76	72

Performance Curve

BIFA56 - 3 Phase - 2 Pole



Performance Guide

Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m	
	Stock Ref	Poles	r.p.m			0	200	400	600	800	1000	1200			1400
560	BIFA563210	2	2880	IP55	10°	3.01	2.8	2.56	2.25	1.85	1.36	0.79	0.09	4	79
560	BIFA563212	2	2880	IP55	12°	3.44	3.2	2.93	2.59	2.18	1.69	1.11	0.35	4	79
560	BIFA563214	2	2880	IP55	14°	3.87	3.61	3.31	2.95	2.52	1.99	1.37	0.53	4	79
560	BIFA563216	2	2880	IP55	16°	4.3	4.04	3.73	3.36	2.88	2.27			5.5	79
560	BIFA563218	2	2880	IP55	18°	4.73	4.48	4.18	3.79	3.25	2.53			5.5	79
560	BIFA563220	2	2880	IP55	20°	5.15	4.91	4.61	4.21	3.65	2.83			7.5	79
560	BIFA563222	2	2880	IP55	22°	5.54	5.3	5	4.61	4.05	3.21			7.5	79
560	BIFA563224	2	2880	IP55	24°	5.94	5.67	5.36	4.98	4.45	3.62			7.5	79

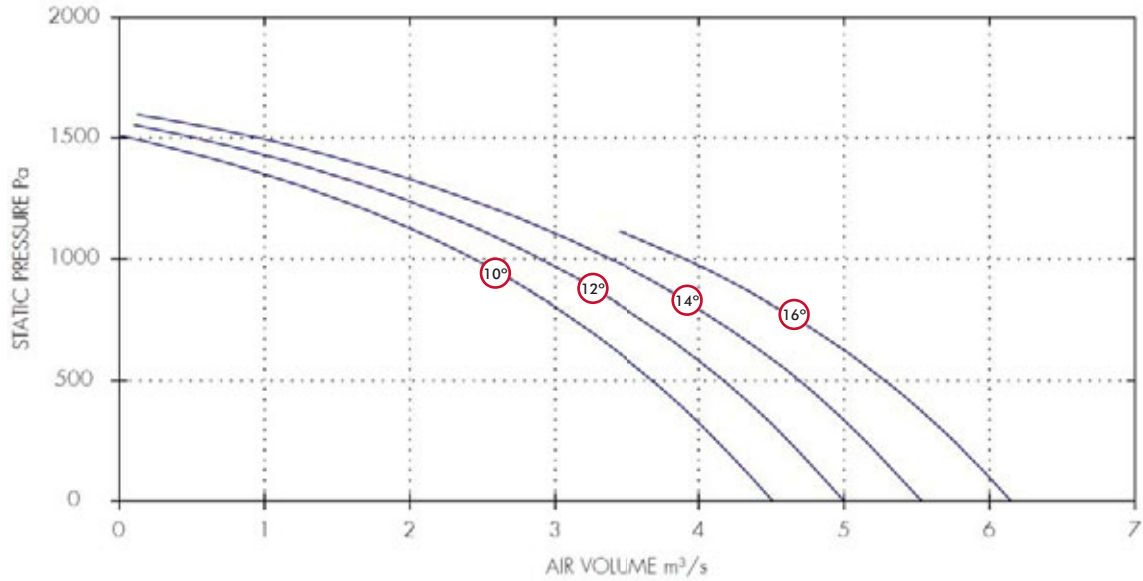
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	63	125	250	500	1k	2k	4k	8k	dBA @ 3m
	Stock Ref	Poles											
560	BIFA563210	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563212	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563214	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563216	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563218	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563220	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563222	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	
560	BIFA563224	2	Inlet/Outlet	94	89	97	98	94	91	86	82	79	

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA63 - 3 Phase - 2 Pole



Performance Guide

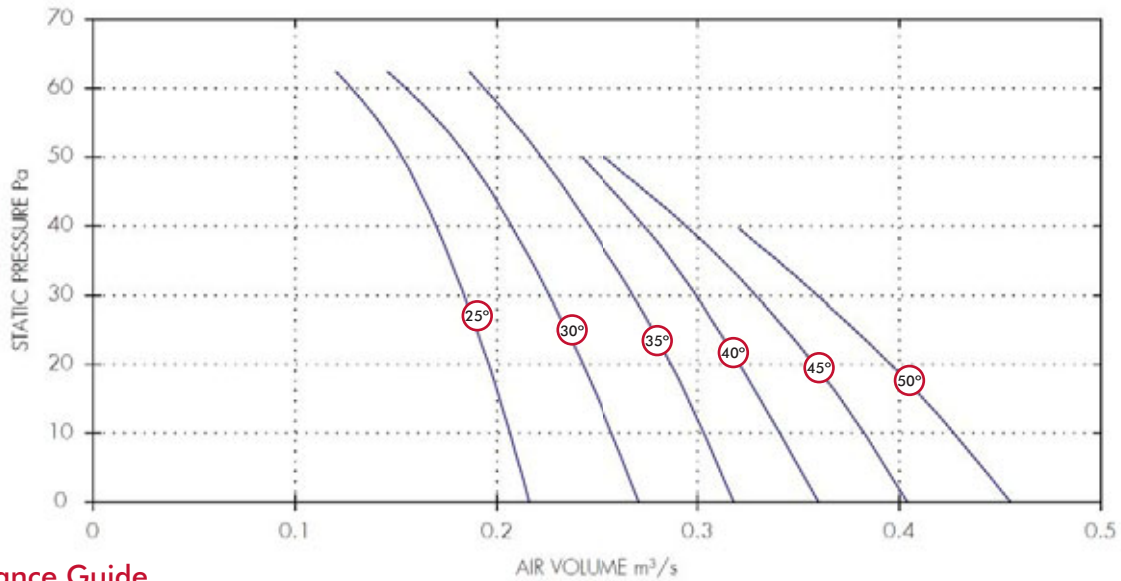
Dia.	3 Phase		r.p.m	IP Rating	Curve Ref	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Poles				0	200	400	600	800	1000	1200	1400		
630	BIFA633210	2	2940	IP55	10°	4.51	4.2	3.87	3.47	3.01	2.44	1.7	0.72	5.5	84
630	BIFA633212	2	2940	IP55	12°	5	4.7	4.36	3.96	3.48	2.9	2.16	1.17	5.5	84
630	BIFA633214	2	2940	IP55	14°	5.53	5.22	4.88	4.48	3.98	3.38	2.61	1.6	7.5	84
630	BIFA633216	2	2940	IP55	16°	6.15	5.84	5.48	5.06	4.54	3.89			7.5	84

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase		Spectrum	dB								dBA @ 3m
	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
630	BIFA633210	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	BIFA633212	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	BIFA633214	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84
630	BIFA633216	2	Inlet/Outlet	99	94	102	103	99	96	91	87	84

Performance Curve

BIFA25 - 1 & 3 Phase - 4 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m.			0	10	20	30	40	50	60			
250	BIFA251425	BIFA253425	4	1400	IP55	25°	0.22	0.21	0.2	0.18	0.17	0.15	0.13	0.25	46	
250	BIFA251430	BIFA253430	4	1400	IP55	30°	0.27	0.26	0.24	0.23	0.21	0.19	0.15	0.25	45	
250	BIFA251435	BIFA253435	4	1400	IP55	35°	0.32	0.3	0.29	0.27	0.25	0.22	0.19	0.25	46	
250	BIFA251440	BIFA253440	4	1400	IP55	40°	0.36	0.34	0.32	0.3	0.27	0.24		0.25	46	
250	BIFA251445	BIFA253445	4	1400	IP55	45°	0.4	0.38	0.36	0.33	0.29	0.25		0.25	46	
250	BIFA251450	BIFA253450	4	1440	IP55	50°	0.46	0.43	0.4	0.36				0.25	46	

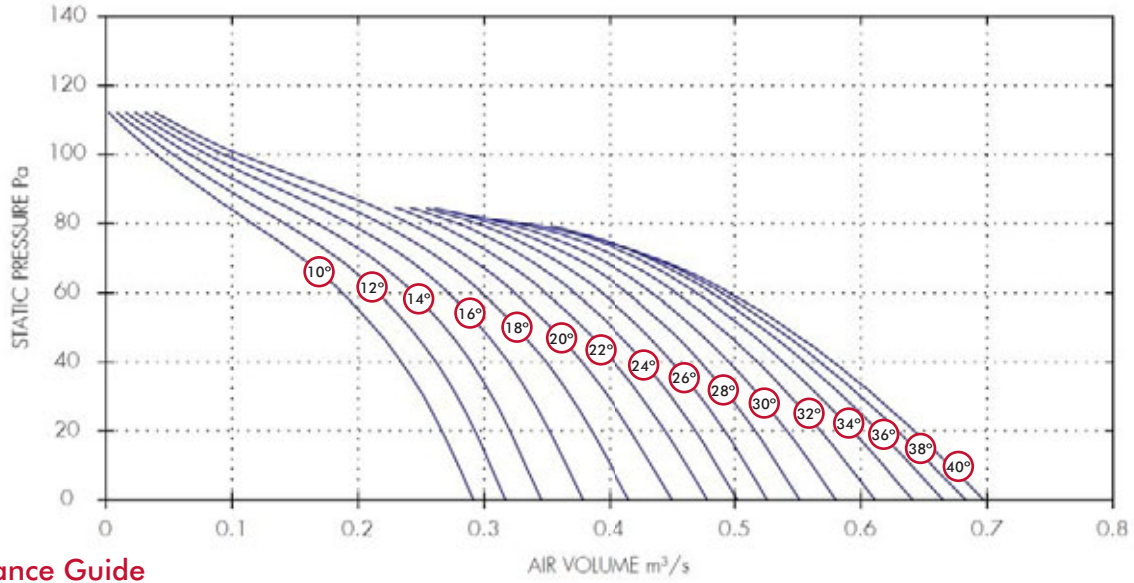
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @ 3m							
	Stock Ref	Stock Ref	Poles	Spectrum		63	125	250	500	1k	2k	4k	8k
250	BIFA251425	BIFA253425	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46
250	BIFA251430	BIFA253430	4	Inlet/Outlet	60	67	63	62	60	57	54	51	45
250	BIFA251435	BIFA253435	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46
250	BIFA251440	BIFA253440	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46
250	BIFA251445	BIFA253445	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46
250	BIFA251450	BIFA253450	4	Inlet/Outlet	61	68	64	63	61	58	55	52	46

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA31 - 1 & 3 Phase - 4 Pole



Performance Guide

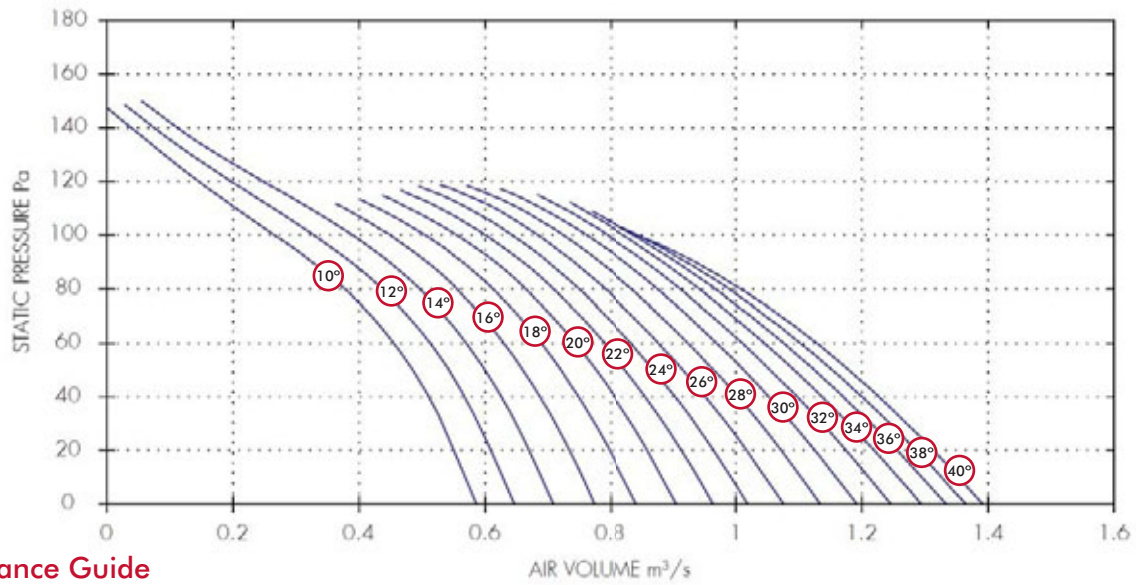
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m	
	Stock Ref	Stock Ref	Poles	r.p.m			0	20	40	60	80			100
315	BIFA311410	BIFA313410	4	1400	IP55	10°	0.29	0.27	0.23	0.19	0.12	0.04	0.25	49
315	BIFA311412	BIFA313412	4	1400	IP55	12°	0.32	0.29	0.26	0.22	0.14	0.05	0.25	49
315	BIFA311414	BIFA313414	4	1400	IP55	14°	0.35	0.32	0.29	0.24	0.17	0.07	0.25	49
315	BIFA313416	BIFA313416	4	1400	IP55	16°	0.38	0.35	0.32	0.27	0.19	0.08	0.25	44
315	BIFA311418	BIFA313418	4	1400	IP55	18°	0.42	0.39	0.35	0.3	0.22	0.09	0.25	44
315	BIFA311420	BIFA313420	4	1400	IP55	20°	0.45	0.42	0.38	0.32	0.24	0.11	0.25	44
315	BIFA311422	BIFA313422	4	1400	IP55	22°	0.48	0.45	0.4	0.35	0.26		0.25	44
315	BIFA311424	BIFA313424	4	1400	IP55	24°	0.5	0.47	0.43	0.37	0.28		0.25	46
315	BIFA311426	BIFA313426	4	1400	IP55	26°	0.53	0.49	0.45	0.39	0.29		0.25	46
315	BIFA311428	BIFA313428	4	1400	IP55	28°	0.55	0.52	0.47	0.41	0.31		0.25	46
315	BIFA311430	BIFA313430	4	1400	IP55	30°	0.58	0.54	0.5	0.43	0.32		0.25	46
315	BIFA311432	BIFA313432	4	1400	IP55	32°	0.61	0.57	0.52	0.45	0.32		0.25	48
315	BIFA311434	BIFA313434	4	1400	IP55	34°	0.64	0.59	0.54	0.47	0.33		0.25	48
315	BIFA311436	BIFA313436	4	1400	IP55	36°	0.67	0.61	0.56	0.48			0.25	48
315	BIFA311438	BIFA313438	4	1400	IP55	38°	0.68	0.63	0.57	0.49			0.25	48
315	BIFA311440	BIFA313440	4	1400	IP55	40°	0.7	0.64	0.58	0.5			0.25	48

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @ 3m											
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k				
315	BIFA311410	BIFA313410	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49				
315	BIFA311412	BIFA313412	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49				
315	BIFA311414	BIFA313414	4	Inlet/Outlet	66	69	67	64	65	63	58	48	49				
315	BIFA313416	BIFA313416	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44				
315	BIFA311418	BIFA313418	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44				
315	BIFA311420	BIFA313420	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44				
315	BIFA311422	BIFA313422	4	Inlet/Outlet	61	64	62	59	60	58	53	43	44				
315	BIFA311424	BIFA313424	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46				
315	BIFA311426	BIFA313426	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46				
315	BIFA311428	BIFA313428	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46				
315	BIFA311430	BIFA313430	4	Inlet/Outlet	63	66	64	61	62	60	55	45	46				
315	BIFA311432	BIFA313432	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48				
315	BIFA311434	BIFA313434	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48				
315	BIFA311436	BIFA313436	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48				
315	BIFA311438	BIFA313438	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48				
315	BIFA311440	BIFA313440	4	Inlet/Outlet	65	68	66	63	64	62	57	47	48				

Performance Curve

BIFA40 - 1 & 3 Phase - 4 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP	Curve	m³/s at Pa								Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			Rating	Ref.	0	20	40	60	80	100		
400	BIFA401410	BIFA403410	4	1400	IP55	10°	0.59	0.55	0.51	0.46	0.38	0.27	0.15	0.04	0.25	54
400	BIFA401412	BIFA403412	4	1400	IP55	12°	0.65	0.61	0.57	0.51	0.44	0.33	0.2	0.08	0.25	54
400	BIFA401414	BIFA403414	4	1400	IP55	14°	0.71	0.67	0.63	0.57	0.5	0.39	0.25	0.11	0.25	54
400	BIFA401416	BIFA403416	4	1400	IP55	16°	0.77	0.73	0.69	0.63	0.56	0.45			0.25	54
400	BIFA401418	BIFA403418	4	1400	IP55	18°	0.84	0.8	0.75	0.69	0.61	0.5			0.25	54
400	BIFA401420	BIFA403420	4	1400	IP55	20°	0.91	0.86	0.81	0.74	0.66	0.55			0.25	54
400	BIFA401422	BIFA403422	4	1400	IP55	22°	0.96	0.91	0.86	0.79	0.71	0.6			0.25	48
400	BIFA401424	BIFA403424	4	1400	IP55	24°	1.02	0.97	0.9	0.83	0.75	0.64			0.25	48
400	BIFA401426	BIFA403426	4	1400	IP55	26°	1.08	1.02	0.95	0.88	0.79	0.68			0.25	50
400	BIFA401428	BIFA403428	4	1400	IP55	28°	1.13	1.07	1	0.92	0.83	0.72			0.25	51
400	BIFA401430	BIFA403430	4	1400	IP55	30°	1.19	1.13	1.05	0.97	0.88	0.76			0.25	52
400	BIFA401432	BIFA403432	4	1400	IP55	32°	1.25	1.18	1.1	1.01	0.91	0.79			0.25	52
400	BIFA401434	BIFA403434	4	1400	IP55	34°	1.29	1.22	1.14	1.05	0.94	0.82			0.25	51
400	BIFA401436	BIFA403436	4	1400	IP55	36°	1.33	1.26	1.17	1.08	0.97	0.84			0.25	51
400	BIFA401438	BIFA403438	4	1400	IP55	38°	1.36	1.29	1.2	1.1	0.99	0.84			0.25	50
400	BIFA401440	BIFA403440	4	1400	IP55	40°	1.39	1.31	1.23	1.13	1.01	0.84			0.37	50

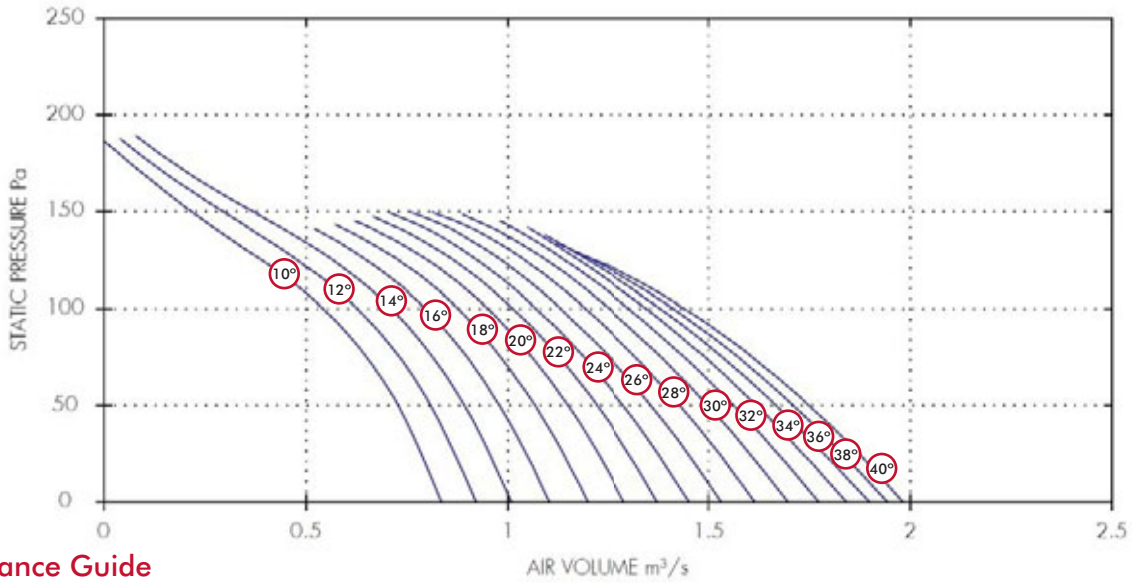
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		Poles	Spectrum	dB @ 3m									
	Stock Ref	Stock Ref			63	125	250	500	1k	2k	4k	8k	3m	
400	BIFA401410	BIFA403410	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401412	BIFA403412	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401414	BIFA403414	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401416	BIFA403416	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401418	BIFA403418	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401420	BIFA403420	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54	
400	BIFA401422	BIFA403422	4	Inlet/Outlet	66	68	67	63	64	61	57	48	48	
400	BIFA401424	BIFA403424	4	Inlet/Outlet	66	68	67	63	64	61	57	48	48	
400	BIFA401426	BIFA403426	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	
400	BIFA401428	BIFA403428	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	BIFA401430	BIFA403430	4	Inlet/Outlet	70	72	71	67	68	65	61	52	52	
400	BIFA401432	BIFA403432	4	Inlet/Outlet	70	72	71	67	68	65	61	52	52	
400	BIFA401434	BIFA403434	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	BIFA401436	BIFA403436	4	Inlet/Outlet	69	71	70	66	67	64	60	51	51	
400	BIFA401438	BIFA403438	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	
400	BIFA401440	BIFA403440	4	Inlet/Outlet	68	70	69	65	66	63	59	50	50	

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA45 - 1 & 3 Phase - 4 Pole



Performance Guide

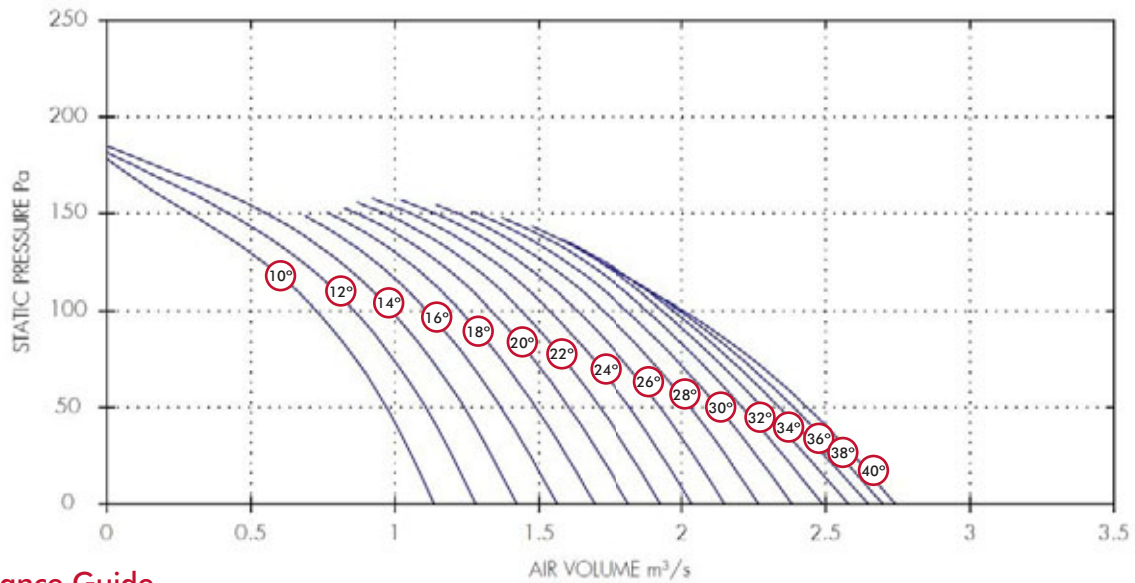
Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	AIR VOLUME m³/s					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	40	80	120	160		
450	BIFA451410	BIFA453410	4	1400	IP55	10°	0.83	0.75	0.63	0.42	0.15	0.25	59
450	BIFA451412	BIFA453412	4	1400	IP55	12°	0.92	0.83	0.71	0.51	0.22	0.25	59
450	BIFA451414	BIFA453414	4	1400	IP55	14°	1.01	0.92	0.8	0.6	0.28	0.25	59
450	BIFA451416	BIFA453416	4	1400	IP55	16°	1.1	1.01	0.88	0.68		0.25	59
450	BIFA451418	BIFA453418	4	1400	IP55	18°	1.2	1.1	0.96	0.76		0.25	54
450	BIFA451420	BIFA453420	4	1400	IP55	20°	1.29	1.18	1.04	0.83		0.25	55
450	BIFA451422	BIFA453422	4	1400	IP55	22°	1.37	1.25	1.11	0.9		0.25	54
450	BIFA451424	BIFA453424	4	1400	IP55	24°	1.45	1.32	1.17	0.96		0.25	54
450	BIFA451426	BIFA453426	4	1400	IP55	26°	1.53	1.4	1.23	1.01		0.37	54
450	BIFA451428	BIFA453428	4	1400	IP55	28°	1.61	1.47	1.29	1.07		0.37	54
450	BIFA451430	BIFA453430	4	1400	IP55	30°	1.7	1.54	1.36	1.13		0.37	54
450	BIFA451432	BIFA453432	4	1400	IP55	32°	1.77	1.61	1.41	1.17		0.37	54
450	BIFA451434	BIFA453434	4	1400	IP55	34°	1.84	1.67	1.46	1.21		0.55	54
450	BIFA451436	BIFA453436	4	1400	IP55	36°	1.9	1.72	1.51	1.24		0.55	54
450	BIFA451438	BIFA453438	4	1400	IP55	38°	1.94	1.76	1.54	1.25		0.55	54
450	BIFA451440	BIFA453440	4	1400	IP55	40°	1.98	1.8	1.58	1.27		0.55	54

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @										
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k	3m		
450	BIFA451410	BIFA453410	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59			
450	BIFA451412	BIFA453412	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59			
450	BIFA451414	BIFA453414	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59			
450	BIFA451416	BIFA453416	4	Inlet/Outlet	77	79	78	74	75	72	68	59	59			
450	BIFA451418	BIFA453418	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451420	BIFA453420	4	Inlet/Outlet	73	75	74	70	71	68	64	55	55			
450	BIFA451422	BIFA453422	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451424	BIFA453424	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451426	BIFA453426	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451428	BIFA453428	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451430	BIFA453430	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451432	BIFA453432	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451434	BIFA453434	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451436	BIFA453436	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451438	BIFA453438	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			
450	BIFA451440	BIFA453440	4	Inlet/Outlet	72	74	73	69	70	67	63	54	54			

Performance Curve

BIFA50 - 1 & 3 Phase - 4 Pole



Performance Guide

Dia.	1 Phase		3 Phase		IP Rating	Curve Ref.	m³/s at Pa					Motor kW	dBA @3m
	Stock Ref	Stock Ref	Poles	r.p.m			0	40	80	120	160		
500	BIFA501410	BIFA503410	4	1400	IP55	10°	1.14	1.01	0.84	0.58	0.18	0.25	58
500	BIFA501412	BIFA503412	4	1400	IP55	12°	1.28	1.15	0.97	0.72	0.3	0.25	58
500	BIFA501414	BIFA503414	4	1400	IP55	14°	1.42	1.28	1.1	0.85	0.42	0.25	58
500	BIFA501416	BIFA503416	4	1400	IP55	16°	1.56	1.41	1.22	0.97		0.25	58
500	BIFA501418	BIFA503418	4	1400	IP55	18°	1.69	1.53	1.34	1.09		0.25	58
500	BIFA501420	BIFA503420	4	1400	IP55	20°	1.82	1.65	1.45	1.19		0.37	58
500	BIFA501422	BIFA503422	4	1400	IP55	22°	1.93	1.76	1.56	1.29		0.37	58
500	BIFA501424	BIFA503424	4	1400	IP55	24°	2.04	1.87	1.66	1.39		0.37	58
500	BIFA501426	BIFA503426	4	1400	IP55	26°	2.15	1.97	1.76	1.48		0.37	60
500	BIFA501428	BIFA503428	4	1400	IP55	28°	2.27	2.08	1.86	1.56		0.55	60
500	BIFA501430	BIFA503430	4	1400	IP55	30°	2.38	2.18	1.95	1.64		0.55	61
500	BIFA501432	BIFA503432	4	1400	IP55	32°	2.49	2.27	2.02	1.71		0.55	61
500	BIFA501434	BIFA503434	4	1400	IP55	34°	2.58	2.34	2.08	1.76		0.55	61
500	BIFA501436	BIFA503436	4	1400	IP55	36°	2.65	2.4	2.13	1.78		0.75	61
500	BIFA501438	BIFA503438	4	1400	IP55	38°	2.7	2.46	2.17	1.77		0.75	61
500	BIFA501440	BIFA503440	4	1400	IP55	40°	2.74	2.5	2.2			0.75	61

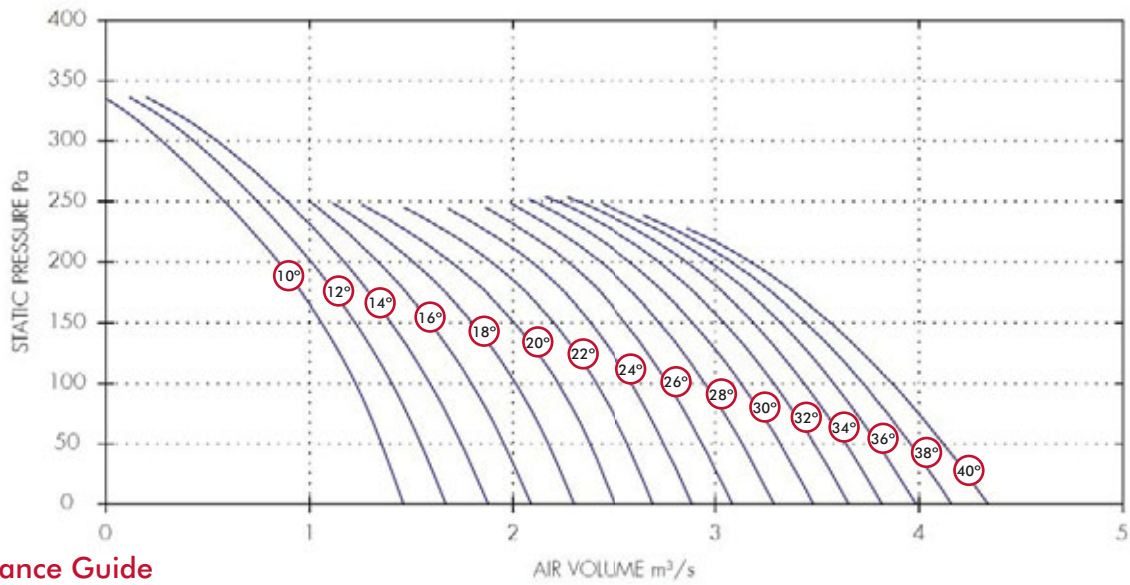
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	1 Phase		3 Phase		Spectrum	dB @										
	Stock Ref	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k	3m		
500	BIFA501410	BIFA503410	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501412	BIFA503412	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501414	BIFA503414	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501416	BIFA503416	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501418	BIFA503418	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501420	BIFA503420	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501422	BIFA503422	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501424	BIFA503424	4	Inlet/Outlet	76	78	74	75	74	71	68	58	58			
500	BIFA501426	BIFA503426	4	Inlet/Outlet	78	80	76	77	76	73	70	60	60			
500	BIFA501428	BIFA503428	4	Inlet/Outlet	78	80	76	77	76	73	70	60	60			
500	BIFA501430	BIFA503430	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			
500	BIFA501432	BIFA503432	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			
500	BIFA501434	BIFA503434	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			
500	BIFA501436	BIFA503436	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			
500	BIFA501438	BIFA503438	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			
500	BIFA501440	BIFA503440	4	Inlet/Outlet	79	81	77	78	77	74	71	61	61			

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA56 - 3 Phase - 4 Pole



Performance Guide

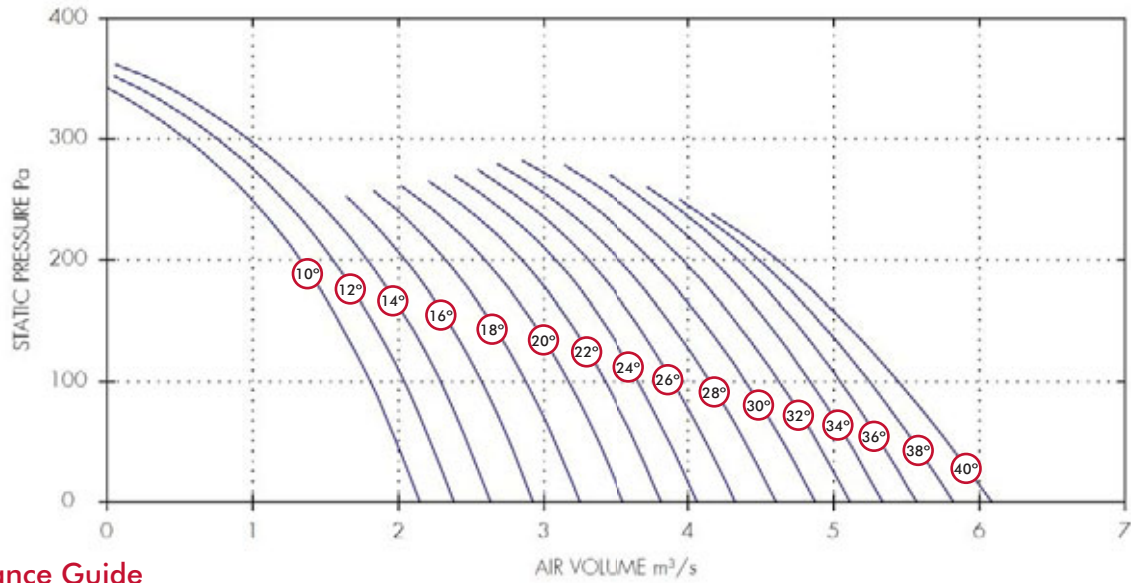
Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m
	Stock Ref	Poles	r.p.m			0	50	100	150	200	250	300		
560	BIFA563410	4	1400	IP55	10°	1.46	1.36	1.23	1.06	0.85	0.58	0.28	0.55	64
560	BIFA563412	4	1400	IP55	12°	1.67	1.55	1.41	1.23	1.01	0.74	0.43	0.55	64
560	BIFA563414	4	1400	IP55	14°	1.88	1.75	1.59	1.4	1.17	0.89	0.55	0.55	64
560	BIFA563416	4	1400	IP55	16°	2.09	1.96	1.8	1.59	1.34			0.55	64
560	BIFA563418	4	1400	IP55	18°	2.3	2.17	2.01	1.8	1.51			0.75	64
560	BIFA563420	4	1400	IP55	20°	2.5	2.38	2.22	2.01	1.69			0.75	64
560	BIFA563422	4	1400	IP55	22°	2.7	2.57	2.41	2.2	1.89			0.75	64
560	BIFA563424	4	1400	IP55	24°	2.89	2.75	2.59	2.38	2.09			1.1	64
560	BIFA563426	4	1400	IP55	26°	3.08	2.94	2.77	2.56	2.27			1.1	64
560	BIFA563428	4	1400	IP55	28°	3.29	3.13	2.95	2.73	2.43			1.1	64
560	BIFA563430	4	1400	IP55	30°	3.48	3.32	3.13	2.89	2.58	2.1		1.1	64
560	BIFA563432	4	1400	IP55	32°	3.66	3.49	3.29	3.04	2.72	2.21		1.5	64
560	BIFA563434	4	1400	IP55	34°	3.82	3.64	3.44	3.19	2.85	2.32		1.5	64
560	BIFA563436	4	1400	IP55	36°	3.99	3.8	3.58	3.32	2.97			1.5	64
560	BIFA563438	4	1400	IP55	38°	4.16	3.96	3.73	3.45	3.08			2.2	64
560	BIFA563440	4	1400	IP55	40°	4.34	4.12	3.87	3.57	3.17			2.2	64

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB @ 3m							
	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
560	BIFA563410	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563412	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563414	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563416	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563418	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563420	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563422	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563424	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563426	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563428	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563430	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563432	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563434	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563436	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563438	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64
560	BIFA563440	4	Inlet/Outlet	75	75	80	81	81	77	74	64	64

Performance Curve

BIFA63 - 3 Phase - 4 Pole



Performance Guide

3 Phase			IP Rating	Curve Ref.	m³/s at Pa								Motor kW	dBA @3m	
Dia.	Stock Ref	Poles			r.p.m	0	50	100	150	200	250	300			350
630	BIFA633410	4	1400	IP55	10°	2.15	1.99	1.81	1.59	1.33	0.99	0.54	0.55	64	
630	BIFA633412	4	1400	IP55	12°	2.38	2.22	2.04	1.82	1.55	1.21	0.76	0.09	0.75	64
630	BIFA633414	4	1400	IP55	14°	2.64	2.47	2.29	2.06	1.79	1.43	0.97	0.29	0.75	64
630	BIFA633416	4	1400	IP55	16°	2.93	2.76	2.57	2.34	2.05	1.66		1.1	64	
630	BIFA633418	4	1400	IP55	18°	3.24	3.08	2.88	2.63	2.32	1.9		1.1	64	
630	BIFA633420	4	1400	IP55	20°	3.55	3.37	3.17	2.92	2.59	2.14		1.1	64	
630	BIFA633422	4	1400	IP55	22°	3.82	3.63	3.42	3.17	2.85	2.38		1.5	65	
630	BIFA633424	4	1400	IP55	24°	4.06	3.87	3.66	3.4	3.08	2.62		1.5	65	
630	BIFA633426	4	1400	IP55	26°	4.32	4.12	3.9	3.63	3.3	2.84		1.5	65	
630	BIFA633428	4	1400	IP55	28°	4.61	4.39	4.15	3.87	3.52	3.06		2.2	65	
630	BIFA633430	4	1400	IP55	30°	4.88	4.65	4.4	4.1	3.74	3.27		2.2	65	
630	BIFA633432	4	1400	IP55	32°	5.11	4.89	4.63	4.32	3.96	3.5		2.2	65	
630	BIFA633434	4	1400	IP55	34°	5.34	5.1	4.84	4.54	4.17	3.7		2.2	65	
630	BIFA633436	4	1400	IP55	36°	5.57	5.32	5.04	4.73	4.34	3.84		3	65	
630	BIFA633438	4	1400	IP55	38°	5.82	5.55	5.25	4.9	4.48			3	65	
630	BIFA633440	4	1400	IP55	40°	6.09	5.78	5.44	5.06	4.61			3	65	

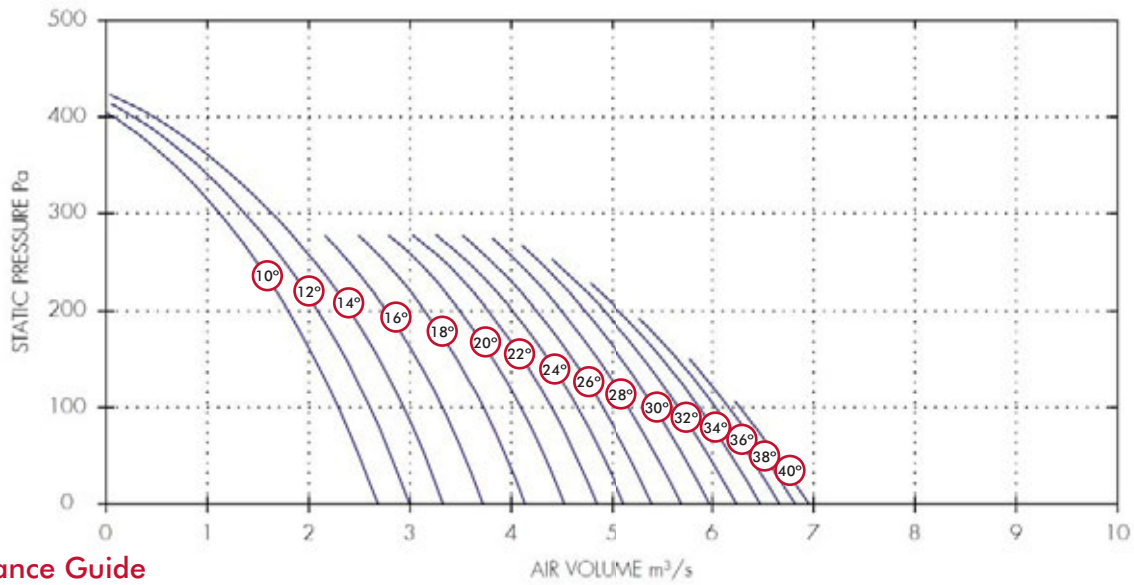
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

3 Phase			Spectrum	dB @ 3m								
Dia.	Stock Ref	Poles		63	125	250	500	1k	2k	4k	8k	
630	BIFA633410	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633412	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633414	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633416	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633418	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633420	4	Inlet/Outlet	75	71	79	82	81	77	74	66	64
630	BIFA633422	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633424	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633426	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633428	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633430	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633432	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633434	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633436	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633438	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65
630	BIFA633440	4	Inlet/Outlet	76	72	80	83	82	78	75	67	65

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA71 - 3 Phase - 4 Pole



Performance Guide

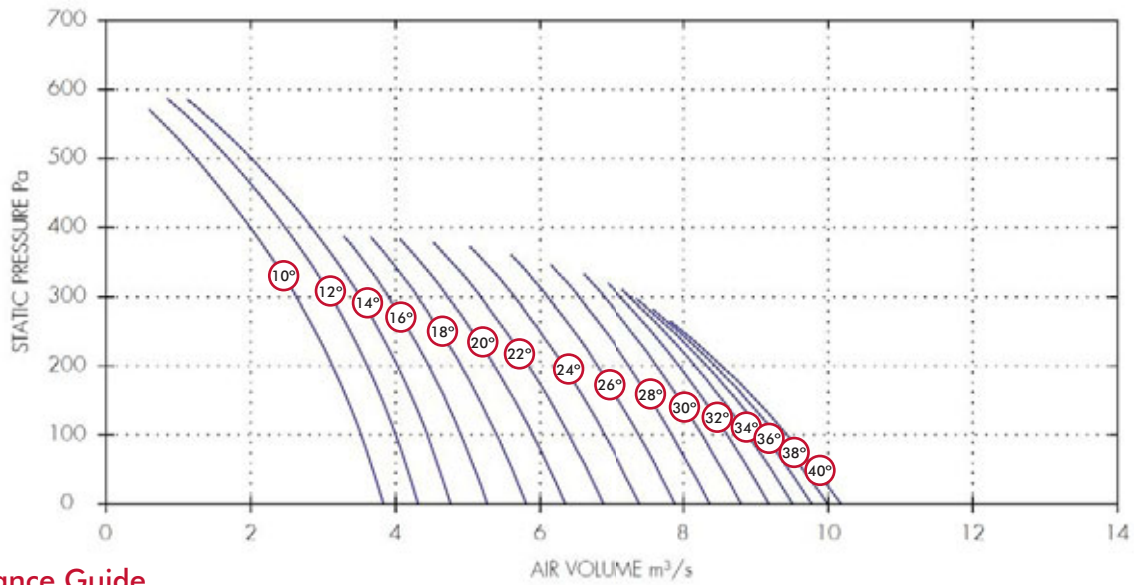
Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa										Motor kW	dBA @3m
	Stock Ref	Poles	r.p.m			0	50	100	150	200	250	300	350	400			
710	BIFA713410	4	1420	IP55	10°	2.68	2.5	2.3	2.06	1.8	1.49	1.12	0.68	0.07	0.75	74	
710	BIFA713412	4	1420	IP55	12°	2.99	2.81	2.61	2.37	2.09	1.76	1.37	0.9	0.27	1.1	74	
710	BIFA713414	4	1420	IP55	14°	3.33	3.15	2.94	2.7	2.41	2.06	1.64	1.13	0.47	1.1	74	
710	BIFA713416	4	1420	IP55	16°	3.72	3.53	3.32	3.07	2.77	2.4				1.5	74	
710	BIFA713418	4	1420	IP55	18°	4.14	3.95	3.73	3.46	3.15	2.76				1.5	74	
710	BIFA713420	4	1420	IP55	20°	4.53	4.33	4.1	3.82	3.49	3.08				2.2	71	
710	BIFA713422	4	1420	IP55	22°	4.84	4.64	4.4	4.12	3.77	3.34				2.2	71	
710	BIFA713424	4	1420	IP55	24°	5.12	4.9	4.66	4.36	4.01	3.57				2.2	71	
710	BIFA713426	4	1420	IP55	26°	5.4	5.17	4.91	4.61	4.25	3.81				3	71	
710	BIFA713428	4	1420	IP55	28°	5.69	5.45	5.17	4.86	4.49	4.06				3	71	
710	BIFA713430	4	1420	IP55	30°	5.98	5.71	5.43	5.1	4.73	4.28				3	71	
710	BIFA713432	4	1420	IP55	32°	6.24	5.97	5.67	5.32	4.92	4.42				4	71	
710	BIFA713434	4	1420	IP55	34°	6.47	6.19	5.87	5.51	5.07					4	71	
710	BIFA713436	4	1420	IP55	36°	6.67	6.37	6.04	5.66						4	71	
710	BIFA713438	4	1420	IP55	38°	6.82	6.51	6.17	5.78						5.5	71	
710	BIFA713440	4	1420	IP55	40°	6.96	6.63	6.28							5.5	71	

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB @ 3m							
	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
710	BIFA713410	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	BIFA713412	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	BIFA713414	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	BIFA713416	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	BIFA713418	4	Inlet/Outlet	89	84	92	92	90	85	82	75	74
710	BIFA713420	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713422	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713424	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713426	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713428	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713430	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713432	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713434	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713436	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713438	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71
710	BIFA713440	4	Inlet/Outlet	86	81	89	89	87	82	79	72	71

Performance Curve

BIFA80 - 3 Phase - 4 Pole



Performance Guide

Dia.	3 Phase Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s at Pa						Motor kW	dBA @3m
						0	100	200	300	400	500		
800	BIFA803410	4	1420	IP55	10°	3.84	3.53	3.13	2.63	1.99	1.24	2.2	80
800	BIFA803412	4	1440	IP55	12°	4.32	4	3.61	3.11	2.47	1.69	2.2	80
800	BIFA803414	4	1440	IP55	14°	4.76	4.44	4.03	3.51	2.84	2	3	80
800	BIFA803416	4	1440	IP55	16°	5.27	4.91	4.46	3.9			3	80
800	BIFA803418	4	1440	IP55	18°	5.81	5.4	4.91	4.3			3	80
800	BIFA803420	4	1440	IP55	20°	6.35	5.9	5.37	4.72			3	77
800	BIFA803422	4	1440	IP55	22°	6.88	6.4	5.84	5.17			4	78
800	BIFA803424	4	1440	IP55	24°	7.39	6.9	6.33	5.64			4	78
800	BIFA803426	4	1440	IP55	26°	7.89	7.38	6.8	6.1			5.5	78
800	BIFA803428	4	1440	IP55	28°	8.36	7.84	7.25	6.53			5.5	79
800	BIFA803430	4	1440	IP55	30°	8.8	8.26	7.64	6.89			7.5	79
800	BIFA803432	4	1440	IP55	32°	9.19	8.61	7.94	7.12			7.5	79
800	BIFA803434	4	1440	IP55	34°	9.51	8.9	8.17	7.25			7.5	79
800	BIFA803436	4	1440	IP55	36°	9.78	9.12	8.33				11	79
800	BIFA803438	4	1440	IP55	38°	9.99	9.29	8.44				11	79
800	BIFA803440	4	1440	IP55	40°	10.18	9.44	8.54				11	79

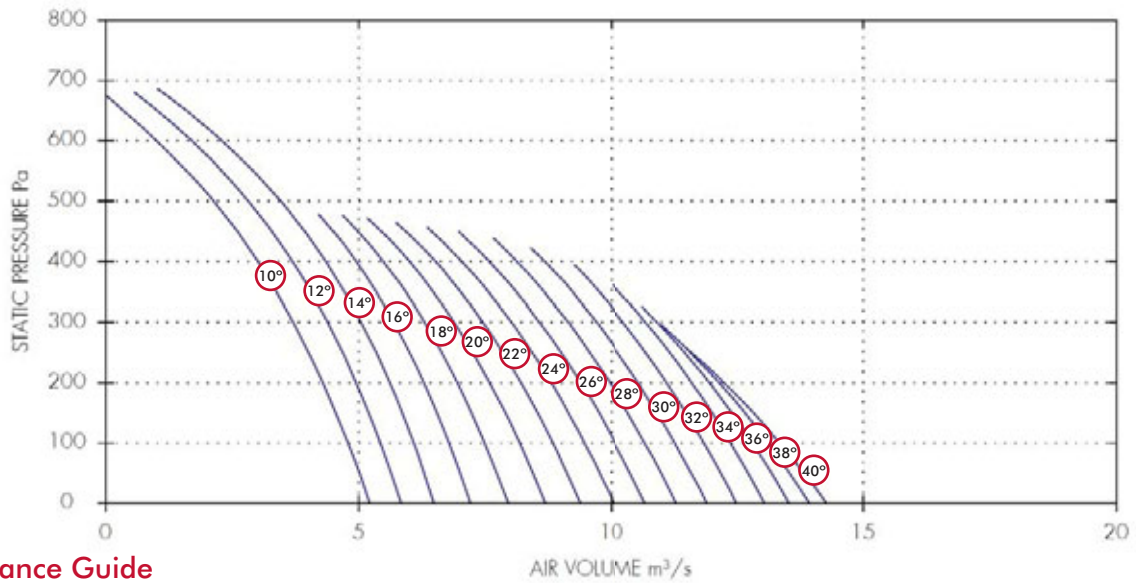
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase Stock Ref	Poles	Spectrum	dB @ 3m								
				63	125	250	500	1k	2k	4k	8k	
800	BIFA803410	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	BIFA803412	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	BIFA803414	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	BIFA803416	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	BIFA803418	4	Inlet/Outlet	93	87	93	98	96	93	88	80	80
800	BIFA803420	4	Inlet/Outlet	90	84	90	95	93	90	85	77	77
800	BIFA803422	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	BIFA803424	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	BIFA803426	4	Inlet/Outlet	91	85	91	96	94	91	86	78	78
800	BIFA803428	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803430	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803432	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803434	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803436	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803438	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79
800	BIFA803440	4	Inlet/Outlet	92	86	92	97	95	92	87	79	79

Bifurcated Case Axial Fans (BIFA)

Performance Curve

BIFA90 - 3 Phase - 4 Pole



Performance Guide

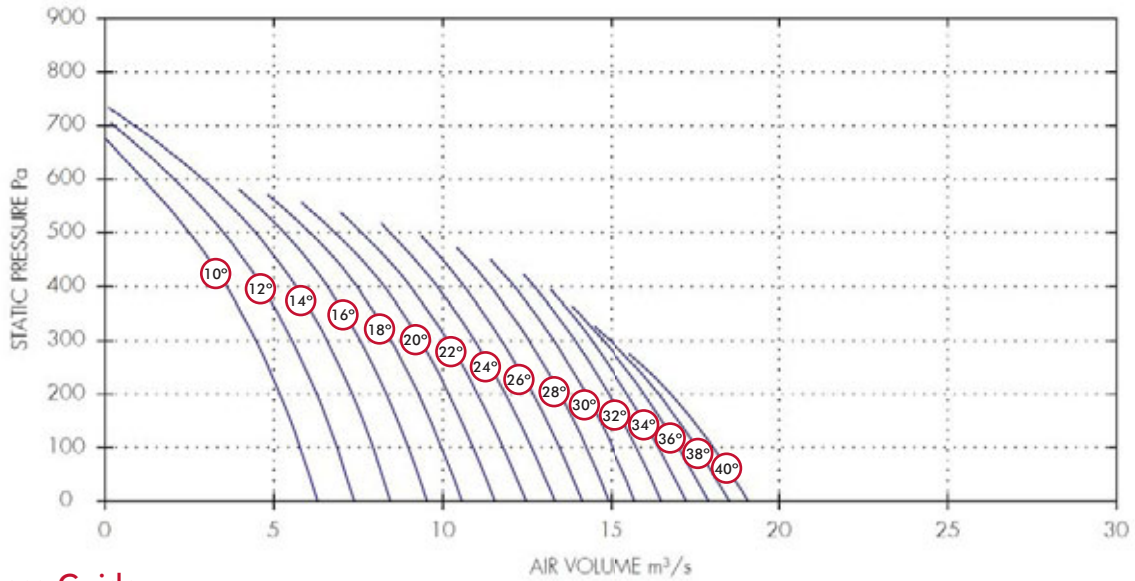
Dia.	3 Phase			IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m
	Stock Ref	Poles	r.p.m			0	100	200	300	400	500	600		
900	BIFA903410	4	1440	IP55	10°	5.22	4.79	4.29	3.71	3	2.12	1	3	79
900	BIFA903412	4	1440	IP55	12°	5.84	5.43	4.95	4.38	3.69	2.82	1.7	4	80
900	BIFA903414	4	1440	IP55	14°	6.49	6.09	5.62	5.05	4.34	3.45	2.29	4	80
900	BIFA903416	4	1440	IP55	16°	7.21	6.79	6.29	5.69	4.94			4	80
900	BIFA903418	4	1440	IP55	18°	7.96	7.49	6.95	6.3	5.49			5.5	81
900	BIFA903420	4	1440	IP55	20°	8.69	8.18	7.59	6.89	6			5.5	81
900	BIFA903422	4	1440	IP55	22°	9.39	8.84	8.21	7.46	6.51			7.5	81
900	BIFA903424	4	1440	IP55	24°	10.04	9.47	8.81	8.02	7.04			7.5	81
900	BIFA903426	4	1440	IP55	26°	10.69	10.08	9.39	8.58	7.57			7.5	82
900	BIFA903428	4	1440	IP55	28°	11.31	10.69	9.97	9.14	8.12			11	82
900	BIFA903430	4	1440	IP55	30°	11.91	11.28	10.55	9.71	8.67			11	82
900	BIFA903432	4	1440	IP55	32°	12.5	11.85	11.12	10.26				11	82
900	BIFA903434	4	1440	IP55	34°	13.05	12.39	11.62	10.7				15	82
900	BIFA903436	4	1440	IP55	36°	13.54	12.82	11.97	10.93				15	82
900	BIFA903438	4	1440	IP55	38°	13.94	13.13	12.15					15	82
900	BIFA903440	4	1440	IP55	40°	14.27	13.36	12.26					15	82

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase			Spectrum	dB							
	Stock Ref	Poles			63	125	250	500	1k	2k	4k	8k
900	BIFA903410	4	Inlet/Outlet	89	83	91	97	95	92	87	79	79
900	BIFA903412	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	BIFA903414	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	BIFA903416	4	Inlet/Outlet	90	84	92	98	96	93	88	80	80
900	BIFA903418	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	BIFA903420	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	BIFA903422	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	BIFA903424	4	Inlet/Outlet	91	85	93	99	97	94	89	81	81
900	BIFA903426	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903428	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903430	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903432	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903434	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903436	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903438	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82
900	BIFA903440	4	Inlet/Outlet	92	86	94	100	98	95	90	82	82

Performance Curve

BIFA100 - 3 Phase - 4 Pole



Performance Guide

Dia.	3 Phase Stock Ref	Poles	r.p.m	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	dBA @3m	
						0	100	200	300	400	500	600			700
1000	BIFA1003410	4	1440	IP55	10°	6.3	5.78	5.18	4.47	3.6	2.49	1.12	4	89	
1000	BIFA1003412	4	1440	IP55	12°	7.38	6.87	6.27	5.54	4.64	3.5	2.04	0.26	4	89
1000	BIFA1003414	4	1440	IP55	14°	8.46	7.94	7.33	6.57	5.64	4.45	2.88	0.86	5.5	89
1000	BIFA1003416	4	1440	IP55	16°	9.54	8.98	8.33	7.55	6.58	5.3			5.5	89
1000	BIFA1003418	4	1440	IP55	18°	10.57	9.97	9.29	8.47	7.45	6.06			7.5	89
1000	BIFA1003420	4	1440	IP55	20°	11.55	10.91	10.19	9.33	8.26	6.8			7.5	89
1000	BIFA1003422	4	1440	IP55	22°	12.46	11.79	11.04	10.15	9.04	7.59			7.5	89
1000	BIFA1003424	4	1440	IP55	24°	13.32	12.64	11.86	10.94	9.82	8.44			11	89
1000	BIFA1003426	4	1440	IP55	26°	14.13	13.45	12.67	11.75	10.63				11	89
1000	BIFA1003428	4	1440	IP55	28°	14.93	14.26	13.48	12.55	11.41				15	89
1000	BIFA1003430	4	1440	IP55	30°	15.73	15.05	14.25	13.29	12.11				15	89
1000	BIFA1003432	4	1440	IP55	32°	16.52	15.78	14.92	13.91	12.7				15	89
1000	BIFA1003434	4	1440	IP55	34°	17.26	16.44	15.5	14.42					18.5	89
1000	BIFA1003436	4	1440	IP55	36°	17.92	17.03	16.01	14.77					18.5	89
1000	BIFA1003438	4	1440	IP55	38°	18.53	17.57	16.44	14.97					18.5	89
1000	BIFA1003440	4	1440	IP55	40°	19.1	18.06	16.8						22	89

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Dia.	3 Phase Stock Ref	Poles	Spectrum	dB @ 3m								
				63	125	250	500	1k	2k	4k	8k	
1000	BIFA1003410	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003412	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003414	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003416	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003418	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003420	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003422	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003424	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003426	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003428	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003430	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003432	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003434	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003436	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003438	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89
1000	BIFA1003440	4	Inlet/Outlet	99	94	101	106	106	102	97	89	89

Bifurcated Case Axial Fans (BIFA)

Electrical Details

1 Phase 2 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	*eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
BIFA25	2800	25°-50°	0.37	8	2.6	D.O.L	444744	444702	-	-	-	-
BIFA31	2800	10°-24°	0.37	8	2.6	D.O.L	444744	444702	-	-	-	-
BIFA31	2800	26°-32°	0.55	14	3.6	D.O.L	444744	444703	-	-	-	-
BIFA31	2800	34°-38°	0.75	16	4.5	D.O.L	444744	444703	-	-	-	-
BIFA31	2800	40°	1.1	23	6.6	D.O.L	444744	444704	-	-	-	-
BIFA40	2800	10°-18°	0.75	16	4.5	D.O.L	444744	444703	-	-	-	-
BIFA40	2800	20°-24°	1.1	23	6.6	D.O.L	444744	444704	-	-	-	-
BIFA40	2800	26°-32°	1.5	31	8.5	D.O.L	444744	444705	-	-	-	-

*1 phase 2 pole are not speed controllable

3 Phase 2 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
BIFA25	2800	25°-50°	0.37	5.82	0.97	D.O.L	444747	444700	-	-	444177	444172
BIFA31	2800	10°-24°	0.37	5.82	0.97	D.O.L	444747	444700	-	-	444177	444172
BIFA31	2800	26°-32°	0.55	8.52	1.42	D.O.L	444747	444701	-	-	444177	444172
BIFA31	2800	34°-38°	0.75	10.62	1.77	D.O.L	444747	444701	-	-	444177	444172
BIFA31	2800	40°	1.1	15.06	2.51	D.O.L	444747	444702	-	-	444177	444173
BIFA40	2800	10°-18°	0.75	10.62	1.77	D.O.L	444747	444701	-	-	444177	444172
BIFA40	2800	20°-26°	1.1	15.06	2.51	D.O.L	444747	444702	-	-	444177	444173
BIFA40	2800	28°-32°	1.5	19.68	3.28	D.O.L	444747	444702	-	-	444177	444173
BIFA40	2800	34°-38°	2.2	27.66	4.61	D.O.L	444747	444703	-	-	-	444174
BIFA40	2800	40°	3	42.2	6.03	D.O.L	444747	444704	-	-	-	444174
BIFA45	2880	10°-12°	1.1	15.06	2.51	D.O.L	444747	444702	-	-	444177	444173
BIFA45	2880	14°-18°	1.5	19.68	3.28	D.O.L	444747	444702	-	-	444177	444173
BIFA45	2880	20°-26°	2.2	27.66	4.61	D.O.L	444747	444703	-	-	-	444174
BIFA45	2880	28°-32°	3	42.2	6.03	D.O.L	444747	444704	-	-	-	444174
BIFA50	2880	10°-12°	1.5	19.68	3.28	D.O.L	444747	444702	-	-	444177	444173
BIFA50	2880	14°-18°	2.2	27.66	4.61	D.O.L	444747	444703	-	-	-	444174
BIFA50	2880	20°-24°	3	42.2	6.03	D.O.L	444747	444704	-	-	-	444174
BIFA50	2880	26°-30°	4	59.1	7.88	D.O.L	444747	444705	-	-	-	444175
BIFA50	2880	32°-36°	5.5	78.8	10.5	D.O.L	444748	444706	-	-	-	444175
BIFA50	2880	38°-40°	7.5	106	14.1	D.O.L	444748	444707	-	-	-	444176
BIFA56	2880	10°-14°	4	59.1	7.88	D.O.L	444747	444705	-	-	-	444175
BIFA56	2880	16°-18°	5.5	78.8	10.5	D.O.L	444748	444706	-	-	-	444175
BIFA56	2880	20°-24°	7.5	106	14.1	D.O.L	444748	444707	-	-	-	444176
BIFA63	2940	10°-12°	5.5	78.8	10.5	D.O.L	444748	444706	-	-	-	444175
BIFA63	2940	14°-16°	7.5	106	14.1	D.O.L	444748	444707	-	-	-	444176

1 Phase 4 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transform Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
BIFA25	1440	25°-50°	0.25	5	2	D.O.L	444744	444701	10314103	444164	-	-
BIFA31	1400	10°-40°	0.25	5	2	D.O.L	444744	444701	10314103	444164	-	-
BIFA40	1400	10°-40°	0.55	11	3.9	D.O.L	444744	444703	10314105	444164	-	-
BIFA45	1400	10°-40°	0.55	11	3.9	D.O.L	444744	444703	10314105	444164	-	-
BIFA50	1400	10°-34°	0.55	11	3.9	D.O.L	444744	444703	10314105	444164	-	-
BIFA50	1400	36°-40°	0.75	15	5.3	D.O.L	444744	444704	10314107	444165	-	-

Electrical Details

3 Phase 4 Pole

Stock Ref	r.p.m	Pitch Angle	Motor kW	S.C. Amps	F.L.C Amps	Starting Method	Starter Ref	Overload Ref	Transformer Controller	eDemand Controller		
										Voltage Control	1/3 Phase Inverter	3 Phase Inverter
BIFA25	1440	25°-50°	0.25	5.04	0.84	D.O.L	444747	444699	10314301	444166	444177	444172
BIFA31	1400	10°-40°	0.25	5.04	0.84	D.O.L	444747	444699	10314301	444166	444177	444172
BIFA40	1400	10°-40°	0.55	9.48	1.58	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA45	1400	10°-40°	0.55	9.48	1.58	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA50	1400	10°-34°	0.55	9.48	1.58	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA50	1400	36°-40°	0.75	11.58	1.93	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA56	1400	10°-16°	0.55	9.48	1.58	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA56	1400	18°-22°	0.75	11.58	1.93	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA56	1400	24°-30°	1.1	15.84	2.64	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA56	1400	32°-36°	1.5	20.7	3.45	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA56	1400	38°-40°	2.2	33.9	4.84	D.O.L	444747	444703	10314307	444167	-	444173
BIFA63	1400	10°	0.55	9.48	1.58	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA63	1400	12°-14°	0.75	11.58	1.93	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA63	1400	16°-20°	1.1	15.84	2.64	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA63	1400	22°-26°	1.5	20.7	3.45	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA63	1400	28°-34°	2.2	33.9	4.84	D.O.L	444747	444703	10314307	444167	-	444174
BIFA63	1400	36°-40°	3	45.3	6.47	D.O.L	444747	444704	10314311	444167	-	444174
BIFA71	1420	10°	0.75	11.58	1.93	D.O.L	444747	444701	10314304	444166	444177	444172
BIFA71	1420	12°-14°	1.1	15.84	2.64	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA71	1420	16°-18°	1.5	20.7	3.45	D.O.L	444747	444702	10314304	444166	444177	444173
BIFA71	1420	20°-24°	2.2	33.9	4.84	D.O.L	444747	444703	10314307	444167	-	444174
BIFA71	1420	26°-30°	3	45.3	6.47	D.O.L	444747	444704	10314311	444167	-	444174
BIFA71	1420	32°-36°	4	57.8	8.26	D.O.L	444747	444705	10314311	444167	-	444175
BIFA71	1420	38°-40°	5.5	77	11	D.O.L	444748	444706	-	444168	-	444175
BIFA80	1420	10°-12°	2.2	33.9	4.84	D.O.L	444747	444703	10314307	444167	-	444174
BIFA80	1440	14°-20°	3	45.3	6.47	D.O.L	444747	444704	10314311	444167	-	444174
BIFA80	1440	22°-24°	4	57.8	8.26	D.O.L	444747	444705	10314311	444167	-	444175
BIFA80	1440	26°-28°	5.5	77	11	D.O.L	444748	444706	-	444168	-	444175
BIFA80	1440	30°-34°	7.5	102.2	14.6	D.O.L	444748	444707	-	-	-	444176
BIFA80	1440	36°-40°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
BIFA90	1440	10°	3	45.3	6.47	D.O.L	444747	444704	10314311	444167	-	444174
BIFA90	1440	12°-16°	4	57.8	8.26	D.O.L	444747	444705	10314311	444167	-	444175
BIFA90	1440	18°-20°	5.5	77	11	D.O.L	444748	444706	-	444168	-	444175
BIFA90	1440	22°-26°	7.5	102.2	14.6	D.O.L	444748	444707	-	-	-	444176
BIFA90	1440	28°-32°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
BIFA90	1440	34°-40°	15	75.3	30.1	Star Delta	-	-	-	-	-	-
BIFA100	1440	10°-12°	4	57.8	8.26	D.O.L	444747	444705	10314311	444167	-	444175
BIFA100	1440	14°-16°	5.5	77	11	D.O.L	444748	444706	-	444168	-	444175
BIFA100	1440	18°-22°	7.5	102.2	14.6	D.O.L	444748	444707	-	-	-	444176
BIFA100	1440	24°-26°	11	52.3	20.9	Star Delta	444843	444707	-	-	-	-
BIFA100	1440	28°-32°	15	75.3	30.1	Star Delta	-	-	-	-	-	-
BIFA100	1440	34°-38°	18.5	86	34.3	Star Delta	-	-	-	-	-	-
BIFA100	1440	40°	22	102	40.6	Star Delta	-	-	-	-	-	-

Speed Controllers

Used in conjunction with speed controllable fans Vent-Axia offers a choice of speed controllers, the traditional Five-Step Auto Transformer or the Inverter Speed Controller.

The **Five-Step-Auto** Transformer provides five stepped speed settings without the electronic motor harmonic noise associated with all electronic or solid state type Speed Controllers.

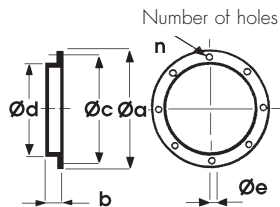
eDemand Speed Controllers & Inverters see Accessories & Controls Section.

Bifurcated Case Axial Fans (BIFA)

Accessory Dimensions (mm)

Coupling Flange

Rolled from mild steel. Dimensionally matched to fan flange and fixing holes

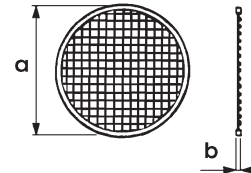


Stock Ref. No.	overall a	spigot b	pcd c	int dia d	hole dia e	No. holes
10506250	327	55	292	254	10	4
10506315	385	30	355	315	10	8
10506400	480	45	450	400	12	8
10506450	530	60	500	450	12	8
10506500	590	0	560	500	12	12
10506560	650	75	620	560	12	12
10506630	720	75	690	630	12	12
10506710A	794	40	770	710	12	13
10506800A	884	40	860	800	12	13
10506900A	1100	50	970	900	14	15
105061000A	1100	50	1070	1000	14	15

Inlet Wire Guard

'K' factor loss 0.25

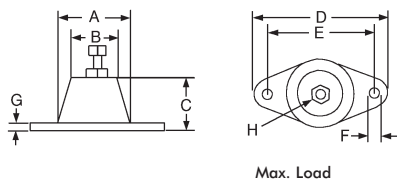
Available for direct fixing to either side of the fan using flange sizing holes. Constructed to meet BS 848 Part 5



Stock Ref.	a	b
10505250	245	3
10505315	380	3
10505400	475	3
10505450	525	3
10505500	595	3
10505560	655	3
10505630	725	3
10505710A	784	10
10505800A	870	10
10505900A	970	10
105051000A	1090	10

For more information on the 'K' factor, refer to General Information Section

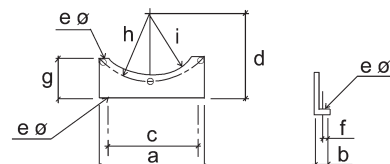
*Anti-Vibration Mounts



Stock Ref.	A	B	C	D	E	F	G	H	kg
10523033	37	26	27	67	54	7	3	M 8	23
10523055	37	26	27	67	54	7	3	M8	36
10523133	57	46	35	95	76	10.5	4	M12	91
10523165	57	46	35	95	76	10.5	4	M12	245

*4 required per fan

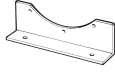
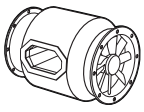
*Mounting Feet



Stock Ref.	a	b	c	d	e	f	g	h	i
10503250	232	24	180	240	10	14	115	146	130
10503315	275	24	224	240	10	14	115	177.5	167
10503400	348	24	280	300	12	14	135	225	213
10503450	384	24	315	360	12	14	155	250	238
10503500	425	24	315	360	12	14	135	280	268
10503560	475	24	355	355	12	14	155	310	298
10503630	520	24	400	400	12	14	175	345	333
10503710A	710	40	610	435	13	18	240	385	365
10503800A	800	40	700	480	13	18	262	430	410
10503900A	900	40	800	535	13	18	288	485	460
105031000A	1000	40	900	580	15	18	314	535	510

*Supplied as a pair

Accessories

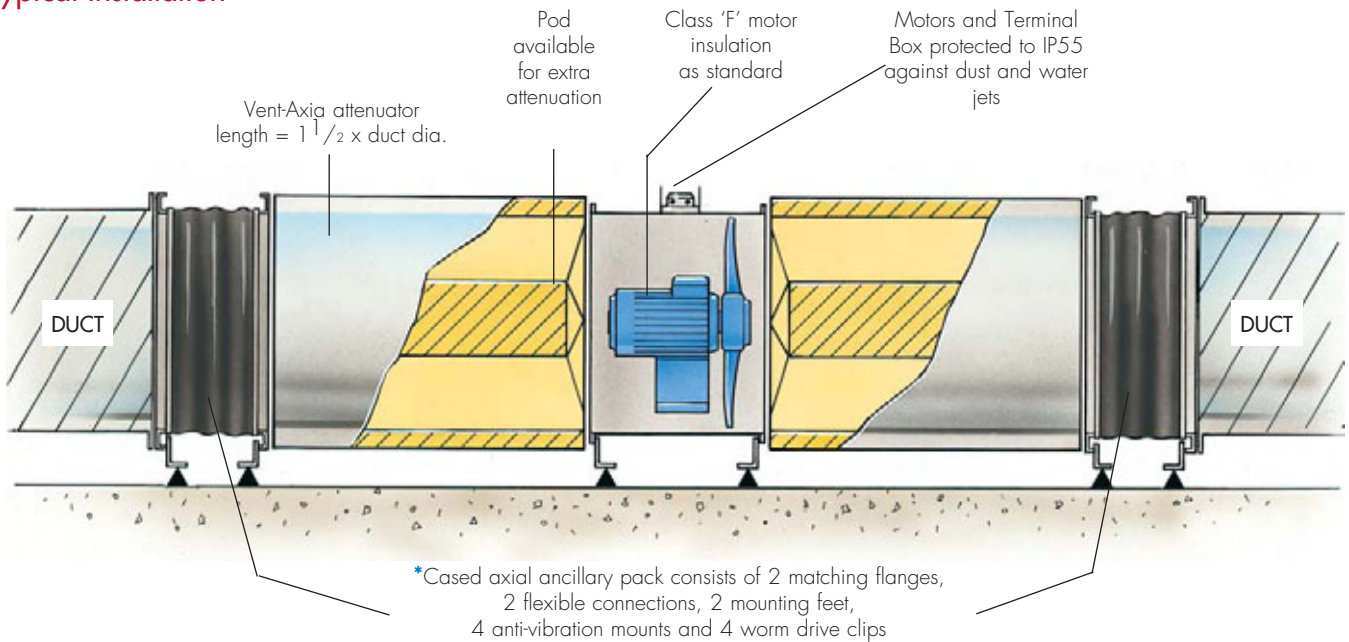


Model	Mounting Feet	Inlet Wire Guard	Coupling Flange	Ancillary Pack*	Attenuator	Attenuator inc. Pod	Anti-Vibration Mount**
BIFA25	10503250	10505250	10506250	10513250HT	10514250	-	10523033
BIFA31	10503315	10505315	10506315	10513315HT	10514315	10500315	10523033
BIFA40	10503400	10505400	10506400	10513400HT	10514400	10500400	10523033
BIFA45	10503450	10505450	10506450	10513450HT	10514450	10500450	10523033
BIFA50	10503500	10505500	10506500	10513500HT	10514500	10500500	10523033
BIFA56	10503560	10505560	10506560	10513560HT	10514560	10500560	10523033
BIFA63	10503630	10505630	10506630	10513630HT	10514630	10500630	10523033
BIFA71	10503710A	10505710	10506710A	10513710HT	10514710A	10500710	10523055
BIFA80	10503800A	10505800	10506800A	10513800HT	10514800A	10500800	10523055
BIFA90	10503900A	10505900	10506900A	10513900HT	10514900A	10500900	10523133
BIFA100	105031000A	105051000	105061000A	105131000HT	105141000A	105001000	10523133

*Axial Ancillary Pack consists of 2 Matching flanges, 2 Flexible connectors, 2 Mounting feet, 4 Anti vibration mounts and 4 Worm drive clips

**4 required per fan

Typical Installation

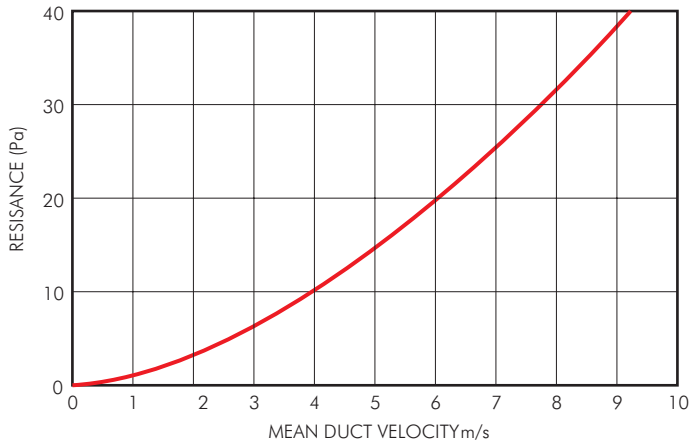


Bifurcated Case Axial Fans (BIFA)

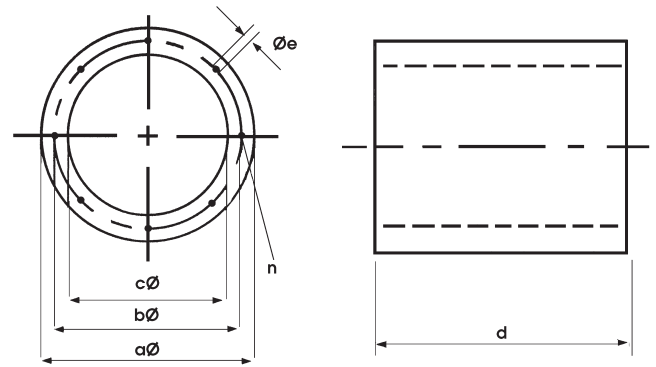
Fan Attenuator Details

An attenuator without pod offers negligible resistance to air flow, and therefore the pressure loss can be considered to be the same as that for the equivalent length of ducting.

Resistance Graph for Axial Attenuator with Pod



Attenuator Dimensions (mm)



Attenuator Insertion Loss Data

Dia	Stock Ref.	63	125	250	500	1k	2k	4k	8k	kg approx
250	10514250	2	3	6	11	16	11	10	6	20
315	10514315	2	3	6	11	16	11	10	6	22
400	10514400	2	3	6	13	16	12	10	6	41
450	10514450	2	4	6	14	17	12	10	6	50
500	10514500	3	4	7	14	17	14	11	7	59
560	10514560	2	4	8	15	18	14	11	7	70
630	10514630	3	4	8	16	18	14	11	7	82
710	10514710A	1	2	6	9	12	10	6	2	90
800	10514800A	1	2	6	9	12	10	6	2	100
800	10514800A	1	2	6	9	12	10	6	2	100
1000	105141000A	1	2	6	9	12	10	6	2	184

Melinex lined attenuators are available on request

Case Axial Attenuator Fitted with Pod Insertion Losses

Dia	Stock Ref.	63	125	250	500	1k	2k	4k	8k	kg approx + POD
315	10500315	6	7	12	18	27	25	22	19	32
400	10500400	3	8	12	18	28	26	23	19	60
450	10500450	4	8	14	20	28	26	23	19	73
500	10500500	4	8	14	20	29	26	23	19	87
560	10500560	4	9	14	20	29	26	23	19	102
630	10500630	4	9	14	20	29	26	23	19	120
710	10500710A	6	10	20	30	35	28	25	22	134
800	10500800A	6	10	20	30	35	28	25	22	149
900	10500900A	6	10	20	30	35	28	25	22	211
1000	105001000A	6	10	20	30	35	28	25	22	267

Attenuator without Pod

Model	Stock Ref. No.	Dia a	Dia b	Dia c	Length d	Dia e	No. holes
BIFA25	10514250	350	292	254	375	M8	4
BIFA31	10514315	415	355	315	475	M8	8
BIFA40	10514400	500	450	400	600	M10	8
BIFA45	10514450	550	500	450	675	M10	8
BIFA50	10514500	600	560	500	750	M10	12
BIFA56	10514560	660	620	560	810	M10	12
BIFA63	10514630	730	690	630	940	M10	12
BIFAA71	10514710A	814	700	710	1070	M10	16
BIFAA80	10514800A	900	860	796	1200	M10	16
BIFAA90	10514900A	999	970	893	1350	M10	16
BIFAA100	105141000A	1108	1070	1070	1500	M10	16

Attenuator with Pod

Model	Stock Ref. No.	Dia a	Dia b	Dia c	Length d	Dia e	No. holes
BIFA25	10500250	350	292	254	375	M8	4
BIFA31	10500315	415	355	315	475	M8	8
BIFA40	10500400	500	450	400	600	M10	8
BIFA45	10500450	550	500	450	675	M10	8
BIFA50	10500500	600	560	500	750	M10	12
BIFA56	10514560	660	620	560	810	M10	12
BIFA63	10500630	730	690	630	940	M10	12
BIFAA71	10500710A	814	700	710	1070	M10	16
BIFAA80	10500800A	900	860	796	1200	M10	16
BIFAA90	10500900A	999	970	893	1350	M10	16
BIFAA100	105001000A	1108	1070	1070	1500	M10	16

In-line Fans

Vent-Axia in-line fans features both box and tube fans designed to provide controllable environmental management solutions for commercial and industrial applications.

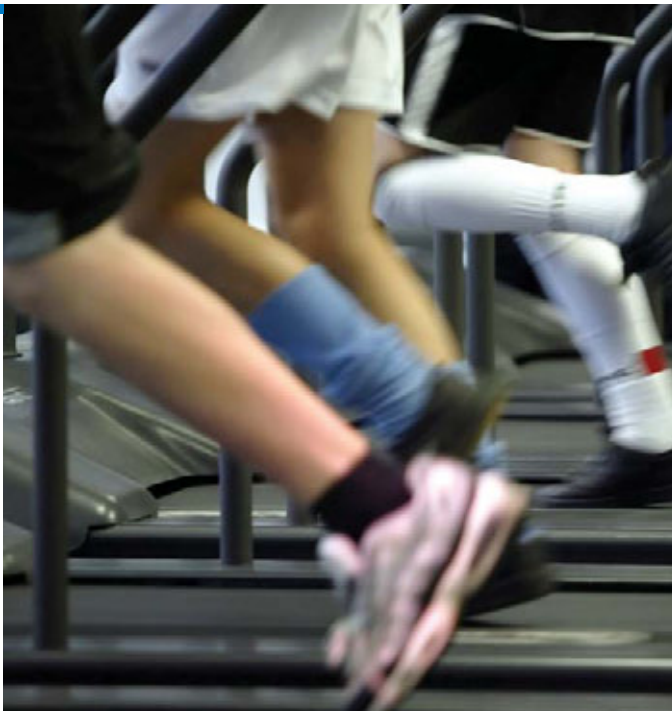
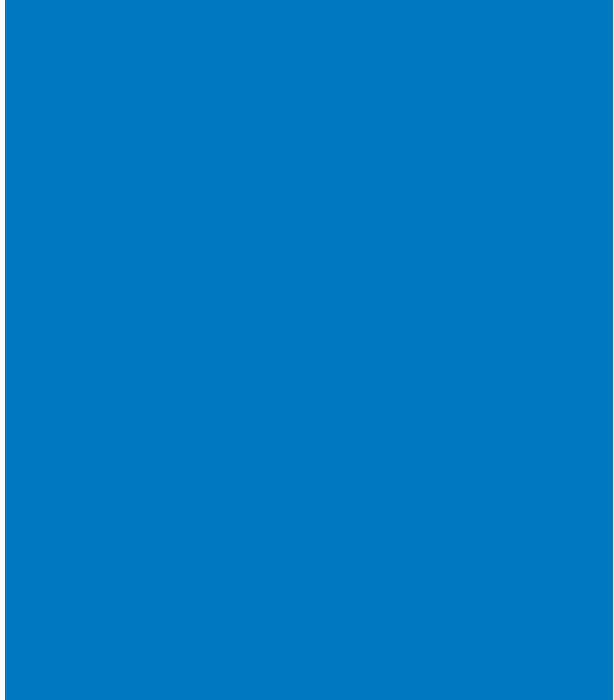
With sizes ranging from 100mm to 500mm diameter and air volumes up to 3.813m³/s optimum performance at minimum running costs is assured.

Where noise is an issue, our ACQ range features 50mm of acoustic lining and designed to be compact enough to fit within ceiling voids.

The KDF and ARH ranges are specifically designed for use in rectangular ducted systems where space is limited.



Range



Vent-Axia®

NEW RANGE

Eco Mixed Flow (eMF)

Features and Benefits

- **High efficiency mixed flow Fan with guide vanes**
- **Available in sizes 355 to 710mm dia.**
- **IP54 Fan rating (duct mounted)**
- **Operating Temperatures up to 80 Deg C (see technical specification)**
- **Maintenance free, long life bearings**
- **All units suitable for speed control.**
- **Quality Assurance to BS EN ISO 9001:1994.**

Energy Saver

The "eMF" high efficiency in-line mixed flow duct fans are designed around a high efficiency, high pressure development mixed flow impeller, offering a very compact design with high performance and low sound levels.

The in-line fan shall be constructed from steel and incorporates an aerodynamically designed airflow guide vane to ensure maximum performance from the unit.

All models offer minimum space requirements for installation & are designed for simple installation into duct ventilation systems via the included mounting foot. All units are suitable for vertical or horizontal mounting.

The "eMF" range is available in 15 models, covering sizes 355, 400, 450, 500, 560, 630 & 710mm diameter. The range shall provide a performance from 0.06m³/s to 5.63m³/s with a maximum pressure development of up to 1200 Pa.

Impellers

The impellers shall be aerodynamically designed high efficiency mixed flow type, manufactured from steel or polyamide. The motor and impeller shall be factory matched, statically and dynamically balanced to ISO 1940, Grade G 2.5.

Motors

All sizes shall be protected to IP54 in accordance with BS EN 60529:1992. With motors suitable for operating temperatures up to 80 Deg C (see technical data). The range shall incorporate maintenance free motors, fitted with sealed for life ball bearings, ideally suited for speed control. Single phase 230V units by auto transformer control, 3 phase 230V or 400V by frequency Inverters.

Motor protection by means of a thermal contact switch incorporated within the windings shall be provided to prevent motor damage due to overloading/overheating.

Terminal Box

An IP44 terminal box shall be supplied with all models.

Performance

The fan performance shall be in accordance with tests to BS848 Part 1 1980, with the fan sound levels measured in a reverberant chamber in accordance with BS848 Part 2 1985.

Quality Assurance

Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001:1994.

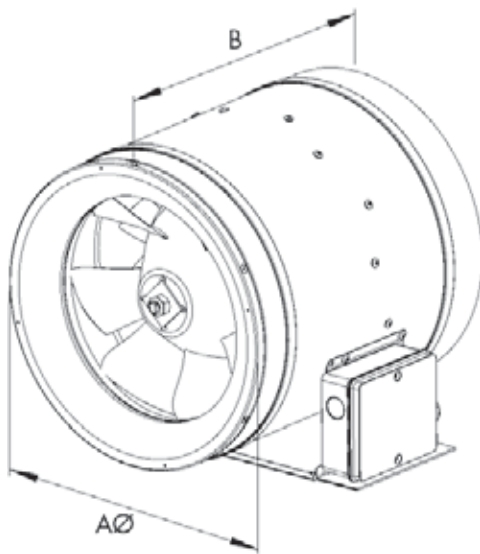
Accessories

A full range of accessories are available with the "eMF" in-line mixed flow duct fans such as:

- Fast Clamps
- Auto Transformer Speed Controllers
- Frequency inverters
- D.O.L. Starters & Overloads



Fan Dimensions (mm)

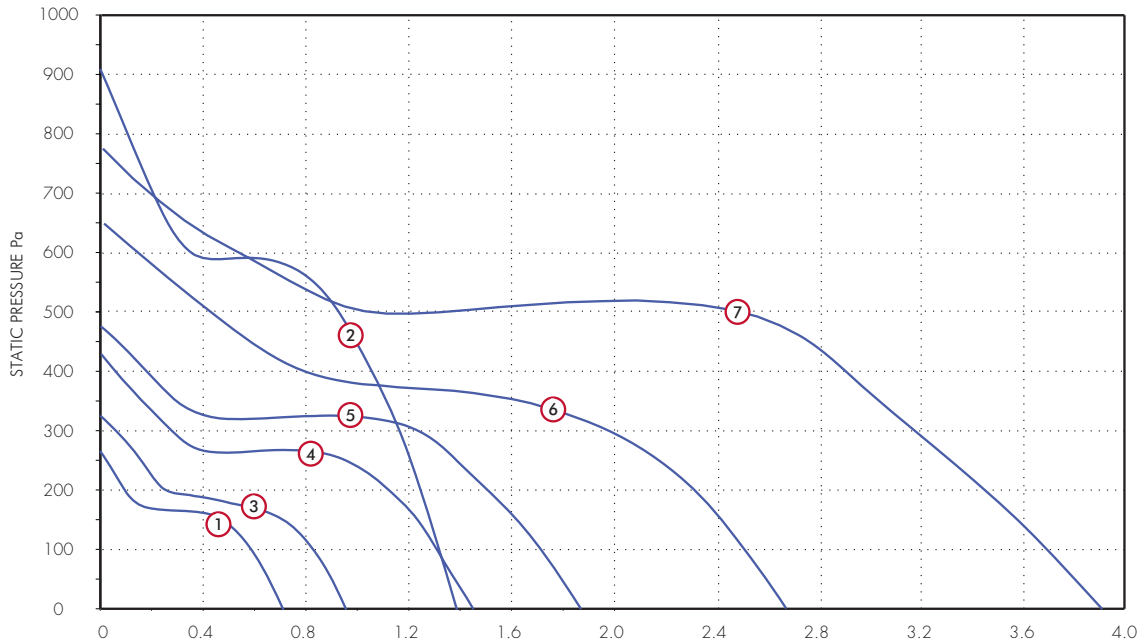


Stock Ref	AØ	B	Weight kg
EMF35514	355	396	13.5
EMF35512	354	396	17.3
EMF40014	403	417	12.8
EMF45014	453	467	18.4
EMF50014	504	515	23.2
EMF56014	564	582	38.0
EMF63014	634	655	43.1
EMF35532	354	396	17.5
EMF40034	403	417	14.8
EMF45034	453	467	18.9
EMF50034	504	515	23.6
EMF40032	403	417	20.3
EMF56034	564	582	28.0
EMF63034	634	654	39.3
EMF71034	714	732	49.0

Eco Mixed Flow (eMF)

Performance Curve

EMF355 - EMF630 - 1 Phase - 2 & 4 Pole



Performance Guide

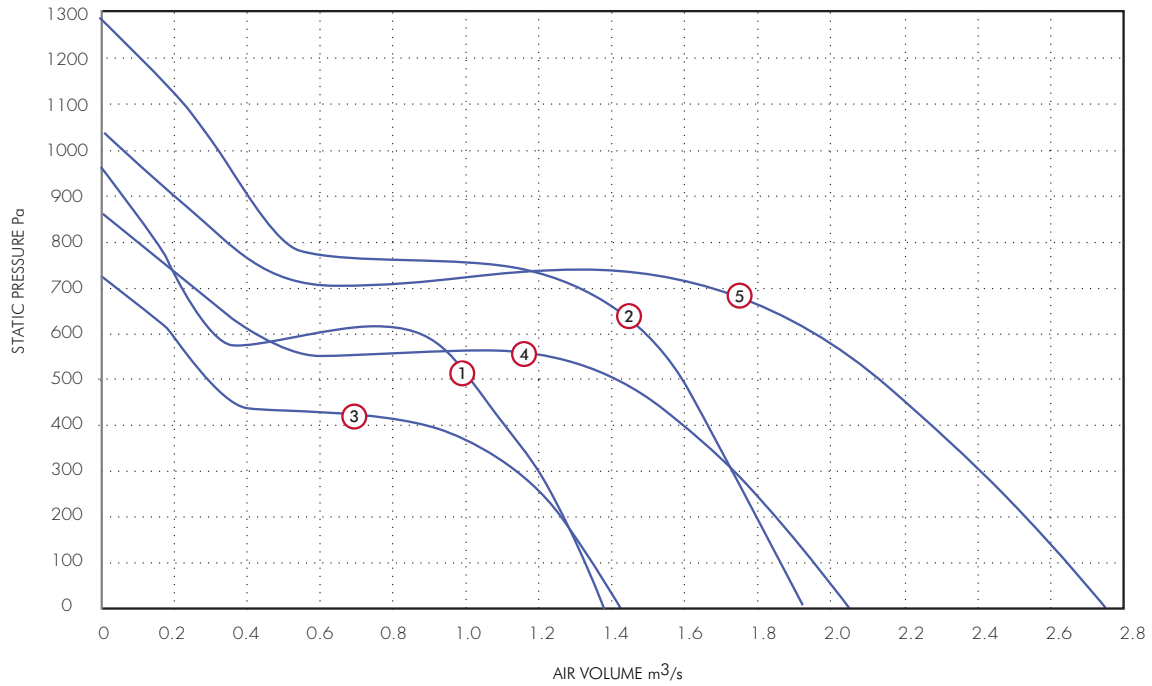
Stock Ref.	RPM	Max temp °C	Curve	AIR VOLUME m ³ /s										Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				m ³ /s at Pa													
				0	100	200	300	400	500	600	700	800	900				
EMF35514	1460	45	①	0.71	0.58	0.09								230V/1/50	150	3.0	1.2
EMF35512	2850	80	②	1.39	1.32	1.24	1.16	1.05	0.92	0.35	0.20	0.10	0.01	230V/1/50	950	13.5	5.4
EMF40014	1460	80	③	0.95	0.82	0.25	0.06							230V/1/50	210	3.8	1.5
EMF45014	1450	80	④	1.45	1.31	1.12	0.28	0.06						230V/1/50	450	7.8	3.1
EMF50014	1380	80	⑤	1.87	1.71	1.50	1.25	0.18						230V/1/50	1380	9.3	3.7
EMF56014	1430	80	⑥	2.67	2.51	2.31	1.97	0.78	0.42	0.12				230V/1/50	1110	19.0	7.6
EMF63014	1410	50	⑦	3.89	3.69	3.43	3.18	2.90	2.49	0.54	0.19			230V/1/50	2140	28.5	11.4

Sound Data

Stock Ref.		125	250	500	1k	2k	4k	8k	dBA @3m
EMF35512	INLET	49	72	74	79	78	77	71	40
	OUTLET	55	74	80	83	81	77	69	40
	BREAKOUT	49	56	60	61	59	58	49	40
EMF35514	INLET	51	57	61	62	63	63	48	26
	OUTLET	56	60	66	67	64	60	47	26
	BREAKOUT	42	41	43	46	43	46	29	26
EMF40014	INLET	57	60	70	68	69	64	53	35
	OUTLET	65	63	73	73	69	65	54	35
	BREAKOUT	50	46	59	59	53	52	41	35
EMF45014	INLET	64	66	69	71	74	69	57	42
	OUTLET	71	69	77	76	74	70	59	42
	BREAKOUT	57	69	67	65	61	57	43	42
EMF50014	INLET	69	69	72	73	73	69	57	41
	OUTLET	74	75	78	77	74	70	59	41
	BREAKOUT	54	66	65	64	61	59	42	41
EMF56014	INLET	72	77	79	79	78	74	63	49
	OUTLET	76	82	85	81	79	76	65	49
	BREAKOUT	70	77	75	69	68	63	52	49
EMF63014	INLET	74	78	82	82	80	78	66	50
	OUTLET	74	82	86	84	81	78	67	50
	BREAKOUT	70	74	76	72	70	65	53	50

Performance Curve

EMF355 - EMF400 - 3 Phase - 2 & 4 Pole



Performance Guide

Stock Ref.	RPM	Max temp °C	Curve	m³/s at Pa							Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				0	200	400	600	800	1000	1200				
EMF35532	2910	60	①	1.38	1.27	1.10	0.88	0.15			230V/3/50	910	8.0	3.2
EMF40032	2930	80	②	1.92	1.85	1.66	1.49	0.51	0.32	0.11	400V/3/50	1540	8.0	3.2
EMF40034	2200	80	③	1.43	1.26	0.88	0.19				230V/3/75	650	6.8	2.7
EMF45034	2150	80	④	2.04	1.84	1.60	0.42				230V/3/70	1200	11.0	4.4
EMF50034	2060	70	⑤	2.75	2.53	2.27	1.96	0.34			230V/3/70	1920	17.8	7.1

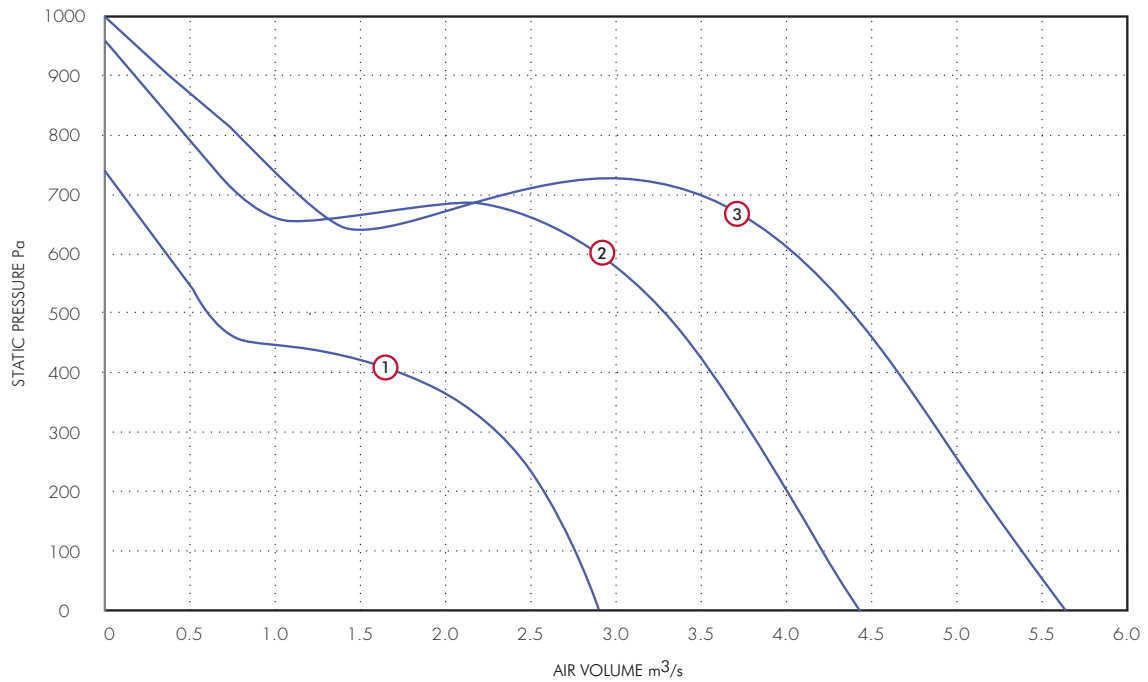
Sound Data

Stock Ref.		125	250	500	1K	2K	4K	8K	dBA @3m
EMF35532	INLET	52	75	77	79	78	77	74	43
	OUTLET	56	76	85	85	82	78	71	43
	BREAKOUT	52	60	66	64	60	61	53	43
EMF40032	INLET	73	88	84	84	85	82	80	55
	OUTLET	76	89	93	91	87	84	80	55
	BREAKOUT	72	88	81	75	71	69	62	55
EMF40034	INLET	68	82	77	77	77	74	66	43
	OUTLET	69	85	86	84	79	76	68	43
	BREAKOUT	59	59	68	66	62	60	51	43
EMF45034	INLET	72	84	81	79	78	77	69	46
	OUTLET	74	87	88	84	81	79	71	46
	BREAKOUT	65	69	72	68	63	62	52	46
EMF50034	INLET	61	81	82	83	81	79	72	53
	OUTLET	71	81	89	89	86	82	74	53
	BREAKOUT	77	77	79	75	70	68	61	53

Eco Mixed Flow (eMF)

Performance Curve

EMF560 - EMF710 - 3 Phase - 2 & 4 Pole



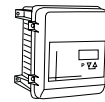
Performance Guide

Stock Ref.	RPM	Max temp °C	Curve	m³/s at Pa					Voltage	Max Watts	S.C. Amps	F.L.C. Amps
				0	200	400	600	800				
EMF56034	1570	80	①	2.90	2.57	1.73	0.37		400V/3/50	1360	7.0	2.8
EMF63034	1590	70	②	4.43	4.00	3.56	2.90	0.47	400V/3/50	2620	13.5	5.4
EMF71034	1440	55	③	5.63	5.13	4.66	4.05	0.78	400V/3/50	3610	19.3	7.7

Sound Data

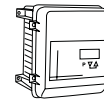
Stock Ref.		125	250	500	1K	2K	4K	8K	dBA @3m
EMF56034	INLET	72	74	78	80	78	75	63	48
	OUTLET	74	84	83	82	80	76	65	48
	BREAKOUT	59	67	74	71	68	63	51	48
EMF63034	INLET	76	77	85	83	81	80	68	51
	OUTLET	76	83	88	85	83	80	69	51
	BREAKOUT	67	69	77	73	71	66	55	51
EMF71034	INLET	74	84	85	87	83	80	69	54
	OUTLET	75	87	90	89	86	81	71	54
	BREAKOUT	68	77	78	78	74	66	58	54

Accessories



eDemand

Stock Ref.	Voltage/Hz	FLC	Auto Transformer	Frequency Inverter	FastClamp
EMF35512	230/1/50	5.4	10314107	444170	VM355
EMF35514	230/1/50	1.2	10314103	444169	VM355
EMF40014	230/1/50	1.5	10314103	444169	VM400
EMF45014	230/1/50	3.1	10314105	444169	VM450
EMF50014	230/1/50	3.7	10314105	444169	VM500
EMF56014	230/1/50	7.6	10314107	444171	VM560
EMF63014	230/1/50	11.4	10314113	-	VM630



eDemand

Stock Ref.	Voltage/Hz	FLC	Auto Transformer	Frequency Inverter	FastClamp
*EMF35532	230/3/50	3.2	-	444177	VM355
EMF40032	400/3/50	3.2	10314304	444173	VM400
* EMF40034	230/3/75	2.7	-	444177	VM400
* EMF45034	230/3/70	4.4	-	444177	VM450
* EMF50034	230/3/70	7.1	-	-	VM500
EMF56034	400/3/50	2.8	10314304	444173	VM560
EMF63034	400/3/50	5.4	10314307	444174	VM630

*Item available to special order, please enquire.

NOTE For full range of speed controller options & duct mounted accessories, see Accessories & Controllers Section

Powerflow In-Line Duct Fans (ACP)

Features and Benefits

- Tough plastic in-line range in eight models
- 50-80mm long ribbed spigots
- Flame retardant casing
- All models speed controllable
- Fitted with Standard Thermal Overload Protection (S.T.O.P.)
- For the best performance from your fan, use a Vent-Axia controller
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1 & 2
- 2 Year Guarantee

A range of eight models from 100 to 315mm dia. duct sizes. The 315mm dia. model has been specifically developed for use with rigid ductwork. Air volumes from 0.059m³/s to 0.42m³/s in free air and capable of pressure development up to 550 Pa.

Powerflow has 50-80mm long inlet and discharge spigots allowing easy installation and fixing. The adjustable mounting foot allows the terminal box to be rotated to any angle and allows plenty of space and adjustment for screw fixing. The robust fire-retardant polymeric casing combined with internal guide vanes ensures optimum airflow management through the unit.

Electrical

Motors are 220-240V single phase 50Hz. Capacitor start and run. The terminal box is integral with the case moulding. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.).

Motor/Impellers

All models are fitted with an external rotor motor and backward curved impeller assembly for long life and reliability.

All sizes are IP44 according to BS EN 60529. Ball bearings are greased for life and designed to run at any angle. Insulation is Class 'B' (from -30°C to +40°C). Manufacture is controlled to BS EN ISO 9001.

2.5A Electronic Controller

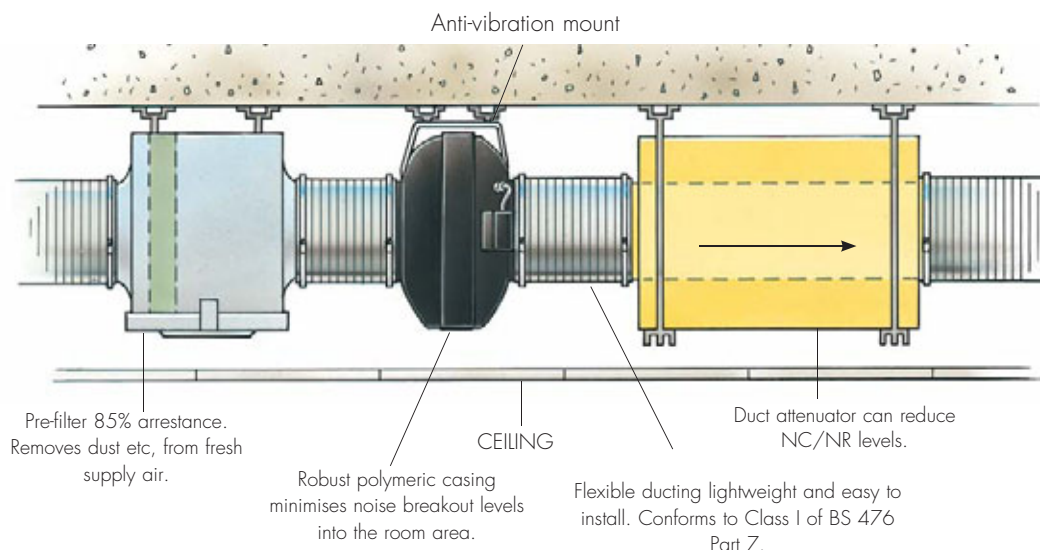
On/Off neon indicator. Infinitely variable speed control. Adjustable minimum speed setting and optional sensor mode. The controller is radio-suppressed to BS800 and rated at 2.5 amps.

Stock Ref. No. W10303102M

Ducted Ventilation

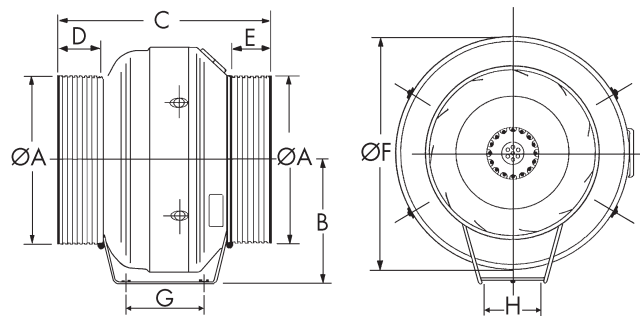
Powerflow models provide a compact yet versatile range designed with the installer in mind, combining the acoustic benefits of a tough plastic casing with the pressure characteristics of a centrifugal fan.

Typical Installation





Fan Dimensions (mm)

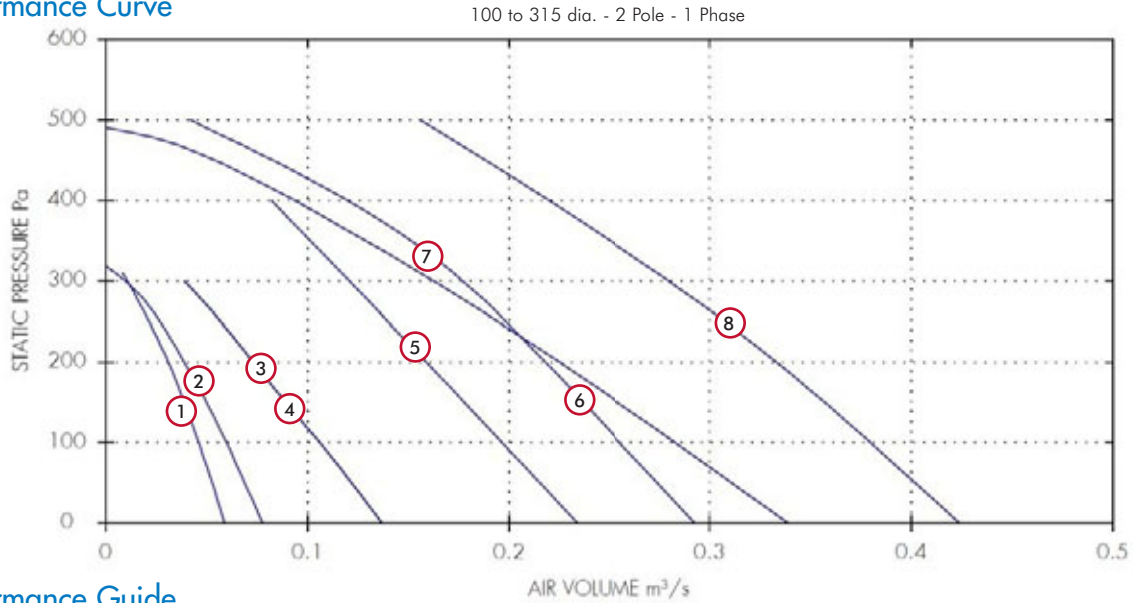


Dia	Øa	b	c	d	e	Øf	g	h	Weight kg
100*	100	146	287	52	52	254	110	270*	2.2
125*	125	146	287	60	60	254	110	270*	2.2
150*	149	175	287	52	52	301	110	270*	3.1
160*	160	175	287	52	52	301	110	270*	3.1
200	200	193	290	47	47	344	92	130	4.3
250	250	218	312	65	65	367	92	130	4.6
315	315	250	366	76	76	405	92	130	5.9
315HP	315	250	366	76	76	405	92	130	6.1

*Sizes 100, 125, 150 & 160 have a flat mounting foot

Powerflow In-Line Duct Fans (ACP)

Performance Curve



Performance Guide

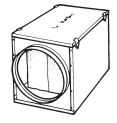
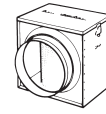
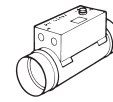
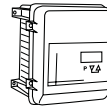
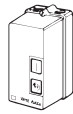
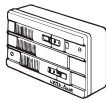
Dia.	Nominal r.p.m	Performance Curve	m³/s at Pa										S.C. Watts	F.L.C. Amps	dB(A) @3m	
			0	50	100	150	200	250	300	350	400					
100	2740	①	0.059	0.052	0.046	0.039	0.031	0.021					83	0.85	0.34	35
125	2410	②	0.078	0.069	0.06	0.05	0.039	0.027					86	0.85	0.34	35
150	2520	③	0.137	0.122	0.106	0.089	0.073	0.057	0.039				100	1.1	0.43	45
160	2520	④	0.137	0.122	0.106	0.089	0.073	0.057	0.039				100	1.1	0.43	45
200	2620	⑤	0.234	0.214	0.194	0.177	0.159	0.138	0.119	0.1	0.082		150	1.52	0.68	47
250	2720	⑥	0.29	0.27	0.25	0.234	0.216	0.197	0.177	0.156	0.124		185	1.6	0.77	48
315	2720	⑦	0.339	0.313	0.274	0.244	0.218	0.191	0.161	0.131	0.098		182	1.57	0.75	51
315HP	2667	⑧	0.42	0.4	0.38	0.35	0.33	0.3	0.27	0.247	0.222		300	4	1.3	52

Figures are based on a 1 Phase Motor

Sound Data

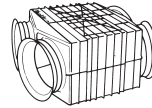
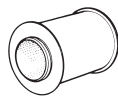
Stock Ref.		63	125	250	500	1K	2K	4K	8K	dBA @3m
ACP1002B	INLET	81	84	75	68	61	52	46	40	51
ACP1002B	OUTLET	82	84	77	68	61	52	49	43	52
ACP1002B	BREAKOUT	52	48	57	53	53	48	40	38	35
ACP12512B	INLET	80	79	76	70	61	57	51	45	51
ACP12512B	OUTLET	82	80	76	71	61	54	51	43	52
ACP12512B	BREAKOUT	52	48	57	53	53	48	40	38	35
ACP15012B	INLET	79	84	84	76	69	65	61	52	59
ACP15012B	OUTLET	78	84	83	74	69	65	60	50	58
ACP15012B	BREAKOUT	59	62	66	62	62	58	51	43	45
ACP16012B	INLET	81	81	79	76	66	61	58	49	55
ACP16012B	OUTLET	80	82	81	73	67	62	57	49	54
ACP16012B	BREAKOUT	59	62	66	62	62	58	51	43	45
ACP20012B	INLET	80	79	74	76	67	65	66	60	57
ACP20012B	OUTLET	79	79	74	71	69	69	65	59	55
ACP20012B	BREAKOUT	54	70	67	66	62	59	53	43	47
ACP25012B	INLET	84	80	74	74	69	69	67	63	57
ACP25012B	OUTLET	75	79	73	72	72	73	68	64	59
ACP25012B	BREAKOUT	60	71	70	66	65	62	55	44	48
ACP31512B	INLET	84	80	74	74	69	69	67	63	56
ACP31512B	OUTLET	75	79	73	72	72	73	68	64	59
ACP31512B	BREAKOUT	72	71	73	71	66	63	55	45	51
ACP31512/HP	INLET	63	72	75	77	79	75	74	67	63
ACP31512/HP	OUTLET	65	73	76	79	76	80	74	68	64
ACP31512/HP	BREAKOUT	61	68	69	71	68	67	58	51	52

Accessories



Stock Ref.	Electronic controller Stock Ref.	Auto transformer Stock Ref.	D.O.L. starter & coil Stock Ref.	*eDemand Controller			†Duct air heater Stock Ref.	Filter cassette Stock Ref.	Bag filter cassette Stock Ref.
				Voltage Control	1/3 Phase Inverter	3 Phase Inverter			
ACP10012B	W10303102M	10314103	444744 + 444697	444164	-	-	10531100T1	10532100A	10533100
ACP12512B	W10303102M	10314103	444744 + 444697	444164	-	-	10531125T1	10532125A	10533125
ACP15012B	W10303102M	10314103	444744 + 444698	444164	-	-	10531150T1	10532150A	10533150
ACP16012B	W10303102M	10314103	444744 + 444698	444164	-	-	-	-	-
ACP20012B	W10303102M	10314103	444744 + 444699	444164	-	-	10531200T1	10532200A	10533200
ACP25012B	W10303102M	10314103	444744 + 444699	444164	-	-	10531250T1	10532250A	10533250
ACP31512B	W10303102M	10314103	444744 + 444699	444164	-	-	10531315T1	10532315A	10533315
ACP31512/HP	W10303102M	10314103	444744 + 444700	444164	-	-	10531315T1	10532315A	10533315

*For full range of speed controller options, see Accessories & Controllers Section



Stock Ref.	Duct attenuator				Heat exchange unit Stock Ref.
	300mm Stock Ref.	600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.	
ACP10012B	10534100	10535100	10536100	-	-
ACP12512B	10534125	10535125	10536125	-	-
ACP15012B	10534150	10535150	10536150	-	-
ACP16012B	-	-	-	-	-
ACP20012B	-	10535200	10536200	10537200	10538290 10577315 10578315
ACP250-12B	-	10535250	10536250	10537250	10538290 10577315 10578290
ACP31512B	-	10535315	10536315	10537315	10538290 10577315
ACP31512/HP	-	10535315	10536315	10537315	10538290 10577315

NEW RANGE

Airtrak™ In-Line Centrifugal Duct Fans (ACH)

Features and Benefits

- Available in sizes 100 to 315.
- Motor Insulation Class B, protected to IP44.
- Operating Temperatures from -15°C up to +40°C.
- HOT SPOT Protection.
- All units suitable for speed control.
- Quality Assurance to BS EN ISO 9001:1994.
- Performance tested to BS848 Part 1 1980.

The "ACH" Airtrak in-line centrifugal duct fans shall be as supplied from ventilation, designed around an efficient backward curved centrifugal impeller and external rotor motor, to ensure a compact design, high performance and low sound levels.

The in-line fan shall be constructed from spun steel and incorporate an aerodynamically designed airflow guide vane, ensuring maximum performance from the unit. All models are to have 30mm inlet and discharge spigots, for ease of installation and shall come complete with mounting feet for horizontal or vertical mounting. ACH shall be available in six models, sizes 100, 125, 150, 200, 250 & 315mm diameter. The range shall provide a performance from 0.069m³/s to 0.51m³/s with a maximum pressure development of up to 700 Pa.

Impellers

The impellers shall be aerodynamically designed centrifugal backward curved type, manufactured from steel or polyamide. The motor and impeller shall be factory matched, statically and dynamically balanced in two planes to ISO 1940, Grade G 6.3.

Motors

All sizes from 100 to 315 shall be protected to IP44 in accordance with BS EN 60529:1992. With motor insulation Class B, suitable for operating temperatures from -15°C to +40°C and atmospheres up to 95% RH. The range shall incorporate maintenance free external rotor motors, fitted with sealed for life ball bearings, ideally suited for speed control by electronic or voltage reduction.

The motors shall be wound to suit a 230V/1PH/50Hz electrical supply, with all motors permanent capacitor type to optimise efficiency. HOT SPOT protection by means of a thermal contact switch incorporated within the windings shall be provided to prevent motor damage due to overloading/overheating.

Terminal Box

An IP44 terminal box shall be supplied with all models with 20mm entry.

Performance

The fan performance shall be in accordance with tests to BS848 Part 1 1980, with the fan sound levels measured in a reverberant chamber in accordance with BS848 Part 2 1985.

Quality Assurance

Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001:1994.

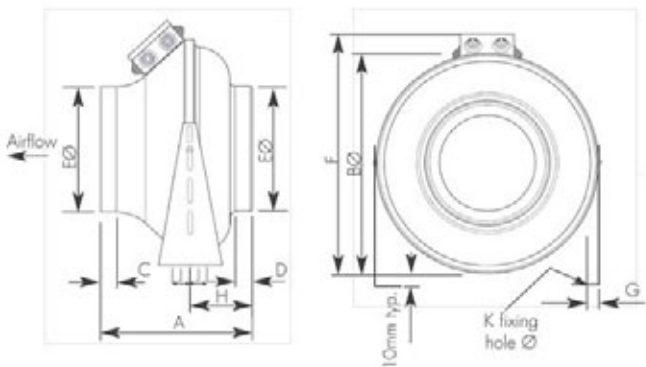
Accessories

A full range of accessories are available with the Euroflow in-line centrifugal duct fans such as:

- Electronic Speed Controllers
- Auto Transformer Speed Controllers
- D.O.L. Starters
- Pre & Secondary Filter Cassettes
- Electric Heater Batteries
- In-Line Attenuators
- Backdraught Shutters
- Fast Clamps
- Flexible Ducting
- Wall Terminals
- Roof Terminals

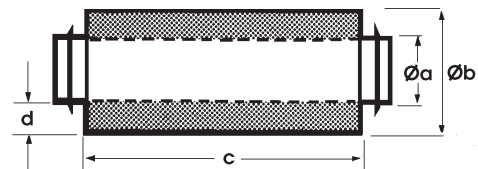


Fan Dimensions (mm)



Unit Size	A	BØ	C	D	EØ	F	G	H	J	KØ	Weight Kg
ACH100B	240	250	35	36	98	280	41.5	120	42.5	7	3
ACH125B	240	250	35	36	123	280	41.5	120	42.5	7	3
ACH150B	250	342	35	36	148	372	41.5	120	42.5	7	5
ACH200B	239	349	25	27	198	379	41.5	99	42.5	7	5
ACH250B	259	349	25	27	248	379	41.5	129	42.5	7	5.5
ACH315B	259	399	32	27	313	441	41.5	139	42.5	7	6

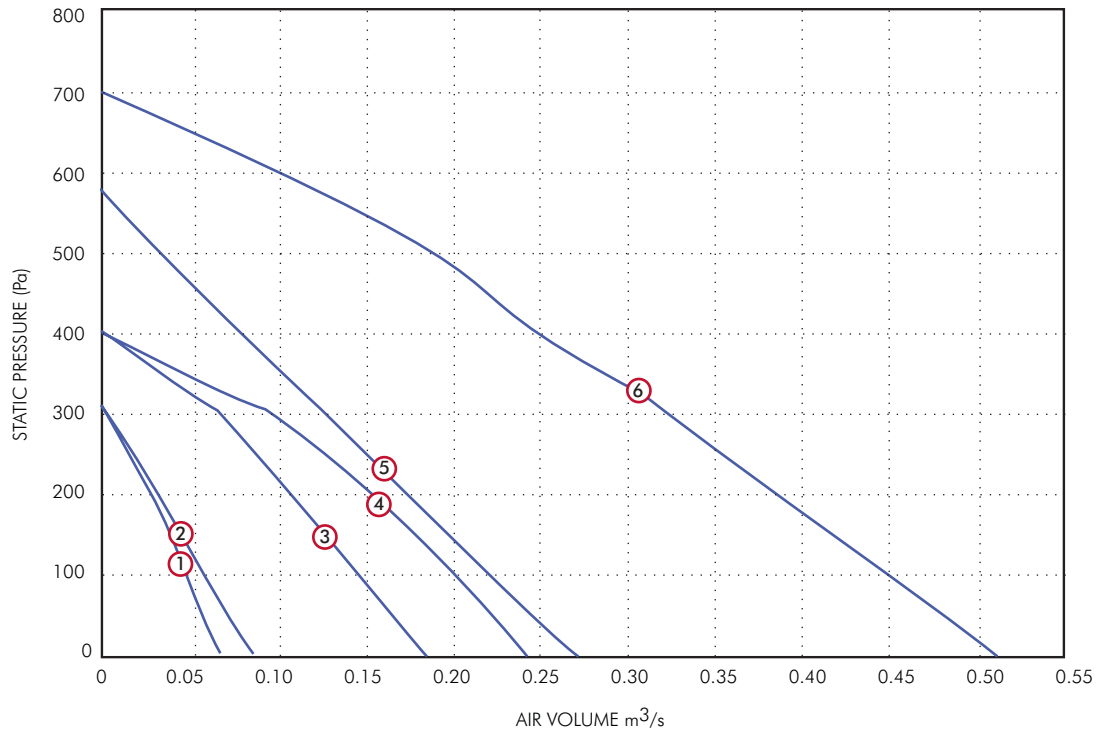
Attenuator Dimensions (mm)



Stock Ref.	Øa	Øb	c	d	kg
10534100	100	200	300	50	2.4
10534125	125	225	300	50	2.6
10534150	150	250	300	50	4.1
10535100	100	200	600	50	2.9
10535125	125	225	600	50	4.5
10535150	150	250	600	50	5.8
10535200	200	315	600	57.5	7
10535250	250	355	600	52.5	8.6
10535315	315	450	600	67.5	9.8
10536100	100	200	900	50	6.6
10536125	125	225	900	50	7.6
10536150	150	250	900	50	9
10536200	200	315	900	57.5	10
10536250	250	355	900	52.5	12.2
10536315	315	450	900	67.5	15
10537200	200	315	1200	57.5	14
10537250	250	355	1200	52.5	18
10537315	315	450	1200	67.5	21

Airtrak™ In-Line Centrifugal Duct Fans (ACH)

Performance Curve



Performance Guide

Model	Nom. RPM	Phase	Curve Ref	Duty - m ³ /s @ Pa										Motor Watts	Amps FLC	Amps SC	dBA @ 3m	
				0	50	100	150	200	250	300	400	500	600					
ACH100B	2450	1	1	0.069	0.059	0.05	0.041	0.030	0.015						80	0.36	1.44	47
ACH125B	2450	1	2	0.087	0.073	0.059	0.046	0.033	0.017						80	0.36	1.44	47
ACH150B	2700	1	3	0.186	0.167	0.146	0.126	0.106	0.086	0.064					85	0.38	1.52	51
ACH200B	2700	1	4	0.242	0.221	0.199	0.175	0.15	0.122	0.093					150	0.66	2.64	54
ACH250B	2600	1	5	0.27	0.244	0.218	0.194	0.17	0.147	0.124	0.077	0.032			155	0.7	2.8	53
ACH315B	2460	1	6	0.51	0.482	0.446	0.416	0.383	0.353	0.321	0.246	0.188	0.100	230	1.05	4.2	61	


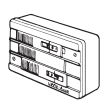


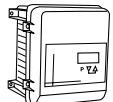
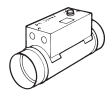

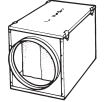
FLC = Full Load Current SC = Starting Current

Sound Power Level Spectra dB (re 10⁻¹² Watts)



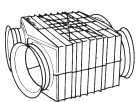


Model		63	125	250	Mid Octave Bands				8000	dBA @ 3m
					500	1000	2000	4000		
ACH100B	Inlet	57	58	66	58	60	56	54	47	47
ACH100B	Outlet	56	55	67	57	59	57	56	50	47
ACH125B	Inlet	52	58	60	59	59	57	54	48	46
ACH125B	Outlet	57	61	67	59	59	56	55	50	47
ACH150B	Inlet	58	59	69	67	64	59	54	46	51
ACH150B	Outlet	59	59	69	62	61	57	53	45	49
ACH200B	Inlet	58	63	66	71	67	62	57	49	54
ACH200B	Outlet	59	66	65	69	65	63	59	49	53
ACH250B	Inlet	60	64	65	69	64	57	56	49	52
ACH250B	Outlet	61	64	65	68	65	63	58	51	53
ACH315B	Inlet	64	70	77	74	71	71	70	70	61
ACH315B	Outlet	64	70	75	74	71	73	68	67	61

Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵ Pa. The free field sound power level spectra figure are dB with reference of 10⁻¹² Watts. To ensure minimum noise levels during speed control an auto transformer speed controller is recommended.

Accessories

							
Stock Ref.	Electronic controller Stock Ref.	Auto transformer Stock Ref.	D.O.L. starter & coil Stock Ref.	*eDemand Controller Voltage Control Stock Ref.	Duct air heater Stock Ref.	Filter cassette Stock Ref.	Bag filter cassette Stock Ref.
ACH100B	W10303102M	10314103	444744 + 444698	444164	10531100T1	10532100A	10533100
ACH125B	W10303102M	10314103	444744 + 444698	444164	10531125T1	10532125A	10533125
ACH150B	W10303102M	10314103	444744 + 444698	444164	10531150T1	10532150A	10533150
ACH200B	W10303102M	10314103	444744 + 444699	444164	10531200T1	10532200A	10533200
ACH250B	W10303102M	10314103	444744 + 444699	444164	10531250T1	10532250A	10533250
ACH315B	W10303102M	10314103	444744 + 444700	444164	10531315T1	10532315A	10533315

*For full range of speed controller options, see Accessories & Controllers Section

							
Stock Ref. No.	300mm Stock Ref.	600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.	Heat exchange unit Stock Ref.	Backdraught shutter Stock Ref.	Fast clamp Stock Ref.
ACH100B	10534100	10535100	10536100	-	-	10542100	10540100
ACH125B	10534125	10535125	10536125	-	-	10542125	10540125
ACH150B	10534150	10535150	10536150	-	-	10542150	10540150
ACH200B	-	10535200	10536200	10537200	10538290 +10577315 +10578315	10542200	10540200
ACH250B	-	10535250	10536250	10537250	10538290 +10577315 +10577315	10542250	10540250
ACH315B	-	10535315	10536315	10537315	10538315 +10577315	10542315	10540315

Duct Attenuator Insertion Losses

Stock Ref.	Length	Duct Ø	63	125	250	500	1k	2k	4k	8k
10534100	300	100	3	4	10	18	23	25	25	12
10534125	300	125	3	4	8	17	21	23	21	11
10534150	300	150	3	3	6	14	20	23	21	11
10535100	600	100	5	8	16	33	39	40	36	17
10535125	600	125	4	8	13	30	34	35	31	15
10535150	600	150	4	7	13	23	29	36	31	15
10535200	600	200	4	5	11	21	26	32	20	9
10535250	600	250	3	6	10	19	24	29	19	8
10535315	600	315	3	5	8	16	21	22	16	15

Stock Ref.	Length	Duct Ø	63	125	250	500	1k	2k	4k	8k
10536100	900	100	10	13	20	39	45	38	35	18
10536125	900	125	9	12	18	37	41	37	32	16
10536150	900	150	8	9	15	30	37	37	33	17
10536200	900	200	7	9	14	27	31	36	25	12
10536250	900	250	5	8	13	24	30	31	22	11
10536315	900	315	4	7	11	20	31	27	17	12
10537200	1200	200	10	12	17	35	40	43	27	13
10537250	1200	250	7	9	15	31	36	38	26	12
10537315	1200	315	6	8	13	23	32	30	18	11

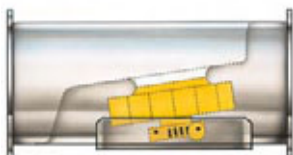
For accessory details, see Non-Residential Accessories & Controls Section

Access™ Pac In-Line Fans (PAC)

Features and Benefits

- Compact design
- Fully speed controllable
- Low noise levels, duct borne and breakout
- Motors protected to IP44
- Sizes 100 and 125 are rated to IP54
- Motor insulation Class B
- Circular spigots
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Parts 1 & 2
- 2 Year Guarantee

Where round in-line fans just won't go due to height constraints the Vent-Axia Access™ Pac is the answer, cutting a 1/3 off the height of conventional in-line fans. Available in six sizes.



The casing includes an inclined inlet and bellmouth entry which directs the incoming air to the impeller with minimal turbulence.

The result is better air management through the unit, less noise, higher efficiency and an increased performance.

The Vent-Axia Access™ Pac range has been designed to produce minimum noise levels for use where quiet operation is required. The housing is designed to be as compact as possible for concealed false ceiling applications. Manufactured in galvanised sheet metal, the Vent-Axia Access™ Pac range has integral anchorage points to allow the fan to be suspended in any plane.

When it comes to flexibility the Vent-Axia Access™ Pac can be fitted directly to circular duct using the spigots provided. To complete the picture a full range of accessories, filters, heaters, silencers, shutters are available for maximum problem solving capability.

Motors/Impeller

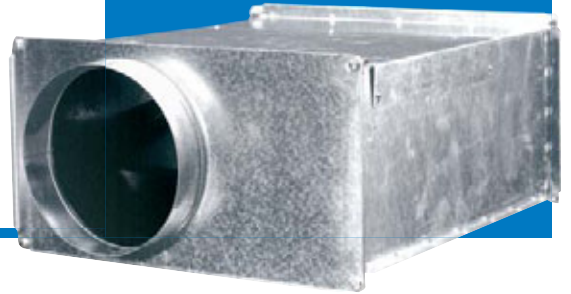
Features an external rotor motor and backward curved impeller assembly specifically chosen for performance and non-overloading characteristics. The assembly is dynamically balanced to VDI 2060 Class 'Q' 6.3, motor sizes 100 and 125 rated IP54, all other sizes, IP44 according to BS EN 60529. Ball bearings are greased for life and allow the fan to run at any angle. Insulation is Class 'B' (from -30°C to + 50°C).

Electrical

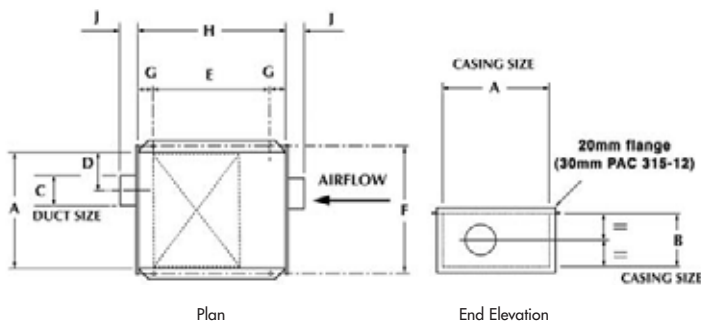
Motors are single phase 220-240V 50Hz. Capacitor start and run. All models are fitted with Standard Thermal Overload Protection (S.T.O.P).

Performance/Sound

Tested to BS 848 Parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascals). The inlet/outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt).

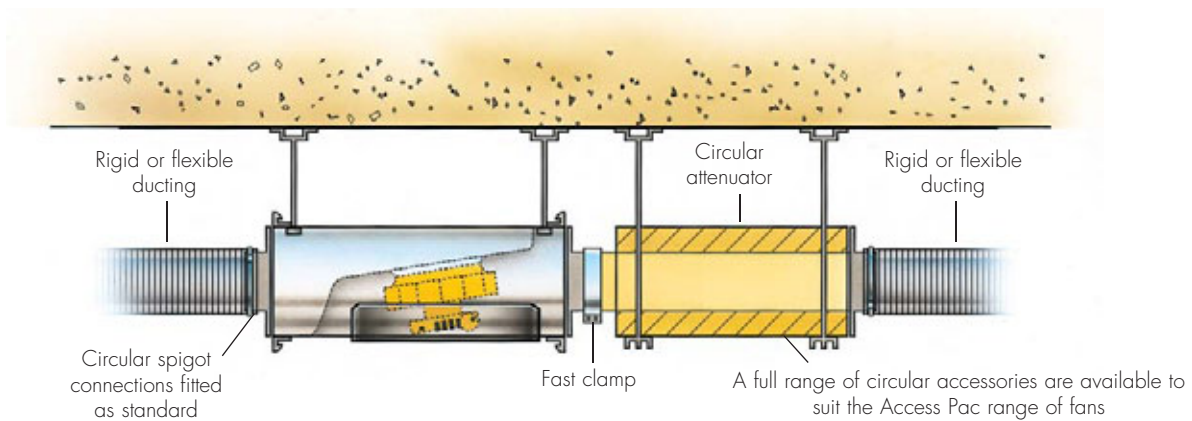


Fan Dimensions (mm)



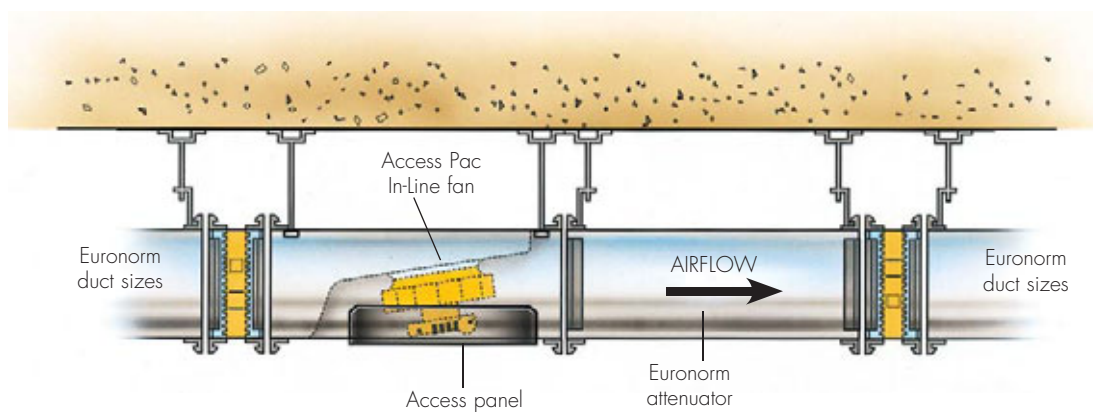
Duct										Weight		
DuctØ	Dimensions	Model	A	B	C	D	E	F	G	H	J	Kg
100	350 x 175	PAC10012	350	175	97	105	380	382	50	480	60	10.2
125	350 x 175	PAC12512	350	175	122	105	380	382	50	480	60	10.2
150	350 x 175	PAC15012	350	175	146	105	380	382	50	480	60	10.2
200	400 x 200	PAC20012	400	200	196	115	380	432	50	480	60	12.8
250	500 x 255	PAC25012	500	250	246	150	500	532	50	600	60	17.4
315	650 x 350	PAC31512	650	350	311	195	500	680	50	600	60	25.0

*Typical Circular Duct Installation



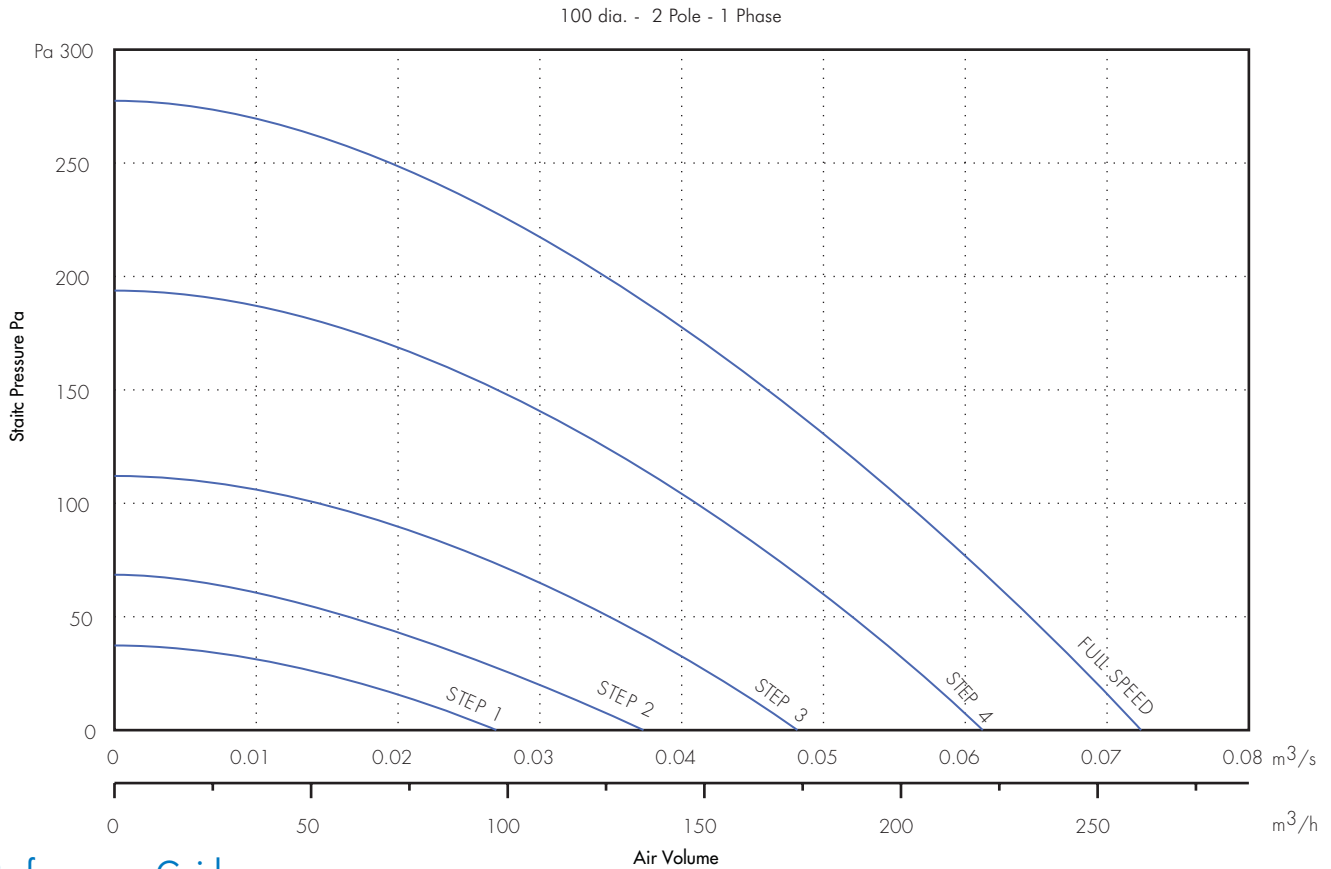
*The standard unit comes with circular spigots that can be removed to give rectangular connections.

Typical Rectangular Installation



Access™ Pack In-Line Fans (PAC)

Performance Curve



Performance Guide

Dia.	Motor	Stock		m³/s at Pa							Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m
		Ref. No.	r.p.m.	0	25	50	100	150	200	250				
100	1 phase	PAC10012	2560	0.073	0.068	0.063	0.054	0.047	0.034	0.018	75	1	0.32	37

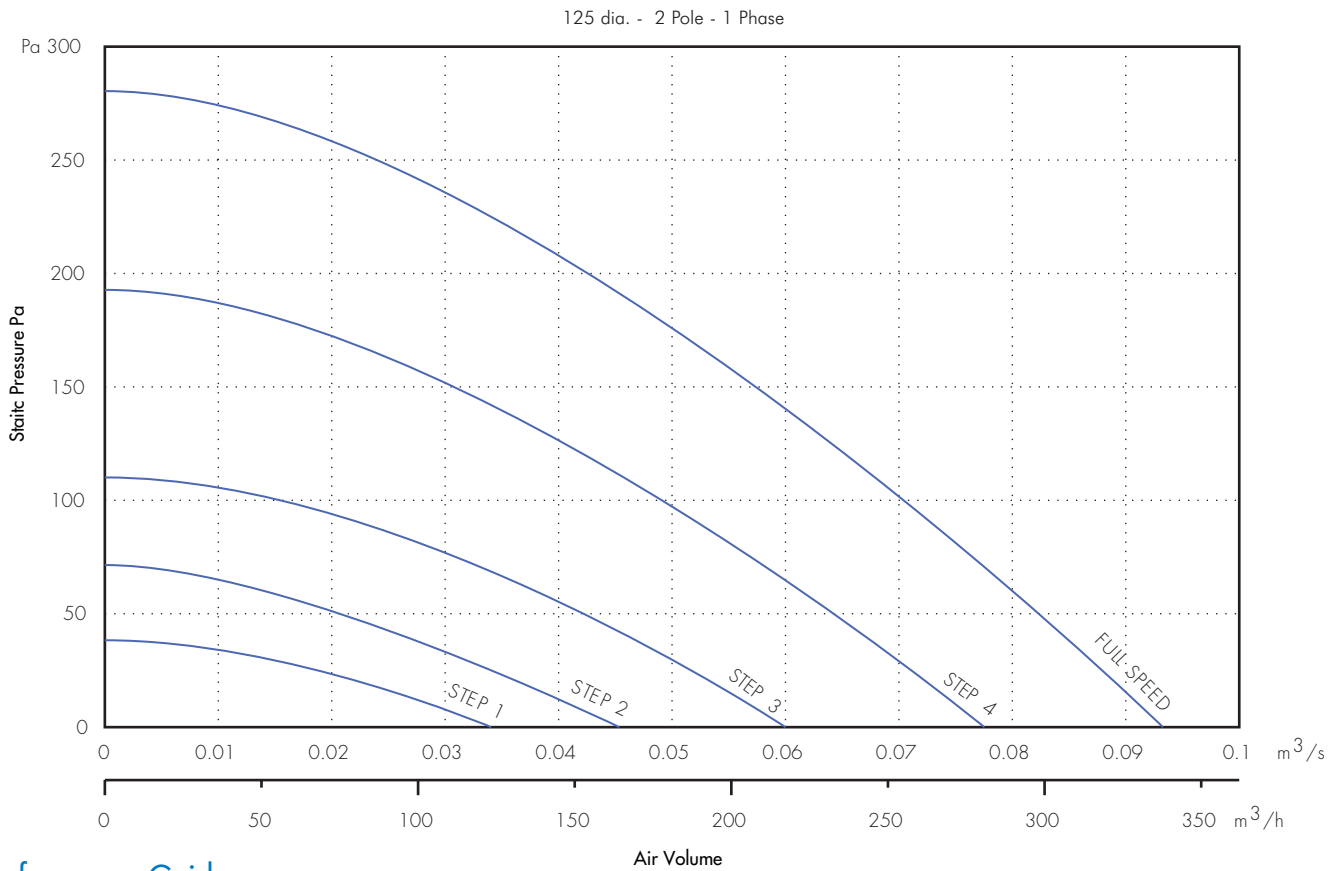
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	77	75	67	66	55	53	46	42	45
	OUTLET	76	78	69	66	59	54	51	44	47
	BREAKOUT									37
Step 4 Auto transformer Controller	INLET	73	71	63	62	51	48	42	37	41
	OUTLET	72	74	65	62	54	50	47	39	42
	BREAKOUT									32
Step 3 Auto transformer Controller	INLET	66	64	56	55	45	42	36	31	35
	OUTLET	65	67	58	55	48	44	40	33	36
	BREAKOUT									26
Step 2 Auto transformer Controller	INLET	60	58	50	49	39	36	30	25	28
	OUTLET	59	61	52	49	42	37	34	27	30
	BREAKOUT									20
Step 1 Auto transformer Controller	INLET	53	51	43	42	31	28	22	17	21
	OUTLET	52	54	45	42	34	30	27	19	22
	BREAKOUT									13

NOTE:

Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller. Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Performance Curve



Performance Guide

Dia.	Motor	Stock		m³/s at Pa										Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m			
		Ref. No.	r.p.m.	0	25	50	100	150	200	250	300	350	400							
125	1 phase	PAC12512	2560	0.091	0.085	0.079	0.07	0.056	0.043	0.024							75	1	0.32	35

Sound Power Level Spectra dB (re 10⁻¹² Watts)

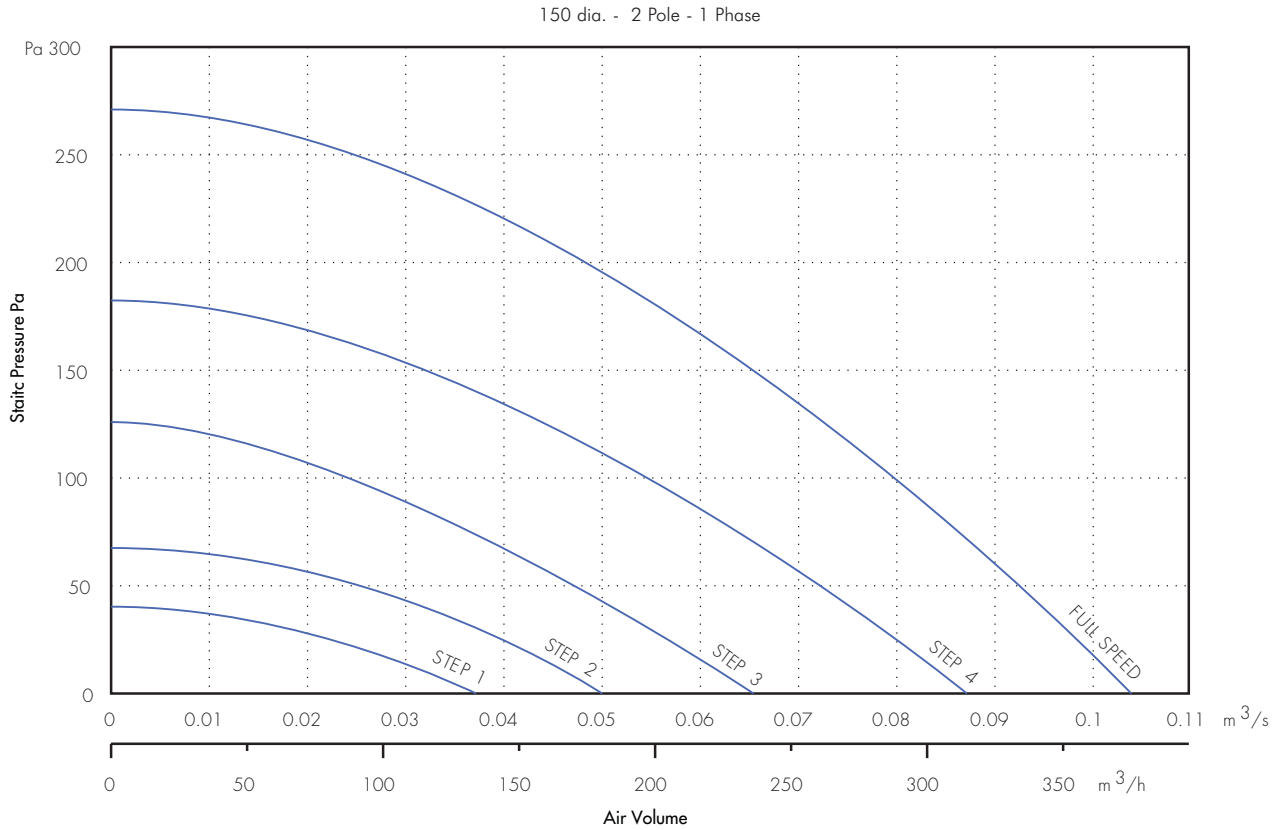
Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	74	73	66	65	58	57	50	44	45
	OUTLET	76	74	68	66	59	58	54	46	46
	BREAKOUT									35
Step 4 Auto transformer Controller	INLET	70	69	62	60	53	52	45	40	40
	OUTLET	72	70	64	61	55	54	50	41	42
	BREAKOUT									30
Step 3 Auto transformer Controller	INLET	63	63	55	54	47	46	39	34	34
	OUTLET	65	64	57	55	48	48	43	35	36
	BREAKOUT									24
Step 2 Auto transformer Controller	INLET	57	56	49	48	41	40	33	27	28
	OUTLET	59	58	51	49	42	41	37	29	29
	BREAKOUT									18
Step 1 Auto transformer Controller	INLET	50	49	42	40	33	32	25	20	21
	OUTLET	52	50	44	41	35	34	30	21	22
	BREAKOUT									11

NOTE:

Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller. Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Access™ Pack In-Line Fans (PAC)

Performance Curve



Performance Guide

Dia.	Motor	Stock		m³/s at Pa										Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m			
		Ref. No.	r.p.m.	0	25	50	100	150	200	250	300	350	400							
150	1 phase	PAC15012	2580	0.104	0.095	0.091	0.08	0.063	0.049	0.024							75	1	0.32	41

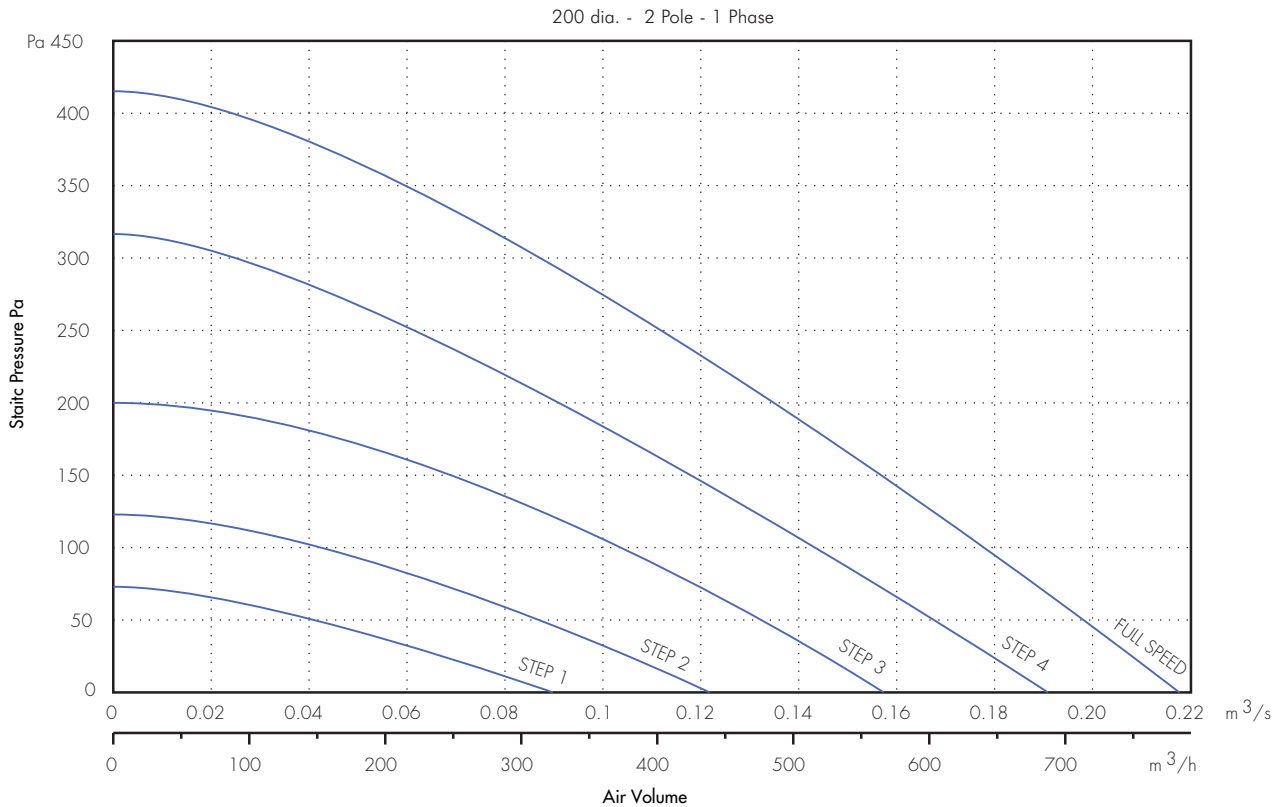
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	71	76	72	79	70	69	65	59	57
	OUTLET	72	78	74	76	73	74	69	63	59
	BREAKOUT									41
Step 4 Auto transformer Controller	INLET	67	72	67	75	66	65	60	55	53
	OUTLET	68	73	69	71	68	70	64	59	54
	BREAKOUT									37
Step 3 Auto transformer Controller	INLET	61	65	61	69	60	58	54	48	47
	OUTLET	62	67	63	65	62	63	58	53	48
	BREAKOUT									31
Step 2 Auto transformer Controller	INLET	55	59	55	62	53	52	48	42	41
	OUTLET	55	61	57	59	56	57	52	46	42
	BREAKOUT									24
Step 1 Auto transformer Controller	INLET	47	52	47	55	46	45	40	35	33
	OUTLET	48	53	49	51	48	50	44	39	34
	BREAKOUT									17

NOTE:

Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller. Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Performance Curve



Performance Guide

Dia.	Motor	Stock		m³/s at Pa										Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m
		Ref. No.	r.p.m.	0	25	50	100	150	200	250	300	350	400				
200	1 phase	PAC20012	2520	0.214	0.203	0.194	0.177	0.156	0.133	0.109	0.084	0.056	150	1.9	0.65	42	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	74	77	70	79	67	65	63	57	56
	OUTLET	73	77	73	73	67	68	64	58	54
	BREAKOUT									42
Step 4 Auto transformer Controller	INLET	71	74	67	76	64	62	59	54	53
	OUTLET	70	74	70	70	64	64	61	55	51
	BREAKOUT									38
Step 3 Auto transformer Controller	INLET	66	69	62	72	59	57	55	49	49
	OUTLET	65	70	65	65	59	60	56	51	46
	BREAKOUT									34
Step 2 Auto transformer Controller	INLET	60	63	56	66	53	51	49	43	43
	OUTLET	59	64	59	59	53	54	50	45	40
	BREAKOUT									28
Step 1 Auto transformer Controller	INLET	53	56	49	58	46	44	42	36	35
	OUTLET	52	56	52	52	46	47	43	37	33
	BREAKOUT									17

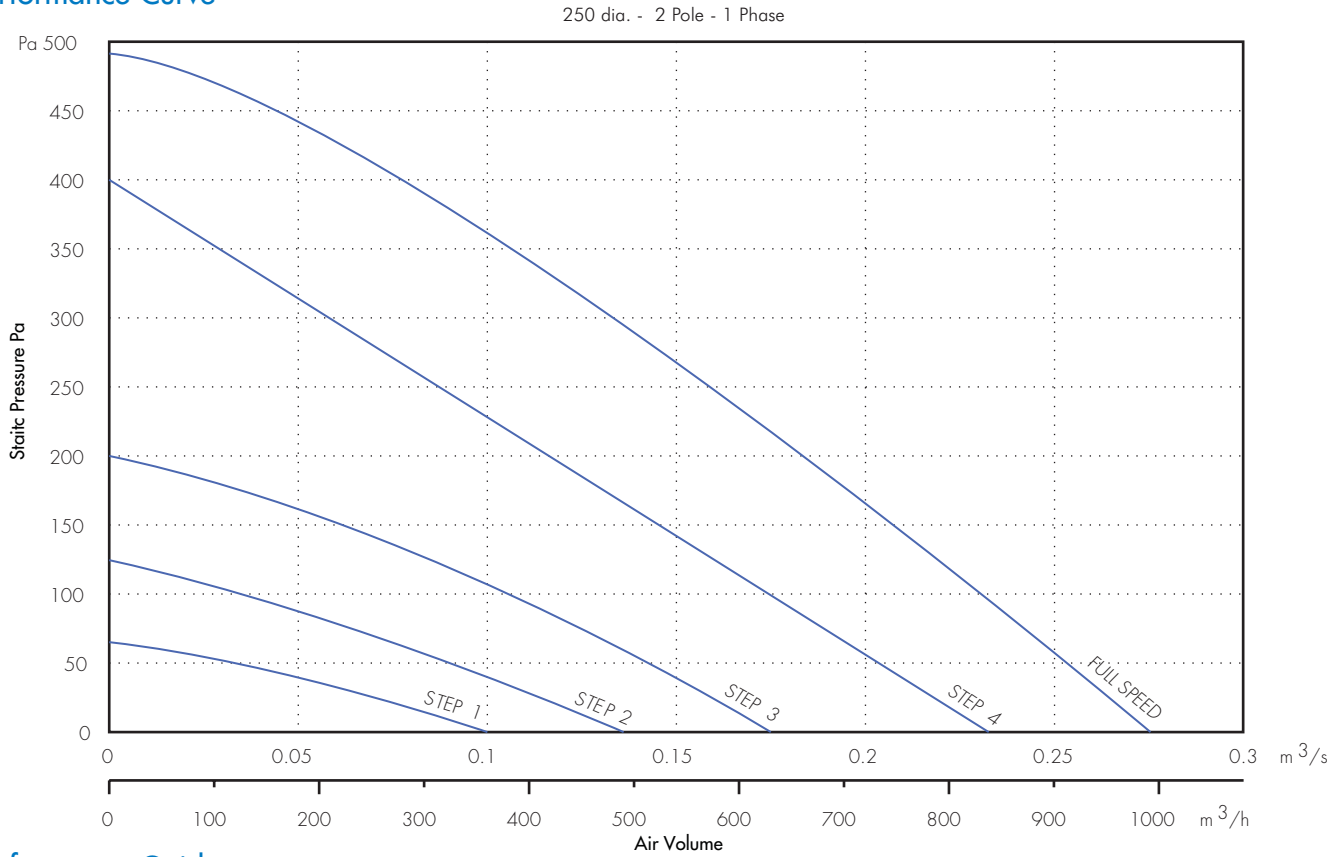
NOTE:

Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller.

Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Access™ Pack In-Line Fans (PAC)

Performance Curve



Performance Guide

Dia.	Motor	Stock Ref. No.	r.p.m.	m³/s at Pa										Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m
				0	25	50	100	150	200	250	300	350	400				
250	1 phase	PAC25012	2630	0.278	0.26	0.244	0.225	0.201	0.184	0.155	0.127	0.096	0.063	175	2.3	0.75	41

Sound Power Level Spectra dB (re 10⁻¹² Watts)

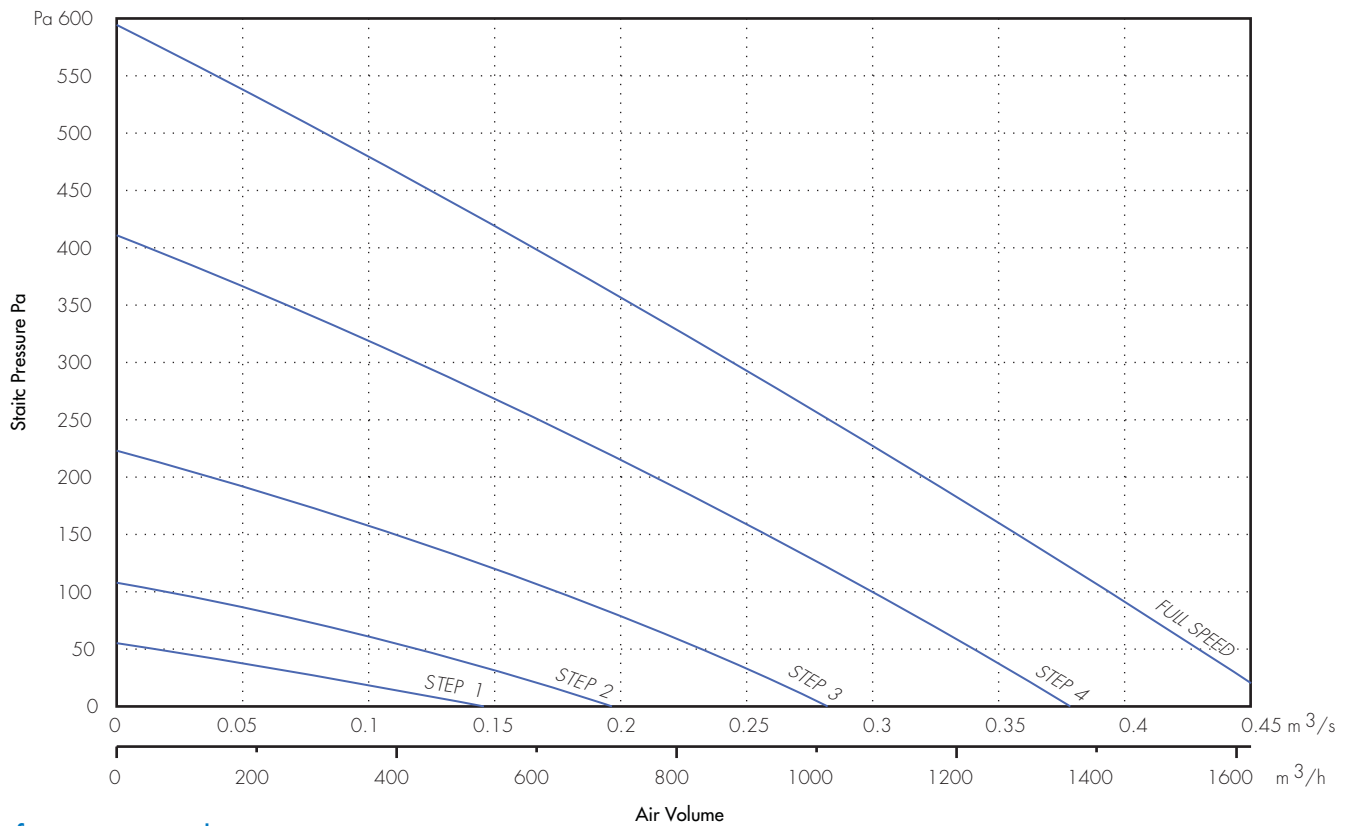
Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	71	76	72	79	70	69	65	59	57
	OUTLET	72	78	74	76	73	74	69	63	59
	BREAKOUT									41
Step 4 Auto transformer Controller	INLET	67	72	67	75	66	65	60	55	53
	OUTLET	68	73	69	71	68	70	64	59	54
	BREAKOUT									37
Step 3 Auto transformer Controller	INLET	61	65	61	69	60	58	54	48	47
	OUTLET	62	67	63	65	62	63	58	53	48
	BREAKOUT									31
Step 2 Auto transformer Controller	INLET	55	59	55	62	53	52	48	42	41
	OUTLET	55	61	57	59	56	57	52	46	42
	BREAKOUT									24
Step 1 Auto transformer Controller	INLET	47	52	47	55	46	45	40	35	33
	OUTLET	48	53	49	51	48	50	44	39	34
	BREAKOUT									17

NOTE:

Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller. Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Performance Curve

315 dia. - 2 Pole - 1 Phase



Performance Guide

Dia.	Motor	Stock Ref. No.	r.p.m.	m³/s at Pa										Motor Watts	S.C. Amps	F.L.C. Amps	Breakout dBA @ 3m
				0	25	50	100	150	200	250	300	350	400				
315	1 phase	PAC31512	2550	0.458	0.437	0.423	0.384	0.342	0.306	0.271	0.243	0.197	0.158	290	4	1.3	40

Sound Power Level Spectra dB (re 10⁻¹² Watts)

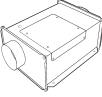


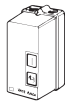
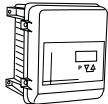
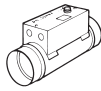

Speed		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
Full speed	INLET	75	76	76	77	72	71	67	63	58
	OUTLET	73	79	79	78	74	75	69	66	60
	BREAKOUT									40
Step 4 Auto transformer Controller	INLET	71	72	72	72	67	67	63	58	53
	OUTLET	69	74	75	74	70	71	65	61	56
	BREAKOUT									36
Step 3 Auto transformer Controller	INLET	63	65	65	65	60	59	55	51	46
	OUTLET	62	67	68	67	63	64	57	54	49
	BREAKOUT									29
Step 2 Auto transformer Controller	INLET	55	56	56	57	52	51	47	43	37
	OUTLET	53	58	59	58	54	55	49	46	40
	BREAKOUT									20
Step 1 Auto transformer Controller	INLET	48	49	49	49	44	44	40	35	30
	OUTLET	46	51	52	51	47	48	42	38	33
	BREAKOUT									13

NOTE:

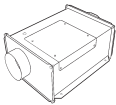


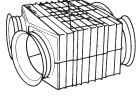


Performance & sound levels on Steps 4 to 1, can only be achieved when wired to a 5-Step Auto Transformer speed controller. Breakout levels are based on the noise transmitted from the fan casing, actual breakout levels may be higher due to breakout from the system ductwork.

Access™ Pack In-Line Fans (PAC)

Accessories

								
Electronic controller	Auto transformer	D.O.L. starter & coil		*eDemand Controller			Duct air heater	Filter cassette
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Voltage Control	1/3 Phase Inverter	3 Phase Inverter	Stock Ref.	Stock Ref.
				Stock Ref.	Stock Ref.	Stock Ref.		
PAC10012	W10303102M	10314103	444744 + 444697	444164	-	-	10531100T1	10532100A
PAC12512	W10303102M	10314103	444744 + 444697	444164	-	-	10531125T1	10532125A
PAC15012	W10303102M	10314103	444744 + 444697	444164	-	-	10531150T1	10532150A
PAC20012	W10303102M	10314103	444744 + 444699	444164	-	-	10531200T1	10532200A
PAC25012	W10303102M	10314103	444744 + 444699	444164	-	-	10531250T1	10532250A
PAC31512	W10303102M	10314103	444744 + 444700	444164	-	-	10531315T1	10532315A

*For full range of speed controller options, see Accessories & Controllers Section

								
Stock	Bag filter cassette	Duct attenuator				Heat exchange unit	Backdraught shutter	Fast clamp
Ref. No.	Stock Ref.	300mm	600mm	900mm	1200mm	Stock Ref.	Stock Ref.	Stock Ref.
		Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.			
PAC10012	10533100	10534100	10535100	10536100	-	-	10542100	10540100
PAC12512	10533125	10534125	10535125	10536125	-	-	10542125	10540125
PAC15012	10533150	10534150	10535150	10536150	-	-	10542150	10540150
PAC20012	10533200	-	10535200	10536200	10537200	10538290 +10577315 +10578315	10542200	10540200
PAC25012	10533250	-	10535250	10536250	10537250	10538290 +10577315 +10577315	10542250	10540250
PAC31512	10533315	-	10535315	10536315	10537315	10538315 +10577315	10542315	10540315

Acoustic In-Line Fans (ACQ)

Features and Benefits

- **50mm Acoustically treated housing, Class 'O' rated, self extinguishing, zero burn, resists ignition, no toxic fumes**
- **Motors protected to IP44**
- **Motor insulation Class 'B'**
- **Maximum operating temperature 50°C**
- **Standard Thermal Overload Protection**
- **Quick release access panel**
- **Fully weatherproof units available**
- **All models speed controllable**
- **Manufacture controlled to BS EN 150 9001**
- **Performance tested to BS 848 parts 1 and 2**

The ACQ fans feature a 50mm acoustic lined sound controlled housing rated Class 'O' for use where quiet operation is required. The housing is designed to be as compact as possible for concealed false ceiling applications.

Manufactured in galvanised sheet metal, with integral anchorage points to allow the fan to be suspended at any angle, via drop rods or anti vibration mounts, ensuring a quick and easy solution to installation of the in-line acoustic fans. The access panel is easily removed for inspection using the four quick release catches provided.

The full range of Acoustic fans are also available, finished with optional C.R.P (Chlorinated Rubber Paint), ensuring the unit is fully weatherproofed and suitable for external mounting. All weatherproofed units

are manufactured to order. Note the standard product codes are suffixed with 'WP' eg ACQ100-12CWP.

Eleven models are available in sizes 100, 125, 150, 160, 200, 250, 315, 400 and 500, providing air volumes from 0.075m³/s to 1.609m³/s (270m³/h to 5,792 m³/h) at free air. Designed for pressures up to 550 Pa.

Motors

At the heart of the range is a proven external rotor motor and forward curved galvanised impeller assembly specially selected for its performance. The assembly is dynamically balanced to ISO 1940. Motors are rated to IP44 according to BS EN 60529. Ball bearings are greased for life and allow the fan to run at any angle. Insulation is Class 'B' (from -15°C to +50°C).

All Acoustic fans are suitable for speed control with either an electronic or auto transformer. An Auto Transformer is recommended to ensure minimum noise levels during speed control so eliminating any possibility of motor harmonic noise.

Terminal Box

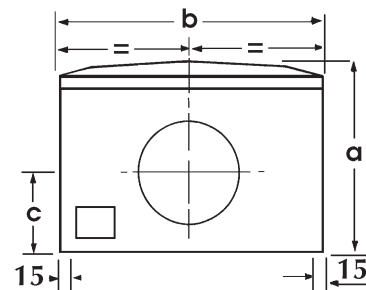
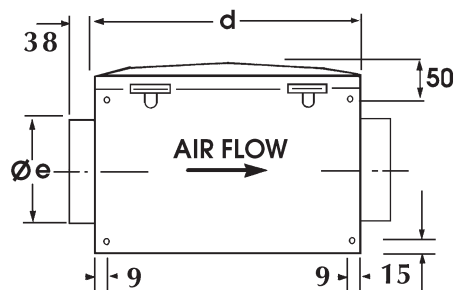
An IP54 Terminal Box is supplied with all models with 20mm cable gland entry.

Sound and Performance

Tested to BS 848 Parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The inlet, outlet and breakout sound power level spectra figures are dB with a reference of 10⁻¹² Watts (1 pico-watt).



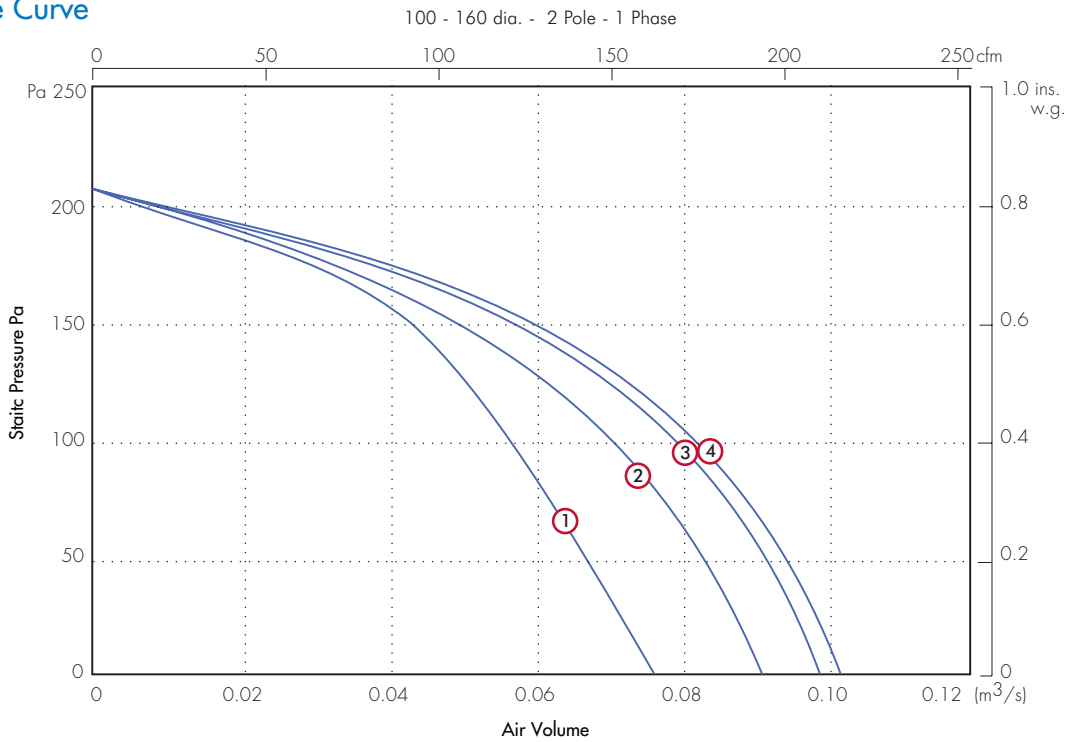
Fan Dimensions (mm)



Unit Size	a	b	c	d	e	Weight Kg
ACQ10012C	291	363	171	272	97	14
ACQ12512C	291	363	171	272	122	14
ACQ15012C	291	363	171	272	147	14
ACQ16012C	291	363	171	272	157	14
ACQ20012C	345	400	203	336	197	20
ACQ25012C	400	489	233	336	247	25
ACQ31512LC	458	537	258	446	312	35
ACQ31514HC	495	614	295	499	312	45
ACQ40014C	495	660	253	499	397	50
ACQ50014C	649	732	357	670	497	75

Acoustic In-Line Fans (ACQ)

Performance Curve



Performance Guide

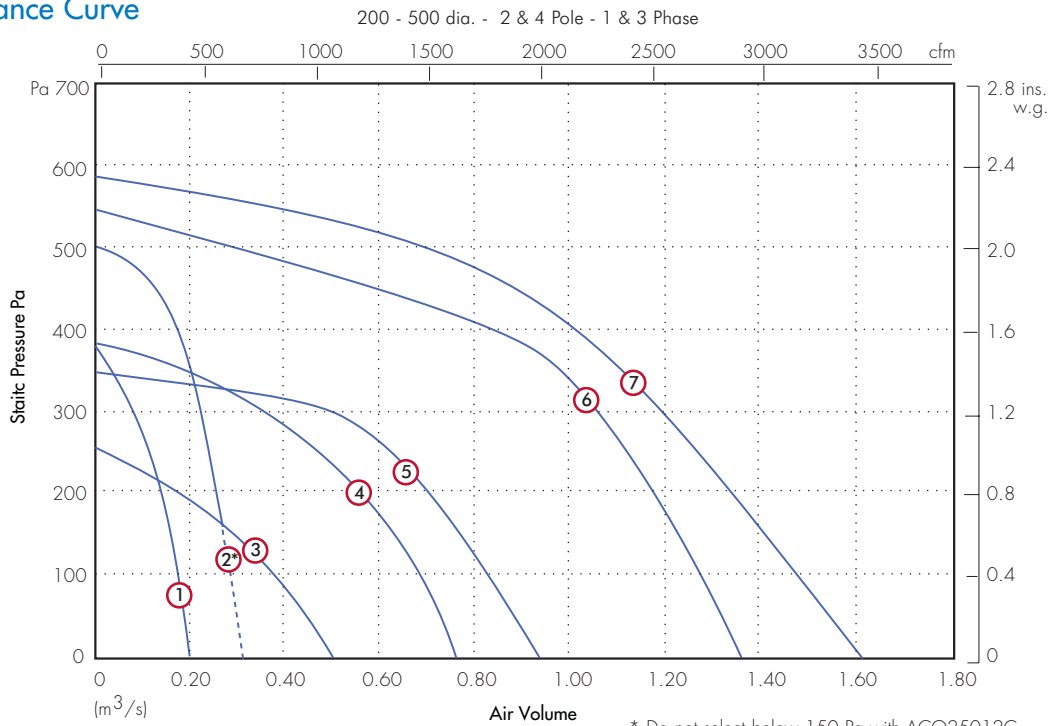
Unit Code	Nom. RPM	Phase	Curve Ref.	m³/s at Pa					Motor kW	Amps F.L.C.	Amps S.C.
				0	50	100	150	200			
ACQ10012C	1650	1	1	0.075	0.067	0.056	0.043	0.005	0.08	0.34	0.36
ACQ12512C	1650	1	2	0.09	0.081	0.07	0.051	0.005	0.08	0.34	0.36
ACQ15012C	1650	1	3	0.098	0.09	0.079	0.058	0.005	0.08	0.34	0.36
ACQ16012C	1650	1	4	0.101	0.093	0.081	0.06	0.005	0.08	0.34	0.36

S.C. = STARTING CURRENT, F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code	Unit	Mid Octave Bands								dBa @ 3m
		63	125	250	500	1k	2k	4k	8k	
ACQ10012C	Inlet	55	56	44	39	37	37	34	25	25
ACQ10012C	Outlet	50	57	50	47	51	50	49	47	36
ACQ10012C	Breakout	48	46	43	36	34	32	20	20	20
ACQ12512C	Inlet	54	57	43	40	37	37	36	25	25
ACQ12512C	Outlet	49	58	54	50	54	53	52	50	39
ACQ12512C	Breakout	48	47	43	38	34	32	20	20	20
ACQ15012C	Inlet	55	57	45	43	39	41	38	28	27
ACQ15012C	Outlet	50	58	54	52	54	54	52	51	39
ACQ15012C	Breakout	51	50	44	37	33	32	20	20	20
ACQ16012C	Inlet	54	58	43	41	37	40	37	28	26
ACQ16012C	Outlet	50	54	53	51	54	53	52	51	39
ACQ16012C	Breakout	50	49	43	37	33	32	20	20	20

Performance Curve



Performance Guide

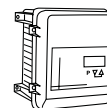
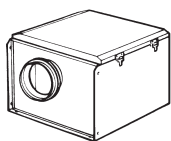
Unit Code	Nom. RPM	Phase	Curve Ref.	m³/s at Pa												Motor kW	Amps F.L.C.	Amps S.C.	
				0	50	100	150	200	250	300	350	400	450	500	550				
ACQ20012C	1700	1	①	0.197	0.188	0.174	0.159	0.134	0.108	0.08	0.04						0.175	0.77	0.92
ACQ25012C	2050	1	②				0.278	0.262	0.246	0.222	0.18	0.131	0.065				0.3	1.31	1.5
ACQ31512LC	1900	1	③	0.5	0.44	0.384	0.303	0.166									0.36	1.58	3.3
ACQ31514HC	1280	1	④	0.76	0.712	0.664	0.614	0.551	0.46	0.36	0.155						0.525	2.29	4.4
ACQ40014C	1230	1	⑤	0.926	0.873	0.825	0.763	0.692	0.615	0.498							1.06	5.38	8.5
ACQ50014C	1120	1	⑥	1.368	1.323	1.28	1.23	1.18	1.12	1.06	1	0.852	0.54	0.271			1.52	6.5	11
ACQ50034C	1185	3	⑦	1.609	1.549	1.486	1.427	1.359	1.285	1.198	1.11	1.021	0.88	0.715	0.35		2	3.3	10

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code		Mid Octave Bands								dBa @ 3m
		63	125	250	500	1k	2k	4k	8k	
ACQ20012C	Inlet	66	65	56	50	46	47	46	40	35
ACQ20012C	Outlet	52	62	59	60	62	61	59	58	47
ACQ20012C	Breakout	59	63	52	43	36	27	25	25	29
ACQ25012C	Inlet	66	73	62	59	50	52	47	42	41
ACQ25012C	Outlet	60	72	67	66	67	65	65	65	52
ACQ25012C	Breakout	63	66	61	56	48	43	43	39	37
ACQ31512LC	Inlet	64	65	59	55	47	51	49	38	38
ACQ31512LC	Outlet	59	68	65	66	67	63	64	62	51
ACQ31512LC	Breakout	60	62	57	51	49	42	39	32	34
ACQ31514HC	Inlet	67	74	62	56	51	51	47	44	41
ACQ31514HC	Outlet	65	71	67	66	69	66	67	65	53
ACQ31514HC	Breakout	63	68	60	55	51	46	42	36	38
ACQ40014C	Inlet	71	71	68	61	56	57	54	50	44
ACQ40014C	Outlet	66	72	71	70	72	69	69	67	56
ACQ40014C	Breakout	71	72	63	57	52	51	51	44	41
ACQ50014C	Inlet	77	69	65	59	56	56	52	48	43
ACQ50014C	Outlet	75	71	69	70	71	67	67	64	55
ACQ50014C	Breakout	71	70	64	60	54	53	51	44	42
ACQ50034C	Inlet	79	71	66	60	57	58	54	51	45
ACQ50034C	Outlet	76	72	71	71	74	69	70	66	57
ACQ50034C	Breakout	74	73	67	62	57	55	54	50	45

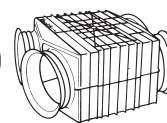
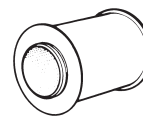
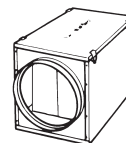
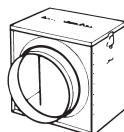
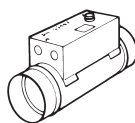
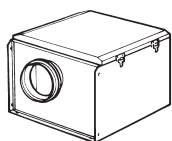
Acoustic In-Line Fans (ACQ)

Accessories



Dia	Weatherproofed		Electronic controller	Auto transformer	*eDemand Controller		
	StdUnit	Unit			Voltage Control	1/3 Phase Inverter	3 Phase Inverter
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
100	ACQ10012C	ACQ100-12CWP	W103 03 102M	10314103	444164	-	-
125	ACQ12512C	ACQ125-12CWP	W10303102M	10314103	444164	-	-
150	ACQ15012C	ACQ150-12CWP	W10303102M	10314103	444164	-	-
160	ACQ16012C	ACQ160-12CWP	W10303102M	10314103	444164	-	-
200	ACQ20012C	ACQ200-12CWP	W10303102M	10314103	444164	-	-
250	ACQ25012C	ACQ250-12CWP	W10303102M	10314103	444164	-	-
315	ACQ31512LC	ACQ315-12LCWP	W10303102M	10314103	444164	-	-
400	ACQ40014C	ACQ400-14CWP	10303110A	10314107	444164	-	-
500	ACQ50014C	ACQ500-14CWP	10303110A	10314107	444164	-	-
500	ACQ50034C	ACQ500-34CWP	-	10314304	444165	-	-

*For full range of speed controller options, see Accessories & Controllers Section



Dia	Weatherproofed		Anti-Vibration Mounts (each)	Duct air heater	Filter cassette	Bag filter cassette	*Duct	
	StdUnit	Unit					attenuator 600mm	Heat exchange unit
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	
100	ACQ10012C	ACQ100-12CWP	10523033	10531100T1	10532100A	10533100	10535100	-
125	ACQ12512C	ACQ125-12CWP	10523033	10531125T1	10532125A	10533125	10535125	-
150	ACQ15012C	ACQ150-12CWP	10523033	10531150T1	10532150A	10533150	10535150	-
160	ACQ16012C	ACQ160-12CWP	10523033	-	10532160A	10533160	10535160	-
200	ACQ20012C	ACQ200-12CWP	10523033	10531200T1	10532200A	10533200	10535200	10538290 +10577315 +10578315
250	ACQ25012C	ACQ250-12CWP	10523033	10531250T1	10532250A	10533250	10535250	10538290 +10577315 +10578315
315	ACQ31512LC	ACQ315-12LCWP	10523033	10531315T1	10532315A	10533315	10535315	10538290 +10577315
400	ACQ40014C	ACQ400-14CWP	10523033	10531400T3	10532400A	10533400	10535400	-
500	ACQ50014C	ACQ500-14CWP	10523033	10531500T3	10532500A	10533500	10536500*	-
500	ACQ50034C	ACQ500-34CWP	10523033	10531500T3	10532500A	10533500	10536500*	-

*For alternative attenuator lengths, refer to Accessories and Controllers section

Square Mixed Flow Fans (MFQ)

Features and Benefits

- Motors protected to IP44
- Motor insulation Class 'B'
- Maximum operating temperature +40°C
- Standard Thermal Overload Protection
- Sizes 400 to 500 3 phase are supplied with 2 speed motors as standard
- Ductmate flanging
- All models speed controllable
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 parts 1 & 2

The square mixed flow range has been specially designed for systems with high performance and low sound levels in mind. Ideal for commercial and industrial premises. The MFQ range places the emphasis on fast installation, reliable performance and easy access for maintenance.

The range offers almost two and a half times the pressure development of conventional axial fans and is an ideal cost effective alternative to two stage axial arrangements. The range is dimensionally compact, saving weight and installation costs.

Available in five sizes with a duty range from 0.632m³/s to 3.673m³/s (2275m³/h to 13,222m³/h), develops pressures up to 450 Pa.

Mixed Flow Impeller and Casing

The 355, 400 & 450mm diameter high efficiency backward curved mixed flow impeller is manufactured in moulded polyamide. All other sizes of impeller are constructed in aluminium. All impellers offer non-overloading characteristics and are dynamically balanced for maximum efficiency. The casing is manufactured in sheet steel with Ductmate flanges at both ends.

The full range of MFQ fans is also available, finished with optional C.R.P. (Chlorinated Rubber Paint), ensuring the unit is fully weatherproofed and suitable for external mounting. All weatherproofed units are manufactured to order. Note the standard product codes are suffixed with 'WP' eg MFQ350/4/1WP.

Motors



A proven external rotor motor and mixed flow impeller assembly has been specially selected for its performance and non-overloading characteristics. The assembly is dynamically balanced to VDI 2060. The motors in this range are rated at IP44 according to BS EN 60529. Ball bearings are greased for life and are designed to run at any angle. Insulation is Class B (from -30°C to +40°C).

3 Phase units, sizes 400 to 560 have 2 speed pole change DELTA/STAR connection motors as standard.

Electrical

Single phase 220-240V 50 Hz. Capacitor start and run. Capacitors are located in the terminal box. Three phase 380-415V 50Hz. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.). Most models are available with 4 and 6 pole motors.

Performance and Sound

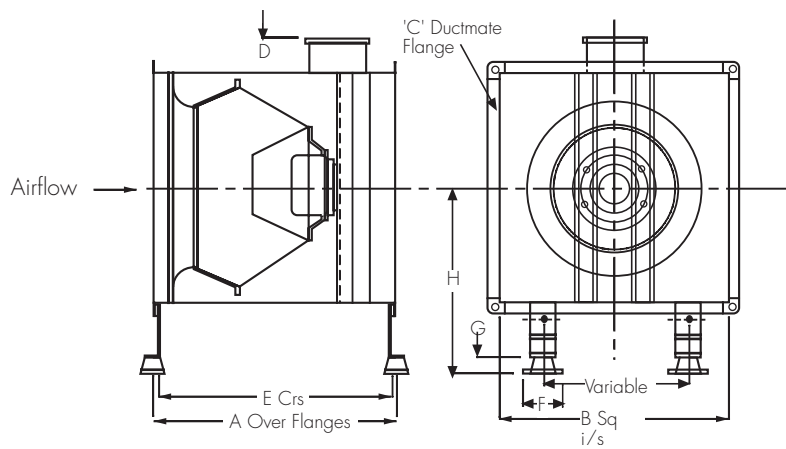
Tested to BS 848 Parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The inlet, outlet and breakout sound power level spectra figures are dB with a reference of 10⁻¹² Watts (1 pico-watt).

Quality Assurance

Design and manufacture is in accordance with BS EN ISO 9001.



Fan Dimensions (mm)

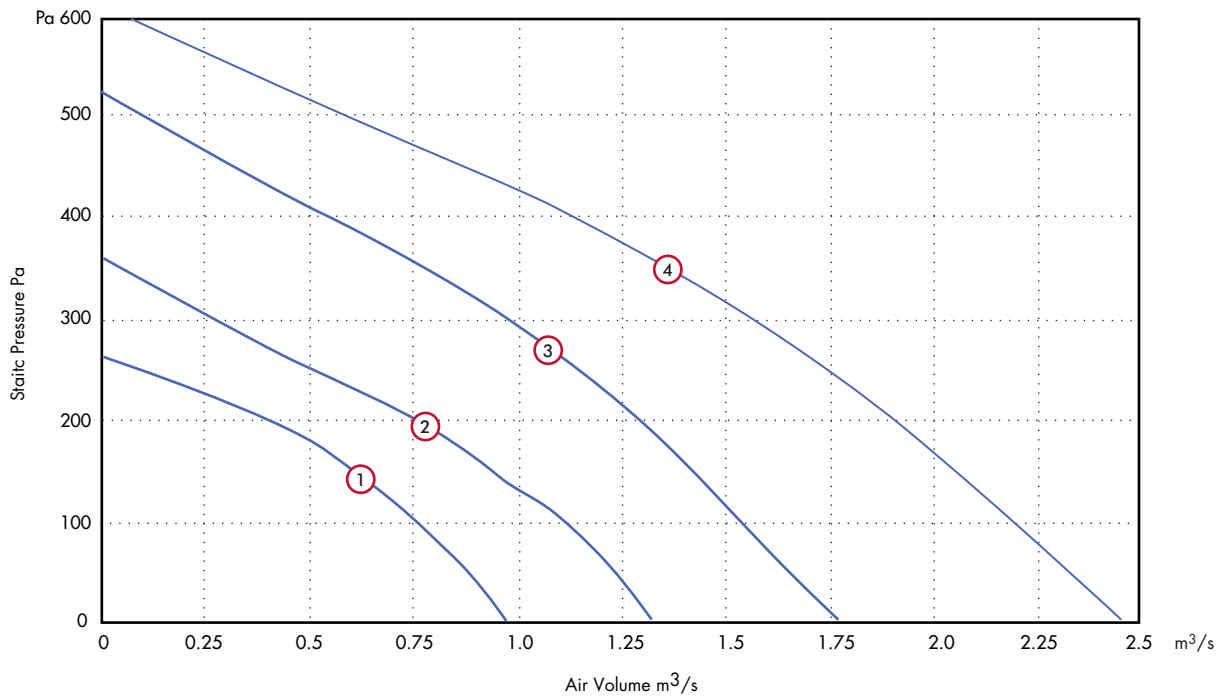


Unit	Duct Size	A	B	C	D	E	F	G	H	Weight kg
350	450 x 450	400	450	25	52	406	62	29	345	22
400	500 x 500	450	500	25	52	456	62	29	370	28
450	550 x 550	485	550	35	52	491	62	29	405	42
500	650 x 650	510	650	35	86	516	102	37	455	73
560	700 x 700	530	700	35	52	536	102	37	480	78

Square Mixed Flow Fans (MFQ)

Performance Curve

350 to 500 dia. - 4 Pole, 1 Phase



Performance Guide

Stock Ref.	Motor Pole	Motor Phase	Motor r.p.m.	Curve Ref.	m³/s at Pa										Motor kW	SC Amps	FLC Amps	dBA @ 3m		
					0	50	75	100	150	200	250	300	350	400					450	
MFQ350/4/1	4	1	1390	1	0.976	0.875	0.82	0.752	0.603	0.394							0.31	3.7	1.35	55
MFQ400/4/1	4	1	1280	2	1.323	1.21	1.15	1.077	0.928	0.746	0.511	0.275	0.025				0.52	5.5	2.2	57
MFQ450/4/1	4	1	1330	3	1.774	1.65	1.595	1.547	1.423	1.3	1.15	0.971	0.768	0.535	0.316		0.96	9.6	4.3	59
MFQ500/4/1	4	1	1310	4	2.438	2.31	2.246	2.182	2.046	1.91	1.74	1.57	1.35	1.13	0.87		1.45	15	6.1	61

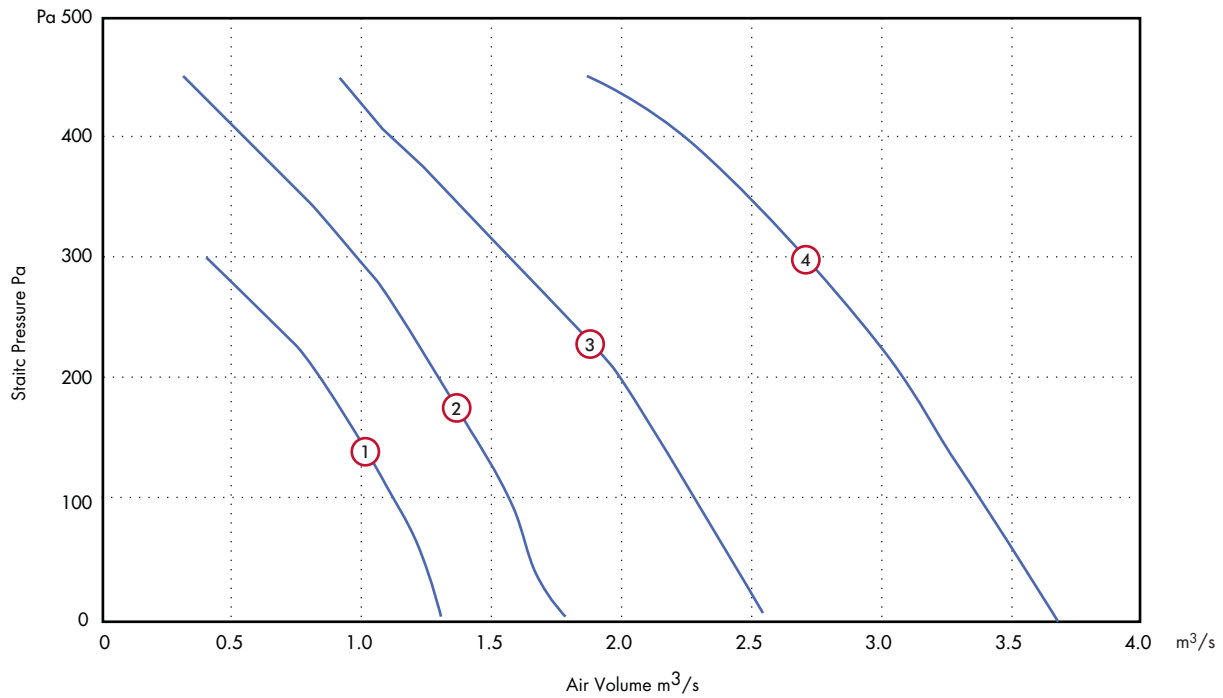
S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Motor Pole	Motor Phase		Motor								dBA @ 3m
				63	125	250	500	1k	2k	4k	8k	
MFQ350	4	1	Inlet	70	74	76	72	72	70	62	54	55
MFQ350	4	1	Outlet	70	74	76	72	72	70	62	54	55
MFQ400	4	1	Inlet	71	78	79	75	74	69	68	59	57
MFQ400	4	1	Outlet	71	78	79	75	74	69	68	59	57
MFQ450	4	1	Inlet	80	82	79	76	78	73	68	60	59
MFQ450	4	1	Outlet	80	82	79	76	78	73	68	60	59
MFQ500	4	1	Inlet	83	85	81	79	80	76	71	66	61
MFQ500	4	1	Outlet	83	85	81	79	80	76	71	66	61

Performance Curve

400 to 560 dia. - 4 Pole, 3 Phase



Performance Guide

Stock Ref.	Motor		Curve Ref.	m³/s at Pa												Motor kW	SC Amps	FLC Amps	dBA @ 3m
	Pole	Phase		r.p.m.	0	50	75	100	150	200	250	300	350	400	450				
MFQ450/4/6/3*	4	3	1330	①	1.774	1.65	1.595	1.547	1.423	1.3	1.15	0.971	0.768	0.535	0.316	0.89	5.9	1.65	59
MFQ400/4/6/3*	4	3	1350	②	1.306	1.218	1.173	1.121	1.001	0.84	0.638	0.397				0.54	4.2	1.05	57
MFQ500/4/6/3*	4	3	1320	③	2.533	2.402	2.34	2.271	2.132	1.99	1.77	1.59	1.34	1.11	0.895	1.35	10	2.4	61
MFQ560/4/3	4	3	1350	④	3.673	3.525	3.451	3.377	3.229	3.08	2.89	2.7	2.47	2.24	1.85	2.4	20	4.3	68

*The 3 phase, 4 pole units 400 to 500 are fitted with 2 speed pole change delta/star connection motors as standard (4/6 pole).

S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

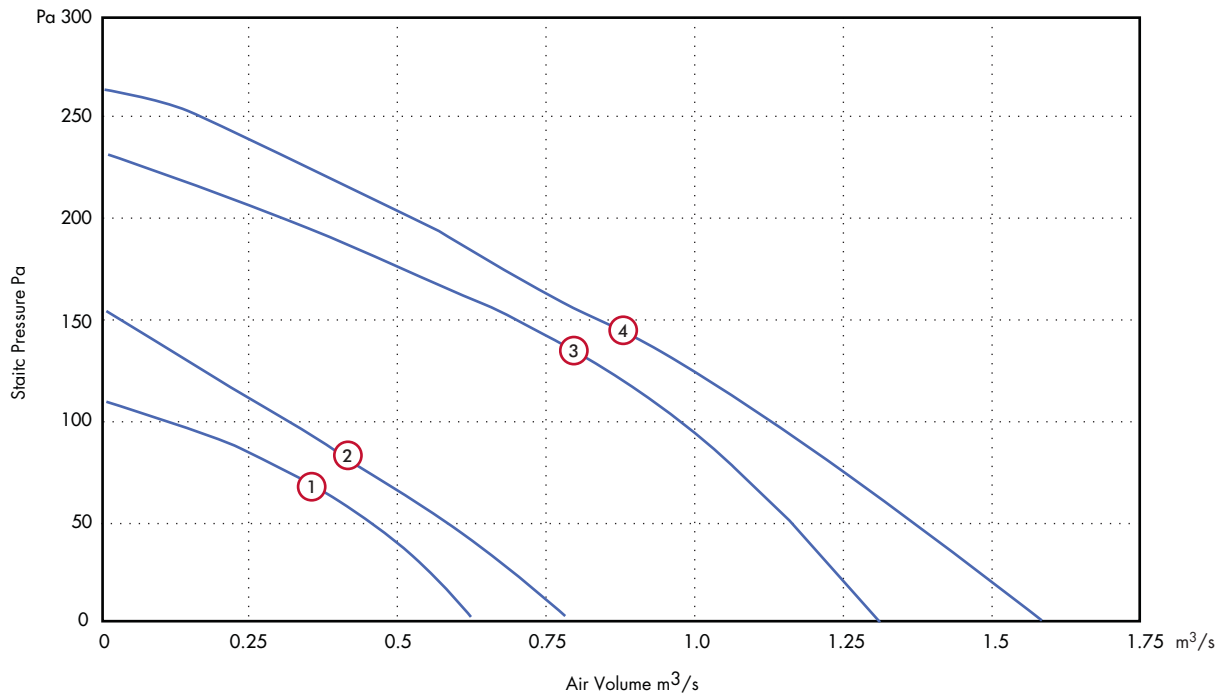
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Motor			dB								
	Pole	Phase		63	125	250	500	1k	2k	4k	8k	@ 3m
MFQ400	4	3	Inlet	71	78	79	75	74	69	68	59	57
MFQ400	4	3	Outlet	71	78	79	75	74	69	68	59	57
MFQ450	4	3	Inlet	80	82	79	76	78	73	68	60	59
MFQ450	4	3	Outlet	80	82	79	76	78	73	68	60	59
MFQ500	4	3	Inlet	83	85	81	79	80	76	71	66	61
MFQ500	4	3	Outlet	83	85	81	79	80	76	71	66	61
MFQ560	4	3	Inlet	86	90	87	86	87	81	74	69	68
MFQ560	4	3	Outlet	86	90	87	86	87	81	74	69	68

Square Mixed Flow Fans (MFQ)

Performance Curve

350 to 500 dia. - 6 Pole, 1 Phase



Performance Guide

Stock Ref.	Motor			Curve Ref.	m³/s at Pa							Motor kW	SC Amps	FLC Amps	dBA @ 3m	
	Pole	Phase	r.p.m.		0	25	50	75	100	150	200					250
MFQ350/6/1	6	1	890	①	0.632	0.563	0.455	0.32	0.125				0.12	1.6	0.59	43
MFQ400/6/1	6	1	800	②	0.79	0.689	0.582	0.45	0.313	0.05			0.19	1.2	0.81	46
MFQ450/6/1	6	1	940	③	1.319	1.242	1.162	1.077	0.978	0.692	0.311		0.4	4.7	2.1	50
MFQ500/6/1	6	1	850	④	1.592	1.485	1.368	1.252	1.127	0.837	0.528	0.173	0.43	3.8	1.95	52

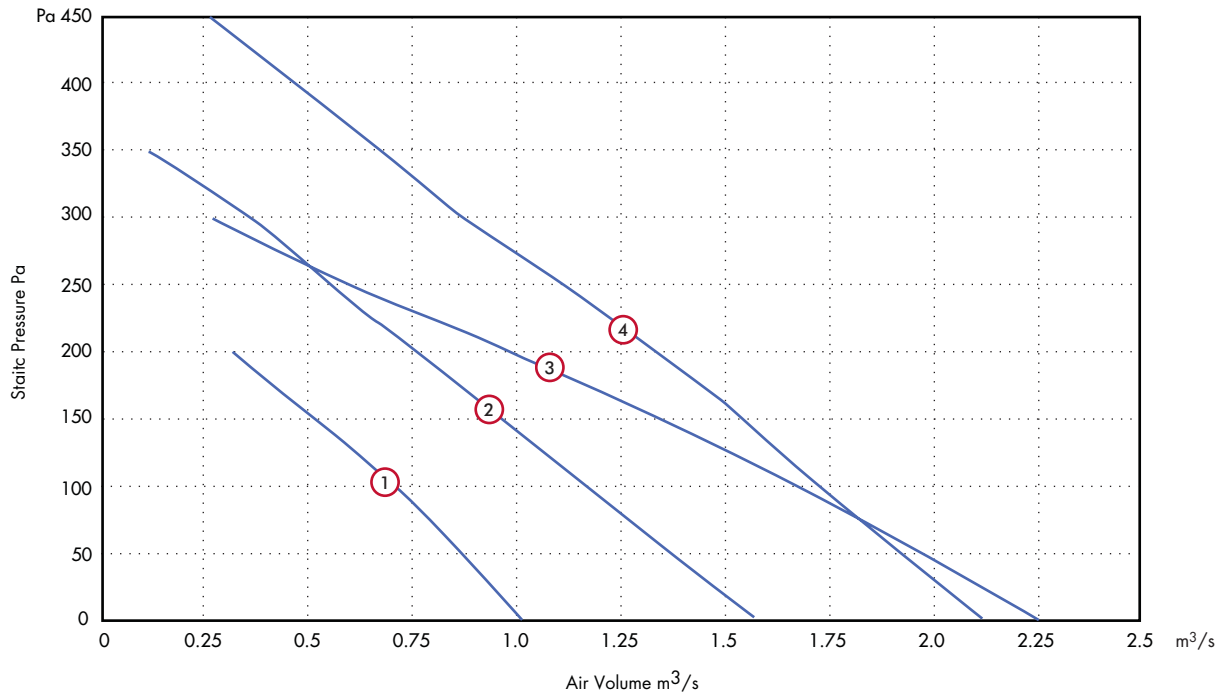
S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Motor			dB								
	Pole	Phase		63	125	250	500	1k	2k	4k	8k	@ 3m
MFQ350	6	1	Inlet	62	62	65	61	59	55	54	33	43
MFQ350	6	1	Outlet	62	62	65	61	59	55	54	33	43
MFQ400	6	1	Inlet	68	66	67	63	64	60	49	40	46
MFQ400	6	1	Outlet	68	66	67	63	64	60	49	40	46
MFQ450	6	1	Inlet	72	72	71	68	66	63	57	49	50
MFQ450	6	1	Outlet	72	72	71	68	66	63	57	49	50
MFQ500	6	1	Inlet	73	73	69	69	70	65	57	50	52
MFQ500	6	1	Outlet	73	73	69	69	70	65	57	50	52

Performance Curve

400 to 630 dia. - 6 Pole, 3 Phase



Performance Guide

Stock Ref.	Motor			Curve Ref.	m ³ /s at Pa										Motor kW	SC Amps	FLC Amps	dBA @ 3m		
	Pole	Phase	r.p.m.		0	50	75	100	150	200	250	300	350	400					450	
MFQ400/4/6/3*	6	3	1050	①	1.011	0.872	0.793	0.706	0.512	0.324							0.39	1.4	0.67	46
MFQ450/4/6/3*	6	3	1040	②	1.569	1.364	1.265	1.162	0.96	0.76	0.565	0.357	0.111				0.59	2	0.96	50
MFQ500/4/6/3*	6	3	1020	③	2.115	1.92	1.8	1.72	1.54	1.31	1.124	0.87	0.67	0.47	0.26		0.88	3.4	1.45	56
MFQ560/6/3	6	3	850	④	2.249	1.957	1.811	1.66	1.329	0.997	0.62	0.25					0.67	3.7	1.45	54

S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

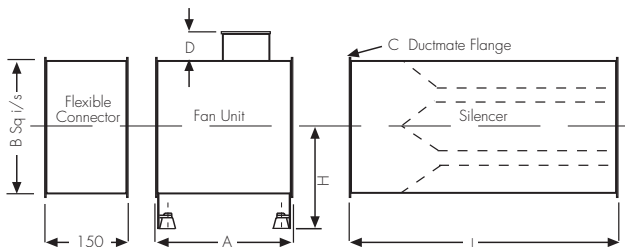
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Motor		Motor	dB								
	Pole	Phase		63	125	250	500	1k	2k	4k	8k	@ 3m
MFQ400	6	3	Inlet	68	66	67	63	64	60	49	40	46
MFQ400	6	3	Outlet	68	66	67	63	64	60	49	40	46
MFQ450	6	3	Inlet	72	72	71	68	66	63	57	49	50
MFQ450	6	3	Outlet	72	72	71	68	66	63	57	49	50
MFQ500	6	3	Outlet	73	73	69	69	70	65	57	50	52
MFQ500	6	3	Inlet	79	80	76	76	78	72	65	56	56
MFQ560	6	3	Outlet	79	80	76	76	78	72	65	56	56
MFQ560	6	3	Inlet	76	75	73	73	73	65	57	49	54

Square Mixed Flow Fans (MFQ)

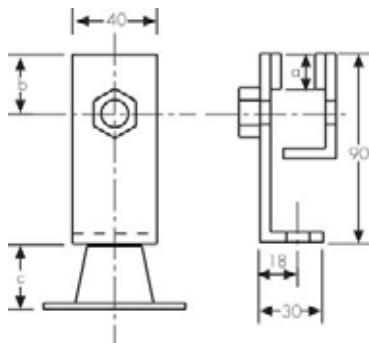
Accessories Dimensions (mm)

Flexible Connectors and Silencer



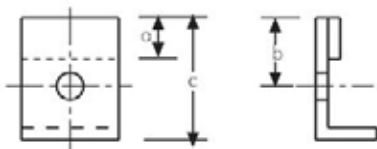
Unit	A	B	C	D	H	I	Weight	Flange
							kg	Ductmate
350	400	450	25	52	345	1200	45	25
400	450	500	25	52	370	1200	48	25
450	485	550	35	52	405	1200	55	35
500	510	650	35	86	455	1500	67	35
560	530	700	35	52	480	1500	70	35

Mount/Feet Details



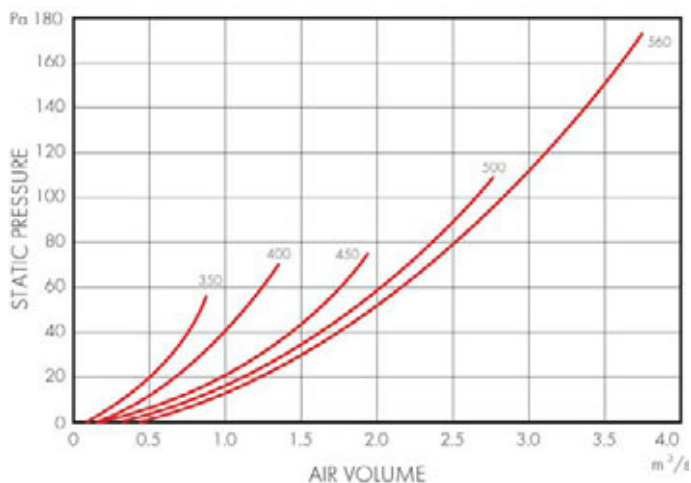
Stock Ref. No.	a	b	c
PAVM 1	25	38	27
PAVM 2	35	38	27
PAVM 3	35	38	35

Clamp Details



Stock Ref. No.	a	b	c
PAVM 1	25	38	60
PAVM 2	35	38	60
PAVM 3	35	38	60

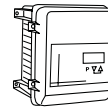
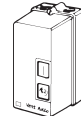
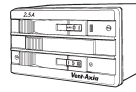
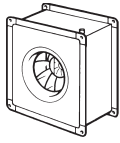
Silencer Resistance Pa



Silencer Insertion Losses

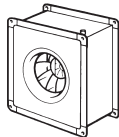
Size	63	125	250	500	1k	2k	4k	8k
350	-3	-5	-14	-27	-36	-36	-29	-24
400	-2	-4	-12	-22	-30	-30	-22	-14
450	-2	-4	-11	-17	-24	-24	-16	-8
500	-3	-6	-15	-23	-31	-31	-21	-11
560	-4	-8	-16	-24	-32	-32	-22	-12

Accessories



Standard Stock Ref.	Weatherproofed Stock Ref.	Electronic Controller Stock Ref.	Auto Transformer Stock Ref.	D.O.L. Starter & Overload Stock Ref.	*eDemand Controller		
					Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
MFQ350/4/1	MFQ350/4/1WP	W10303102M	10314103	444744 + 444700	444164	-	-
MFQ400/4/1	MFQ400/4/1WP	W10303102M	10314103	444744 + 444702	444164	-	-
MFQ400/4/6/3*	MFQ400/4/6/3WP*	-	10314301	444747 + 444700	444166	444177	444172
MFQ450/4/1	MFQ450/4/1WP	10303106A	10314105	444744 + 444703	444164	-	-
MFQ450/4/6/3*	MFQ450/4/6/3WP*	-	10314304	444747 + 444699	444166	444177	444172
MFQ500/4/1	MFQ500/4/1WP	10303110A	10314107	444744 + 444704	444165	-	-
MFQ500/4/6/3*	MFQ500/4/6/3WP*	-	10314304	444747 + 444702	444166	444177	444173
MFQ560/4/3*	MFQ560/4/3WP*	-	10314307	444747 + 444703	444166	444177	444173
MFQ350/6/1	MFQ350/6/1WP	W10303102M	10313103	444744 + 444699	444164	-	-
MFQ400/6/1	MFQ400/6/1WP	W10303102M	10313103	444744 + 444699	444164	-	-
MFQ400/4/6/3*	MFQ400/4/6/3WP*	-	10314301	444747 + 444701	444166	444177	444172
MFQ450/6/1	MFQ450/6/1WP	W10303102M	10313103	444744 + 444701	444164	-	-
MFQ450/4/6/3*	MFQ450/4/6/3WP*	-	10314301	444747 + 444700	444166	444177	444172
MFQ500/6/1	MFQ500/6/1WP	W10303102M	10313103	444744 + 444701	444164	-	-
MFQ500/4/6/3*	MFQ500/4/6/3WP*	-	10314304	444747 + 444701	444166	444177	444172
MFQ560/6/3*	MFQ560/6/3WP	-	10314304	444747 + 444701	444166	444177	444172

* For full range of speed controller options, see Accessories & Controllers Section



Standard Stock Ref.	Weatherproofed Stock Ref.	Set of Mounting Feet & AV's Stock Ref.	Flexible Connection Stock Ref.	Matching Attenuator Stock Ref.	Acoustic Jacket Stock Ref.
MFQ400/4/1	MFQ400/4/1WP	PAVM1	MFQFC400	MFQSS400	MFQAJ400
MFQ400/4/6/3*	MFQ400/4/6/3WP*	PAVM1	MFQFC400	MFQSS400	MFQAJ400
MFQ450/4/1	MFQ450/4/1WP	PAVM2	MFQFC450	MFQSS450	MFQAJ450
MFQ450/4/6/3*	MFQ450/4/6/3WP*	PAVM2	MFQFC450	MFQSS450	MFQAJ450
MFQ500/4/1	MFQ500/4/1WP	PAVM3	MFQFC500	MFQSS500	MFQAJ500
MFQ500/4/6/3*	MFQ500/4/6/3WP*	PAVM3	MFQFC500	MFQSS500	MFQAJ500
MFQ560/4/3*	MFQ560/4/3WP*	PAVM3	MFQFC560	MFQSS560	MFQAJ560
MFQ350/6/1	MFQ350/6/1WP	PAVM1	MFQFC350	MFQSS350	MFQAJ350
MFQ400/6/1	MFQ400/6/1WP	PAVM1	MFQFC400	MFQSS400	MFQAJ400
MFQ400/4/6/3*	MFQ400/4/6/3WP*	PAVM1	MFQFC400	MFQSS400	MFQAJ400
MFQ450/6/1	MFQ450/6/1WP	PAVM2	MFQFC450	MFQSS450	MFQAJ450
MFQ450/4/6/3*	MFQ450/4/6/3WP*	PAVM2	MFQFC450	MFQSS450	MFQAJ450
MFQ500/6/1	MFQ500/6/1WP	PAVM3	MFQFC500	MFQSS500	MFQAJ500
MFQ500/4/6/3*	MFQ500/4/6/3WP*	PAVM3	MFQFC500	MFQSS500	MFQAJ500
MFQ560/6/3*	MFQ560/6/3WP	PAVM3	MFQFC560	MFQSS560	MFQAJ560

NOTE The 3 phase, 4 pole units 400 to 500 are fitted with 2 speed pole change delta/star connection motors as standard (4/6 pole).

Access Rectangular In-Line Fans (ARH)

Features and Benefits

- Motors protected to IP44
- Motor insulation Class 'B'
- Standard Thermal Overload Protection
- IP54 terminal box
- Backward curved centrifugal impeller
- Access panel for ease of maintenance
- MEZ flanging
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Parts 1 & 2
- 2 Year Guarantee

The ACCESS range of rectangular backward curved in-line fans have been specifically designed with the latest COSHH (Control of Substances Hazardous to Health) regulations in mind.

These regulations make it a requirement for employers to provide effective methods to control exposure to certain hazardous materials and substances in the work place utilising general or local exhaust ventilation systems. The regulations also require that the system installed be inspected and maintained on a regular and documented basis.

ACCESS has been developed for commercial and industrial applications with the emphasis on fast installation, reliable performance and access for inspection. It features a new generation of backward curved fans specially selected for their performance and non overloading characteristics.

This range of rectangular fans are available with matched accessories for complete ventilation systems in a variety of ducted applications. The innovative and compact design of the galvanised steel casing, backward curved impeller and motor unit ensures that the ACCESS model occupies no more space than ordinary forward curved units.

An access panel on all models comes complete with the motor and impeller assembly mounted on it making maintenance a swift and simple procedure.

Motors/Impeller

The range is powered by a proven external rotor motor and impeller assembly dynamically balanced for quiet, vibration free performance. Motors are rated IP44 according to BS EN 60529. Bearings are greased for life and are designed to run at any angle. Motor insulation is Class 'B'. 100 to 315 dia. operating temperatures 50°C; 355 to 710 dia 40°C.

Manufacture of the motor impellers, casings and assembly are all controlled to BS EN ISO 9001 standards.

The motor/impeller assemblies are dynamically balanced to VDI 2060

Electrical

Single phase 220-240V 50 Hz. Capacitor start and run. The capacitors are located in the terminal box where possible. Three phase 380-415V 50 Hz.

The terminal box on models 355 to 710 are protected to IP54 according to BS EN 60529. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.), which should be wired into all controller circuits and into starter contactors. Models are available with 2, 4, 6 and 8 pole motors.

Performance

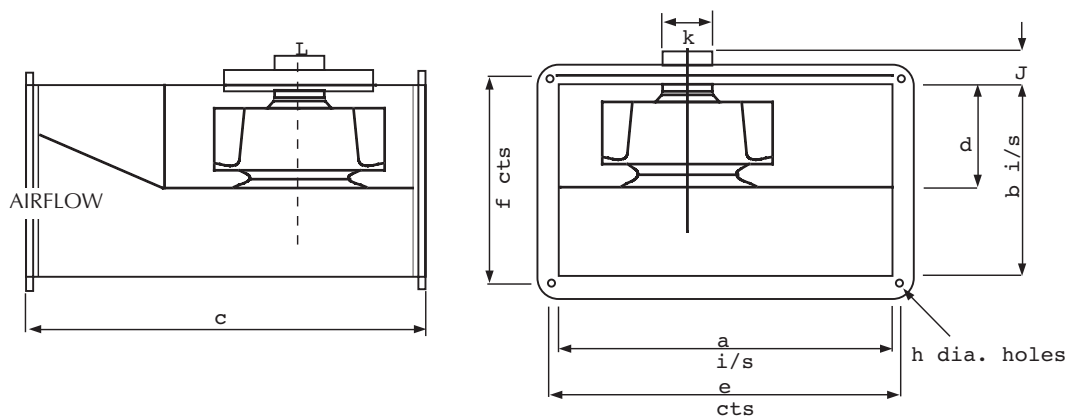
Tested to BS 848 Parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascals). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt).

Accessories

Rectangular flexible connections, attenuators and bag filter cassettes.



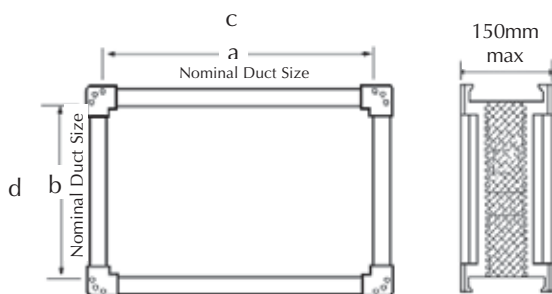
Fan Dimensions (mm)



Size	a	b	c	d	e	f	g	h	i	j	k x l	Weight kg	Flange Type
355	550	485	700	260	585	520	35	11	50	160 x 130	40	Ductmate 35	
400	625	535	775	295	660	570	35	11	50	230 x 230	55	Ductmate 35	
450	700	600	850	325	735	635	35	11	65	230 x 230	62	Ductmate 35	
500	775	700	925	355	810	735	35	11	50	230 x 230	80	Ductmate 35	
630	850	800	1000	400	885	835	35	11	55	230 x 230	97	Ductmate 35	
710	950	850	1100	430	985	885	35	11	55	230 x 230	112	Ductmate 35	

Accessories Dimensions (mm)

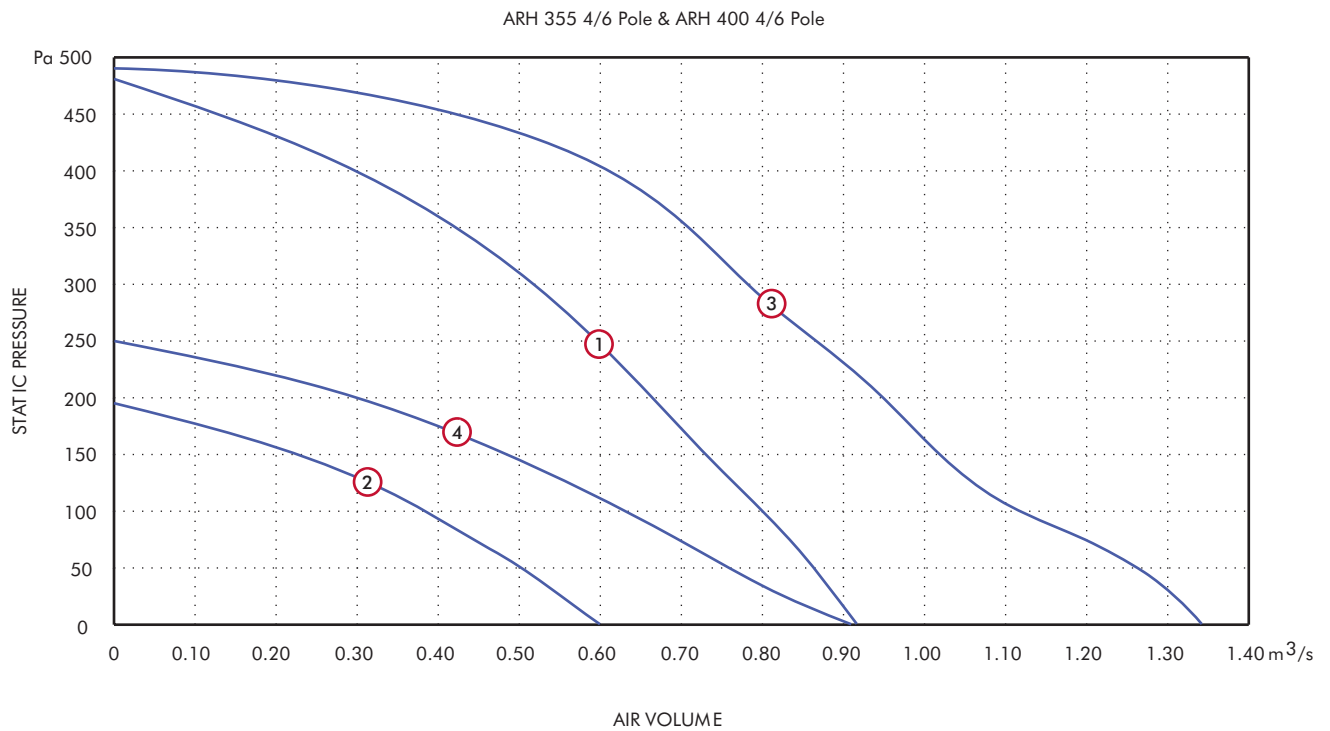
Rectangular Flexible Connectors



Stock Ref.	a	b	c	d	Flange Type
LFC355	550	485	620	555	Ductmate 35
LFC400	625	535	695	605	Ductmate 35
LFC450	700	600	770	670	Ductmate 35
LFC500	775	700	845	770	Ductmate 35
LFC630	850	800	920	870	Ductmate 35
LFC710	950	850	1020	920	Ductmate 35

Access Rectangular In-Line Fans (ARH)

Performance Curve



Performance Guide

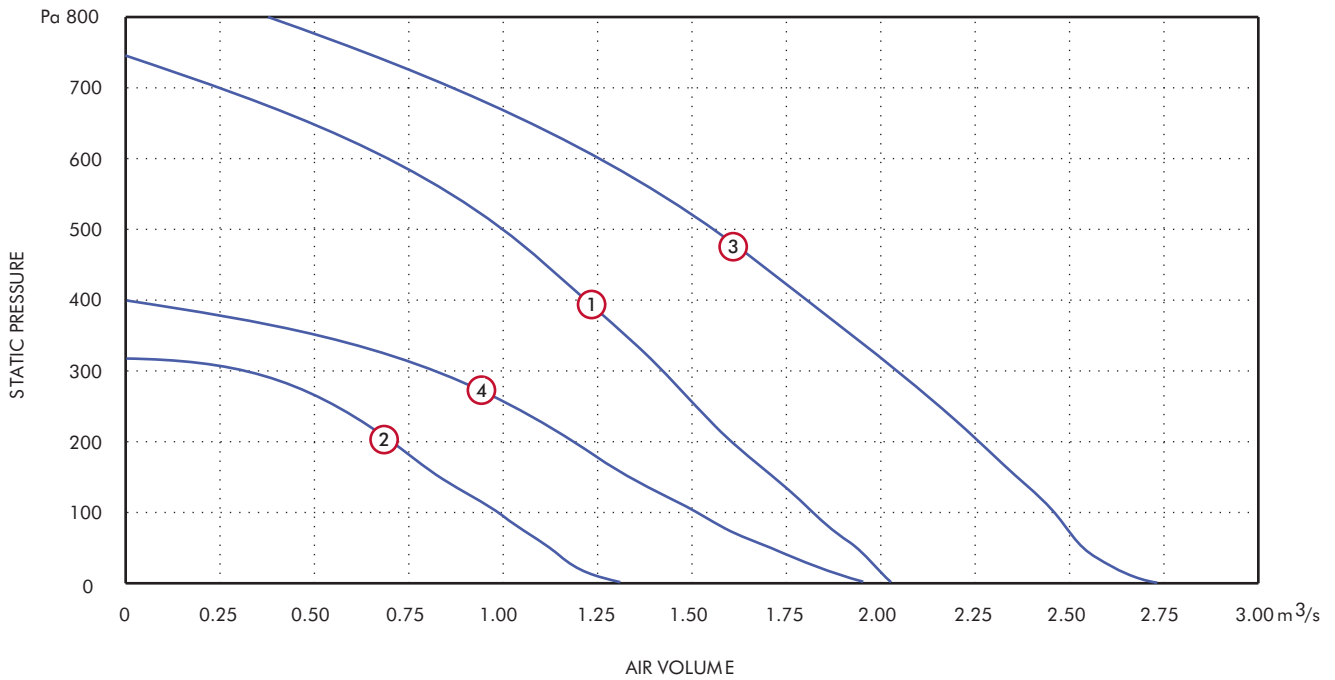
Duct Size		Stock		Curve		m³/s at Pa										Motor	S.C.	F.L.C.	dBA
W x H	Phase	Pole	Ref. No.	r.p.m.	Ref.	0	50	100	150	200	250	300	350	400	kW	Amps	Amps	@ 3m	
550 x 485	1	4	ARH355-14A	1365	①	0.915	0.865	0.803	0.733	0.676	0.596	0.517	0.41	0.3	0.52	5	2.2	59	
550 x 485	3	4	ARH355-34A	1365	①	0.915	0.865	0.803	0.733	0.676	0.596	0.517	0.41	0.3	0.46	2.9	0.46	59	
550 x 485	1	6	ARH355-16A	880	②	0.6	0.51	0.38							0.17	1.6	0.8	47	
550 x 485	3	6	ARH355-36A	880	②	0.6	0.51	0.38							0.16	1.05	0.36	47	
625 x 535	1	4	ARH400-14A	1280	③	1.37	1.255	1.14	1.05	0.98	0.885	0.79	0.7	0.6	0.74	7	3.2	61	
625 x 535	3	4	ARH400-34A	1280	③	1.37	1.255	1.14	1.05	0.98	0.885	0.79	0.7	0.6	0.69	3.4	1.3	61	
625 x 535	1	6	ARH400-16A	840	④	0.91	0.76	0.62	0.49	0.3					0.3	2	1.5	52	
625 x 535	3	6	ARH400-36A	840	④	0.91	0.76	0.62	0.49	0.3					0.26	1.1	0.49	52	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Stock Ref	Pole	63	125	250	500	1k	2k	4k	8k	
ARH355	IN DUCT	4	66	84	78	79	75	71	66	59
ARH355	IN DUCT	6	70	69	67	65	63	60	53	46
ARH400	IN DUCT	4	74	91	83	81	76	72	69	65
ARH400	IN DUCT	6	75	86	74	71	67	65	58	48

Performance Curve

ARH 450 4/6 Pole & ARH 500 4/6 Pole



Performance Guide

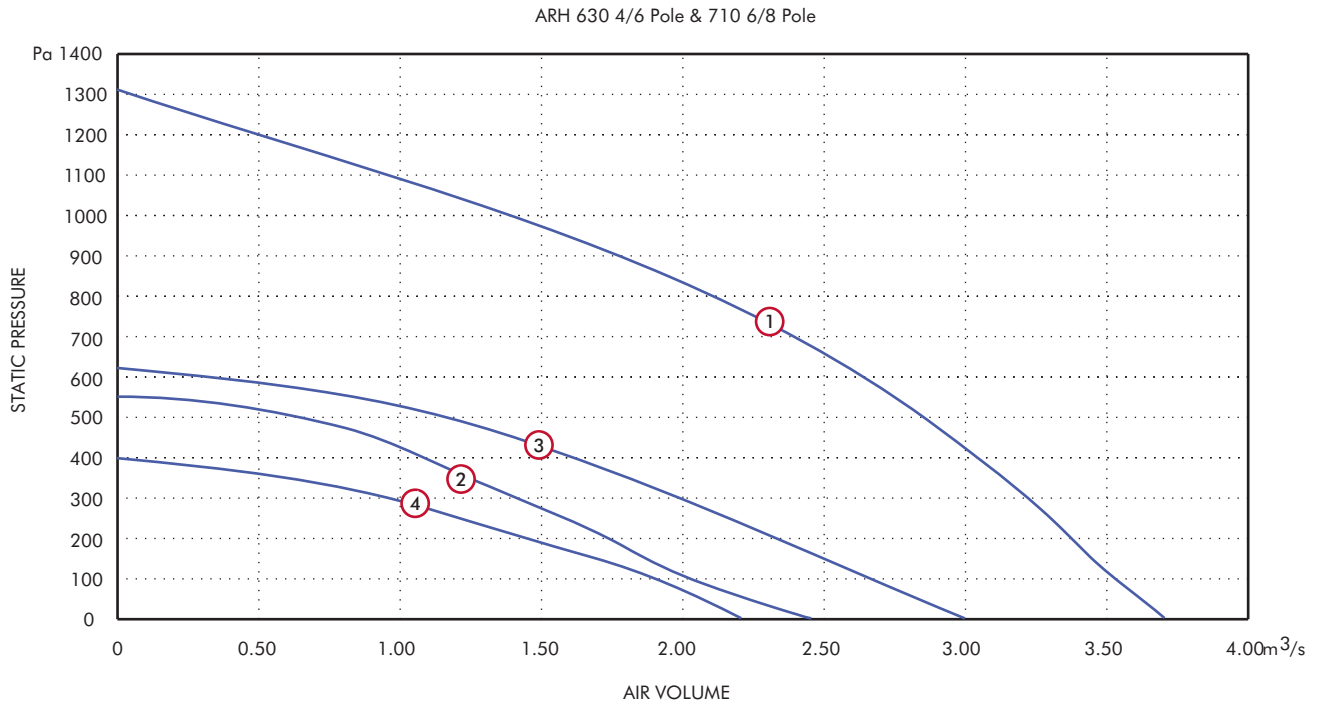
Duct Size		Stock		Curve										Motor	S.C.	F.L.C.	dBA		
W x H	Phase	Pole	Ref. No.	r.p.m.	Ref.	0	25	50	100	150	200	250	300	350	400	kW	Amps	Amps	@ 3m
700 x 600	1	4	ARH450-14A	1320	①	2.03	1.97	1.74	1.8	1.7	1.6	1.5	1.4	1.312	1.225	1.3	15	5.7	66
700 x 600	3	4	ARH450-34A	1320	①	2.03	1.97	1.74	1.8	1.7	1.6	1.5	1.4	1.312	1.225	1.25	9.2	2.3	66
700 x 600	1	6	ARH450-16A	850	②	1.3	1.21	1.17	1	0.87	0.7					0.45	4.2	2.2	53
700 x 600	3	6	ARH450-36A	850	②	1.3	1.21	1.17	1	0.87	0.7					0.39	1.75	0.81	53
775 x 700	3	4	ARH500-34A	1230	③	2.75	2.61	2.56	2.46	2.3	2.26	2.145	2.03	1.93	1.82	1.8	10	3.4	67
775 x 700	3	6	ARH500-36A	865	④	1.92	1.84	1.72	1.55	1.37	1.19	0.81				0.69	3.6	1.5	55

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Stock Ref	Pole	63	125	250	500	1k	2k	4k	8k	
ARH450	IN DUCT	4	76	95	88	86	81	76	76	71
ARH450	IN DUCT	6	76	82	77	73	70	65	59	53
ARH500	IN DUCT	4	80	96	89	86	83	78	72	66
ARH500	IN DUCT	6	80	81	78	80	71	62	60	52

Access Rectangular In-Line Fans (ARH)

Performance Curve



Performance Guide

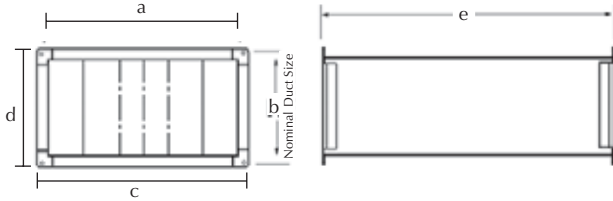
Duct Size		Stock		Curve		m³/s at Pa										Motor	S.C.	F.L.C.	dBA
W x H	Phase	Pole	Ref. No.	r.p.m.	Ref.	0	25	50	100	150	200	250	300	350	400	kW	Amps	Amps	@ 3m
850 x 800	3	4	ARH630-34A	1380	①	3.7	3.657	3.612	3.522	3.477	3.39	3.307	3.237	3.141	3.046	4.1	29	6.8	70
850 x 800	3	6	ARH630-36A	890	②	2.453	2.396	2.327	2.218	1.956	1.81	1.478	1.14	0.8		1.2	8	2.6	56
950 x 850	3	6	ARH710-36A	880	③	3.017	2.904	2.786	2.663	2.481	2.313	1.812	1.989			1.95	14	3.6	60
950 x 850	3	8	ARH710-38A	650	④	2.297	2.214	2.115	1.903	1.703	1.495	1.201	0.951			0.96	14	1.9	53

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Stock Ref	Pole	63	125	250	500	1k	2k	4k	8k
ARH630 IN DUCT	4	83	99	94	90	87	85	75	70
ARH630 IN DUCT	6	84	86	80	77	73	66	61	56
ARH710 IN DUCT	6	90	87	85	81	77	71	65	59
ARH710 IN DUCT	8	82	78	78	74	70	63	57	50

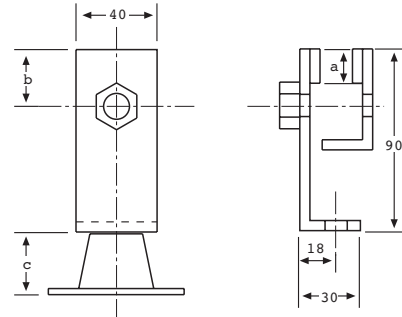
Accessories Dimensions (mm)

Rectangular Attenuators



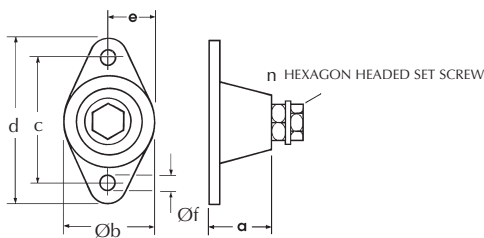
Stock Ref.	a	b	c	d	e	Flange	
						Type	Weight kg
RULDS355	550	485	620	555	1200	Ductmate 35	75
RULDS400	625	535	695	605	1200	Ductmate 35	103
RULDS450	700	600	770	670	1500	Ductmate 35	112
RULDS500	775	700	845	770	1500	Ductmate 35	145
RULDS630	850	800	920	870	1800	Ductmate 35	180
RULDS710	950	850	1020	920	1800	Ductmate 35	203

Mount/Feet Details



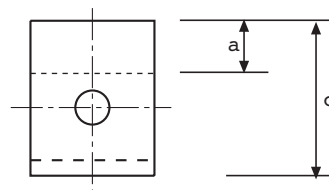
Stock Ref.	a	b	c
PAVM2	35	38	27
PAVM 3	35	38	35

Anti-Vibration Mounts



Stock Ref. No.	a	Øb	c	d	e	Øf	n	Max. load kg
10523055	27	37	54	67	18.5	7	M8	36
10523133	35	57	76	95	28.5	10.5	M12	91

Clamp Detail:



Stock Ref.	a	b	c
PAVM2	35	38	60
PAVM3	35	38	60

Rectangular Flexible Connections



Duct size W x H	Stock Ref. No.
550 x 485mm	LFC355
625 x 535mm	LFC400
700 x 600mm	LFC450
775 x 700mm	LFC500
850 x 800mm	LFC630
950 X 850mm	LFC710

Flexible connections are used to connect rigid ductwork to the rectangular range of ducted fan units. Flexible connections are fitted with flanges and a Duroprene flexible material to prevent vibration transmission. Maximum operating temperature +150°C meets BS476 Part 7 Fire Test.

Rectangular Bag Filter Cassettes

Synthetic bag filter cassettes are available in a range of sizes. The synthetic filter medium is to EU5 (Eurovent 4/5) 94% arrestance. The filter casings are manufactured from galvanised sheet metal fitted with flanges for quick and easy installation. Quick release catches allow the hinged access panel to open for access to the bag filter. Replacement bag filters are available.

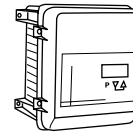
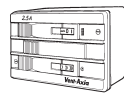
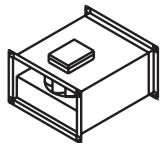
Maximum operating temperature +100°C.

Attenuator, Insertion Losses

Impeller Ø	Stock Ref.	Stock							
		63	125	250	500	1k	2k	4k	8k
355	RLDS 355	6	12	23	32	45	45	33	28
400	RLDS 400	6	10	20	31	43	43	33	27
450	RLDS 450	4	9	17	27	36	36	24	13
500	RLDS 500	3	7	14	22	27	21	15	10
450	RLDS 630	4	8	15	24	30	26	14	8
500	RLDS 710	7	15	30	41	45	45	45	32

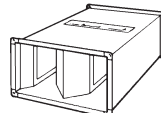
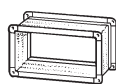
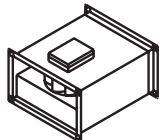
Access Rectangular In-Line Fans (ARH)

Accessories



Duct Size W x H	Stock Ref. No.	Electronic controller Stock Ref. No.	Auto transformer Stock Ref. No.	D.O.L starter & Overload Stock Ref. No.	*eDemand Controller		
					Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
550 x 485	ARH35514A	W10303102M	10314103	444744 + 444702	444164	-	-
550 x 485	ARH35534A	-	10314301	444747 + 444698	444166	444177	444172
625 x 535	ARH40014A	10303106A	10314105	444744 + 444702	444164	-	-
625 x 535	ARH40034A	-	10314301	444747 + 444700	444166	444177	444172
700 x 600	ARH45014A	10303106A	10314107	444744 + 444704	444165	-	-
700 x 600	ARH45034A	-	10314304	444747 + 444702	444166	444177	444173
775 x 700	ARH50034A	-	10314304	444747 + 444702	444166	444177	444173
850 x 800	ARH63034A	-	10314307	444747 + 444704	444167	-	444174
550 x 485	ARH35516A	W10303102M	10314103	444744 + 444699	444164	-	-
550 x 485	ARH35536A	-	10314301	444747 + 444698	444166	444177	444172
625 x 535	ARH40016A	W10303102M	10314103	444744 + 444701	444164	-	-
625 x 535	ARH40036A	-	10314301	444747 + 444698	444166	444177	444172
700 x 600	ARH45016A	W10303102M	10314103	444744 + 444702	444164	-	-
700 x 600	ARH45036A	-	10314301	444747 + 444699	444166	444177	444172
775 x 700	ARH50036A	-	10314304	444747 + 444701	444166	444177	444172
850 x 800	ARH63036A	-	10314304	444747 + 444702	444166	444177	444173
950 x 850	ARH71036A	-	10314304	444747 + 444702	444166	444177	444173
950 x 850	ARH71038A	-	10314304	444747 + 444701	444166	444177	444172

* For full range of speed controller options, see Accessories & Controllers Section



Duct Size W x H	Stock Ref. No.	Rectangular flexible connection Stock Ref. No.	Rectangular attenuator Stock Ref. No.	Mounting Feet & AV's
550 x 485	ARH35514A	LFC355	RULDS355	PAVM2
550 x 485	ARH35534A	LFC355	RULDS355	PAVM2
625 x 535	ARH40014A	LFC400	RULDS400	PAVM3
625 x 535	ARH40034A	LFC400	RULDS400	PAVM3
700 x 600	ARH45014A	LFC450	RULDS450	PAVM3
700 x 600	ARH45034A	LFC450	RULDS450	PAVM3
775 x 700	ARH50034A	LFC500	RULDS500	PAVM3
850 x 800	ARH63034A	LFC630	RULDS630	PAVM3
550 x 485	ARH35516A	LFC355	RULDS355	PAVM2
550 x 485	ARH35536A	LFC355	RULDS355	PAVM2
625 x 535	ARH40016A	LFC400	RULDS400	PAVM3
625 x 535	ARH40036A	LFC400	RULDS400	PAVM3
700 x 600	ARH45016A	LFC450	RULDS450	PAVM3
700 x 600	ARH45036A	LFC450	RULDS450	PAVM3
775 x 700	ARH50036A	LFC500	RULDS500	PAVM3
850 x 800	ARH63036A	LFC630	RULDS630	PAVM3
950 x 850	ARH71036A	LFC710	RULDS710	PAVM3
950 x 850	ARH71038A	LFC710	RULDS710	PAVM3

High Pressure Centrifugal In-line Fans (BS)

Features and Benefits

- Performance range up to 9m³/s
- Static pressure development up to 1,400Pa
- Suitable for either internal or external mounting
- Optional IP65 service isolator
- Operating Temperatures up to +55°C
- Rigid anodised aluminium extruded frame casing
- Motors suitable for Inverter Speed Control where permissible
- Quality Assurance to BS EN ISO 9001
- Performance tested to BS 848 Part 1

BS units are constructed to the highest manufacturing standards and developed around a rigid anodised aluminium extruded frame. Panels are manufactured from prime quality galvanised or plastisol sheet steel, fixed to the frame, ensuring a robust casing, for those tough site conditions.

Motor Sizes:

0.55 kW = D	4.00 kW = K
0.75 kW = E	5.50 kW = L
1.10 kW = F	7.50 kW = M
1.50 kW = G	11.0 kW = N
2.20 kW = H	15.0 kW = P
3.00 kW = J	

Note:

220-240V/1ph/50Hz units are only available up to 1.5kW.

Fan & Motor Assembly

Units are forward curved, double inlet double width centrifugal impellers, belt driven by totally enclosed fan ventilated motors, wound

to suit 220-240V/1/50Hz or 380-415V/3/50Hz electrical supply, with special voltage motors available on request. The fan and motors are assembled on a rigid angle iron framework, fitted with anti-vibration mounts and a flexible connection between the unit casing and frame to ensure vibration free operation.

The motors are protected to IP55, against dust and water jets complying with BS EN 60529. With motor insulation Class F as a minimum, suitable for operating temperatures up to +55°C. All belt driven fans have metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753. Protection of the motor is provided by a current overload protection switch such as a D.O.L. starter or equivalent which is required on all installations or the product guarantee will be invalidated.

Performance

The fan performance, shall be tested in accordance with BS 848 Part 1.

Sound Levels

Fan sound levels are measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt).

Quality Assurance

Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001.

Accessories

Full ranges of optional accessories are available, such as:

- Inverter Speed Controllers where permissible.
- Motor Isolators.
- D.O.L. Starters.
- Inlet Dampers.
- Flexible Connections.
- Attenuators



Selection Procedure

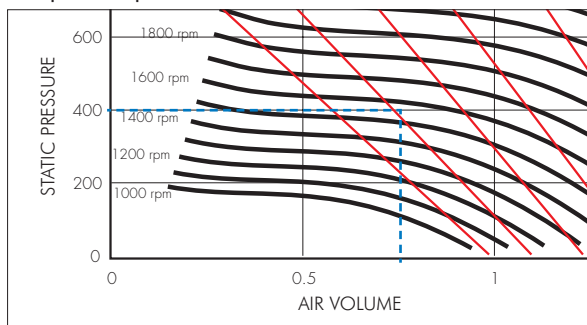
Plot your specified duty on the overlap graphs. Select motor size and fan speed required. The full Stock Ref. No. for your unit will comprise of the unit size, motor rating, supply and fan speed.

Motor Sizes :

0.55 kW = D	3.00 kW = J
0.75 kW = E	4.00 kW = K
1.10 kW = F	5.50 kW = L
1.50 kW = G	7.50 kW = M
2.20 kW = H	11.0 kW = N
	15.0 kW = P

Note:
220-240V/1ph/50Hz units are only available up to 1.5kW.

Graph Example:



Example:

Duty required = 0.75m³/s
@ 400Pa
Unit Size = BS 1
Supply = 3 phase

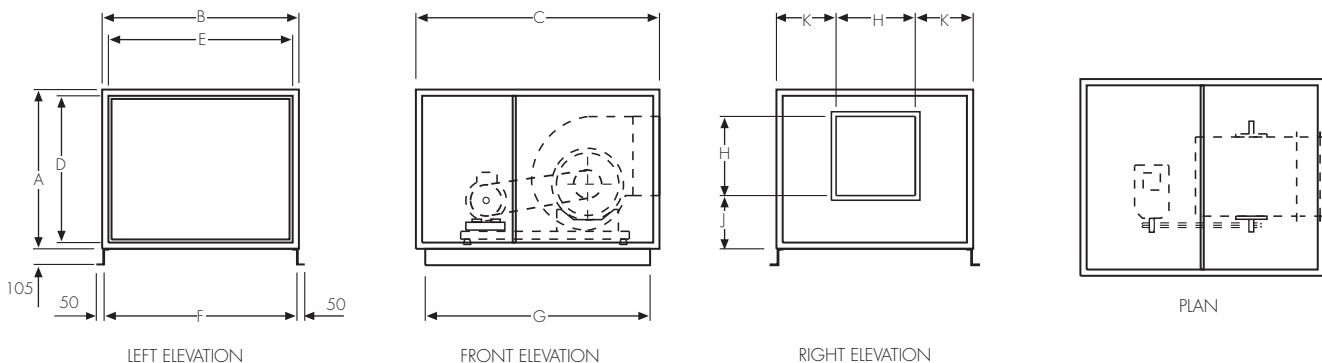
From above graph (BS 1):
Speed = 1600rpm,
Motor = 1.1kW

Stock Ref. No. will be:
BS1F22F3G1600

Typical Stock Ref. No.: **BS1F22F3G1600**

BS Range
F Belt Drive
22 Fan Size
F Motor Size (see opposite)
3 Voltage
1 = 230V/1 Ph/50Hz
3 = 400V/3 Ph/50Hz
G Casing Finish
G = Galvanised (Internal mounting)
W = Weatherproofed (External mounting)
1600 Fan Speed (RPM)

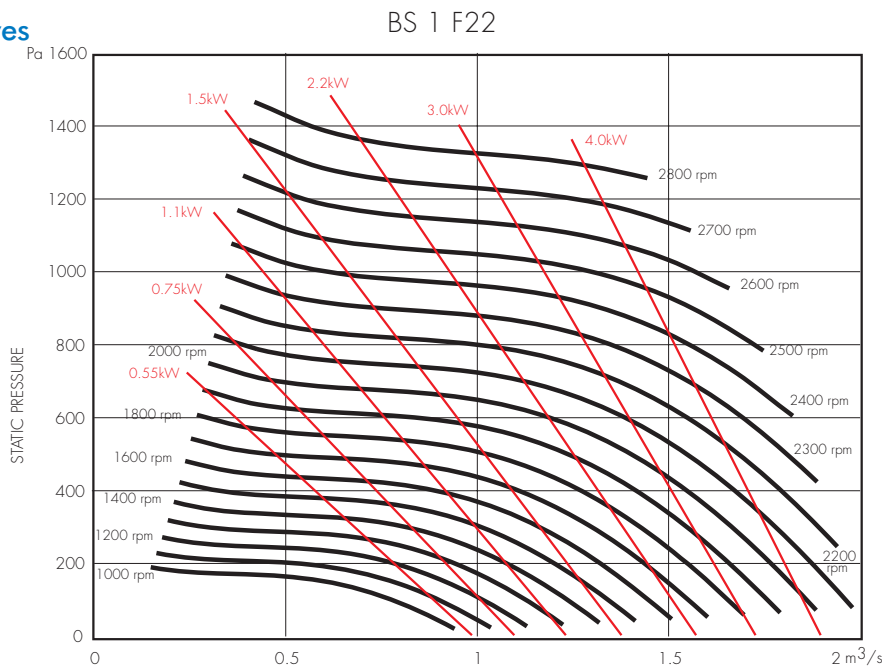
Dimensions (mm)



Unit Size	A	B	C	D	E	F	G	H	J	K
BS1F22	720	660	960	640	580	625	840	288	264	186
BS2F31	1020	960	1260	940	880	925	1140	404	308	278
BS3F40	1020	1260	1560	940	1180	1225	1440	507	339	376
BS4F50	1320	1560	1560	1240	1480	1525	1440	638	389	461

High Pressure Centrifugal In-Line Fans (BS)

Performance Curves



Sound Power Level Spectra dB (ref 10⁻¹² Watts)

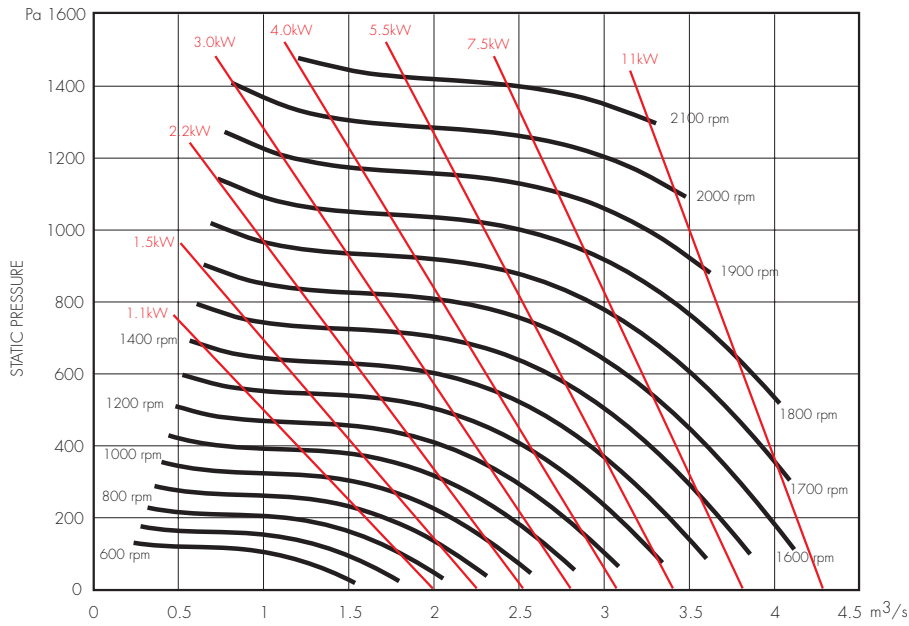
AIR VOLUME

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
1000	Inlet	70	71	72	72	71	67	65	58	55
1000	Outlet	76	70	70	69	68	66	63	58	53
1000	Breakout	62	63	56	42	41	34	32	25	31
1100	Inlet	72	73	74	74	73	69	67	60	57
1100	Outlet	78	72	72	71	70	68	65	60	55
1100	Breakout	64	65	58	44	43	36	34	27	33
1200	Inlet	75	76	77	77	76	72	70	63	60
1200	Outlet	81	75	75	74	73	71	68	63	58
1200	Breakout	67	68	61	47	46	39	37	30	36
1300	Inlet	76	77	78	78	77	73	71	64	61
1300	Outlet	82	76	76	75	74	72	69	64	59
1300	Breakout	68	69	62	48	47	40	38	31	37
1400	Inlet	78	79	80	80	79	75	73	66	63
1400	Outlet	84	78	78	77	76	74	71	66	61
1400	Breakout	70	71	64	50	49	42	40	33	39
1500	Inlet	79	80	81	81	80	76	74	67	64
1500	Outlet	85	79	79	78	77	75	72	67	62
1500	Breakout	71	72	65	51	50	43	41	34	40
1600	Inlet	81	82	83	83	82	78	76	69	66
1600	Outlet	87	81	81	80	79	77	74	69	64
1600	Breakout	73	74	67	53	52	45	43	36	42
1700	Inlet	82	83	84	84	83	79	77	70	67
1700	Outlet	88	82	82	81	80	78	75	70	65
1700	Breakout	74	75	68	54	53	46	44	37	43
1800	Inlet	83	84	85	85	84	80	78	71	68
1800	Outlet	89	83	83	82	81	79	76	71	66
1800	Breakout	75	76	69	55	54	47	45	38	44
1900	Inlet	82	84	85	84	85	83	79	75	69
1900	Outlet	89	84	83	82	81	81	78	73	67
1900	Breakout	74	76	69	54	55	50	46	42	44

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
2000	Inlet	83	85	86	85	86	84	80	76	70
2000	Outlet	90	85	84	83	82	82	79	74	68
2000	Breakout	75	77	70	55	56	51	47	43	45
2100	Inlet	84	86	87	86	87	85	81	77	71
2100	Outlet	91	86	85	84	83	83	80	75	69
2100	Breakout	76	78	71	56	57	52	48	44	46
2200	Inlet	85	87	88	87	88	86	82	78	72
2200	Outlet	92	87	86	85	84	84	81	76	70
2200	Breakout	77	79	72	57	58	53	49	45	47
2300	Inlet	85	87	88	87	88	86	82	78	72
2300	Outlet	92	87	86	85	84	84	81	76	70
2300	Breakout	77	79	72	57	58	53	49	45	47
2400	Inlet	86	88	89	88	89	87	83	79	73
2400	Outlet	93	88	87	86	85	85	82	77	71
2400	Breakout	78	80	73	58	59	54	50	46	48
2500	Inlet	86	88	89	88	89	87	83	79	73
2500	Outlet	93	88	87	86	85	85	82	77	71
2500	Breakout	78	80	73	58	59	54	50	46	48
2600	Inlet	87	89	90	89	90	88	84	80	74
2600	Outlet	94	89	88	87	86	86	83	78	72
2600	Breakout	79	81	74	59	60	55	51	47	49
2700	Inlet	87	89	90	89	90	88	84	80	74
2700	Outlet	94	89	88	87	86	86	83	78	72
2700	Breakout	79	81	74	59	60	55	51	47	49
2800	Inlet	87	89	90	89	90	88	84	80	74
2800	Outlet	94	89	88	87	86	86	83	78	72
2800	Breakout	79	81	74	59	60	55	51	47	49

Performance Curves

BS 2 F31



Sound Power Level Spectra dB (ref 10⁻¹² Watts) AIR VOLUME

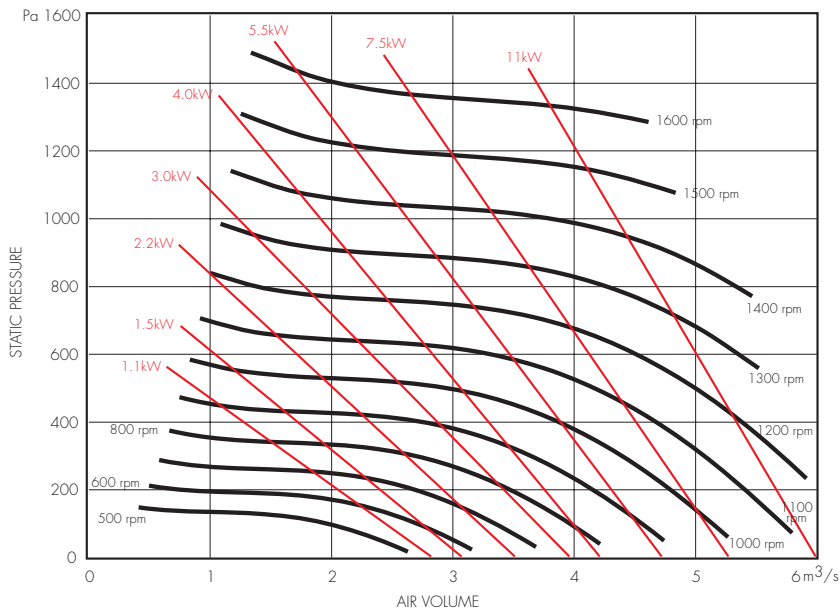
r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
600	Inlet	70	71	70	69	69	65	62	56	53
600	Outlet	75	69	68	66	67	63	61	56	51
600	Breakout	62	63	54	39	39	32	29	23	30
700	Inlet	73	74	73	72	72	68	65	59	56
700	Outlet	78	72	71	69	70	66	64	59	54
700	Breakout	65	66	57	42	42	35	32	26	33
800	Inlet	76	77	76	75	75	71	68	62	59
800	Outlet	81	75	74	72	73	69	67	62	57
800	Breakout	68	69	60	45	45	38	35	29	36
900	Inlet	77	78	79	79	78	74	72	65	62
900	Outlet	83	77	77	76	75	73	70	65	60
900	Breakout	69	70	63	49	48	41	39	32	38
1000	Inlet	79	80	81	81	80	76	74	67	64
1000	Outlet	85	79	79	78	77	75	72	67	62
1000	Breakout	71	72	65	51	50	43	41	34	40
1100	Inlet	81	82	83	83	82	78	76	69	66
1100	Outlet	87	81	81	80	79	77	74	69	64
1100	Breakout	73	74	67	53	52	45	43	36	42
1200	Inlet	83	84	85	85	84	80	78	71	68
1200	Outlet	89	83	83	82	81	79	76	71	66
1200	Breakout	75	76	69	55	54	47	45	38	44
1300	Inlet	85	86	87	87	86	82	80	73	70
1300	Outlet	91	85	85	84	83	81	78	73	68
1300	Breakout	77	78	71	57	56	49	47	40	46

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
1400	Inlet	87	88	89	89	88	84	82	75	72
1400	Outlet	93	87	87	86	85	83	80	75	70
1400	Breakout	79	80	73	59	58	51	49	42	48
1500	Inlet	88	89	90	90	89	85	83	76	73
1500	Outlet	94	88	88	87	86	84	81	76	71
1500	Breakout	80	81	74	60	59	52	50	43	49
1600	Inlet	89	90	91	91	90	86	84	77	74
1600	Outlet	95	89	89	88	87	85	82	77	72
1600	Breakout	81	82	75	61	60	53	51	44	50
1700	Inlet	89	90	91	91	90	86	84	77	74
1700	Outlet	95	89	89	88	87	85	82	77	72
1700	Breakout	81	82	75	61	60	53	51	44	50
1800	Inlet	90	91	92	92	91	87	85	78	75
1800	Outlet	96	90	90	89	88	86	83	78	73
1800	Breakout	82	83	76	62	61	54	52	45	51
1900	Inlet	88	90	91	90	91	89	85	81	75
1900	Outlet	95	90	89	88	87	87	84	79	73
1900	Breakout	80	82	75	60	61	56	52	48	50
2000	Inlet	89	91	92	91	92	90	86	82	76
2000	Outlet	96	91	90	89	88	88	85	80	74
2000	Breakout	81	83	76	61	62	57	53	49	51
2100	Inlet	89	91	92	91	92	90	86	82	76
2100	Outlet	96	91	90	89	88	88	85	80	74
2100	Breakout	81	83	76	61	62	57	53	49	51

High Pressure Centrifugal In-Line Fans (BS)

Performance Curves

BS 3 F40



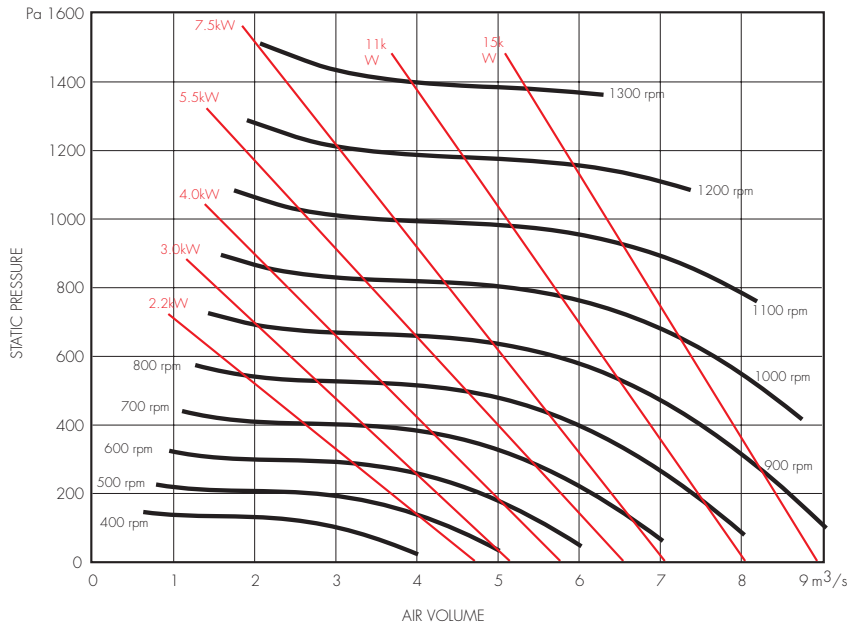
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
500	Inlet	73	74	73	72	72	68	65	59	56
500	Outlet	78	72	71	69	70	66	64	59	54
500	Breakout	65	66	57	42	42	35	32	26	33
600	Inlet	77	78	77	76	76	72	69	63	60
600	Outlet	82	76	75	73	74	70	68	63	58
600	Breakout	69	70	61	46	46	39	36	30	37
700	Inlet	80	81	80	79	79	75	72	66	63
700	Outlet	85	79	78	76	77	73	71	66	61
700	Breakout	72	73	64	49	49	42	39	33	40
800	Inlet	83	84	83	82	82	78	75	69	66
800	Outlet	88	82	81	79	80	76	74	69	64
800	Breakout	75	76	67	52	52	45	42	36	43
900	Inlet	84	85	86	86	85	81	79	72	69
900	Outlet	90	84	84	83	82	80	77	72	67
900	Breakout	76	77	70	56	55	48	46	39	45
1000	Inlet	86	87	88	88	87	83	81	74	71
1000	Outlet	92	86	86	85	84	82	79	74	69
1000	Breakout	78	79	72	58	57	50	48	41	47

r.p.m		dBA								
		63	125	250	500	1k	2k	4k	8k	@ 3m
1100	Inlet	88	89	90	90	89	85	83	76	73
1100	Outlet	94	88	88	87	86	84	81	76	71
1100	Breakout	80	81	74	60	59	52	50	43	49
1200	Inlet	89	90	91	91	90	86	84	77	74
1200	Outlet	95	89	89	88	87	85	82	77	72
1200	Breakout	81	82	75	61	60	53	51	44	50
1300	Inlet	89	90	91	91	90	86	84	77	74
1300	Outlet	95	89	89	88	87	85	82	77	72
1300	Breakout	81	82	75	61	60	53	51	44	50
1400	Inlet	90	91	92	92	91	87	85	78	75
1400	Outlet	96	90	90	89	88	86	83	78	73
1400	Breakout	82	83	76	62	61	54	52	45	51
1500	Inlet	90	91	92	92	91	87	85	78	75
1500	Outlet	96	90	90	89	88	86	83	78	73
1500	Breakout	82	83	76	62	61	54	52	45	51
1600	Inlet	91	92	93	93	92	88	86	79	76
1600	Outlet	97	91	91	90	89	87	84	79	74
1600	Breakout	83	84	77	63	62	55	53	46	52

Performance Curves

BS 4 F50



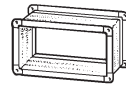
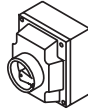
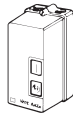
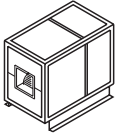
Sound Power Level Spectra dB (ref 10⁻¹² Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
400	Inlet	74	75	74	73	73	69	66	60	57
400	Outlet	79	73	72	70	71	67	65	60	55
400	Breakout	66	67	58	43	43	36	33	27	34
500	Inlet	79	80	79	78	78	74	71	65	62
500	Outlet	84	78	77	75	76	72	70	65	60
500	Breakout	71	72	63	48	48	41	38	32	39
600	Inlet	83	84	83	82	82	78	75	69	66
600	Outlet	88	82	81	79	80	76	74	69	64
600	Breakout	75	76	67	52	52	45	42	36	43
700	Inlet	86	87	86	85	85	81	78	72	69
700	Outlet	91	85	84	82	83	79	77	72	67
700	Breakout	78	79	70	55	55	48	45	39	46
800	Inlet	89	90	89	88	88	84	81	75	72
800	Outlet	94	88	87	85	86	82	80	75	70
800	Breakout	81	82	73	58	58	51	48	42	49

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
900	Inlet	88	89	90	90	89	85	83	76	73
900	Outlet	94	88	88	87	86	84	81	76	71
900	Breakout	80	81	74	60	59	52	50	43	49
1000	Inlet	89	90	91	91	90	86	84	77	74
1000	Outlet	95	89	89	88	87	85	82	77	72
1000	Breakout	81	82	75	61	60	53	51	44	50
1100	Inlet	90	91	92	92	91	87	85	78	75
1100	Outlet	96	90	90	89	88	86	83	78	73
1100	Breakout	82	83	76	62	61	54	52	45	51
1200	Inlet	90	91	92	92	91	87	85	78	75
1200	Outlet	96	90	90	89	88	86	83	78	73
1200	Breakout	82	83	76	62	61	54	52	45	51
1300	Inlet	91	92	93	93	92	88	86	79	76
1300	Outlet	97	91	91	90	89	87	84	79	74
1300	Breakout	83	84	77	63	62	55	53	46	52

High Pressure Centrifugal In-Line Fans (BS)

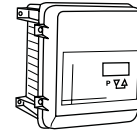
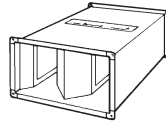
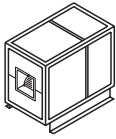
Accessories



Motor Size	Motor Phase	Motor kW	DOL Starter & Overload Stock Ref	Isolator (Factory Fitted) Stock Ref	Flexible Connection Stock Ref	Inlet Damper Stock Ref	Discharge Spigot Including Diffuser Stock Ref
BS1F22							
D	1	0.55	444744 + 444703	71ISOL4	FCBS1	CDBS1	BCBS1
D	3	0.55	444747 + 444701	71ISOL4	FCBS1	CDBS1	BCBS1
E	1	0.75	444744 + 444704	71ISOL4	FCBS1	CDBS1	BCBS1
E	3	0.75	444747 + 444701	71ISOL4	FCBS1	CDBS1	BCBS1
F	1	1.1	444744 + 444705	71ISOL4	FCBS1	CDBS1	BCBS1
F	3	1.1	444747 + 444702	71ISOL4	FCBS1	CDBS1	BCBS1
G	1	1.5	444744 + 444706	71ISOL4	FCBS1	CDBS1	BCBS1
G	3	1.5	444747 + 444702	71ISOL4	FCBS1	CDBS1	BCBS1
H	3	2.2	444747 + 444703	71ISOL4	FCBS1	CDBS1	BCBS1
J	3	3	444747 + 444704	71ISOL4	FCBS1	CDBS1	BCBS1
K	3	4	444747 + 444705	71ISOL4	FCBS1	CDBS1	BCBS1
BS2F31							
F	1	1.1	444744 + 444705	71ISOL4	FCBS2	CDBS2	BCBS2
F	3	1.1	444747 + 444702	71ISOL4	FCBS2	CDBS2	BCBS2
G	1	1.5	444744 + 444706	71ISOL4	FCBS2	CDBS2	BCBS2
G	3	1.5	444747 + 444702	71ISOL4	FCBS2	CDBS2	BCBS2
H	3	2.2	444747 + 444703	71ISOL4	FCBS2	CDBS2	BCBS2
J	3	3	444747 + 444704	71ISOL4	FCBS2	CDBS2	BCBS2
K	3	4	444747 + 444705	71ISOL4	FCBS2	CDBS2	BCBS2
L	3 *	5.5	444748 + 444706	71ISOL6	FCBS2	CDBS2	BCBS2
M	3 *	7.5	444748 + 444707	71ISOL6	FCBS2	CDBS2	BCBS2
N	3 *	11	444749 + 444708	71ISOL6	FCBS2	CDBS2	BCBS2
BS3F40							
F	1	1.1	444744 + 444705	71ISOL4	FCBS3	CDBS3	BCBS3
F	3	1.1	444747 + 444702	71ISOL4	FCBS3	CDBS3	BCBS3
G	1	1.5	444744 + 444706	71ISOL4	FCBS3	CDBS3	BCBS3
G	3	1.5	444747 + 444702	71ISOL4	FCBS3	CDBS3	BCBS3
H	3	2.2	444747 + 444703	71ISOL4	FCBS3	CDBS3	BCBS3
J	3	3	444747 + 444704	71ISOL4	FCBS3	CDBS3	BCBS3
K	3	4	444747 + 444705	71ISOL4	FCBS3	CDBS3	BCBS3
L	3 *	5.5	444748 + 444706	71ISOL6	FCBS3	CDBS3	BCBS3
M	3 *	7.5	444748 + 444707	71ISOL6	FCBS3	CDBS3	BCBS3
N	3 *	11	444749 + 444708	71ISOL6	FCBS3	CDBS3	BCBS3
BS3F40							
H	3	2.2	444747 + 444703	71ISOL4	FCBS4	CDBS4	BCBS4
J	3	3	444747 + 444704	71ISOL4	FCBS4	CDBS4	BCBS4
K	3	4	444747 + 444705	71ISOL4	FCBS4	CDBS4	BCBS4
L	3 *	5.5	444748 + 444706	71ISOL6	FCBS4	CDBS4	BCBS4
M	3 *	7.5	444748 + 444707	71ISOL6	FCBS4	CDBS4	BCBS4
N	3 *	11	444749 + 444708	71ISOL6	FCBS4	CDBS4	BCBS4
P	3 *	15	444750 + 444709	71ISOL6	FCBS4	CDBS4	BCBS4

* Overloads sized to suit a Star/Delta Starter

Accessories



Motor Size	Motor Phase	Motor kW	Matching Attenuator				**eDemand Controller		
			900mm Stock Ref	1200mm Stock Ref	1500mm Stock Ref	1800mm Stock Ref	Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
BS1F22									
D	1	0.55	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	-	-	-
D	3	0.55	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444166	444177	444172
E	1	0.75	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	-	-	-
E	3	0.75	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444166	444177	444172
F	1	1.1	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	-	-	-
F	3	1.1	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444166	444177	444173
G	1	1.5	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	-	-	-
G	3	1.5	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444166	444177	444173
H	3	2.2	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444167	-	444174
J	3	3	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444167	-	444174
K	3	4	BSBS1-900	BSBS1-1200	BSBS1-1500	BSBS1-1800	444167	-	444175
BS2F31									
F	1	1.1	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	-	-	-
F	3	1.1	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444166	444177	444173
G	1	1.5	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	-	-	-
G	3	1.5	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444166	444177	444173
H	3	2.2	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444167	-	444174
J	3	3	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444167	-	444174
K	3	4	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444167	-	444175
L	3 *	5.5	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	444168	-	444175
M	3 *	7.5	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	-	-	444176
N	3 *	11	BSBS2-900	BSBS2-1200	BSBS2-1500	BSBS2-1800	-	-	-
BS3F40									
F	1	1.1	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	-	-	-
F	3	1.1	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444166	444177	444173
G	1	1.5	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	-	-	-
G	3	1.5	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444166	444177	444173
H	3	2.2	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444167	-	444174
J	3	3	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444167	-	444174
K	3	4	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444167	-	444175
L	3 *	5.5	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	444168	-	444175
M	3 *	7.5	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	-	-	444176
N	3 *	11	BSBS3-900	BSBS3-1200	BSBS3-1500	BSBS3-1800	-	-	-
BS3F40									
H	3	2.2	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	444167	-	444174
J	3	3	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	444167	-	444174
K	3	4	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	444167	-	444175
L	3 *	5.5	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	444168	-	444175
M	3 *	7.5	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	-	-	444176
N	3 *	11	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	-	-	-
P	3 *	15	BSBS4-900	BSBS4-1200	BSBS4-1500	BSBS4-1800	-	-	-

* Overloads sized to suit a Star/Delta Starter

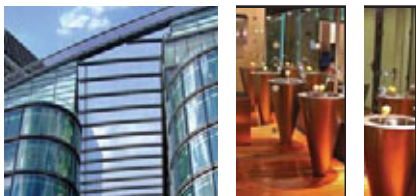
** For full range of speed controller options, see Accessories & Controllers Section

Twin Fan

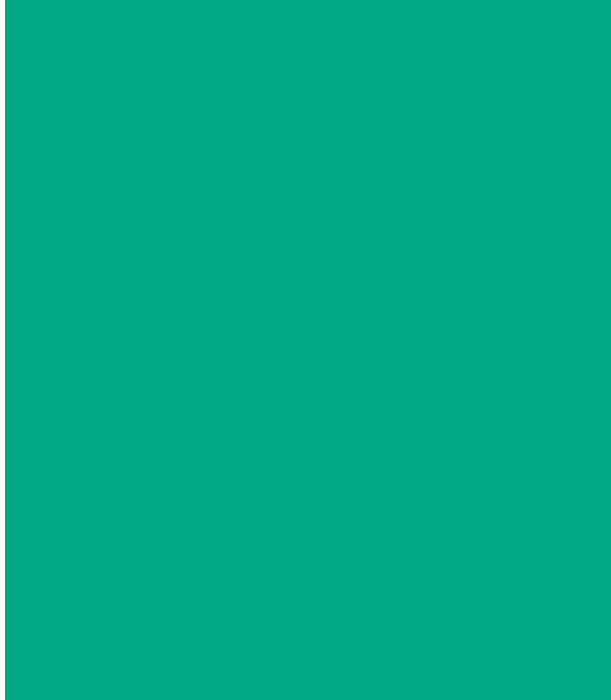
Vent-Axia twin fan range encompasses direct and belt driven models with air performance up to 2.5m³/s with circular duct from 100 to 500mm and rectangular ducts up to 1000x 475mm.

Our range of twin fans also includes roof mounted Galaxy units, which are fully weatherproofed and offer a low profile for discrete roof top mounting.

As with many Vent-Axia units our Trackmaster twin fan controller range offers the end user flexibility when interfaced with our without a BMS. Inline with our constant drive to offer energy efficient solutions the night time setback facility reduces the fan output during low occupancy periods.



Range



Vent-Axia®

Acoustic Twin Fans (ATQ)

Features and Benefits

- Available in sizes from 100 to 500mm dia
- 50mm Acoustically treated housing, Class 'O' rated, self extinguishing, zero burn rate, resists ignition, no toxic fumes
- Motors protected to IP44
- Motor insulation Class B
- Maximum operating temperature 50°C
- Standard Thermal Overload Protection
- Quick release access panel
- Fully watherproof units available
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1 & 2
- 2 Year Guarantee

VentAxia ATQ fans feature a 50mm acoustic lined sound controlled housing **rated Class 'O'**. The housing is designed to be as compact as possible for concealed false ceiling applications. Manufactured in galvanised sheet metal, with integral anchorage points to allow the fan to be suspended horizontally via drop rods or anti vibration mounts, ensuring a quick and easy solution to installation. The access panel is easily removed for inspection using the four quick release catches provided. **Individual gravity operated shutters** prevent air from passing through the unit during shut down periods.

Acoustic Twin fans are also available, finished with optional C.R.P (Chlorinated Rubber Paint), ensuring the unit is fully weatherproofed and suitable for external mounting. All weatherproofed units are manufactured to order. **Note the standard product codes are suffixed with 'WP' eg ATQ100-12CWP.**

Ten models are available in sizes 100, 125, 150, 160, 200, 250, 315, 400 and 500, providing air volumes from 0.057m³/s to 1.40m³/s (205m³/h to 5040m³/h) at free air. Designed for pressures up to 550 Pa.

Motors

At the heart of the range is a proven 230V/1/50Hz external rotor motor and forward curved galvanised impeller assembly. The assembly is dynamically balanced to **ISO 1940**. Motors are rated to **IP44** according to **BS EN 60529**. Ball bearings are greased for life and allow the fan to run at any angle. Insulation is **Class 'B' (from -15°C to +50°C)**. The size 500 utilizes an internal rotor motor with Class B insulation (from -15°C to +40°C).

All Acoustic fans are suitable for speed control, an Auto Transformer is recommended to ensure minimum noise levels during speed control so eliminating any possibility of motor harmonic noise.

For eDemand controls ref to Accessories & Controllers Section.

Terminal Box

An **IP54** Terminal Box is supplied with all models with 20mm cable gland entry.

Performance and Sound

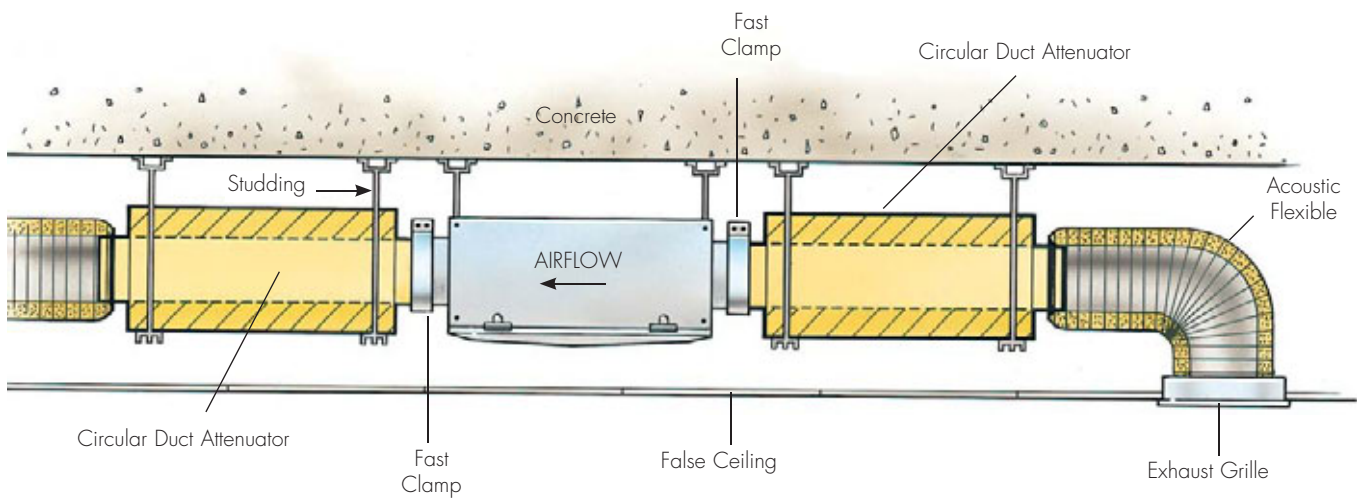
Tested to **BS 848 Parts 1 & 2**. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet, outlet and breakout sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt).

Quality Assurance

Design and manufacture is in accordance with **BS EN ISO 9001**.

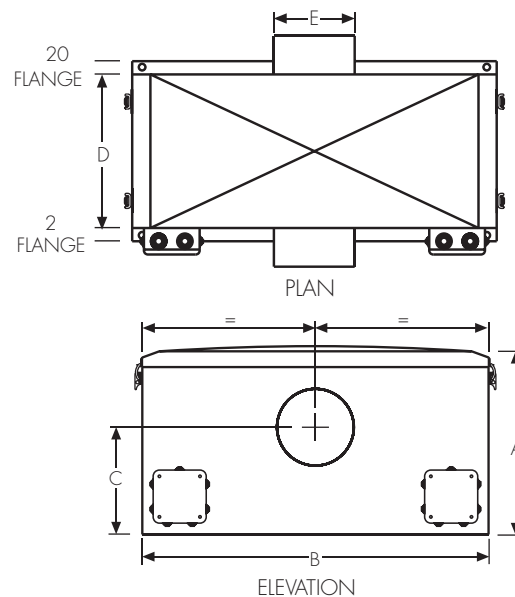


Typical Installation



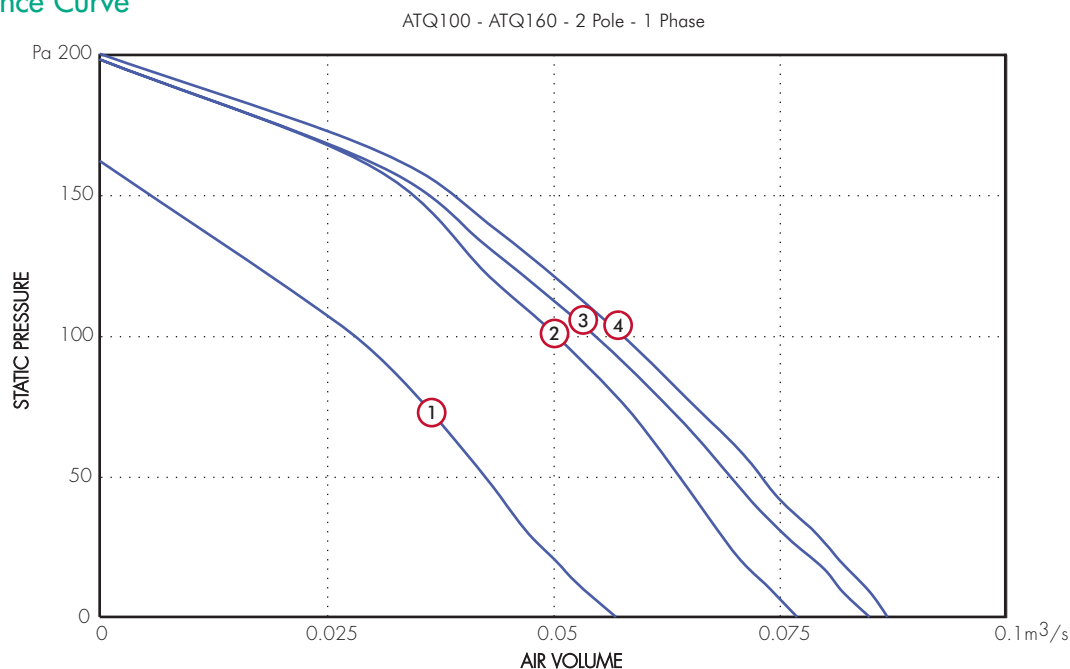
Fan Dimensions (mm)

Stock Ref. No.	A	B	C	D	E	Kg (approx.)
ATQ10012C	312	635	171	510	97	25
ATQ12512C	312	635	171	510	122	25
ATQ15012C	312	635	171	510	147	25
ATQ16012C	312	635	171	510	157	25
ATQ20012C	362	770	203	610	197	35
ATQ25012C	362	770	233	610	247	40
ATQ31512LC	477	880	258	760	312	50
ATQ31514HC	517	1100	295	810	312	70
ATQ40014C	517	1100	253	810	397	75
ATQ50014C	672	1300	357	1060	497	120



Acoustic Twin Fans (ATQ)

Performance Curve



Performance Guide

Unit Code	Phase	Nom. RPM	Curve Ref.	m ³ /s at Pa				Motor kW	Amps F.L.C.	Amps S.C.	dBA @ 3m
				0	50	100	150				
ATQ10012C	1	1650	①	0.057	0.042	0.028		0.08	0.34	0.36	22
ATQ12512C	1	1650	②	0.077	0.064	0.05	0.035	0.08	0.34	0.36	24
ATQ15012C	1	1650	③	0.085	0.07	0.055	0.036	0.08	0.34	0.36	23
ATQ16012C	1	1650	④	0.087	0.073	0.058	0.039	0.08	0.34	0.36	23

S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

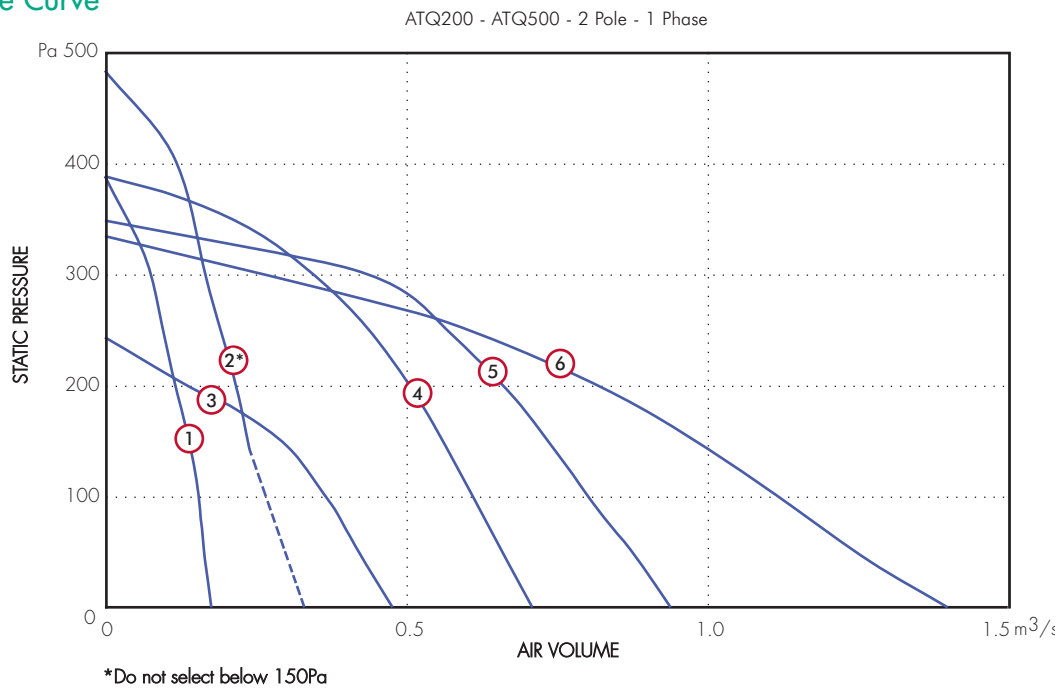
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code		63	125	250	Mid Octave Bands					dBA @ 3m
					500	1k	2k	4k	8k	
ATQ10012C	Inlet	52	50	41	37	34	34	32	32	22
ATQ10012C	Outlet	48	54	48	41	42	42	38	36	28
ATQ10012C	Breakout	49	49	43	38	36	34	30	31	22
ATQ12512C	Inlet	49	51	42	39	33	35	34	33	23
ATQ12512C	Outlet	50	57	49	44	39	42	40	39	29
ATQ12512C	Breakout	52	53	44	39	37	37	36	34	24
ATQ15012C	Inlet	46	53	41	39	37	38	36	34	24
ATQ15012C	Outlet	49	56	49	42	43	45	43	41	30
ATQ15012C	Breakout	55	50	43	38	38	35	30	31	23
ATQ16012C	Inlet	46	53	41	39	37	38	36	34	24
ATQ16012C	Outlet	49	56	49	42	43	45	43	41	30
ATQ16012C	Breakout	55	50	43	39	38	35	30	31	23

Published dB(A) figures are free field sound levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa. The free field sound power level spectra figures are dB with reference of 10^{-12} Watts.

To ensure minimum noise levels during speed control an **auto transformer speed controller** is recommended.

Performance Curve



Performance Guide

Unit Code	Phase	Nom. RPM	Curve Ref.	m ³ /s at Pa												Motor kW	Amps F.L.C.	Amps S.C.	dBA @ 3m
				0	50	100	150	200	250	300	350	400	450						
ATQ20012C	1	1700	1	0.177	0.163	0.153	0.141	0.116	0.094	0.077	0.036				0.175	0.77	0.92	29	
ATQ25012C	1	2050	2				0.234	0.217	0.191	0.163	0.147	0.118	0.053	0.3	1.31	1.5	36		
ATQ31512LC	1	1900	3	0.478	0.419	0.364	0.293	0.126						0.36	1.58	3.3	35		
ATQ31514HC	1	1280	4	0.71	0.66	0.614	0.558	0.505	0.436	0.346	0.207			0.525	2.29	4.4	37		
ATQ40014C	1	1230	5	0.94	0.876	0.802	0.733	0.662	0.566	0.442				1.06	5.38	8.5	48		
ATQ50014C	1	900	6	1.4	1.247	1.12	0.978	0.821	0.603	0.26				1.6	8	13	45		

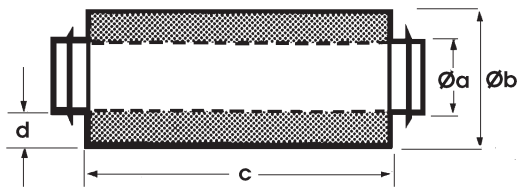
S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Code	Unit	Mid Octave Bands								dBA @ 3m
		63	125	250	500	1k	2k	4k	8k	
ATQ20012C	Inlet	57	67	54	50	40	46	44	41	34
ATQ20012C	Outlet	60	69	61	55	52	51	50	48	40
ATQ20012C	Breakout	54	57	49	46	44	42	38	34	29
ATQ25012C	Inlet	63	71	61	52	46	49	49	46	39
ATQ25012C	Outlet	70	74	65	60	60	61	59	58	47
ATQ25012C	Breakout	60	62	56	51	51	51	45	39	36
ATQ315L12C	Inlet	64	70	60	52	51	54	53	49	40
ATQ315L12C	Outlet	69	72	63	61	65	62	61	59	49
ATQ315L12C	Breakout	68	61	55	49	51	46	42	36	35
ATQ315H14C	Inlet	63	68	62	55	57	57	57	54	43
ATQ315H14C	Outlet	69	74	69	65	66	64	62	61	51
ATQ315H14C	Breakout	63	68	56	50	52	49	48	42	37
ATQ40014C	Inlet	69	79	67	59	60	62	61	59	49
ATQ40014C	Outlet	76	81	73	70	71	71	70	67	57
ATQ40014C	Breakout	75	74	70	63	62	61	57	51	48
ATQ50014C	Inlet	70	77	71	65	64	62	58	53	49
ATQ50014C	Outlet	75	81	71	70	69	67	66	61	55
ATQ50014C	Breakout	69	74	64	61	60	57	52	41	45

Acoustic Twin Fans (ATQ)

Duct Attenuators Dimensions (mm)

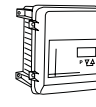
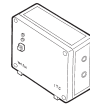
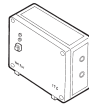
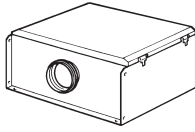


Length	Stock			kg approx
	Ref. No.	Øa	Øb	
300	10534100	100	200	2.6
300	10534125	125	225	3.6
300	10534150	150	250	4
300	10534160	160	250	4
600	10535100	100	200	4
600	10535125	125	225	4.5
600	10535150	150	250	6
600	10535160	160	250	6
600	10535200	200	315	7.4
600	10535250	250	355	10.2
600	10535315	315	450	13
600	10535400	400	606	18.5
900	10536100	100	200	7
900	10536125	125	225	8
900	10536150	150	250	9
900	10536160	160	250	9
900	10536200	200	315	11
900	10536250	250	355	14.7
900	10536315	315	450	18
900	10336400	400	606	38
900	10536500	500	711	43
1200	10537200	200	315	14
1200	10537250	250	355	18.5
1200	10537315	315	450	21.5
1200	10537400	400	606	50
1200	10537500	500	711	60

Duct Attenuator Insertion Losses

Stock Ref.	Duct Length	Duct Ø	Insertion Losses (dB)							
			63	125	250	500	1k	2k	4k	8k
10534100	300	100	3	4	10	18	23	25	25	12
10534125	300	125	3	4	8	17	21	23	21	11
10534150	300	150	3	3	6	14	20	23	21	11
10534160	300	160	3	3	6	14	20	23	21	11
10535100	600	100	5	8	16	33	39	40	36	17
10535125	600	125	4	8	13	30	34	35	31	15
10535150	600	150	4	7	13	23	29	36	31	15
10535160	600	160	4	7	13	23	29	36	31	20
10535200	600	200	4	5	11	21	26	32	20	9
10535250	600	250	3	6	10	19	24	29	19	8
10535315	600	315	3	5	8	16	21	22	16	15
10535400	600	400	3	4	7	14	18	19	14	13
10536100	900	100	10	13	20	39	45	38	35	18
10536125	900	125	9	12	18	37	41	37	32	16
10536150	900	150	8	9	15	30	37	37	33	17
10536160	900	160	8	9	15	30	37	37	33	17
10536200	900	200	7	9	14	27	31	36	25	12
10536250	900	250	5	8	13	24	30	31	22	11
10536315	900	315	4	7	11	20	31	27	17	12
10536400	900	400	3	5	9	19	26	20	13	11
10536500	900	500	3	4	9	15	23	17	12	11
10537200	1200	200	10	12	17	35	40	43	27	13
10537250	1200	250	7	9	15	31	36	38	26	12
10537315	1200	315	6	8	13	23	32	30	18	11
10537400	1200	400	6	8	14	24	30	28	17	9
10537500	1200	500	5	7	13	18	26	23	15	9

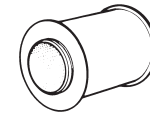
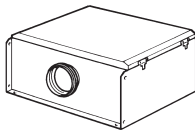
Accessories



Duct Ø	Standard	Weatherproofed	**ITC Man/Auto	**ITC-DS 12/24hr	*eDemand Controller			Anti-
	Unit	Unit	Changeover	Auto Changeover	Voltage	1/3 Phase	3 Phase	Vibration
	Stock Ref. No.	Stock Ref. No.	Controller	Controller	Control	Inverter	Inverter	Mounts
			Stock Ref. No.	Stock Ref. No.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
100	ATQ10012C	ATQ100-12CWP	10314200	10314210	444164	-	-	10523033
125	ATQ12512C	ATQ125-12CWP	10314200	10314210	444164	-	-	10523033
150	ATQ15012C	ATQ150-12CWP	10314200	10314210	444164	-	-	10523033
160	ATQ16012C	ATQ160-12CWP	10314200	10314210	444164	-	-	10523033
200	ATQ20012C	ATQ200-12CWP	10314200	10314210	444164	-	-	10523033
250	ATQ25012C	ATQ250-12CWP	10314200	10314210	444164	-	-	10523033
315	ATQ31512LC	ATQ315-12LCWP	10314200	10314210	444164	-	-	10523033
315	ATQ31514HC	ATQ315-14HCWP	10314200	10314210	444164	-	-	10523033
400	ATQ40014C	ATQ400-14CWP	10314200	10314210	444164	-	-	10523033
500	ATQ50014C	ATQ500-14CWP	10314200	10314210	444165	-	-	10523033

* For full range of speed controller options, see Accessories & Controllers Section

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section



Duct Ø	Standard	Weatherproofed	RVC Remote	RSC Remote	Auto	Duct Attenuator			
	Unit	Unit	Visual	Visual	transformer	300mm	600mm	900mm	1200mm
	Stock Ref.	Stock Ref.	Indicator	Indicator	Stock Ref.	Attenuator	Attenuator	Attenuator	Attenuator
			Stock Ref.	Stock Ref.		Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
100	ATQ10012C	ATQ100-12CWP	10314220	10314230A	10314103	10534100	10535100	10536100	-
125	ATQ12512C	ATQ125-12CWP	10314220	10314230A	10314103	10534125	10535125	10536125	-
150	ATQ15012C	ATQ150-12CWP	10314220	10314230A	10314103	10534150	10535150	10536150	-
160	ATQ16012C	ATQ160-12CWP	10314220	10314230A	10314103	-	10535160	-	-
200	ATQ20012C	ATQ200-12CWP	10314220	10314230A	10314103	-	10535160	10536200	10537200
250	ATQ25012C	ATQ250-12CWP	10314220	10314230A	10314103	-	10535250	10536250	10537250
315	ATQ31512LC	ATQ315-12LCWP	10314220	10314230A	10314103	-	10535315	10536315	10537315
315	ATQ31514HC	ATQ315-14HCWP	10314220	10314230A	10314103	-	10535315	10536315	10537315
400	ATQ40014C	ATQ400-14CWP	10314220	10314230A	10314107	-	10535400	10536400	10537400
500	ATQ50014C	ATQ500-14CWP	10314220	10314230A	10314113	-	10535400	10536500	-

Vent-Axia Power-Line® (TDF)

Features and Benefits

- **Direct Drive Twin Fan (Run & standby)**
- **Backward Curved Centrifugal Impellers**
- **Operating temperatures up to 40°C**
- **Performance range up to 2.72m³/s**
- **Static Pressure Development up to 500pa**
- **Speed Controllable**
- **Quality assured to BS EN ISO 9001**
- **Performance listed to BS 848 Part 1**

The TDF range are twin backward curved centrifugal impellers (Run & Standby) designed for induct installations.

Casings

Robustly constructed from galvanised sheet steel, fitted with propriety flanges at each end in accordance with DW142.

Impellers

Aerodynamically designed backward curved constructed from aluminium or steel plate depending on size and rotational speed.

The rotor of the external rotor motor forms the hub of the impeller. Rotors and impellers are factory matched and statically and dynamically balanced on precision machines according to VDI2060 quality class Q6.3.

Motors

Maintenance free external rotor motors with generously dimensioned sealed for

life ball bearings encapsulating a high temperature lubricant. The bearings allow for the fan to be mounted at any angle. Insulation is Class B with the enclosure IP44 according to DIN 40050. The electrical design corresponds to VDE 0530/12.84. The motors are suitable for operation in atmosphere up to 95% RH and ambients up to 40°C.

Motors are wound to suit either 240V 50HZ 1PH or 415V 50HZ 3PH electrical supply. All motors are fitted with Hot Spot protection by means of a thermal contact switch incorporated in the motor windings to prevent motor damage due to overloading. As the motors have a special torque-speed characteristic they are ideally suitable for speed control by voltage reduction.

Performance

Performance figures given have been tested using installation Type 'D' in accordance with BS848 Part 1 1980 and BS848 Part 2 1985. The aerodynamic performance data being to tolerance Class 'C' as recommended by BSI C.A.M.E Scheme, Certification No CM005.

Sound Levels

Sound Levels are measured in a reverberent chamber in accordance with BS848 Part 2. Sound level measurements are taken with the fan operating at 20% of its maximum pressure development.

Published dBA figures are sound pressure levels measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the real sound level experienced will depend on the acoustic characteristics of the area being served.

Quality Assurance

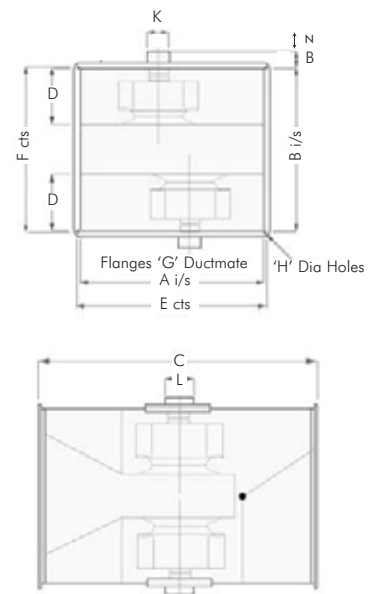
Design and manufacture is in accordance with Quality Assured to BS EN ISO9001



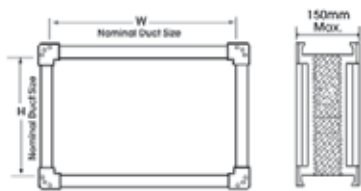
Fan Dimensions (mm)

Unit Size	A	B	C	D	E	F	G	H	J	K	L	N	Max Weight Kg
220	375	330	570	115	400	355	25	9	40	150	115	110	24
250	375	330	570	115	400	355	25	9	40	150	115	110	26
280	425	540	780	190	450	565	25	9	40	150	115	175	40
320	500	655	900	230	525	680	25	9	50	150	130	220	65
380	550	745	1015	260	585	780	35	11	50	160	130	240	75
420	625	830	1130	295	600	865	35	11	50	230	230	220	103
480	700	925	1250	325	735	960	35	11	65	230	230	300	112
520	775	1055	1385	355	810	1090	35	11	50	230	230	350	145
600	850	1200	1530	400	885	1235	35	11	55	230	230	400	180
700	950	1280	1675	430	985	1295	35	11	55	230	230	450	203

Note: For motor removal allow D+J minimum clearance



Power Line TDF Flexible Connections



Dimensions in (mm)

Unit Code	W	H	Ductmate
220	375	330	25
250	375	330	25
280	425	540	25
320	500	655	25
380	550	745	35
420	625	830	35
480	700	925	35
520	775	1055	35
600	850	1200	35
700	950	1280	35

Power Line TDF Attenuators



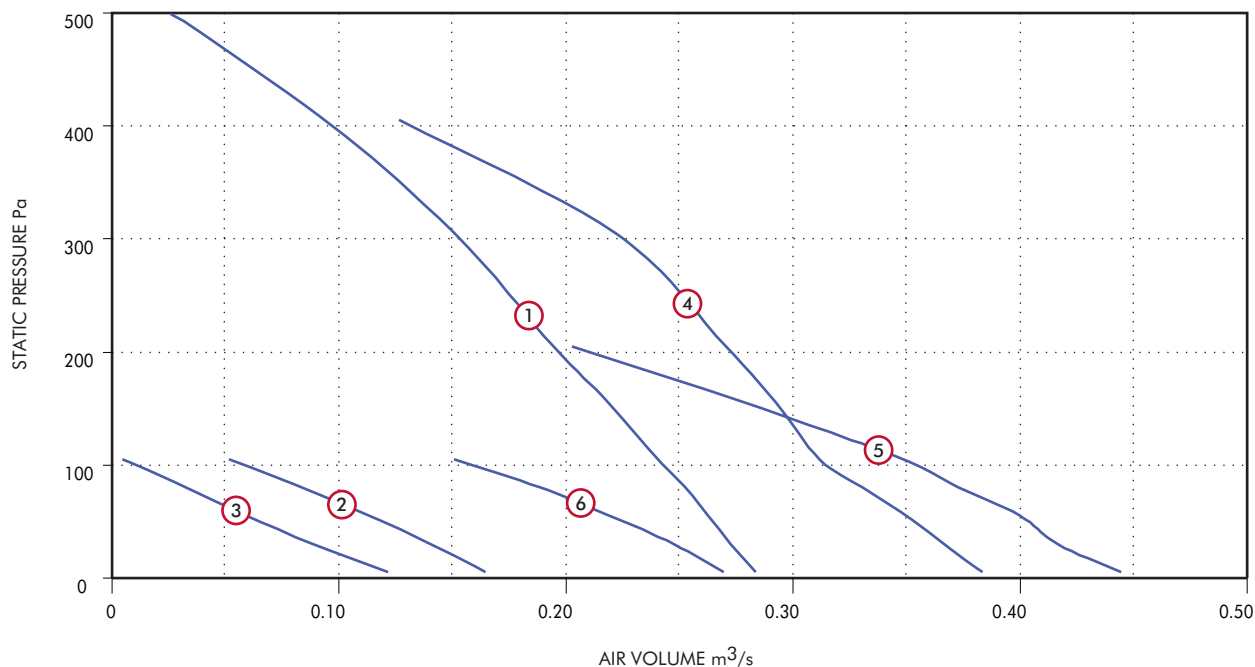
Unit Code

RUTDS	W	L	H	Ductmate	Weight
220	375	900	330	25	12
250	375	900	330	25	12
280	425	900	540	25	18
320	500	900	655	25	30
380	550	1200	745	35	62
420	625	1200	830	35	70
480	700	1500	925	35	96
520	775	1500	1055	35	110
600	850	1800	1200	35	150
700	950	1800	1260	35	240

Vent-Axia Power-Line (TDF)

Performance Curve

TDF220 to TDF280 - 2/4/6 Pole - 1 phase



Performance Guide

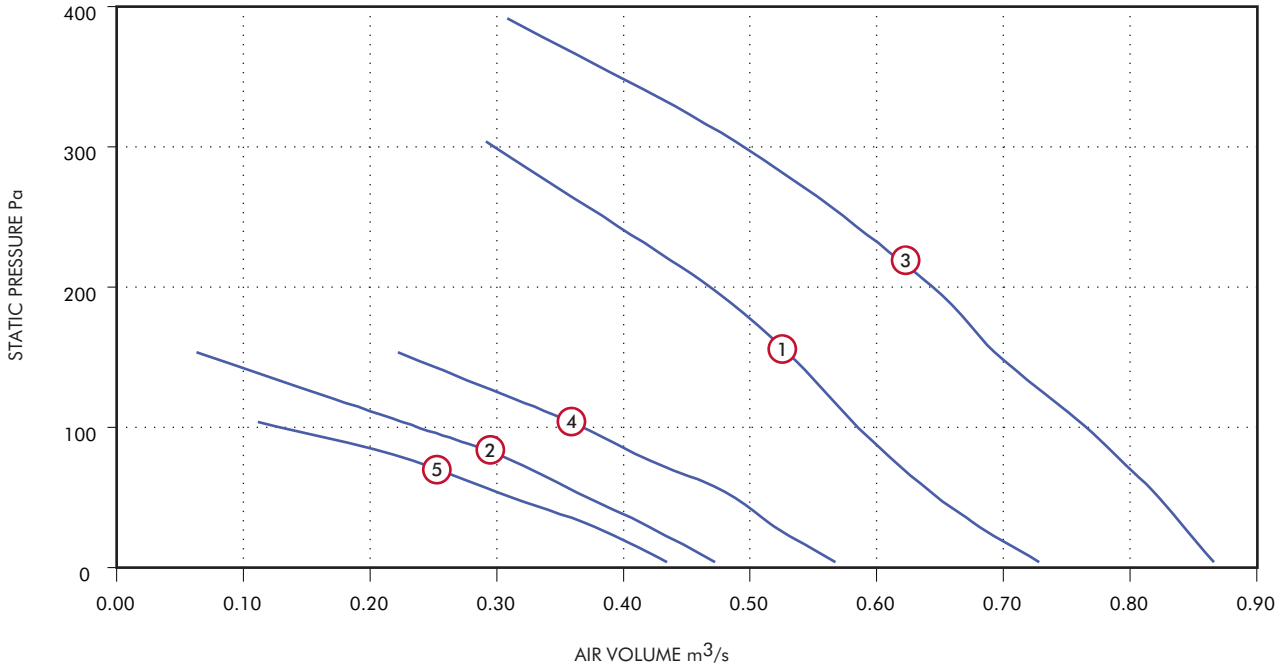
Size	Phase			Curve Ref.	m³/s at Pa									Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
	Motor	Pole	r.p.m.		0	25	50	75	100	150	200	300	400				
TDF220	1	2	2700	1	0.285	0.274	0.264	0.254	0.242	0.22	0.196	0.15	0.21	3.6	0.9	59	
TDF220	1	4	1300	2	0.166	0.142	0.114	0.085	0.053				0.07	1	0.44	40	
TDF220	1	6	950	3	0.123	0.09	0.06	0.034	0.006				0.15	1.4	0.62	36	
TDF250	1	2	2500	4	0.385	0.368	0.351	0.332	0.313	0.294	0.272	0.223	0.128	4.6	1.15	65	
TDF280	1	4	1325	5	0.446	0.418	0.401	0.374	0.35	0.28	0.204		0.17	1.35	0.9	53	
TDF280	1	6	910	6	0.271	0.249	0.22	0.19	0.152				0.08	0.75	0.39	46	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dBa @ 3m
TDF220	2	61	71	79	78	69	68	65	57	58
TDF220	4	56	59	60	58	55	54	50	41	40
TDF220	6	55	51	58	54	54	50	46	34	36
TDF250	2	67	76	80	85	84	83	80	73	65
TDF280	4	62	76	79	72	69	66	62	63	53
TDF280	6	62	66	68	64	63	60	54	43	46

Performance Curve

TDF320 to TDF380 - 4/6/8 Pole - 1 phase



Performance Guide

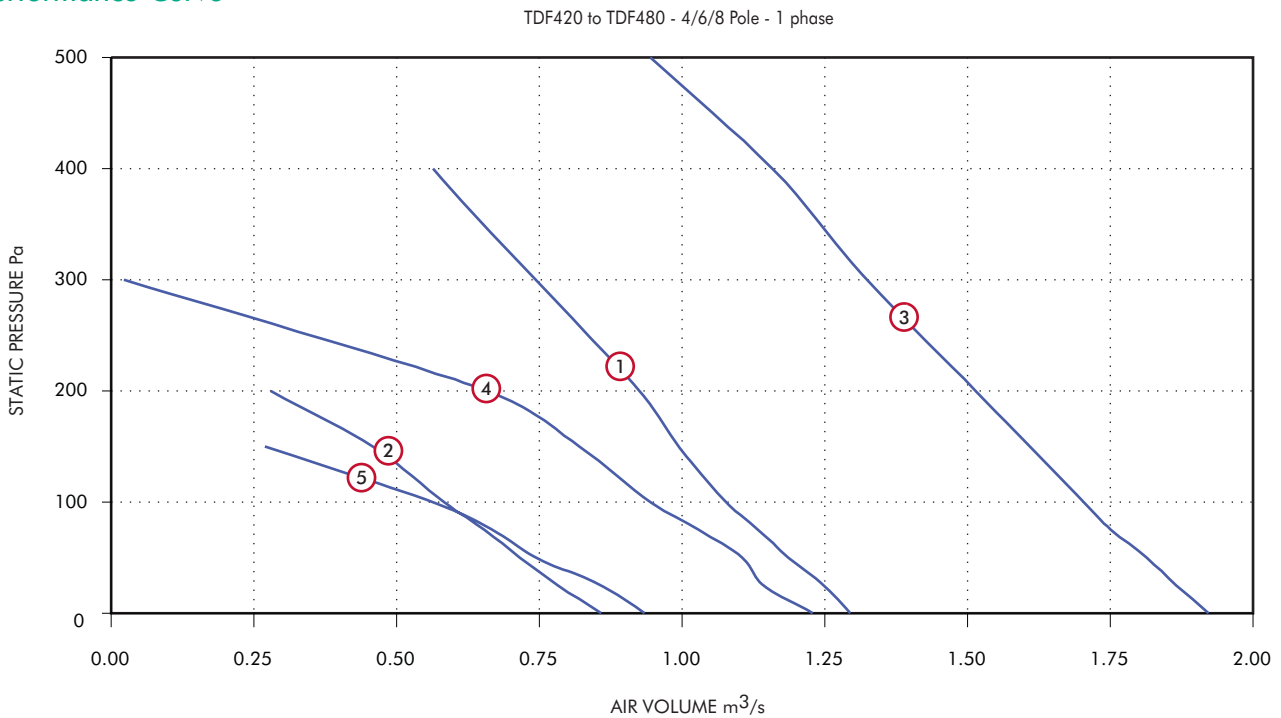
Size	Phase		r.p.m.	Curve Ref.	m³/s at Pa								Motor kW	S.C. Amps	F.L.C. Amps	dBa @ 3m	
	Motor	Pole			0	25	50	75	100	150	200	300					400
TDF320	1	4	1375	①	0.731	0.684	0.646	0.613	0.584	0.532	0.465	0.294	0.31	1.35	3.7	58	
TDF320	1	6	860	②	0.475	0.423	0.366	0.309	0.228	0.066			0.12	1.1	0.54	44	
TDF380	1	4	1365	③	0.869	0.845	0.822	0.793	0.763	0.696	0.642	0.491	0.285	0.52	5	2.2	59
TDF380	1	6	800	④	0.57	0.522	0.484	0.418	0.316	0.225			0.17	1.6	0.8	47	
TDF380	1	8	655	⑤	0.437	0.38	0.304	0.228	0.114				0.13	1	0.68	40	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dbA @ 3m
TDF320	4	65	84	79	77	73	70	65	58	58
TDF320	6	63	65	64	61	61	56	50	45	44
TDF380	4	66	84	78	79	75	71	66	59	59
TDF380	6	70	69	67	65	63	60	53	46	47
TDF380	8	53	64	60	59	58	51	42	33	40

Vent-Axia Power-Line (TDF)

Performance Curve



Performance Guide

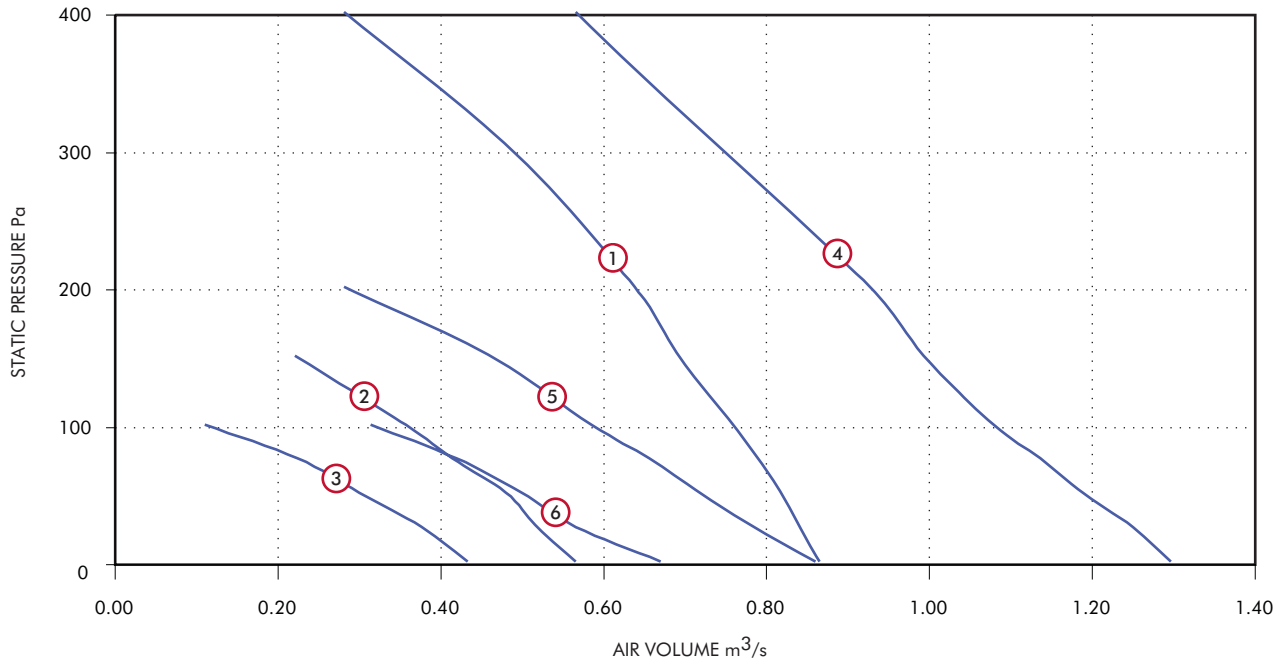
Size	Phase		r.p.m.	Curve Ref.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
	Motor	Pole			0	25	50	75	100	150	200	300	400	500				
TDF420	1	4	1280	①	1.301	1.254	1.192	1.14	1.083	0.977	0.931	0.750	0.57	0.74	7	3.2	61	
TDF420	1	6	840	②	0.864	0.788	0.722	0.66	0.589	0.465	0.285			0.3	2	1.5	52	
TDF480	1	4	1360	③	1.928	1.871	1.843	1.757	0.71	1.615	1.52	1.33	1.164	0.95	1.3	15	5.7	66
TDF480	1	6	905	④	1.235	1.149	1.111	1.035	0.95	0.826	0.665	0.028		0.45	4.2	2.2	53	
TDF480	1	8	670	⑤	0.94	0.864	0.75	0.674	0.57	0.275				0.23	2.05	1.15	45	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dba @ 3m
TDF420	4	74	91	83	81	76	72	69	65	61
TDF420	6	75	86	74	71	67	65	58	48	52
TDF480	4	76	95	88	86	81	76	76	71	66
TDF480	6	76	82	77	73	70	65	59	53	53
TDF480	8	69	73	69	64	62	56	50	42	45

Performance Curve

TDF380 to TDF420 - 4/6/8 Pole - 3 phase



Performance Guide

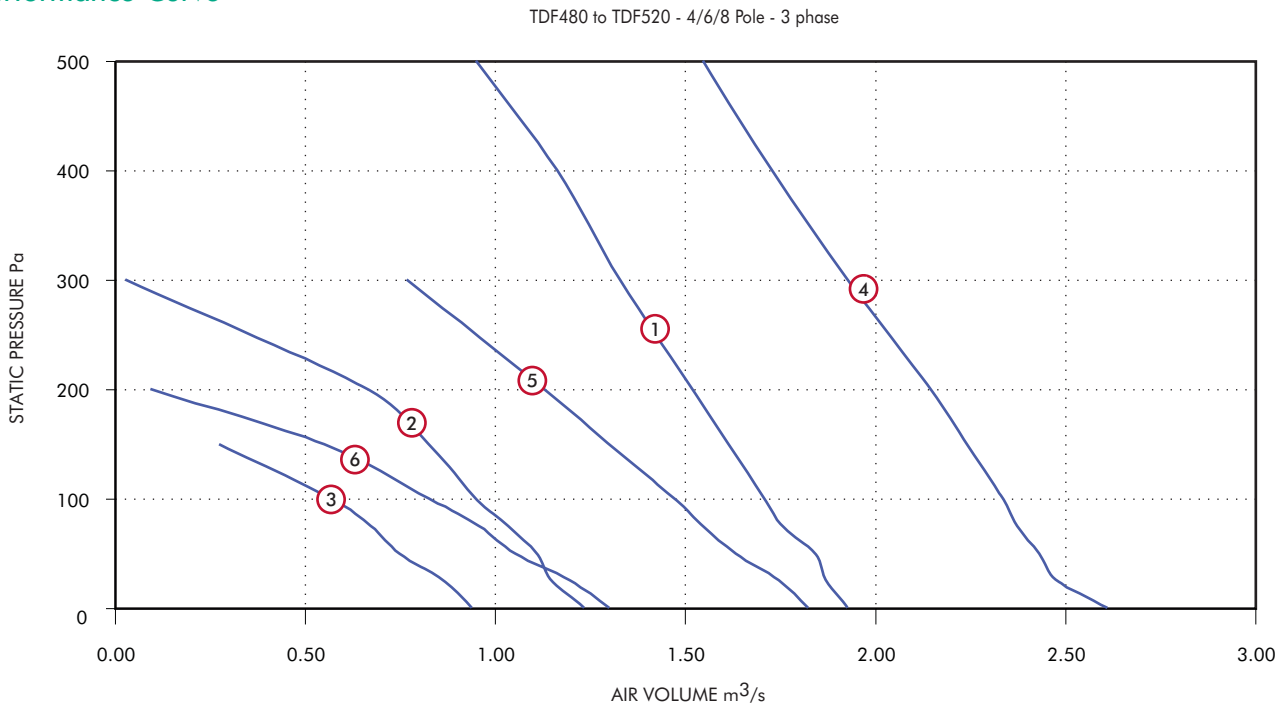
Size	Phase			Curve Ref.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
	Motor	Pole	r.p.m.		0	25	50	75	100	150	200	300	400					
TDF380	3	4	1365	①	0.869	0.845	0.822	0.793	0.763	0.696	0.642	0.491	0.285	0.46	2.5	0.85	59	
TDF380	3	6	800	②	0.57	0.522	0.484	0.418	0.361	0.225				0.16	1.05	0.36	47	
TDF380	3	8	655	③	0.437	0.38	0.304	0.228	0.114					0.09	0.5	0.26	40	
TDF420	3	4	1280	④	1.301	1.254	1.192	1.14	1.083	0.997	0.931	0.75	0.57	0.69	3.4	1.3	61	
TDF420	3	6	840	⑤	0.864	0.788	0.722	0.66	0.589	0.465	0.285			0.26	1.1	0.49	52	
TDF420	3	8	670	⑥	0.674	0.57	0.503	0.423	0.318					0.12	0.55	0.27	45	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dBa @ 3m
TDF380	4	66	84	78	79	75	71	66	59	59
TDF380	6	70	69	67	65	63	60	53	46	47
TDF380	8	53	64	60	59	58	51	42	33	40
TDF420	4	74	91	83	81	76	72	69	65	61
TDF420	6	75	86	74	71	67	65	58	48	52
TDF420	8	68	70	67	63	64	59	49	39	45

Vent-Axia Power-Line (TDF)

Performance Curve



Performance Guide

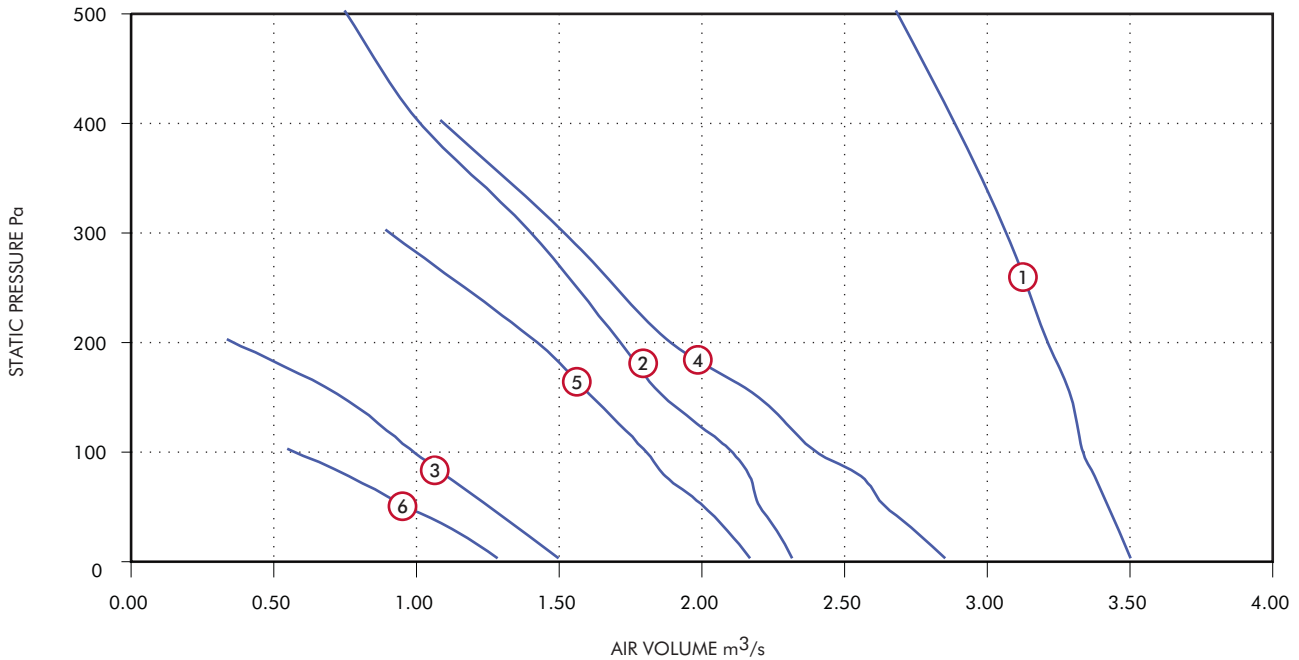
Size	Phase			Curve Ref.	m ³ /s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
	Motor	Pole	r.p.m.		0	25	50	75	100	150	200	300	400	500				
TDF480	3	4	1360	①	1.928	1.871	1.843	1.757	1.71	1.615	1.52	1.33	1.164	0.95	1.25	9.2	2.3	66
TDF480	3	6	905	②	1.235	1.149	1.111	1.035	0.95	0.826	0.665	0.028			0.39	1.75	0.81	53
TDF480	3	8	670	③	0.94	0.864	0.75	0.674	0.57	0.275					0.18	1	0.41	45
TDF520	3	4	1345	④	2.612	2.479	2.432	2.375	2.337	2.242	2.147	1.928	1.729	1.548	1.8	10	3.4	67
TDF520	3	6	865	⑤	1.824	1.748	1.634	1.548	1.472	1.301	1.13	0.769			0.69	3.6	1.5	55
TDF520	3	8	625	⑥	1.301	1.197	1.054	0.959	0.826	0.551	0.095				0.28	1.3	0.56	46

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dBa @ 3m
TDF480	4	76	95	88	86	81	76	76	71	66
TDF480	6	76	82	77	73	70	65	59	53	53
TDF480	8	69	73	69	64	62	56	50	42	45
TDF520	6	80	81	78	80	71	62	60	52	55
TDF520	8	70	71	68	64	61	54	49	40	46

Performance Curve

TDF600 to TDF700 - 4/6/8/12 Pole - 3 phase



Performance Guide

Size	Phase			Curve Ref.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
	Motor	Pole	r.p.m.		0	25	50	75	100	150	200	300	400	500				
TDF600	3	4	1425	①	3.515	3.474	3.431	3.388	3.345	3.303	3.220	3.075	2.893	2.692	4.1	29	6.8	70
TDF600	3	6	925	②	2.33	2.276	2.21	2.21	2.107	1.858	1.719	1.404	1.016	0.76	1.2	8	2.6	56
TDF600	3	8	600	③	1.51	1.383	1.253	1.118	0.989	0.734	0.349				0.43	1.9	1	43
TDF700	3	6	92	④	2.866	2.758	2.646	2.591	2.529	2.197	1.889	1.52	1.097		1.95	14	3.6	60
TDF700	3	8	720	⑤	2.182	2.103	2.009	1.885	1.807	1.617	1.42	0.903			0.96	14	1.9	53
TDF700	3	12	420	⑥	1.298	1.15	0.956	0.776	0.559						0.28	6	0.9	37

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Size	Pole	63	125	250	500	1k	2k	4k	8k	dBa @ 3m
TDF600	4	83	99	94	90	87	85	75	70	70
TDF600	6	84	86	80	77	73	66	61	56	56
TDF600	8	67	69	67	64	60	53	47	41	43
TDF700	6	90	87	85	81	77	71	65	59	60
TDF700	8	82	78	78	74	70	63	57	50	53
TDF700	12	64	62	62	57	53	47	40	32	37

Vent-Axia Power-Line (TDF)

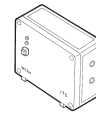
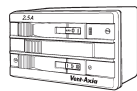
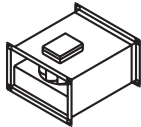
Power-Line Silencers Type TDS

Unit Code TDS	Attenuation across Sound Spectrum H ₃							
	63	125	250	500	1K	2K	4K	8K
220	3	5	16	26	37	37	29	23
250	3	5	16	26	37	37	29	23
280	2	4	14	24	32	32	24	20
320	3	8	17	24	32	32	25	20
380	6	12	23	32	45	45	33	28
420	6	10	20	31	43	43	33	27
480	4	9	17	27	36	36	24	13
520	3	7	14	22	27	21	15	10
600	4	8	15	24	30	26	14	8
700	7	15	30	41	45	45	45	32

For sound breakout through the fan casing the above figures may be reduced by 1.5dB across the frequency band 125 to 8k

Accessories

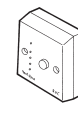
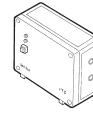
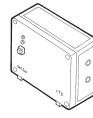
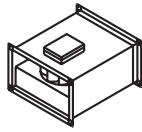
Single Phase



Duct Size		Stock	Electronic Speed	Transformer Speed	ITC Man/Auto	ITC-DS 12/24hr	RVC Remote	RSC Remote
W x H	Pole	Ref	Controller	Controller	Ch'over Cont.	Auto Ch'over Cont.	Visual Indicator	Setback Cont.
375 x 330	2	TDF220/2/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
375 x 330	2	TDF220/2/1	W10303102M	10314103	10314200	10314210	10314220	10314230
375 x 330	4	TDF220/4/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
425 x 540	4	TDF280/4/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
500 x 655	4	TDF320/4/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
550 x 745	4	TDF380/4/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
625 x 830	4	TDF420/4/1	10303106A	10314105	10314200	10314210	10314220	10314230A
700 x 925	4	TDF480/4/1	10303106A	10314107	10314200	10314210	10314220	10314230A
375 x 330	6	TDF220/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
425 x 540	6	TDF280/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
500 x 655	6	TDF320/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
550 x 745	6	TDF380/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
625 x 830	6	TDF420/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
700 x 925	6	TDF480/6/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
550 x 745	8	TDF380/8/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
625 x 830	8	TDF420/8/1	W10303102M	10314103	10314200	10314210	10314220	10314230A
700 x 925	8	TDF480/8/1	W10303102M	10314103	10314200	10314210	10314220	10314230A

Accessories

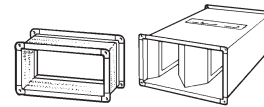
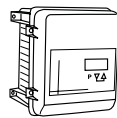
Three Phase



Duct Size W x H	Pole	Stock	Transformer Speed	**ITC Man/Auto	**ITC-DS 12/24hr	RVC Remote	RSC Remote
		Reference	Controller	Ch'over Cont.	Auto Ch'over Cont.	Visual Indicator	Setback Cont.
550 x 745	4	TDF380/4/3	10314301	10314200	10314210	10314220	10314230A
625 x 830	4	TDF420/4/3	10314304	10314200	10314210	10314220	10314230A
700 x 925	4	TDF480/4/3	10314304	10314200	10314210	10314220	10314230A
775 x 1055	4	TDF520/4/3	10314304	10314200	10314210	10314220	10314230A
850 x 1200	4	TDF600/4/3	10314307	10314200	10314210	10314220	10314230A
550 x 745	6	TDF380/6/3	10314301	10314200	10314210	10314220	10314230A
625 x 830	6	TDF420/6/3	10314301	10314200	10314210	10314220	10314230A
700 x 925	6	TDF480/6/3	10314301	10314200	10314210	10314220	10314230A
775 x 1055	6	TDF520/6/3	10314304	10314200	10314210	10314220	10314230A
850 x 1200	6	TDF600/6/3	10314304	10314200	10314210	10314220	10314230A
950 x 1280	6	TDF700/6/3	10314304	10314200	10314210	10314220	10314230A
550 x 745	8	TDF380/8/3	10314301	10314200	10314210	10314220	10314230A
625 x 830	8	TDF420/8/3	10314301	10314200	10314210	10314220	10314230A
700 x 925	8	TDF480/8/3	10314301	10314200	10314210	10314220	10314230A
775 x 1055	8	TDF520/8/3	10314301	10314200	10314210	10314220	10314230A
850 x 1200	8	TDF600/8/3	10314304	10314200	10314210	10314220	10314230A
950 x 1280	8	TDF700/8/3	10314304	10314200	10314210	10314220	10314230A
950 x 1280	12	TDF700/12/3	10314301	10314200	10314210	10314220	10314230A

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

Single Phase & Three Phase



Model	Pole	Phase	*eDemand Controller			Mounting							
			Control	1/3 Phase Inverter	3 Phase Inverter	Feet & AV's (Set of 4)	Flexible Connection	Matching Attenuator	Acoustic Jacket	Discharge Cowl	Roof Canopy		
TDF220	2&4&6	1	444164	-	-	PAVM1	TFC220/250	RUTDS220/250	TAJ220/250	TDW220/250	TRC220/250		
TDF250	2	1	444164	-	-	PAVM1	TFC220/250	RUTDS220/250	TAJ220/250	TDW220/250	TRC220/250		
TDF280	4&6	1	444164	-	-	PAVM1	TFC280	RUTDS280	TAJ280	TDW280	TRC280		
TDF320	4&6	1	444164	-	-	PAVM1	TFC320	RUTDS320	TAJ320	-	TRC320		
TDF380	4&6&8	1	444164	-	-	PAVM2	TFC380	RUTDS380	TAJ380	TDW380	TRC380		
TDF380	4&6&8	3	444166	444177	444172	PAVM2	TFC380	RUTDS380	TAJ380	TDW380	TRC380		
TDF420	4&6&8	1	444164	-	-	PAVM3	TFC420	RUTDS420	TAJ420	TDW420	TRC420		
TDF420	4&6&8	3	444166	444177	444172	PAVM3	TFC420	RUTDS420	TAJ420	TDW420	TRC420		
TDF480	4	1	444165	-	-	PAVM3	TFC480	RUTDS480	TAJ480	TDW480	TRC480		
TDF480	4	3	444166	444177	444173	PAVM3	TFC480	RUTDS480	TAJ480	TDW480	TRC480		
TDF480	6&8	1	444164	-	-	PAVM3	TFC480	RUTDS480	TAJ480	TDW480	TRC480		
TDF480	6&8	3	444166	444177	444172	PAVM3	TFC480	RUTDS480	TAJ480	TDW480	TRC480		
TDF520	4	3	444166	444177	444173	PAVM3	TFC520	RUTDS520	TAJ520	TDW520	TRC520		
TDF520	6&8	3	444166	444177	444172	PAVM3	TFC520	RUTDS520	TAJ520	TDW520	TRC520		
TDF600*	4	3	444167	-	444175	PAVM3	TFC600	RUTDS600	TAJ600	TDW600	TRC600		
TDF600*	6	3	444166	444177	444173	PAVM3	TFC600	RUTDS600	TAJ600	TDW600	TRC600		
TDF600*	8	3	444166	444177	444172	PAVM3	TFC600	RUTDS600	TAJ600	TDW600	TRC600		
TDF700*	4&8	3	444166	444177	444172	PAVM3	TFC700	RUTDS700	TAJ700	TDW700	TRC700		

* For full range of speed controller options, see Accessories & Controllers Section

Galaxy™ In-Line Direct Drive Twin Fans (GDD)

Features and Benefits

- In-line, compact forward curved centrifugal twin fan
- High Quality Heavy Gauge Galvanised Steel Casing
- IP44 terminal box as standard with optional IP65 Service Isolator available
- Standard Thermal Overload Protection
- Motor Insulation Class B
- Maximum operating temperature 40°C
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1 & 2
- 2 Year Guarantee

The GDD Galaxy In-line Direct Driven Twin fan range represents the latest development from Vent-Axia in high performance, run and standby twin fans. Designed to be controlled in conjunction with Vent-Axia Trakmaster twin fan controller range, the total package offers the end user flexibility when interfaced with or without a (BMS) Building Management Systems, such as: manual selection; 12/24hr auto changeover ensuring the extended life of the fan and motor; night setback during low levels of occupancy, for energy management control during 24hr extraction.

The unit casing is manufactured from Heavy Gauge Galvanised Steel fitted with inlet and outlet spigots, with further optional inlet positions. Individual gravity return shutters are fitted as standard to prevent air re-circulation through the standby fan or system during shut down periods. The Galaxy In-Line Direct Driven Twin Fan range is specifically designed

for horizontal mounting only. Assembly is controlled to BS EN ISO 9001.



Top view with access panel removed

All units are pre-wired to an IP44 terminal box, fitted to the outer casing to reduce installation time and cost. An optional IP65 service switch is available on request. Access to the fan section is via an easy to remove top access panel, for cleaning and maintenance during shut down periods.

The Galaxy range is available in ten models with extract performance ranging from 0.067m³/s up to 1.488m³/s (201m³/h to 4820m³/h), with pressure characteristics of up to 400Pa.

Motor/Impellers

Galaxy features external rotor motor and DIDW forward curved centrifugal impeller assemblies specifically chosen for performance. The assembly is dynamically balanced to ISO 1940 Grade G.6.3. Ball bearings are greased for life and allow the fan to run at any angle. Insulation is Class B (from -15°C to + 40°C).

Electrical

All motors are single phase 230-240V/50Hz. A terminal box is supplied with all models protected against dust and water jets from any angle. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.) by means of a thermal contact switch incorporated in the windings to prevent motor damage by overloading/overheating.

Performance

The GDD fan performance is tested in accordance with Test BS 848 Part 1.

Sound Levels

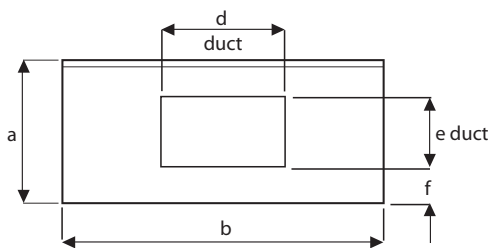
The fan sound levels are measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10-12 Watts (1 picowatt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Quality Assurance

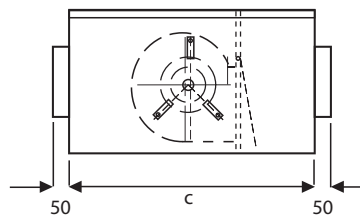
Design and manufacture are in accordance with the standard for quality management system BS EN ISO 9001.



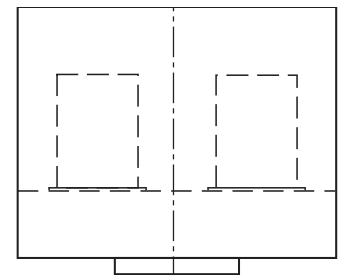
Fan Dimensions (mm)



Front Elevation



Side Elevation

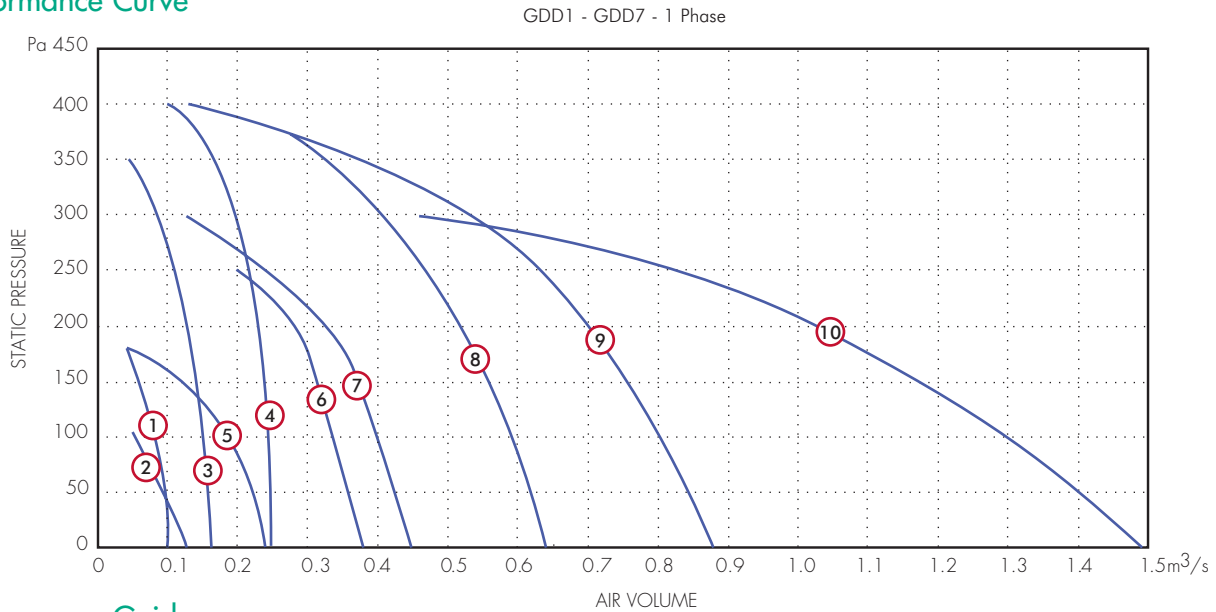


Plan View

Unit	a	b	c	d	e	f	Weight Kg
GDD1X	210	530	425	175	100	55	20
GDD2	260	740	525	225	150	55	20
GDD2X	260	740	525	225	150	55	20
GDD2XH	260	740	525	225	150	55	20
GDD3	330	740	600	250	150	90	20
GDD4S	390	900	700	350	200	95	30
GDD4	390	900	700	350	200	95	30
GDD5	440	1000	800	400	325	57	52
GDD6	440	1000	800	450	350	44	59
GDD7	575	1250	1000	650	400	86	64

Galaxy™ In-Line Direct Drive Twin Fans (GDD)

Performance Curve



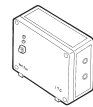
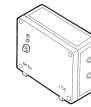
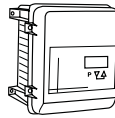
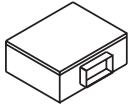
Performance Guide

Duct Size W x H	Stock Phase	Ref No.	Curve r.p.m.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m		
				Ref.	0	50	75	100	150	200	250	300	350					400	
175 x 100	1	GDD1X	1650	1	0.099	0.092	0.087	0.081	0.055	0.018						0.75	1.4	0.35	44
225 x 150	1	GDD2	1350	2	0.126	0.094	0.075	0.053								0.17	1.6	1.11	30
225 x 150	1	GDD2X	1700	3	0.162	0.158	0.155	0.151	0.141	0.128	0.108	0.086	0.045		0.175	3.2	0.77	47	
225 x 150	1	GDD2XH	2050	4	0.249	0.246	0.243	0.24	0.236	0.223	0.212	0.195	0.169	0.1	0.3	6	1.31	57	
250 x 150	1	GDD3	1400	5	0.243	0.217	0.201	0.181	0.12						0.28	2.5	1.2	37	
350 x 200	1	GDD4S	1050	6	0.376	0.355	0.345	0.333	0.31	0.279	0.197				0.42	3.8	1.8	42	
350 x 200	1	GDD4	1250	7	0.443	0.418	0.411	0.392	0.367	0.329	0.232	0.117			0.42	3.8	1.8	44	
400 x 325	1	GDD5	1400	8	0.637	0.615	0.604	0.59	0.555	0.512	0.464	0.402	0.328	0.164	1.32	13	6.2	46	
450 x 350	1	GDD6	1400	9	0.88	0.84	0.824	0.804	0.755	0.698	0.63	0.53	0.38	0.125	1.42	13	6.2	55	
650 x 400	1	GDD7	900	10	1.488	1.405	1.35	1.3	1.175	1.03	0.83	0.46			1.6	13	8	55	

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Model.		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
GDD1X	Inlet/Outlet	76	73	69	60	61	59	55	50	49
GDD1X	Breakout									44
GDD2	Inlet/Outlet	52	62	54	47	48	44	40	34	35
GDD2	Breakout									30
GDD2X	Inlet/Outlet	79	77	69	63	64	63	59	55	52
GDD2X	Breakout									47
GDD2XH	Inlet/Outlet	89	87	79	73	74	73	69	65	62
GDD2XH	Breakout									57
GDD3	Inlet/Outlet	61	63	57	53	56	55	47	39	42
GDD3	Breakout									37
GDD4S	Inlet/Outlet	65	68	64	59	60	57	54	49	47
GDD4S	Breakout									42
GDD4	Inlet/Outlet	67	70	66	61	62	59	56	51	49
GDD4	Breakout									44
GDD5	Inlet/Outlet	72	73	67	66	67	66	62	58	54
GDD5	Breakout									46
GDD6	Inlet/Outlet	77	83	80	74	77	74	72	66	63
GDD6	Breakout									55
GDD7	Inlet/Outlet	75	79	71	76	76	74	72	66	63
GDD7	Breakout									55

Accessories

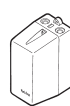
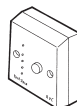
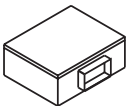


**ITC Man./Auto

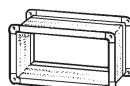
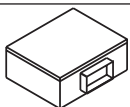
**ITC-DS 12/24hr Auto

Standard Unit Stock Ref. No.	Insulated Unit Stock Ref. No.	*eDemand Controller			Changeover controller Stock Ref. No.	Changeover controller Stock Ref. No.
		Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.		
GDD1X	GDDI1X	444164	-	-	10314200	10314210
GDD2	GDDI2	444164	-	-	10314200	10314210
GDD2X	GDDI2X	444164	-	-	10314200	10314210
GDD2XH	GDDI2XH	444164	-	-	10314200	10314210
GDD3	GDDI3	444164	-	-	10314200	10314210
GDD4S	GDDI4S	444164	-	-	10314200	10314210
GDD4	GDDI4S	444164	-	-	10314200	10314210
GDD5	GDDI5	444165	-	-	10314200	10314210
GDD6	GDDI6	444165	-	-	10314200	10314210
GDD7	GDDI7	444165	-	-	10314200	10314210

* For full range of speed controller options, see Accessories & Controllers Section **Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section



Standard Unit Stock Ref. No.	Insulated Unit Stock Ref. No.	RVC ELV remote visual controller Stock Ref. No.	RSC remote setback controller Stock Ref. No.	Auto Transformer Stock Ref. No.	DOL Starter & Overload Stock Ref. No.	Mounting Bracket Stock Ref. No.
GDD1X	GDDI1X	10314220	10314230A	10314103	444744 + 444697	GDD1MB
GDD2	GDDI2	10314220	10314230A	10314103	444744 + 444700	GDD2MB
GDD2X	GDDI2X	10314220	10314230A	10314103	444744 + 444699	GDD2MB
GDD2XH	GDDI2XH	10314220	10314230A	10314103	444744 + 444700	GDD2MB
GDD3	GDDI3	10314220	10314230A	10314103	444744 + 444700	GDD3MB
GDD4S	GDDI4S	10314220	10314230A	10314105	444744 + 444701	GDD4MB
GDD4	GDDI4S	10314220	10314230A	10314105	444744 + 444701	GDD4MB
GDD5	GDDI5	10314220	10314230A	10314107	444744 + 444704	GDD5MB
GDD6	GDDI6	10314220	10314230A	10314107	444744 + 444704	GDD6MB
GDD7	GDDI7	10314220	10314230A	10314113	444744 + 444705	GDD7MB



Standard Unit Stock Ref.	Insulated Unit Stock Ref.	Flexible connections Stock Ref. No.	Vibration Mounts Stock Ref. No.	Weatherproof treatment Stock Ref. No.	Duct Attenuator			IP65 Isolator (Factory fitted) Stock Ref.
					600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.	
GDD1X	GDDI1X	GDD1FC	10523033	ECP	10535150	10536150	-	71ISOL4
GDD2	GDDI2	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD2X	GDDI2X	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD2XH	GDDI2XH	GDD2FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD3	GDDI3	GDD3FC	10523033	ECP	10535250	10536250	10537250	71ISOL4
GDD4S	GDDI4S	GDD4FC	10523033	ECP	GDS4-600	GDS4-900	GDS4-1200	71ISOL4
GDD4	GDDI4S	GDD4FC	10523033	ECP	GDS4-600	GDS4-900	GDS4-1200	71ISOL4
GDD5	GDDI5	GDD5FC	10523033	ECP	GDS5-600	GDS5-900	GDS5-1200	71ISOL4
GDD6	GDDI6	GDD6FC	10523033	ECP	GDS6-600	GDS6-900	GDS6-1200	71ISOL4
GDD7	GDDI7	GDD7FC	10523033	ECP	GDS7-600	GDS7-900	GDS7-1200	71ISOL4

NOTE: * Inlet silencers shown for GDD1X to GDD3 are circular due to the small inlet sizes - a transformation piece will be required - supplied by others.

Vent-Axia Galaxy™ In-Line Belt Driven Twin Fans (GDB)

Features and Benefits

- In-line, Belt Driven, compact centrifugal twin fan.
- High Quality Heavy Gauge Galvanised Steel Casing.
- Optional IP65 Service Isolator
- Motor Insulation Class F.
- Maximum operating temperature 40°C.
- Manufacture controlled to BS EN ISO 9001.
- Performance tested to BS 848 Part 1 & 2.

The GDB Galaxy In-line Belt Driven, Twin fan range represents the latest development from Vent-Axia in high performance, run and standby twin fan. Designed to be controlled in-conjunction with Vent-Axia Trakmaster twin fan controller range, the total package offers the end user flexibility when interfaced with or without a (BMS) Building Management Systems, such as manual selection, 12/24hr auto changeover ensuring the extended life of the fan and motor, night setback during low levels of occupancy, for energy management control during 24hr extraction.

The unit casing is manufactured from Heavy Gauge Galvanised Steel fitted with inlet and outlet discharge spigots. Individual gravity return shutters are fitted as standard to prevent air re-circulation through the standby or the system during shut down periods. Galaxy Duct Mounting Belt Driven Twin Fans are suitable for horizontal mounting only. Assembly controlled to BS EN ISO 9001.

To meet COSHH requirements, double pole service isolator switches are available. With access to the fan section via an easily removable access panel from the top of the unit, for cleaning and maintenance during

shut down periods.

The Galaxy range is available in four models with extract performance ranging from 0.02m³/s up to 2.5m³/s (720m³/h to 9000m³/h), with pressure characteristics of up to 400Pa.

Fan/Motor Assembly

Galaxy GDB belt driven fans are double inlet double width, forward curved centrifugal fans belt driven by totally enclosed fan ventilated, wound to suit 220-240V/1/50HZ or 380-415V/1/50Hz electrical supply. Protected to IP54, against dust and water jets complying with BS EN 60529:1992. Motor insulation Class F as a minimum, suitable for operating temperatures up to +40°C. Both the fans and motors are mounted on a steel frame, with anti-vibration mounts between the frame and casing and a flexible connection between the fan scroll and fan plate, minimising vibration. All belt driven Galaxy units are supplied with metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753.

Electrical

All Motors are available in either single phase 220-240V 50 Hz capacitor start and run or three phase 380V-415V 50Hz.

Sounds Levels

Fan sound levels are measured in a reverberant chamber in accordance with BS848 Part 2 1985. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10⁻¹² Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended

Quality Assurance

Design and manufacture are in accordance with the standard for quality management system BS EN ISO 9001:1994.

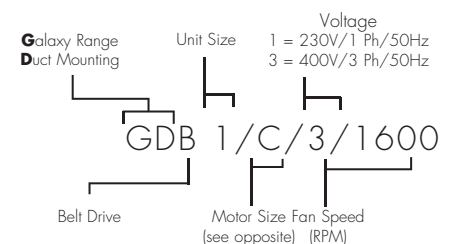
Selection Procedure

Plot your specified duty on the above graphs. Select motor size and fan speed required. The full Stock Ref. No. for your unit will comprise of the unit size, motor rating, supply and fan speed.

MOTOR SIZES :

- 0.37 kW = C
- 0.55 kW = D
- 0.75 kW = E
- 1.10 kW = F
- 1.50 kW = G
- 2.20 kW = H
- 3.00 kW = J
- 4.00 kW = K

Typical Stock Ref. No.:



Example:

- Duty required = 0.35m³/s @ 150Pa
- Unit Size = GDB1
- Supply = 3Ø

From above graph (GDB1):
Speed=1600rpm

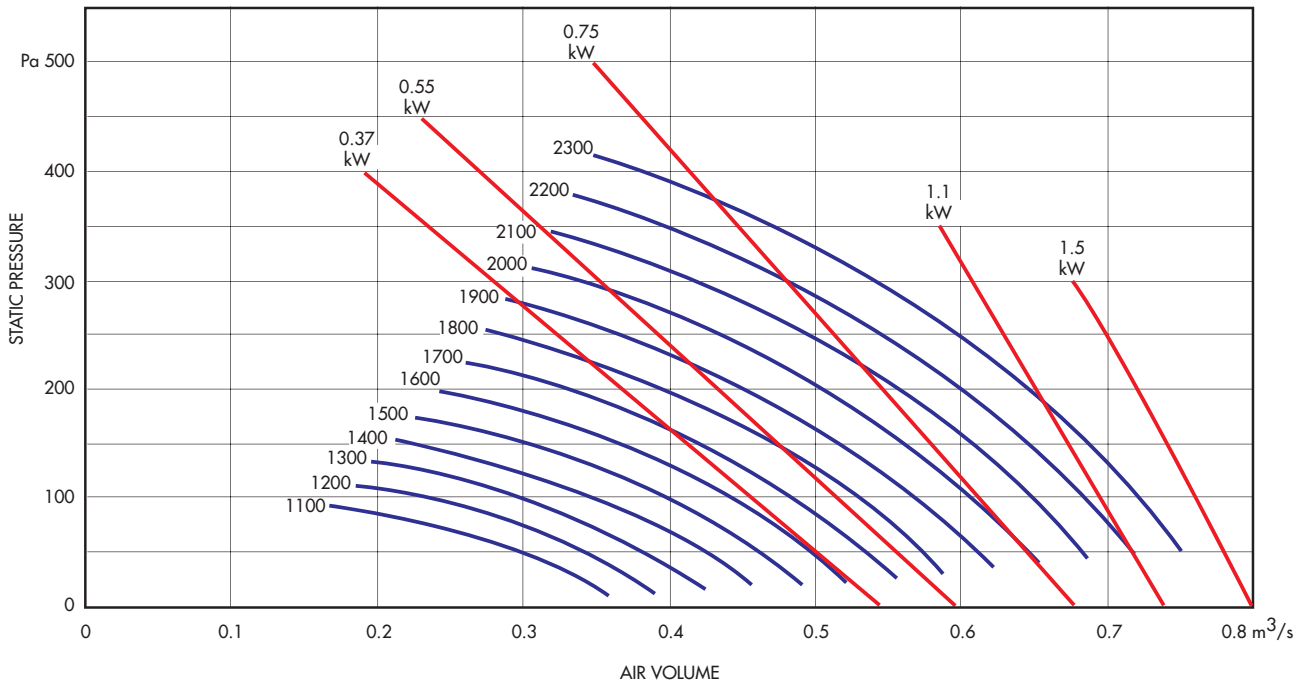
Motor=0.37kW

Stock Ref. No. will be: GDB1/C/3/1600



Performance Curve

GDB1



Sound Power Level Spectra dB (re 10⁻¹² Watts)

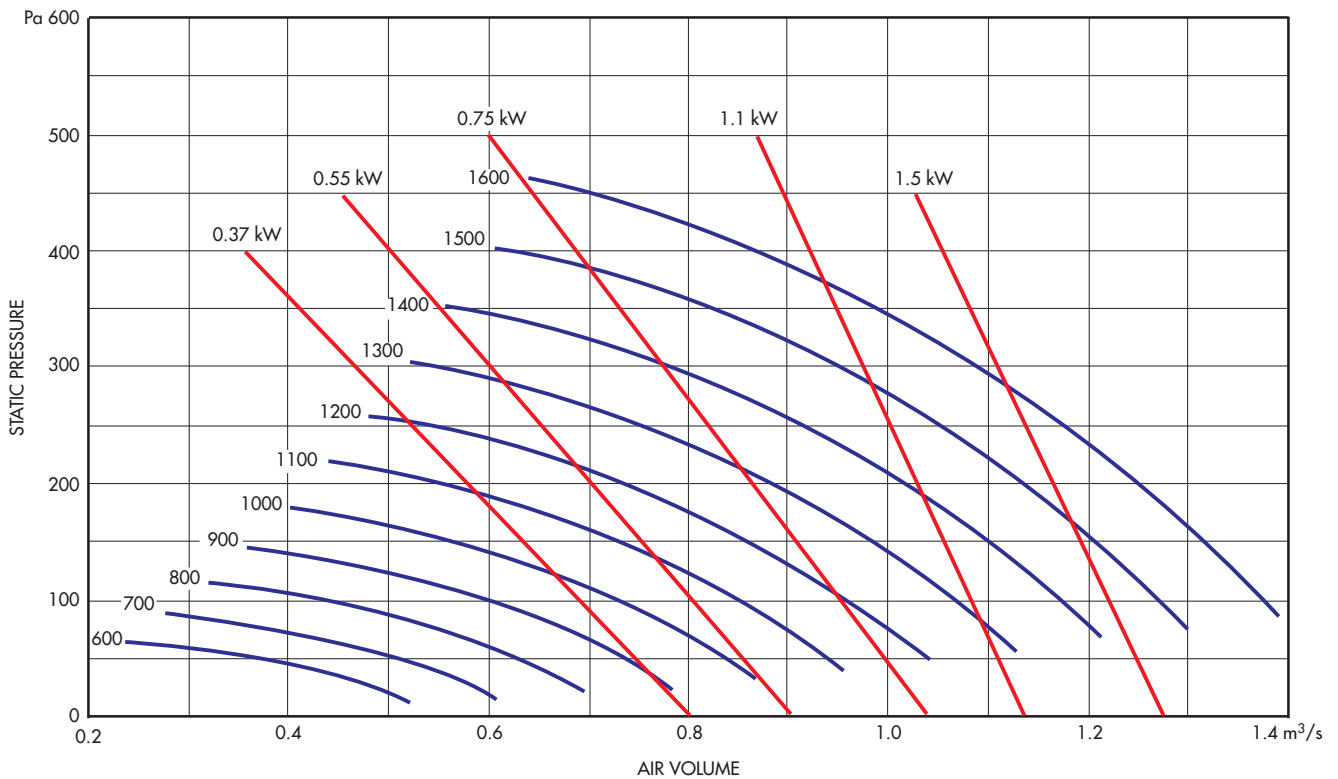
Unit Size	Fan Speed. r.p.m	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz								Sound Pressure dBA @ 3m
			63	125	250	500	1k	2k	4k	8k	
GDB1	1200	71	64	66	65	65	64	61	58	52	50
GDB1	1300	73	66	68	67	67	66	63	60	54	52
GDB1	1400	75	68	70	69	69	68	65	62	56	54
GDB1	1500	76	69	71	70	70	69	66	63	57	55
GDB1	1600	78	71	73	72	72	71	68	65	59	57
GDB1	1700	79	72	74	73	73	72	69	66	60	58
GDB1	1800	80	73	75	74	74	73	70	67	61	59
GDB1	1900	82	75	77	76	76	75	72	69	63	61
GDB1	2000	84	77	79	78	78	77	74	71	65	63
GDB1	2100	86	79	81	80	80	79	76	73	67	65
GDB1	2200	88	81	83	82	82	81	78	75	69	67
GDB1	2300	90	83	85	84	84	83	80	77	71	69

The sound power level shown for each speed is a typical figure for that speed. A variation dependant on the operating point on the curve may apply.

Galaxy™ In-Line Belt Driven Twin Fans (GDB)

Performance Curve

GDB2



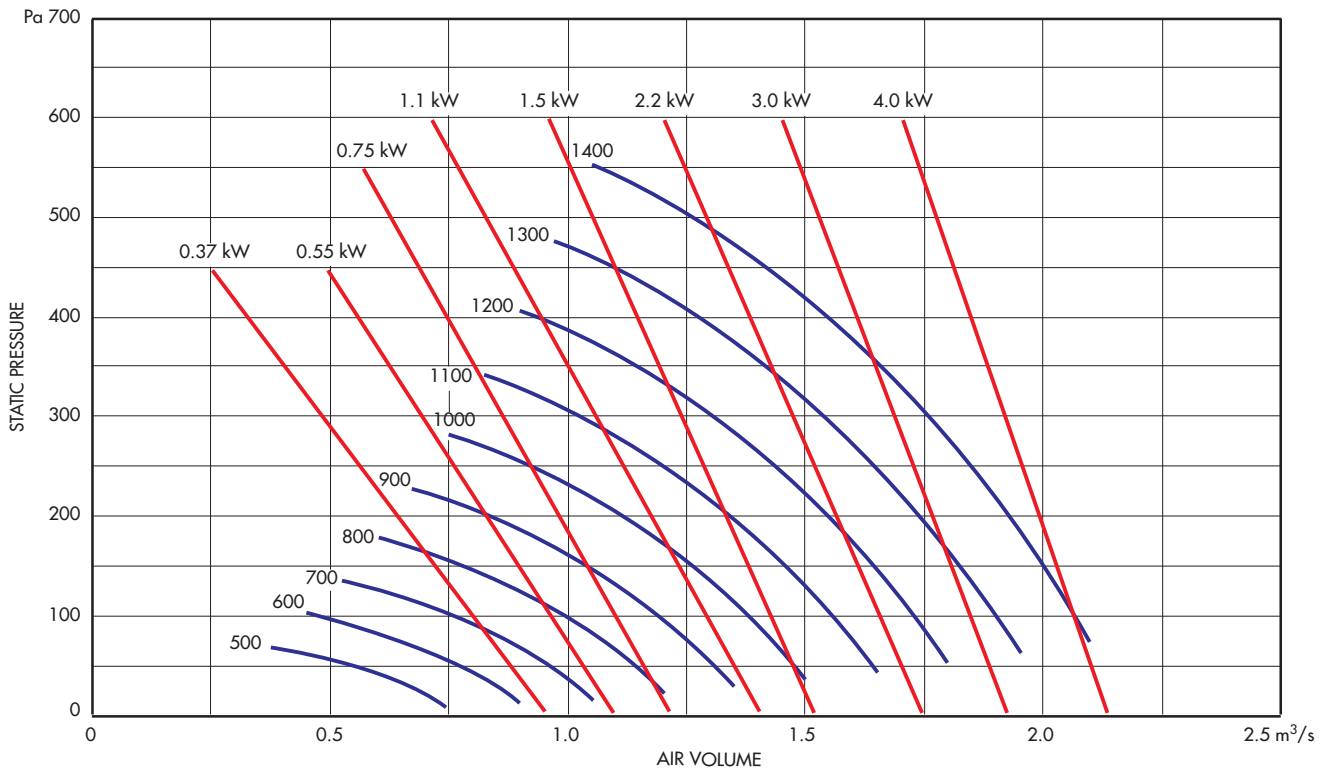
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. r.p.m	Sound Power dBW	Induct Sound Power Levels dBW								Sound Pressure dBA @ 3m
			@ Octave Band Mid Frequency Hz								
			63	125	250	500	1k	2k	4k	8k	
GDB2	600	68	61	63	60	60	58	56	55	48	45
GDB2	700	70	63	65	62	62	60	58	57	50	47
GDB2	800	73	66	68	65	65	63	61	60	53	50
GDB2	900	75	68	70	67	67	65	63	62	55	52
GDB2	1000	77	70	72	69	69	67	65	64	57	54
GDB2	1100	79	72	74	71	71	69	67	66	59	56
GDB2	1200	82	75	77	74	74	72	70	69	62	59
GDB2	1300	84	77	79	76	76	74	72	71	64	61
GDB2	1400	86	79	81	78	78	76	74	73	66	63
GDB2	1500	88	81	83	80	80	78	76	75	68	65
GDB2	1600	90	83	85	82	82	80	78	77	70	67

The sound power level shown for each speed is a typical figure for that speed. A variation dependant on the operating point on the curve may apply.

Performance Curve

GDB3



Sound Power Level Spectra dB (re 10⁻¹² Watts)

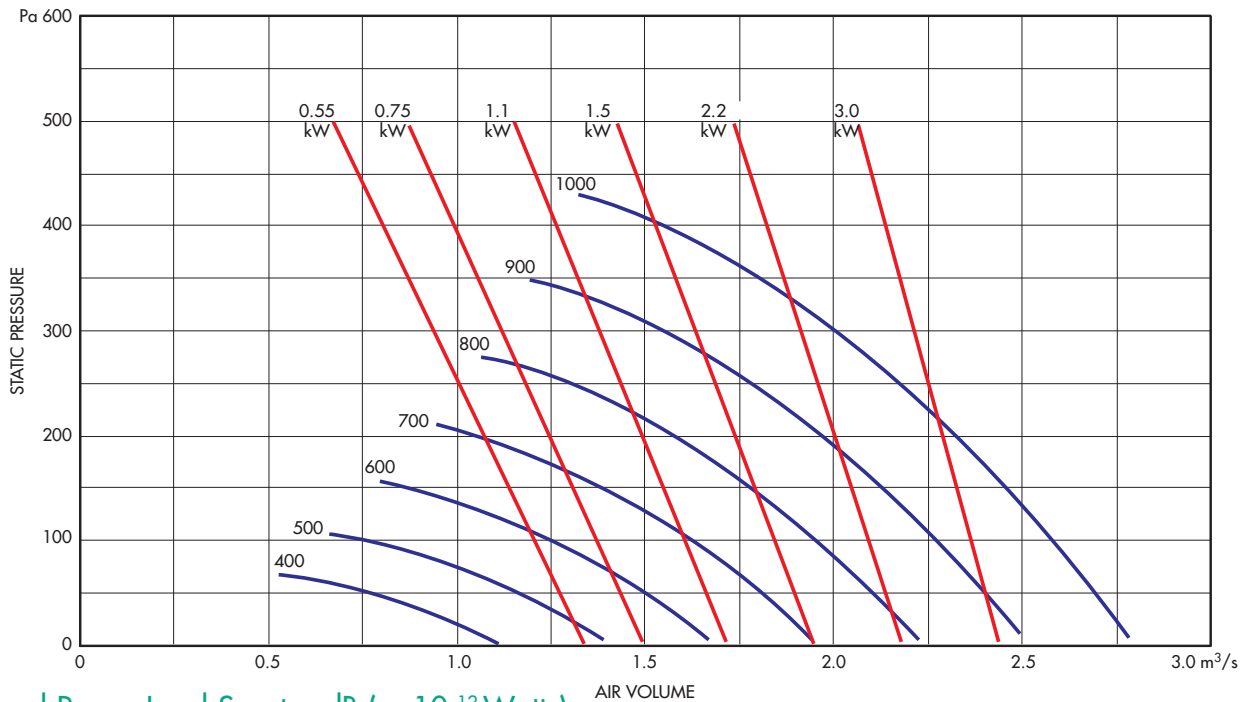
Unit Size	Fan Speed. r.p.m	Sound Power dBW	Induct Sound Power Levels dBW								Sound Pressure dBA @ 3m
			@ Octave Band Mid Frequency Hz								
			63	125	250	500	1k	2k	4k	8k	
GDB3	500	69	62	63	61	60	63	58	54	51	48
GDB3	600	73	66	67	65	64	67	62	58	55	52
GDB3	700	75	70	69	67	66	69	64	60	57	56
GDB3	800	80	73	74	72	71	74	69	65	62	59
GDB3	900	83	76	77	75	74	77	72	68	65	62
GDB3	1000	86	79	80	78	77	80	75	71	68	65
GDB3	1100	88	81	82	80	79	82	77	73	70	67
GDB3	1200	90	83	84	82	81	84	79	75	72	69
GDB3	1300	92	85	86	84	83	86	81	77	74	71
GDB3	1400	94	87	88	86	85	88	83	79	76	73

The sound power level shown for each speed is a typical figure for that speed. A variation dependant on the operating point on the curve may apply.

Galaxy™ In-Line Belt Driven Twin Fans (GDB)

Performance Curve

GDB4

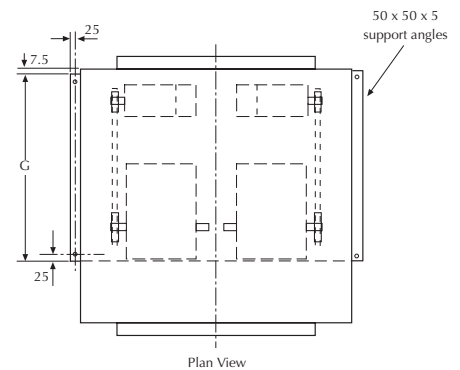
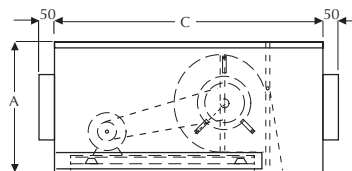
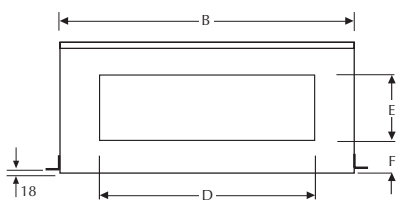


Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. r.p.m	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz								Sound Pressure dBA @ 3m
			63	125	250	500	1k	2k	4k	8k	
GDB4	400	72	65	66	65	64	61	60	58	53	49
GDB4	500	75	68	69	68	67	64	63	61	56	52
GDB4	600	79	72	73	72	71	68	67	65	60	56
GDB4	700	83	76	77	76	75	72	71	69	64	60
GDB4	800	86	79	80	79	78	75	74	71	67	63
GDB4	900	88	81	82	74	80	77	76	74	69	65
GDB4	1000	90	83	84	83	82	79	78	76	71	67

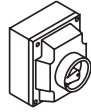
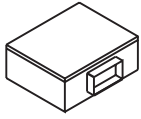
The sound power level shown for each speed is a typical figure for that speed. A variation dependant on the operating point on the curve may apply.

Fan Dimensions (mm)



Unit	A	B	C	D	E	F	Weight Kg
GDB1	480	850	1000	650	250	110	125
GDB2	540	1100	1175	762	305	116	175
GDB3	675	1250	1450	900	400	135	210
GDB4	765	1500	1450	1000	457	153	270

Accessories



Standard Unit	Insulated Unit	KW	**ITC Man/Auto Changeover Controller Stock Ref.	**ITC-DS 12/24hr Auto Changeover Controller Stock Ref.	RSC Remote Visual Indicator Stock Ref.	Starter + Overload Stock Ref.	Mounting Stock Ref.	IP65 Isolator (Factory fitted) Bracket Stock Ref.
GDB1	GDB1	0.37	*10314200	10314210	10314220	444744+444702	55GDB1MB	71ISOL4
GDB1	GDB1	0.55	*10314200	10314210	10314220	444744+444703	55GDB1MB	71ISOL4
GDB1	GDB1	0.75	*10314200	10314210	10314220	444744+444703	55GDB1MB	71ISOL4
GDB1	GDB1	1.1	*10314200	10314210	10314220	444744+444705	55GDB1MB	71ISOL4
GDB2	GDB2	0.37	*10314200	10314210	10314220	444744+444702	55GDB1MB	71ISOL4
GDB2	GDB2	0.55	*10314200	10314210	10314220	444744+444703	55GDB1MB	71ISOL4
GDB2	GDB2	0.75	*10314200	10314210	10314220	444744+444703	55GDB1MB	71ISOL4
GDB2	GDB2	1.1	*10314200	10314210	10314220	444744+444705	55GDB1MB	71ISOL4
GDB2	GDB2	1.5	ACO/9.0-15.0/1	-	-	444744+444706	55GDB1MB	71ISOL4
GDB3	GDB3	0.37	10314200	10314210	10314220	444744+444702	55GDB3MB	71ISOL4
GDB3	GDB3	0.55	10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB3	GDB3	0.75	10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB3	GDB3	1.1	10314200	10314210	10314220	444744+444705	55GDB3MB	71ISOL4
GDB3	GDB3	1.5	*10314200	10314210	10314220	444744+444706	55GDB3MB	71ISOL4
GDB3	GDB3	2.2	*10314200	10314210	10314220	-	55GDB3MB	71ISOL4
GDB3	GDB3	3	*10314200	10314210	10314220	-	55GDB3MB	71ISOL4
GDB3	GDB3	4	ACO/9.0-15.0/1	-	-	-	55GDB3MB	71ISOL4
GDB4	GDB4	0.55	*10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB4	GDB4	0.75	*10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB4	GDB4	1.1	*10314200	10314210	10314220	444744+444705	55GDB3MB	71ISOL4
GDB4	GDB4	1.5	*10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB4	GDB4	2.2	*10314200	10314210	10314220	444744+444703	55GDB3MB	71ISOL4
GDB4	GDB4	3	*10314200	10314210	10314220	444744+444704	55GDB3MB	71ISOL4
GDB4	GDB4	4	ACO/9.0-15.0/1	-	-	444744+444706	55GDB3MB	71ISOL4

* Auto changeover Controllers will require 2 x D.O.L. Starters for each installation.

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

NOTE: Weatherproof treatment for GDB models is available, please enquire. Units include anti vibration mounts & flexible connections internally, as standard.

Electrical Data

Motor Rating	Motor Nominal Speed	400V/3Ph/50Hz		Motor Rating	Motor Nominal Speed	230V/1Ph/50Hz	
kW	r.p.m	F.L.C. Amps	S.C. Amps*	kW	r.p.m	F.L.C. Amps	S.C. Amps*
0.37	1400	1.2	4.73	0.37	1400	2.7	14
0.55	1400	1.7	8.5	0.55	1400	3.6	18
0.75	1400	2.1	9.5	0.75	1400	5	25
1.1	1400	3.25	13.75	1.1	1400	7	35
1.5	1400	3.9	20.7	1.5	1400	10	50
2.2	1400	5.3	28.2				
3	1400	7	37.2				
4	1400	9.05	52.65				

* D.O.L. Start
FLC = Full load current
SC = Starting current

Galaxy™ Roof Mounting Direct Driven Twin Fans (GRD)

Features and Benefits

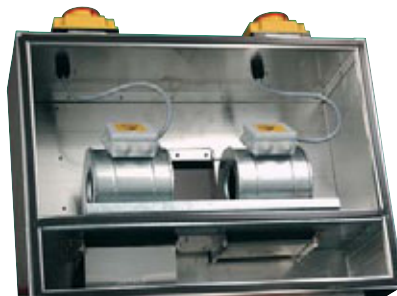
- **Direct Drive Twin Fan (Run & standby)**
- **Backward Curved Centrifugal Impellers**
- **Operating temperatures up to 40°C**
- **Performance range up to 2.72m³/s**
- **Static Pressure Development up to 500pa**
- **Speed Controllable**
- **Quality assured to BS EN ISO 9001**
- **Performance listed to BS 848 Part 1**

The GRD Galaxy Roof Mounting, Direct Driven, Twin fan range represents the latest development from Vent-Axia in high performance, run and standby twin fans. Designed to be controlled in-conjunction with Vent-Axia Trakmaster twin fan controller range, the total package offers the end user flexibility when interfaced with or without a (BMS) Building Management Systems, such as: manual selection; 12/24hr auto changeover ensuring the extended life of the fan and motor; night setback during low levels of occupancy for energy management control during 24hr extraction.

The unit casing is manufactured from mill finished aluminium fitted with a discharge aluminium weather Louvre with bird mesh as standard, ensuring suitability for exposed external environments. Assembly is controlled to BS EN ISO 9001. Optional acoustic lined casing is available.

Individual gravity return shutters are fitted as

standard to prevent air re-circulation through the standby fan or the system during shut down periods. The Galaxy Roof Twin Fans are suitable for horizontal mounting. When installed on a shallow pitch roof (max 20°) a special upstand will be needed to compensate for the angular difference – manufactured by others.



Top view with access panel removed

To meet COSHH requirements, double pole service isolator switches are fitted and pre-wired to the fans and mounted to the outer casing to reduce installation time and cost. Access to the fan section is via an easily removed top access panel for cleaning and maintenance during shut down periods.

The Galaxy range has ten models with extract performance ranging from 0.056m³/s up to 1.339m³/s (201m³/h to 4820m³/h), with pressure characteristics of up 400Pa. All models are supplied with inlet spigots on the underside of the unit casing and a discharge anodised aluminium weather louvre.

Motor/Impellers

Galaxy features motors and DIDW forward curved centrifugal impeller assembly specifically chosen for performance. The

assembly is dynamically balanced to ISO 1940 Grade G.6.3. Ball bearings are greased for life. Insulation is Class 'B' (from -15°C to + 40°C).

Electrical

All Motors are single phase 220-240V/ 50Hz. The isolator is supplied with all models with PG11 entry protected against dust and water jets from any angle for external use. All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.) motor protection by means of a thermal contact switch incorporated in the windings to prevent motor damage by overloading/overheating.

Performance

GRD fan performance is tested in accordance with Test BS 848 Part 1.

Sound Levels

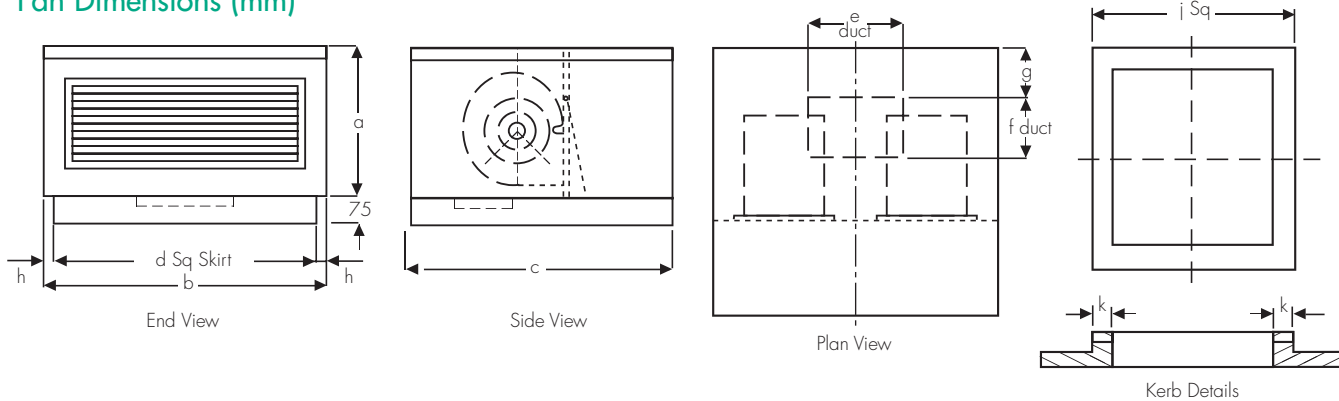
Sound levels are measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Quality Assurance

Design and manufacture are in accordance with the standard for quality management system BS EN ISO 9001.



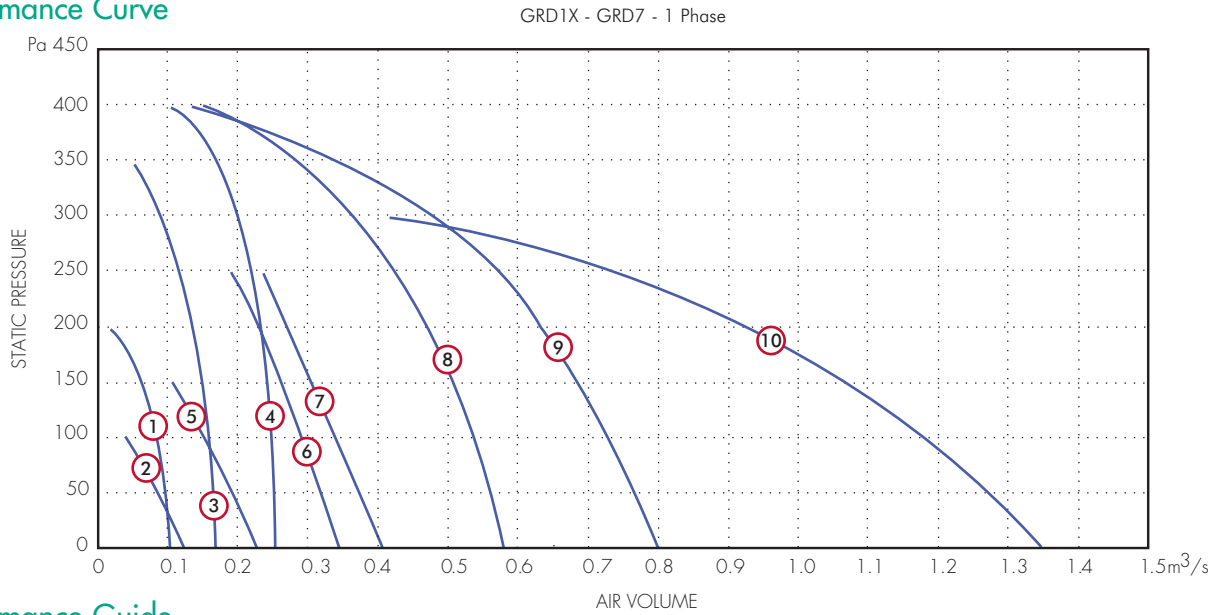
Fan Dimensions (mm)



Unit	a	b	c	d	e	f	g	h	i	k	Weight Kg
GRD1X	250	670	500	500	150	100	150	85	490	75	11
GRD2	340	750	700	700	225	150	150	25	690	75	22
GRD2X	340	750	700	700	225	150	150	25	690	75	22
GRD2XH	340	750	700	700	225	150	150	25	690	75	22
GRD3	390	750	700	700	250	150	150	25	690	75	21
GRD4S	450	850	800	800	300	200	150	25	790	75	32
GRD4	450	850	800	800	300	200	150	25	790	75	32
GRD5	550	1000	950	950	500	250	150	25	940	75	55
GRD6	550	1050	1050	1050	600	300	150	-	1040	75	61
GRD7	650	1250	1150	1150	750	350	150	50	1140	75	65

Galaxy™ In-Line Direct Driven Twin Fans (GRD)

Performance Curve



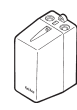
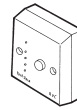
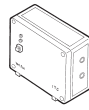
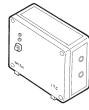
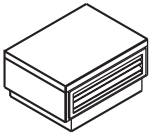
Performance Guide

Duct Size W x H	Phase Motor	Stock Ref.	r.p.m.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m		
				0	25	50	75	100	150	200	250	300	350					400	
150 x 100	1	GRD1X	1650	0.099	0.095	0.092	0.087	0.081	0.055	0.018						0.075	1.4	0.35	44
225 x 150	1	GRD2	1350	0.116	0.099	0.085	0.064	0.037								0.17	1.6	1.11	30
225 x 150	1	GRD2X	1700	0.162	0.16	0.158	0.155	0.151	0.141	0.128	0.108	0.086	0.045			0.175	3.2	0.77	47
225 x 150	1	GRD2XH	2050	0.249	0.248	0.246	0.243	0.24	0.236	0.223	0.212	0.195	0.169	0.1		0.3	6	1.31	57
250 x 150	1	GRD3	1400	0.218	0.203	0.186	0.169	0.15	0.1							0.28	2.5	1.2	37
300 x 200	1	GRD4S	1050	0.341	0.326	0.311	0.297	0.283	0.255	0.228	0.19					0.42	3.8	1.8	42
300x 200	1	GRD4	1250	0.401	0.384	0.366	0.35	0.333	0.3	0.268	0.231					0.42	3.8	1.8	44
500 x 250	1	GRD5	1400	0.573	0.563	0.554	0.544	0.53	0.5	0.467	0.422	0.365	0.285	0.148		1.32	13	6.2	46
600 x 300	1	GRD6	1400	0.792	0.774	0.756	0.742	0.724	0.68	0.628	0.567	0.477	0.342	0.113		1.42	13	6.2	55
750 x 350	1	GRD7	900	1.339	1.305	1.265	1.215	1.17	1.058	0.927	0.747	0.414				1.6	13	8	55

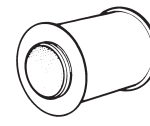
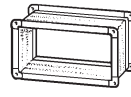
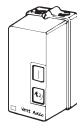
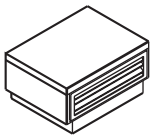
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Model.		63	125	250	500	1k	2k	4k	8k	dBA @3m
GRD1X	Inlet/Outlet	76	73	69	60	61	59	55	50	49
GRD1X	Breakout									44
GRD2	Inlet/Outlet	52	62	54	47	48	44	40	34	35
GRD2	Breakout									30
GRD2X	Inlet/Outlet	79	77	69	63	64	63	59	55	52
GRD2X	Breakout									47
GRD2XH	Inlet/Outlet	89	87	79	73	74	73	69	65	62
GRD2XH	Breakout									57
GRD3	Inlet/Outlet	61	63	57	53	56	55	47	39	42
GRD3	Breakout									37
GRD4S	Inlet/Outlet	65	68	64	59	60	57	54	49	47
GRD4S	Breakout									42
GRD4	Inlet/Outlet	67	70	66	61	62	59	56	51	49
GRD4	Breakout									44
GRD5	Inlet/Outlet	72	73	67	66	67	66	62	58	54
GRD5	Breakout									46
GRD6	Inlet/Outlet	77	83	80	74	77	74	72	66	63
GRD6	Breakout									55
GRD7	Inlet/Outlet	75	79	71	76	76	74	72	66	63
GRD7	Breakout									55

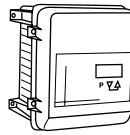
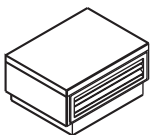
Accessories



Standard Unit	Insulated Unit	**ITC Man./Auto Changeover controller	**ITC-DS 12/24hr Auto Changeover controller	RVC ELV remote visual controller	RSC remote setback controller	Auto Transformer
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
GRD1X	GRDI1X	10314200	10314210	10314220	10314230A	10314103
GRD2	GRDI2	10314200	10314210	10314220	10314230A	10314103
GRD2X	GRDI2X	10314200	10314210	10314220	10314230A	10314103
GRD2XH	GRDI2XH	10314200	10314210	10314220	10314230A	10314103
GRD3	GRDI3	10314200	10314210	10314220	10314230A	10314103
GRD4S	GRDI4S	10314200	10314210	10314220	10314230A	10314105
GRD4	GRDI4S	10314200	10314210	10314220	10314230A	10314105
GRD5	GRDI5	10314200	10314210	10314220	10314230A	10314107
GRD6	GRDI6	10314200	10314210	10314220	10314230A	10314107
GRD7	GRDI7	10314200	10314210	10314220	10314230A	10314113



Standard Unit	Insulated Unit	DOL Starter & Overload	Flexible connection	Duct Attenuator		
Unit	Unit	Stock Ref. No.	Stock Ref. No.	600mm Stock Ref. No.	900mm Stock Ref. No.	1200mm Stock Ref. No.
GRD1X	GRDI1X	444744 + 444697	GRD1FC	10535150	10536150	-
GRD2	GRDI2	444744 + 444700	GRD2FC	10535250	10536250	10537250
GRD2X	GRDI2X	444744 + 444699	GRD2FC	10535250	10536250	10537250
GRD2XH	GRDI2XH	444744 + 444700	GRD2FC	10535250	10536250	10537250
GRD3	GRDI3	444744 + 444700	GRD3FC	10535250	10536250	10537250
GRD4S	GRDI4S	444744 + 444701	GRD4FC	GRS4-600	GRS4-900	GRS4-1200
GRD4	GRDI4S	444744 + 444701	GRD4FC	GRS4-600	GRS4-900	GRS4-1200
GRD5	GRDI5	444744 + 444704	GRD5FC	GRS5-600	GRS5-900	GRS5-1200
GRD6	GRDI6	444744 + 444704	GRD6FC	GRS6-600	GRS6-900	GRS6-1200
GRD7	GRDI7	444744 + 444705	GRD7FC	GRS7-600	GRS7-900	GRS7-1200



Standard Unit	Insulated Unit	End Inlet	*eDemand Controller		
			Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
GRD1X	GRDI1X	E1	444164	-	-
GRD2	GRDI2	E1	444164	-	-
GRD2X	GRDI2X	E1	444164	-	-
GRD2XH	GRDI2XH	E1	444164	-	-
GRD3	GRDI3	E1	444164	-	-
GRD4S	GRDI4S	E1	444164	-	-
GRD4	GRDI4S	E1	444164	-	-
GRD5	GRDI5	E1	444165	-	-
GRD6	GRDI6	E1	444165	-	-
GRD7	GRDI7	E1	444165	-	-

* For full range of speed controller options, see Accessories & Controllers Section

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

NOTE: For end Inlet please add E1 to the end of the stock Ref number

NOTE: Inlet silencers shown for GRD1X to GRD3 are circular due to the small inlet sizes - a transformation piece will be required - supplied by others.

Galaxy™ Roof Mounting Belt Driven Twin Fans (GRB)

Features and Benefits

- **Roof mounting, fully weatherproofed belt driven, low silhouette twin fan**
- **High quality mill finished aluminium casing**
- **Anodised aluminium discharge louvre**
- **Optional inlet spigot position**
- **Pre-wired IP65 Service Isolator**
- **Motor Insulation Class 'F'**
- **Maximum operating temperature 40°C**
- **Manufacture controlled to BS EN ISO 9001**
- **Performance tested to BS 848 Part 1 & 2**
- **2 Year Guarantee**

The GRB Galaxy Roof Mounting Belt Driven Twin fan range is a high performance, run and standby twin fan. Designed to be controlled in-conjunction with Vent-Axia Trakmaster twin fan controller range, the total package offers the end user flexibility when interfaced with or without a (BMS) Building Management Systems, such as: manual selection; 12/24hr auto changeover ensuring the extended life of the fan and motor.

The unit casing is manufactured from mill finished aluminium fitted with discharge aluminium weather louvre with bird mesh as standard. Assembly is controlled to BS EN ISO 9001.

Individual gravity return shutters are fitted as standard to prevent air re-circulation through the standby fan or the system during shut down periods. Galaxy Roof Mounting Fans are only suitable for horizontal mounting. When

installed on a shallow pitch roof a special upstand will be needed to compensate for the angular difference – to be manufactured by others.

To meet COSHH requirements, double pole service isolator switches are fitted and pre-wired from the fans and mounted to the outer casing to reduce installation time and cost. Access to the fan section is via an easily removed top access panel for cleaning and maintenance during shut down periods.

The Galaxy range is available in four models with extract performance ranging from 0.02m³/s up to 2.5m³/s (720m³/h to 9000m³/h), with pressure characteristics of up to 400Pa. All models are supplied with inlet spigots on the underside of the unit casing and a discharge anodised aluminium weather louvre.

Fan/Motor Assembly

Galaxy GRB belt driven fans are double inlet double width, forward curved centrifugal fans belt driven by totally enclosed fan ventilated motors, wound to suit 220-240V/1/50HZ or 380-415V/3/50Hz electrical supply. Protected to IP54, against dust and water jets complying with BS EN 60529. Motor insulation is Class F as a minimum, suitable for operating temperatures up to +40°C. The fans and motors are mounted on a steel frame, with anti-vibration mounts between the frame and casing and a flexible connection between the fan scroll and fan plate, minimising vibration. All belt driven Galaxy units are supplied with metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753.

Electrical

All Motors are available as either single phase 220-240V 50 Hz capacitor start and run or three phase 380V-415V 50Hz. The service isolator is supplied with all models with 20mm and PG11 entry, protected against dust and water jets from any angle.

Performance

The GRB fan performance is tested in accordance with test BS848 Part 1.

Sound Levels

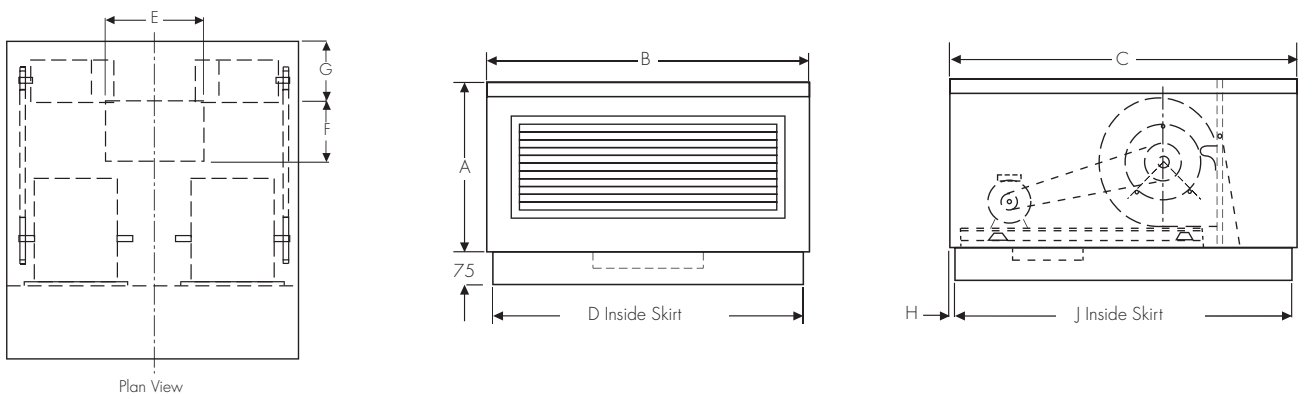
The Fan sound levels are measured in a reverberant chamber in accordance with BS848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The inlet and outlet sound power level spectra figures are dB with a reference of 10^{-12} Watts (1 picowatt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Quality Assurance

Design and manufacture are in accordance with the standard for quality management system BS EN ISO 9001.



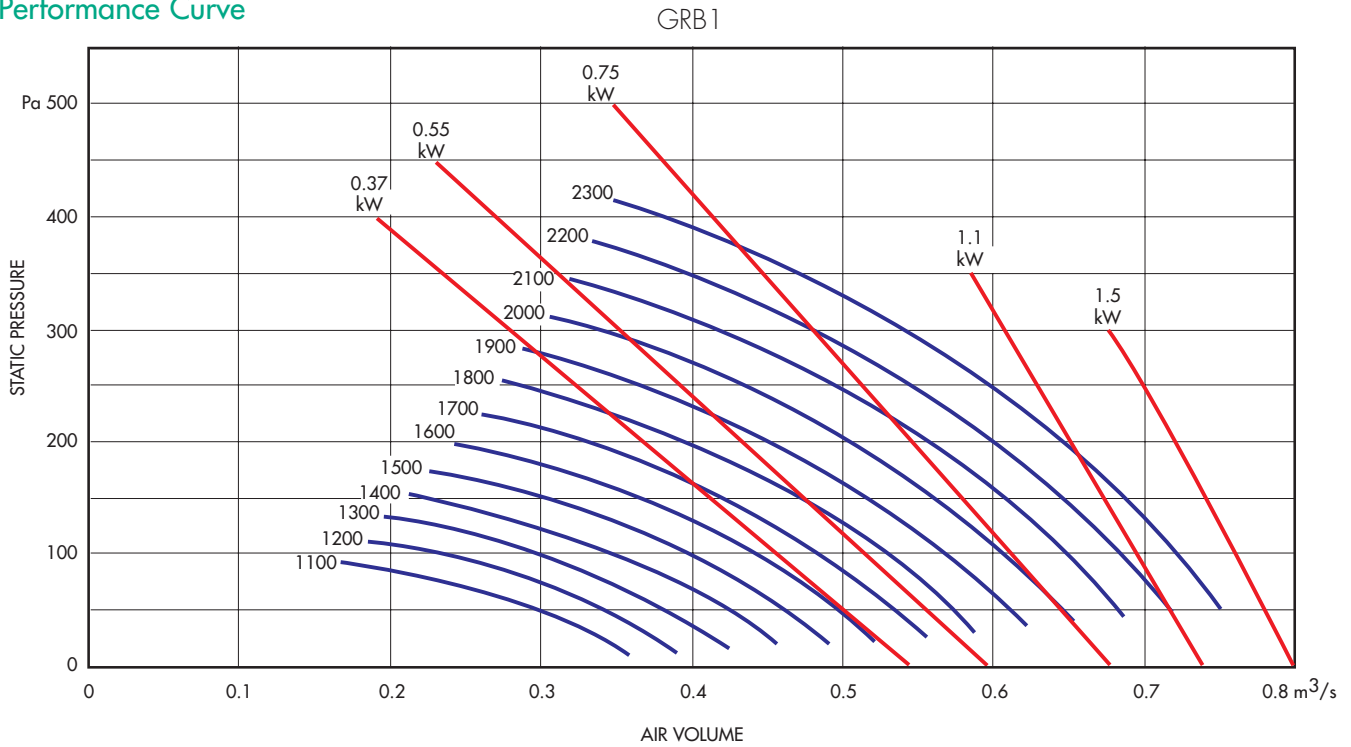
Fan Dimensions (mm)



Unit	A	B	C	D	E	F	G	H	J	Weight kg
GRB1	500	900	1100	900	500	250	247	100	900	90
GRB2	600	1150	1175	1120	762	305	150	27.5	1120	120
GRB3	700	1450	1450	1450	900	400	150	-	1450	195
GRB4	800	1550	1450	1550	1000	450	150	-	1450	215

Galaxy™ Roof Mounting Belt Driven Twin Fans (GRB)

Performance Curve

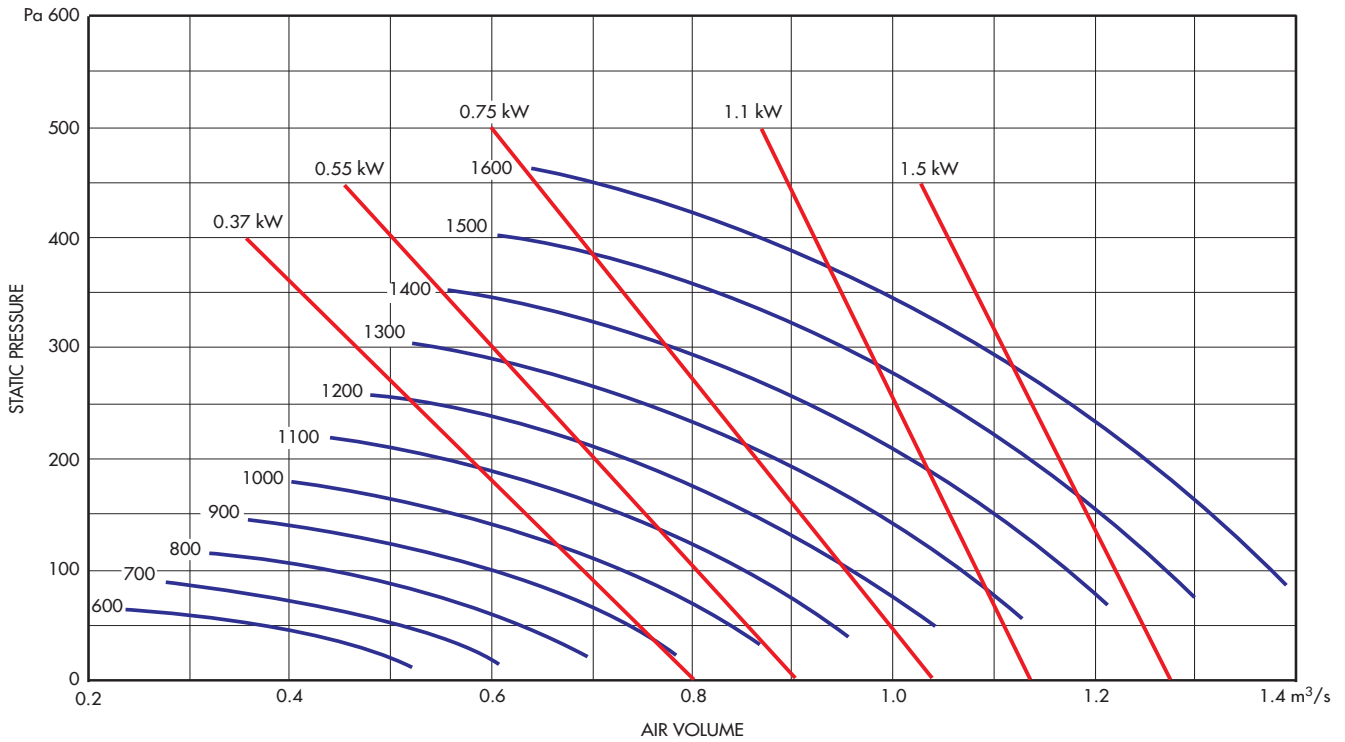


Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. R.P.M	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz								Sound Pressure dBA @ 3m
			63	125	250	500	1k	2k	4k	8k	
GRB1	1200	71	64	66	65	65	64	61	58	52	50
GRB1	1300	73	66	68	67	67	66	63	60	54	52
GRB1	1400	75	68	70	69	69	68	65	62	56	54
GRB1	1500	76	69	71	70	70	69	66	63	57	55
GRB1	1600	78	71	73	72	72	71	68	65	59	57
GRB1	1700	79	72	74	73	73	72	69	66	60	58
GRB1	1800	80	73	75	74	74	73	70	67	61	59
GRB1	1900	82	75	77	76	76	75	72	69	63	61
GRB1	2000	84	77	79	78	78	77	74	71	65	63
GRB1	2100	86	79	81	80	80	79	76	73	67	65
GRB1	2200	88	81	83	82	82	81	78	75	69	67
GRB1	2300	90	83	85	84	84	83	80	77	71	69

Performance Curve

GRB2



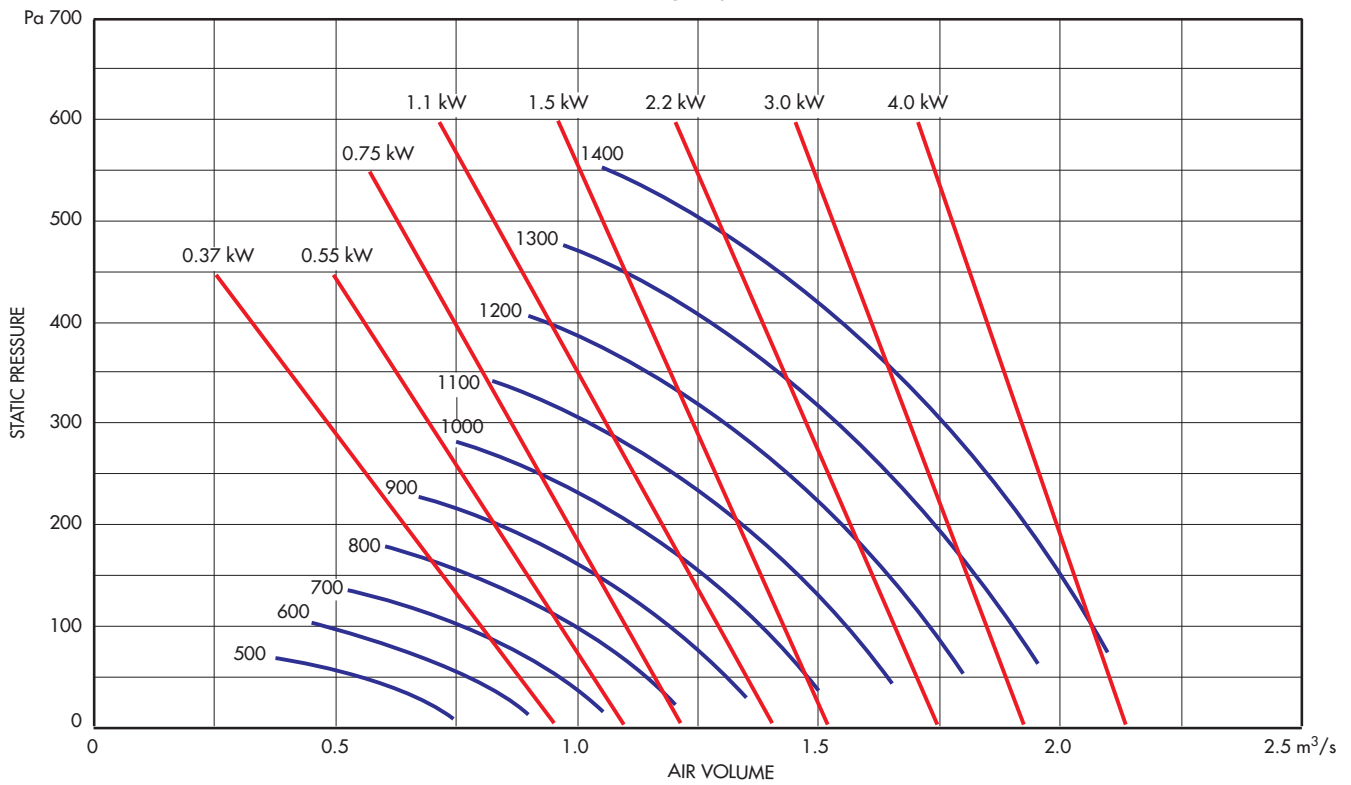
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. R.P.M	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz								Sound Pressure dBA @ 3m
			63	125	250	500	1k	2k	4k	8k	
GRB2	600	68	61	63	60	60	58	56	55	48	45
GRB2	700	70	63	65	62	62	60	58	57	50	47
GRB2	800	73	66	68	65	65	63	61	60	53	50
GRB2	900	75	68	70	67	67	65	63	62	55	52
GRB2	1000	77	70	72	69	69	67	65	64	57	54
GRB2	1100	79	72	74	71	71	69	67	66	59	56
GRB2	1200	82	75	77	74	74	72	70	69	62	59
GRB2	1300	84	77	79	76	76	74	72	71	64	61
GRB2	1400	86	79	81	78	78	76	74	73	66	63
GRB2	1500	88	81	83	80	80	78	76	75	68	65
GRB2	1600	90	83	85	82	82	80	78	77	70	67

Galaxy™ Roof Mounting Belt Driven Twin Fans (GRB)

Performance Curve

GRB3

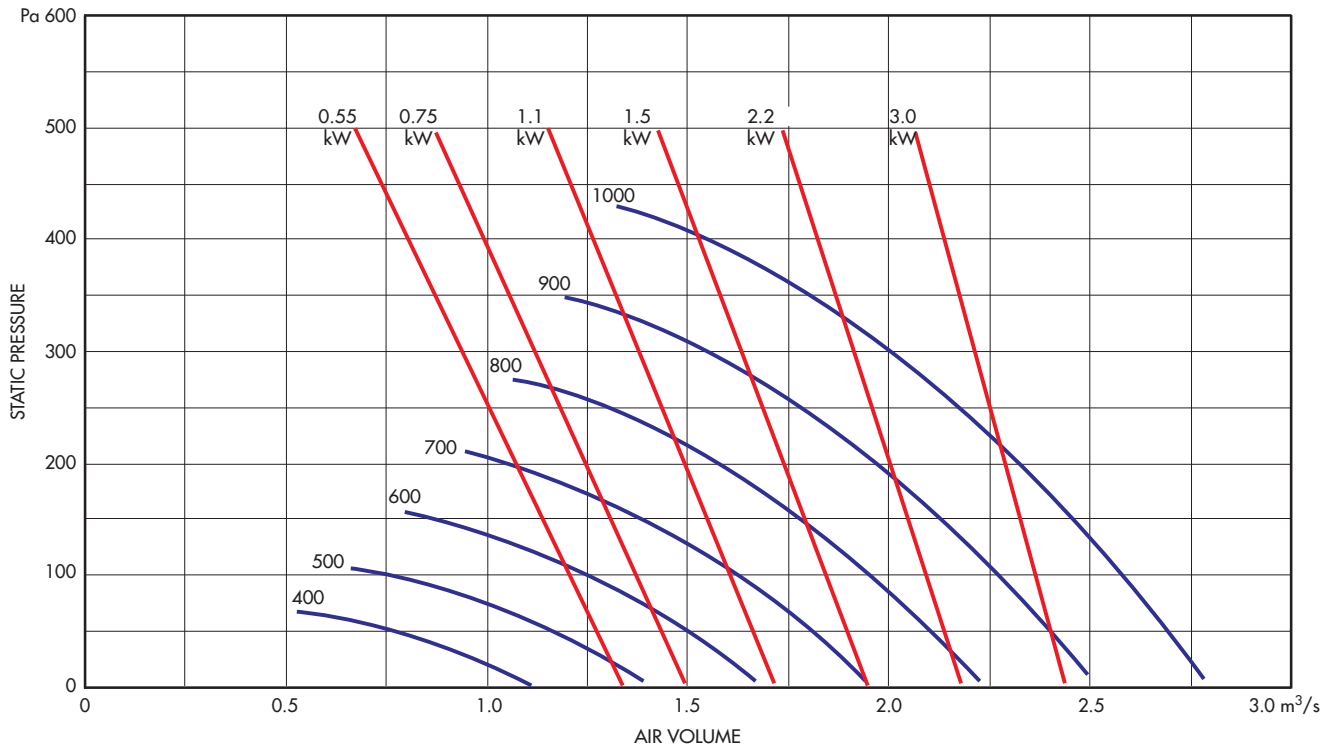


Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. R.P.M	Sound Power dBW	Induct Sound Power Levels dBW								Sound Pressure dBA @ 3m
			@ Octave Band Mid Frequency Hz								
			63	125	250	500	1k	2k	4k	8k	
GRB3	500	69	62	63	61	60	63	58	54	51	48
GRB3	600	73	66	67	65	64	67	62	58	55	52
GRB3	700	75	70	69	67	66	69	64	60	57	56
GRB3	800	80	73	74	72	71	74	69	65	62	59
GRB3	900	83	76	77	75	74	77	72	68	65	62
GRB3	1000	86	79	80	78	77	80	75	71	68	65
GRB3	1100	88	81	82	80	79	82	77	73	70	67
GRB3	1200	90	83	84	82	81	84	79	75	72	69
GRB3	1300	92	85	86	84	83	86	81	77	74	71
GRB3	1400	94	87	88	86	85	88	83	79	76	73

Performance Curve

GRB4



Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit Size	Fan Speed. R.P.M	Sound Power dBW	Induct Sound Power Levels dBW @ Octave Band Mid Frequency Hz								Sound Pressure dBA @ 3m
			63	125	250	500	1k	2k	4k	8k	
GRB4	400	72	65	66	65	64	61	60	58	53	49
GRB4	500	75	68	69	68	67	64	63	61	56	52
GRB4	600	79	72	73	72	71	68	67	65	60	56
GRB4	700	83	76	77	76	75	72	71	69	64	60
GRB4	800	86	79	80	79	78	75	74	71	67	63
GRB4	900	88	81	82	74	80	77	76	74	69	65
GRB4	1000	90	83	84	83	82	79	78	76	71	67

Galaxy™ Roof Mounting Belt Driven Twin Fans (GRB)

Electrical Data

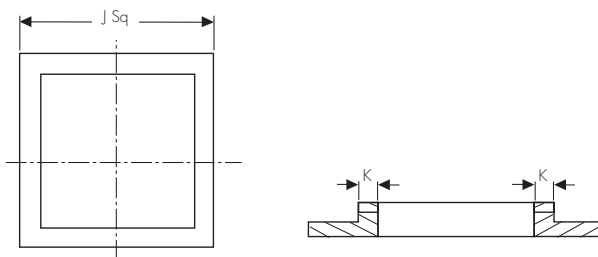
Motor Rating kW	Motor Nominal Speed r.p.m	400V/3Ph/50Hz	
		F.L.C. Amps	S.C. Amps*
0.37	1400	1.2	4.73
0.55	1400	1.7	8.5
0.75	1400	2.1	9.5
1.1	1400	3.25	13.75
1.5	1400	3.9	20.7
2.2	1400	5.3	28.2
3	1400	7	37.2
4	1400	9.05	52.65

Motor Rating kW	Motor Nominal Speed r.p.m	230V/1Ph/50Hz	
		F.L.C. Amps	S.C. Amps*
0.37	1400	2.7	14
0.55	1400	3.6	18
0.75	1400	5	25
1.1	1400	7	35
1.5	1400	10	50

* D.O.L. Start
 FLC = Full load current
 SC = Starting current

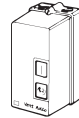
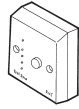
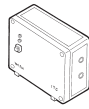
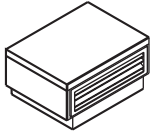
Accessories Dimensions (mm)

Kerb Detail Dimensions (mm)



Unit	J	K
GRB1	890	75
GRB2	1110	100
GRB3	1440	100
GRB4	1440	100

Accessories



Standard Unit Stock Ref. No.	Insulated Unit Stock Ref. No.	KW	**ITC Man/Auto Changeover Controller Stock Ref.	**ITC-DS 12/24hr Auto Changeover Controller Stock Ref.	RVC Remote Visual Indicator Stock Ref.	240V-1ph Supply DOL starter & 240V Overload Stock Ref.	415V-3ph Supply DOL starter & 415V Overload Stock Ref.	End Inlet Stock Ref.
GRB1	GRBI1	0.37	10314200	10314210	10314220	10311240A + 10312050A	10311415A + 10312015A	EI
GRB1	GRBI1	0.55	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB1	GRBI1	0.75	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB1	GRBI1	1.1	10314200	10314210	10314220	10311240A + 10312100A	10311415A + 10312050A	EI
GRB2	GRBI2	0.37	10314200	10314210	10314220	10311240A + 10312050A	10311415A + 10312015A	EI
GRB2	GRBI2	0.55	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB2	GRBI2	0.75	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312033A	EI
GRB2	GRBI2	1.1	10314200	10314210	10314220	10311240A + 10312100A	10311415A + 10312050A	EI
GRB2	GRBI2	1.5	*	-	-	10311240A + 10312150A	10311415A + 10312050A	EI
GRB3	GRBI3	0.37	10314200	10314210	10314220	10311240A + 10312050A	10311415A + 10312015A	EI
GRB3	GRBI3	0.55	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB3	GRBI3	0.75	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312033A	EI
GRB3	GRBI3	1.1	10314200	10314210	10314220	10311240A + 10312100A	10311415A + 10312050A	EI
GRB3	GRBI3	1.5	*	-	-	10311240A + 10312150A	10311415A + 10312050A	EI
GRB3	GRBI3	2.2	*	-	-	-	10311415A + 10312075A	EI
GRB3	GRBI3	3	*	-	-	-	10311415A + 10312100A	EI
GRB3	GRBI3	4	*	-	-	-	10311415A + 10312150A	EI
GRB4	GRBI4	0.55	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB4	GRBI4	0.75	10314200	10314210	10314220	10311240A + 10312075A	10311415A + 10312023A	EI
GRB4	GRBI4	1.1	10314200	10314210	10314220	10311240A + 10312100A	10311415A + 10312050A	EI
GRB4	GRBI4	1.5	*	-	-	10311240A + 10312150A	10311415A + 10312050A	EI
GRB4	GRBI4	2.2	*	-	-	-	10311415A + 10312075A	EI
GRB4	GRBI4	3	*	-	-	-	10311415A + 10312100A	EI
GRB4	GRBI4	4	*	-	-	-	10311415A + 10312150A	EI

NOTE: Units include anti vibration mounts and flexible connections internally, as standard.

* For relevant 1 phase or 3 phase manual/auto changeover controller, see current price list

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

Gemini Roof Mounting Twin Fans (G2B)

Features and Benefits

- High performance roof mounting twin fans
- 12/24 hr run and standby facility
- Cowl and base moulded from glass fibre reinforced polyester
- Motors protected to IP44
- Motor insulation Class 'B'
- Maximum operating temperature 40°C
- Standard Thermal Overload Protection
- Manufacture controlled to BS EN ISO 9001
- Performance tested to BS 848 Part 1

Roof Mounting Centrifugal Twin Fans have been specially developed for high-pressure ducted systems, designed around an aerodynamically shaped roof cowl, offering maximum performance, reliability and minimum noise levels. G2B roof cowl assemblies are moulded from glass fibre reinforced polyester, which offers high impact resistance and provides a rigid profile against strong winds and is resistant to UV light, delivered on-site ready assembled for quick and easy installation.

Standard colour **BS00A05**, alternative B.S colours available on request. Suitable for flat or inclined roofs (max. angle 30°). Designed for kerb or purlin mounting.

Designed and developed to provide one of the most powerful roof mounting twins on the market, available in six sizes, with extract performances ranging from 0.113m³/s up to 2.085m³/s (406m³/h to 7506m³/h), with pressure characteristics of up to 350Pa.

Motors

The Centrifugal Roof Twin fans feature two proven external rotor motors and backward curved impellers selected for performance and non-overloading characteristics. The assembly is dynamically balanced to VDI 2060. The motors in this range are protected to IP44 according to BS EN 60529. Ball bearings are greased for life and are designed to run at any angle. Insulation is Class 'B' (from -30°C to +40°C). Manufacture is controlled to BS EN ISO 9001 standards.

Electrical

Single phase 220-240V Hz. Capacitor start and run. Three phase 380-415V 50Hz.

Performance

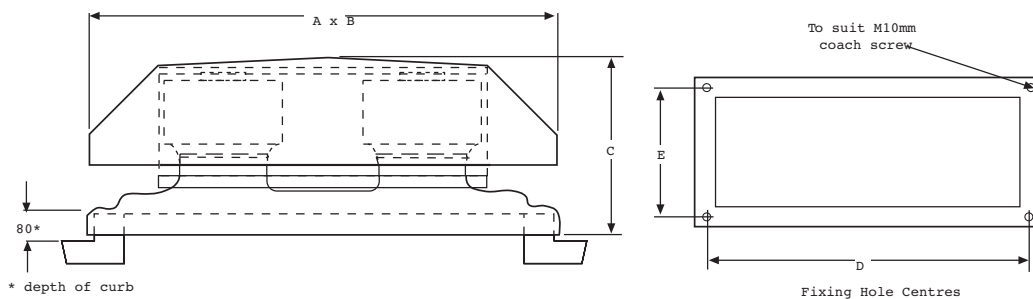
The fan performance, is in accordance with tests to BS 848 Part 1.

Sound Levels

Fan sound levels are measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.



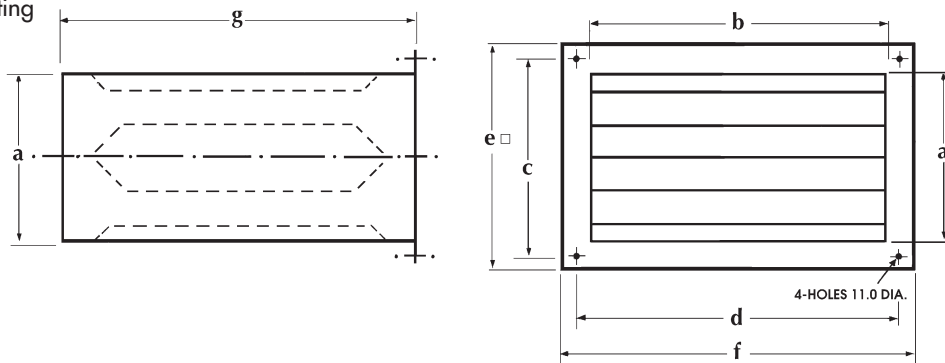
Fan Dimensions (mm)



Unit Code	A	B	C	D	E	Inside Curb	Outside Curb
200	800	470	280	700	370	325 x 650	425 x 750
300	975	550	350	875	450	400 x 825	500 x 925
350/400	1210	675	440	1000	500	400 x 900	600 x 1100
450/500	1430	830	540	1200	600	500 x 1100	700 x 1300

Accessories Dimensions (mm)

Purlin Box Mounting



Stock Ref.	a	b	c	d	e	f	g	Weight kg approx.
DSG2B20	315	645	370	700	425	750	600	15
DSG2B30	395	815	450	875	500	925	900	20
DSG2B35/40	390	890	500	1000	600	1100	900	40
DSG2B35/50	495	1085	600	1200	700	1300	900	59

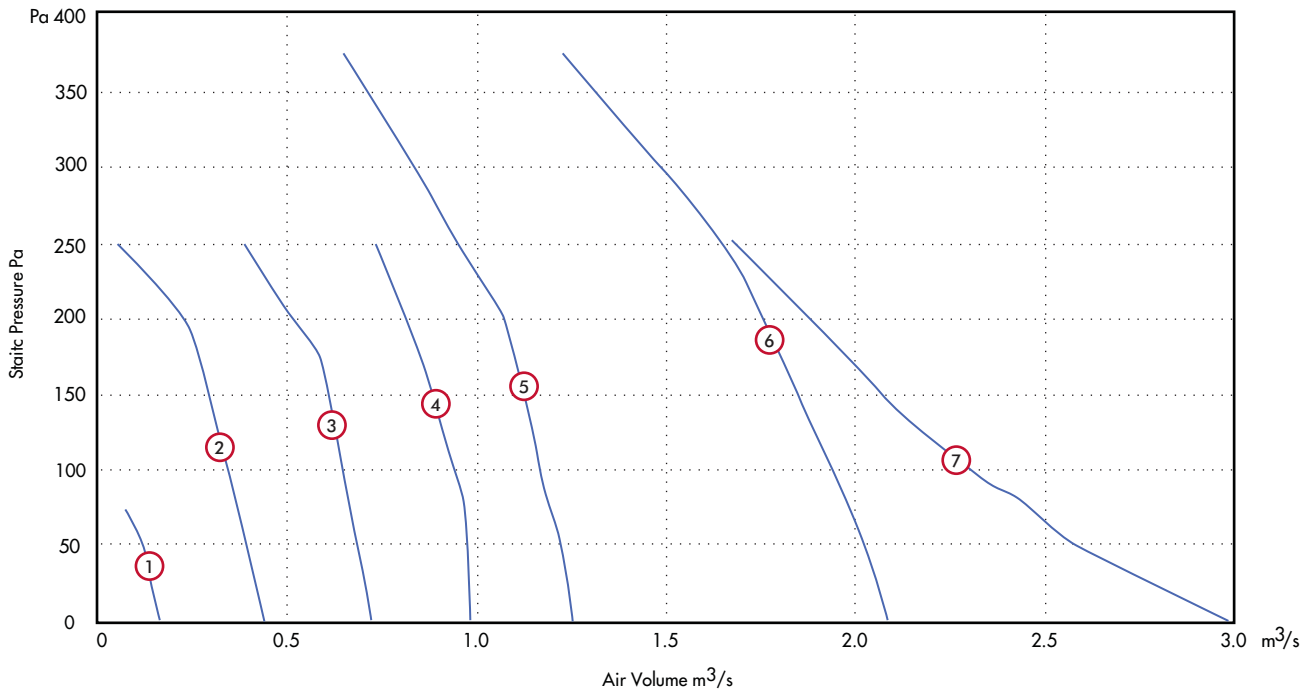
G2B Attenuator Insertion Losses

Stock Ref.	Length	63	125	250	500	1k	2k	4k	8k
DSG2B20	600	-1	-3	-8	-19	-32	-36	-24	-17
DSG2B30	900	-1	-2	-7	-17	-26	-27	-20	-16
DSG2B35/40	900	-1	-2	-5	-11	-18	-18	-12	-6
DSG2B45/50	900	-1	-3	-7	-12	-18	-18	-12	-6

Gemini Roof Mounting Twin Fans (G2B)

Performance Curve

GRB200 - G2B500 - 2 & 4 Pole - 1 & 3 Phase



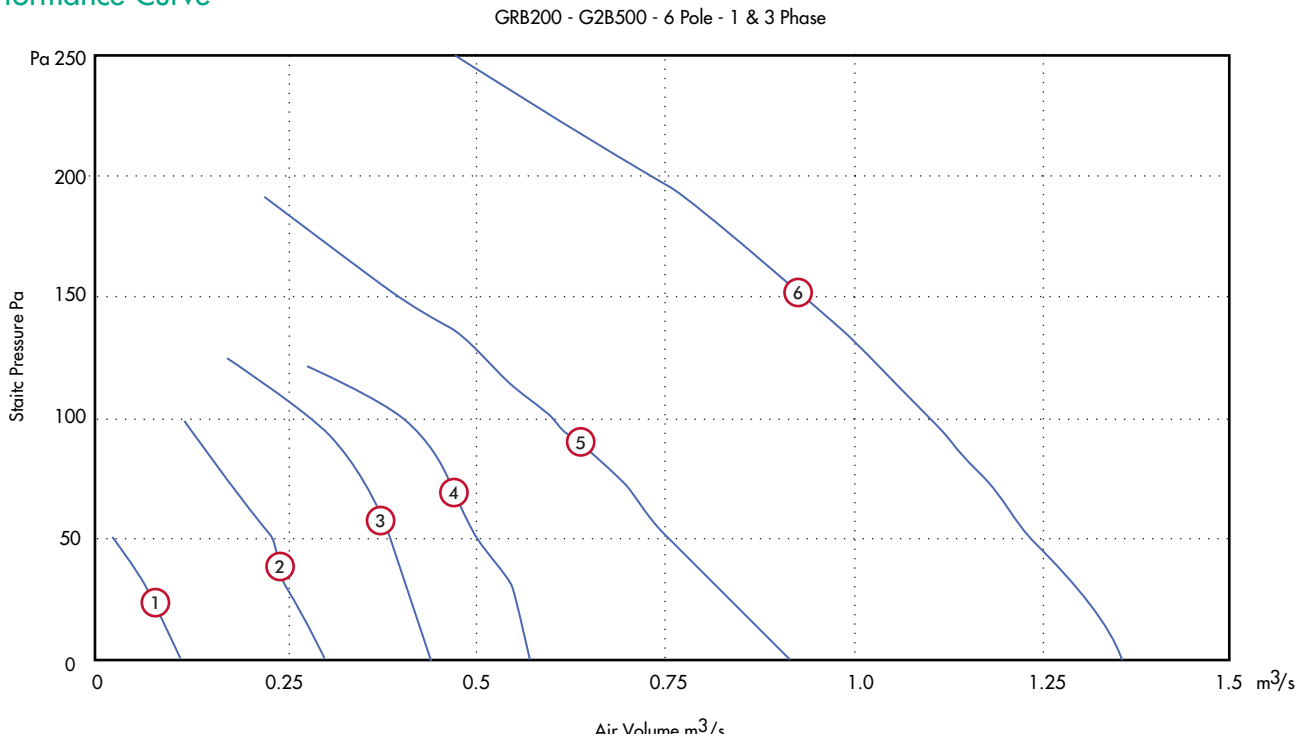
Performance Guide

Dia	Motor Phase	Stock Pole	Stock Ref.	Curve r.p.m.	Curve Ref.	m³/s at Pa										Motor kW	S.C Amps	F.L.C Amps	dBA @ 3m
						0	25	50	75	100	150	200	250	300	350				
200	1	2	G2B200/2/1	2400	7	0.296	0.279	0.267	0.256	0.243	0.218	0.198	0.166			0.21	2.6	0.9	61
200	1	4	G2B200/4/1	1300	1	0.161	0.142	0.114	0.076							0.07	1	0.44	43
300	1	4	G2B300/4/1	1300	2	0.44	0.417	0.394	0.37	0.345	0.283	0.225	0.045			0.17	1.5	0.9	53
350	1	4	G2B350/4/1	1370	3	0.723	0.709	0.684	0.667	0.642	0.59	0.508	0.38			0.31	3.7	1.35	58
400	1	4	G2B400/4/1	1340	4	0.985	0.982	0.965	0.952	0.935	0.887	0.811	0.73			0.52	5	2.2	58
400	3	4	G2B400/4/3	1340	4	0.985	0.982	0.965	0.952	0.935	0.887	0.811	0.73			0.46	2.9	0.85	58
58450	1	4	G2B450/4/1	1230	5	1.251	1.237	1.223	1.195	1.168	1.112	1.054	0.95	0.841	0.708	0.74	7	3.2	62
450	3	4	G2B450/4/3	1230	5	1.251	1.237	1.223	1.195	1.168	1.112	1.054	0.95	0.841	0.708	0.69	3.4	1.3	62
500	1	4	G2B500/4/1	1320	6	2.085	2.069	2.026	1.995	1.938	1.757	1.698	1.596	1.466	1.316	1.3	15	5.7	67
500	3	4	G2B500/4/3	1320	6	2.085	2.069	2.026	1.995	1.938	1.757	1.698	1.596	1.466	1.316	1.25	9.2	2.3	67

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B200	2	Inlet/Outlet	69	75	80	78	76	74	73	66	61
G2B200	4	Inlet/Outlet	62	64	63	61	58	56	53	43	43
G2B300	4	Inlet/Outlet	65	71	72	71	67	67	60	47	53
G2B350	4	Inlet/Outlet	65	84	79	77	73	70	65	58	58
G2B400	4	Inlet/Outlet	67	81	82	75	72	70	65	57	58
G2B450	4	Inlet/Outlet	74	86	85	80	76	74	69	62	62
G2B500	4	Inlet/Outlet	76	95	88	86	81	76	76	71	67

Performance Curve



Performance Guide

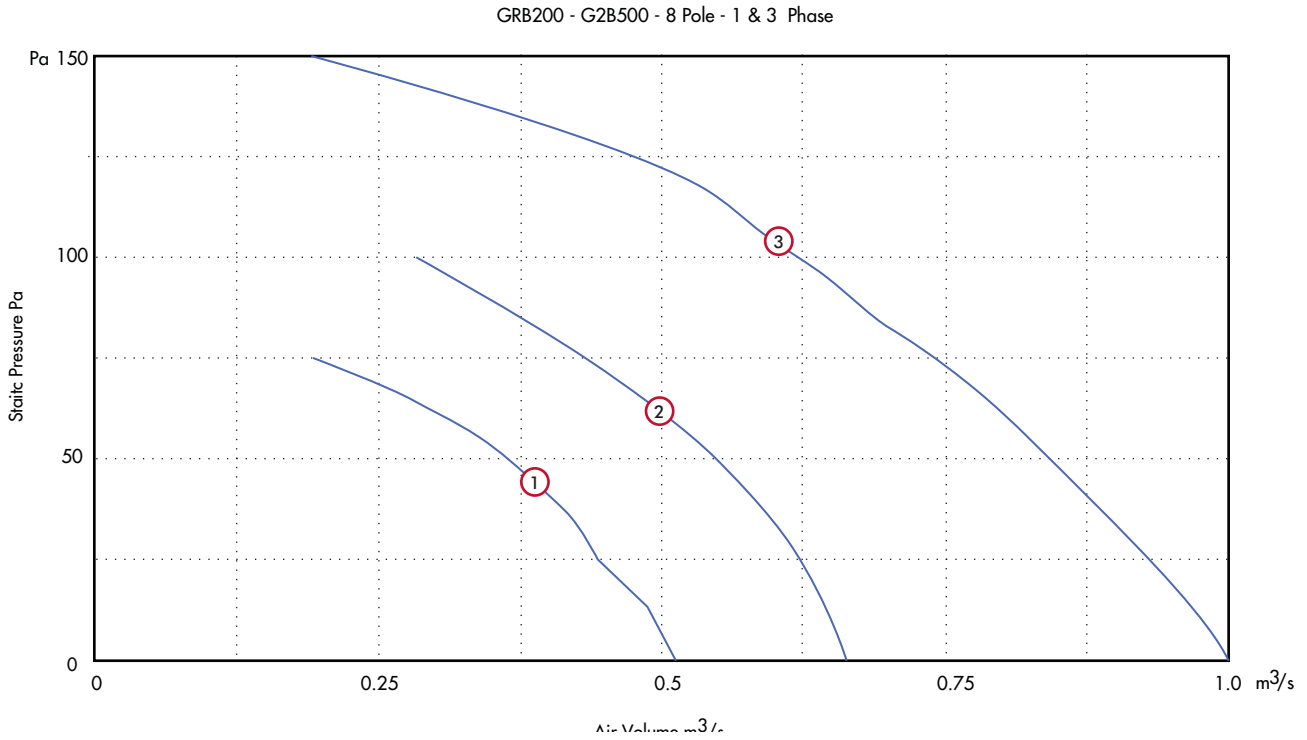
Dia	Motor Phase	Stock Pole	Stock Ref.	Stock r.p.m.	Curve Ref.	m³/s at Pa						Motor kW	S.C Amps	F.L.C Amps	dBA @ 3m	
						0	25	50	75	100	150					200
200	1	6	G2B200/6/1	1300	1	0.113	0.073	0.027	-	-	-	-	0.15	1.4	0.62	34
300	1	6	G2B300/6/1	900	2	0.3	0.269	0.231	0.184	0.111	-	-	0.08	0.7	0.39	45
350	1	6	G2B350/6/1	900	3	0.445	0.42	0.389	0.351	0.285	-	-	0.12	1.1	0.54	44
400	1	6	G2B400/6/1	880	4	0.574	0.556	0.506	0.461	0.406	-	-	0.17	1.6	0.8	47
400	3	6	G2B400/6/3	880	4	0.574	0.556	0.506	0.461	0.406	-	-	0.16	1.05	0.36	47
450	1	6	G2B450/6/1	840	5	0.937	0.83	0.76	0.69	0.608	0.408	-	0.3	2	1.5	51
450	3	6	G2B450/6/3	840	5	0.937	0.83	0.76	0.69	0.608	0.408	-	0.26	1.1	0.49	51
500	1	6	G2B500/6/1	850	6	1.364	1.32	1.23	1.178	1.09	0.94	0.072	0.45	4.2	2.2	55
500	3	6	G2B500/6/3	850	6	1.364	1.32	1.23	1.178	1.09	0.94	0.072	0.39	1.75	0.81	55

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B200	6	Inlet/Outlet	55	54	52	53	49	46	39	28	34
G2B300	6	Inlet/Outlet	57	60	63	65	59	59	43	41	45
G2B350	6	Inlet/Outlet	63	65	64	61	61	56	50	45	44
G2B400	6	Inlet/Outlet	66	70	71	63	61	59	51	43	47
G2B450	6	Inlet/Outlet	77	73	74	67	66	64	56	48	51
G2B500	6	Inlet/Outlet	76	82	77	73	70	65	59	53	55

Gemini Roof Mounting Twin Fans (G2B)

Performance Curve



Performance Guide

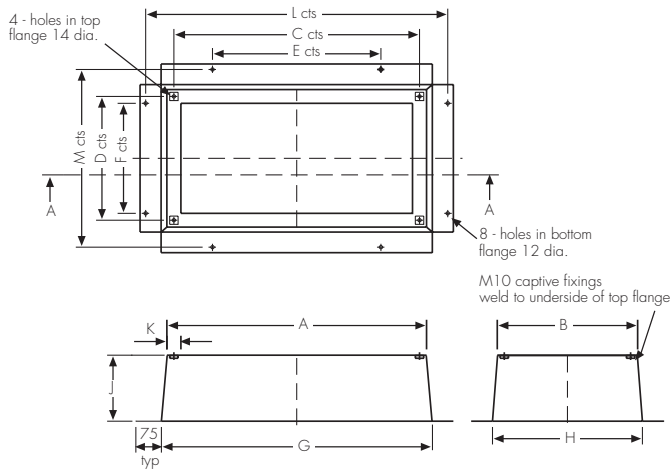
Dia	Motor Phase	Stock Pole	Stock Ref.	Curve r.p.m.	Curve Ref.	m ³ /s at Pa						Motor kW	S.C Amps	F.L.C Amps	dBA @ 3m
						0	25	50	75	100	150				
400	1	8	G2B400/8/1	655	①	0.509	0.444	0.361	0.19			0.13	1	0.68	39
400	3	8	G2B400/8/3	655	①	0.509	0.444	0.361	0.19			0.09	0.5	0.26	39
450	1	8	G2B450/8/1	600	②	0.66	0.62	0.52	0.427	0.285		0.15	1	0.63	44
450	3	8	G2B450/8/3	600	②	0.66	0.62	0.52	0.427	0.285		0.12	0.55	0.27	44
500	1	8	G2B500/8/1	640	③	0.999	0.931	0.84	0.736	0.617	0.19	0.23	2.05	1.15	47
500	3	8	G2B500/8/3	640	③	0.999	0.931	0.84	0.736	0.617	0.19	0.18	1	0.41	47

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Unit	Pole		63	125	250	500	1k	2k	4k	8k	dBA @ 3m
G2B400	8	Inlet/Outlet	64	60	60	55	55	51	42	33	39
G2B450	8	Inlet/Outlet	70	67	65	60	60	57	49	41	44
G2B500	8	Inlet/Outlet	69	73	69	64	62	56	50	42	47

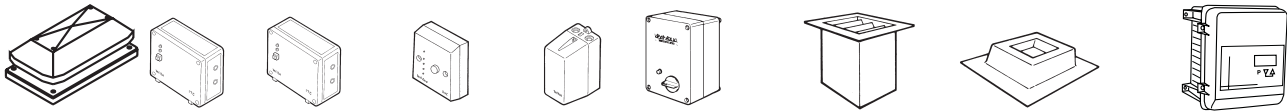
Accessories Dimensions (mm)

Purlin Box Mounting



Unit Code	A	B	C	D	E	F	G	H	J	K	L	M
200	740	410	700	370	600	320	740	410	240	50	852	522
300	925	500	875	450	775	400	964	534	240	50	1087	662
350	1070	570	1000	500	920	470	1120	620	250	70	1230	732
400	1070	570	1000	500	920	470	1120	620	250	70	1230	732
450	1270	670	1200	600	1120	570	1320	720	250	70	1430	832
500	1270	670	1200	600	1120	570	1320	720	250	70	1430	832

Accessories



Stock Ref.	**ITC Man./Auto		**ITC-DS 12/24hr	RVC ELV	RSC Remote	Auto Transformer	Roof Attenuator		Purlin Box	*eDemand Controller		
	Changeover	Auto Changeover	Remote Visual	Setback	600mm		900mm	Voltage Control		1/3 Phase Inverter	3 Phase Inverter	
	Controller	Controller	Controller	Controller	Stock Ref.		Stock Ref.	Stock Ref.		Stock Ref.	Stock Ref.	Stock Ref.
G2B200/2/1	10314200	10314210	10314220	10314230A	10313103	DSG2B20	-	G2B/A2 00	444164	-	-	
G2B200/4/1	10314200	10314210	10314220	10314230A	10313103	DSG2B20	-	G2B/A200	444164	-	-	
G2B300/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B30	G2B/A300	444164	-	-	
G2B350/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	GB/A350/400	444164	-	-	
G2B400/4/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-	
G2B400/4/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172	
G2B450/4/1	10314200	10314210	10314220	10314230A	10314105	-	DSG2B45/50	G2B/A450/500	444164	-	-	
G2B450/4/3	10314200	10314210	10314220	10314230A	10314304	-	DSG2B45/50	G2B/A450/500	444166	444177	444172	
G2B500/4/1	10314200	10314210	10314220	10314230A	10314107	-	DSG2B45/50	G2B/A450/500	444165	-	-	
G2B500/4/3	10314200	10314210	10314220	10314230A	10314304	-	DSG2B45/50	G2B/A450/500	444166	444177	444173	
G2B200/6/1	10314200	10314210	10314220	10314230A	-	DSG2B20	-	G2B/A200	444164	-	-	
G2B300/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B30	G2B/A300	444164	-	-	
G2B350/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-	
G2B400/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-	
G2B400/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172	
G2B450/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-	
G2B450/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172	
G2B500/6/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-	
G2B500/6/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172	
G2B400/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B35/40	G2B/A350/400	444164	-	-	
G2B400/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B35/40	G2B/A350/400	444166	444177	444172	
G2B450/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-	
G2B450/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172	
G2B500/8/1	10314200	10314210	10314220	10314230A	10314103	-	DSG2B45/50	G2B/A450/500	444164	-	-	
G2B500/8/3	10314200	10314210	10314220	10314230A	10314301	-	DSG2B45/50	G2B/A450/500	444166	444177	444172	

* For full range of speed controller options, see Accessories & Controllers Section

**Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

High Pressure Galaxy™ Twin Fans (BT)

Features and Benefits

- Belt driven high pressure, twin fans
- Performance range up to 5.5m³/s
- Static pressure development up to 1,400Pa
- Suitable for either internal or external mounting
- Optional IP65 service isolator
- Operating Temperatures up to +55°C
- Rigid anodised aluminium extruded frame casing
- Motors suitable for Inverter Speed Control where permissible
- Quality Assurance to BS EN ISO 9001
- Performance tested to BS 848 Part 1

BT Twin units are constructed to the highest manufacturing standards and developed around a rigid anodised aluminium extruded frame. Panels shall be manufactured from prime quality galvanised or plastisol sheet steel, fixed to the frame, ensuring a robust casing, for those tough site conditions.

Fan and Motor Assembly

Units are twin forward curved, double inlet double width centrifugal impellers, driven by totally enclosed fan ventilated motors, wound to suit either 220-240V/1ph/50Hz or 380-415V/3ph/50Hz electrical supply, with special voltage motors available on request. The fan and motors are assembled on a rigid angle iron framework, fitted with anti-vibration mounts and a flexible connection between the

unit casing and frame to ensure vibration free operation. The motors are protected to IP55, against dust and water jets complying with BS EN 60529. With motor insulation Class F as a minimum, suitable for operating temperatures up to +55°C. All belt driven fans have metric pulleys to ISO 4183 and wedge belts to ISO 4184 and DIN 7753. Protection of the motor is to be provided by a current overload protection switch such as a D.O.L. starter or equivalent which is required on all installations or the product guarantee will be invalidated.

Twin Fan Controllers

The BT range offers a guaranteed operation in the unlikely event of fan failure. A full range of control packages are available with facilities of Auto Changeover on fan failure, 24hr Duty Share, BMS compatibility and sensor connections for Optical Timelocks, Humidity Sensors, Air Quality Sensors and PIR Detectors.

Performance

The fan performance, shall be tested in accordance with BS 848 Part 1, with the fan sound levels measured in a reverberant chamber in accordance to BS 848 Part 2.

Quality Assurance

Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001.

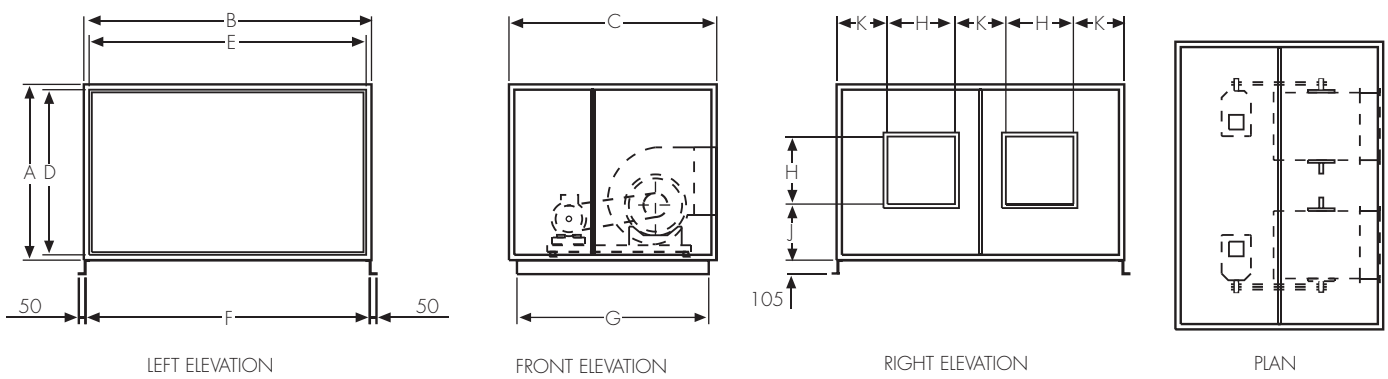
Accessories

Full ranges of optional accessories are available, such as:

- Twin Fan Controllers
- Motor Isolators
- D.O.L. Starters
- Inlet Dampers
- Flexible Connections
- Attenuator



Dimensions (mm)



Unit Size	A	B	C	D	E	F	G	H	J	K
BT1 F18	720	960	960	640	880	925	840	229	241	167
BT2 F22	720	1260	960	640	1180	1225	840	288	264	228
BT3 F28	1020	1560	1260	940	1480	1525	1140	361	286	279
BT4 F31	1020	1860	1260	940	1780	1825	1140	404	308	350
BT5 F40	1320	2160	1560	1240	2080	2125	1440	507	339	382

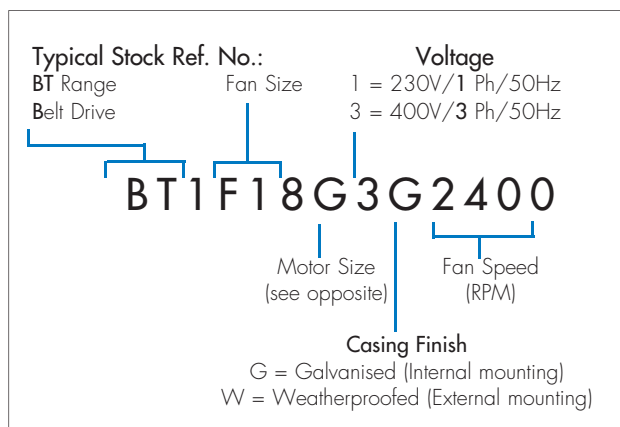
Selection Procedure

Plot your specified duty on the overleaf graphs. Select motor size and fan speed required. The full Stock Ref. No. for your unit will comprise of the unit size, motor rating, supply and fan speed.

Motor Sizes :

0.55 kW = D	3.00 kW = J
0.75 kW = E	4.00 kW = K
1.10 kW = F	5.50 kW = L
1.50 kW = G	7.50 kW = M
2.20 kW = H	11.0 kW = N

Note:
220-240V/1ph/50Hz units are only available up to 1.5kW.

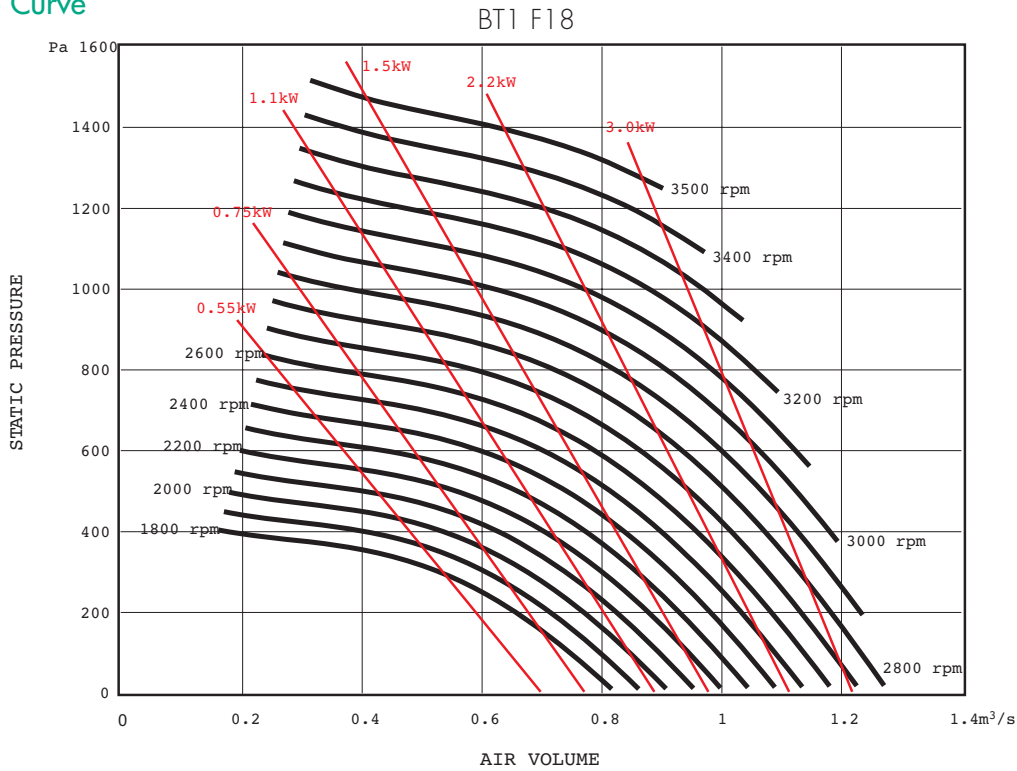


Example:

Duty required = 0.8m³/s @ 400Pa
Unit Size = BT 1
Supply phase = 3
From above graph (BT 1):
Speed = 2400rpm
Motor = 1.5kW

High Pressure Galaxy™ Twin Fans (BT)

Performance Curve



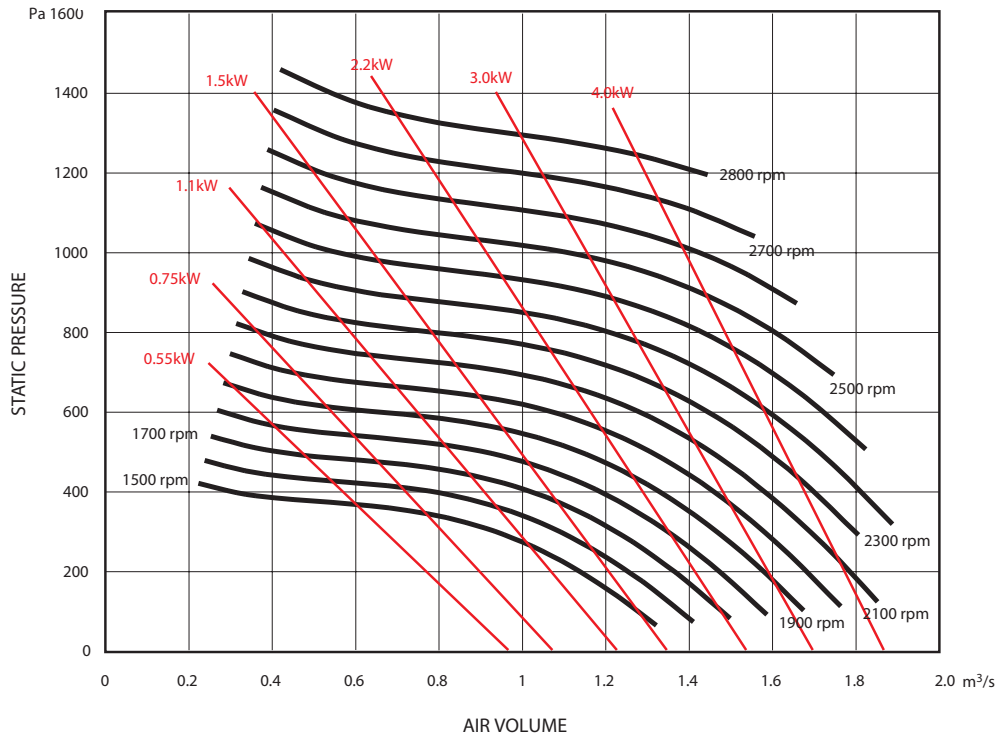
Sound Power Level Spectra dB (re 10⁻¹²Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1800	Inlet	75	76	77	77	76	72	70	63	60
1800	Outlet	81	75	75	74	73	71	68	63	58
1800	Breakout	67	68	61	47	46	39	37	30	36
1900	Inlet	74	76	77	76	77	75	71	67	61
1900	Outlet	81	76	75	74	73	73	70	65	59
1900	Breakout	66	68	61	46	47	42	38	34	36
2000	Inlet	75	77	78	77	78	76	72	68	62
2000	Outlet	82	77	76	75	74	74	71	66	60
2000	Breakout	67	69	62	47	48	43	39	35	37
2100	Inlet	76	78	79	78	79	77	73	69	63
2100	Outlet	83	78	77	76	75	75	72	67	61
2100	Breakout	68	70	63	48	49	44	40	36	38
2200	Inlet	77	79	80	79	80	78	74	70	64
2200	Outlet	84	79	78	77	76	76	73	68	62
2200	Breakout	69	71	64	49	50	45	41	37	39
2300	Inlet	78	80	81	80	81	79	75	71	65
2300	Outlet	85	80	79	78	77	77	74	69	63
2300	Breakout	70	72	65	50	51	46	42	38	40
2400	Inlet	79	81	82	81	82	80	76	72	66
2400	Outlet	86	81	80	79	78	78	75	70	64
2400	Breakout	71	73	66	51	52	47	43	39	41
2500	Inlet	80	82	83	82	83	81	77	73	67
2500	Outlet	87	82	81	80	79	79	76	71	65
2500	Breakout	72	74	67	52	53	48	44	40	42
2600	Inlet	81	83	84	83	84	82	78	74	68
2600	Outlet	88	83	82	81	80	80	77	72	66
2600	Breakout	73	75	68	53	54	49	45	41	43

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
2700	Inlet	81	83	84	83	84	82	78	74	68
2700	Outlet	88	83	82	81	80	80	77	72	66
2700	Breakout	73	75	68	53	54	49	45	41	43
2800	Inlet	82	84	85	84	85	83	79	75	69
2800	Outlet	89	84	83	82	81	81	78	73	67
2800	Breakout	74	76	69	54	55	50	46	42	44
2900	Inlet	82	84	85	84	85	83	79	75	69
2900	Outlet	89	84	83	82	81	81	78	73	67
2900	Breakout	74	76	69	54	55	50	46	42	44
3000	Inlet	83	85	86	85	86	84	80	76	70
3000	Outlet	90	85	84	83	82	82	79	74	68
3000	Breakout	75	77	70	55	56	51	47	43	45
3100	Inlet	83	85	86	85	86	84	80	76	70
3100	Outlet	90	85	84	83	82	82	79	74	68
3100	Breakout	75	77	70	55	56	51	47	43	45
3200	Inlet	84	86	87	86	87	85	81	77	71
3200	Outlet	91	86	85	84	83	83	80	75	69
3200	Breakout	76	78	71	56	57	52	48	44	46
3300	Inlet	84	86	87	86	87	85	81	77	71
3300	Outlet	91	86	85	84	83	83	80	75	69
3300	Breakout	76	78	71	56	57	52	48	44	46
3400	Inlet	85	87	88	87	88	86	82	78	72
3400	Outlet	92	87	86	85	84	84	81	76	70
3400	Breakout	77	79	72	57	58	53	49	45	47
3500	Inlet	85	87	88	87	88	86	82	78	72
3500	Outlet	92	87	86	85	84	84	81	76	70
3500	Breakout	77	79	72	57	58	53	49	45	47

Performance Curve

BT2 F22



Sound Power Level Spectra dB (re 10⁻¹²Watts)

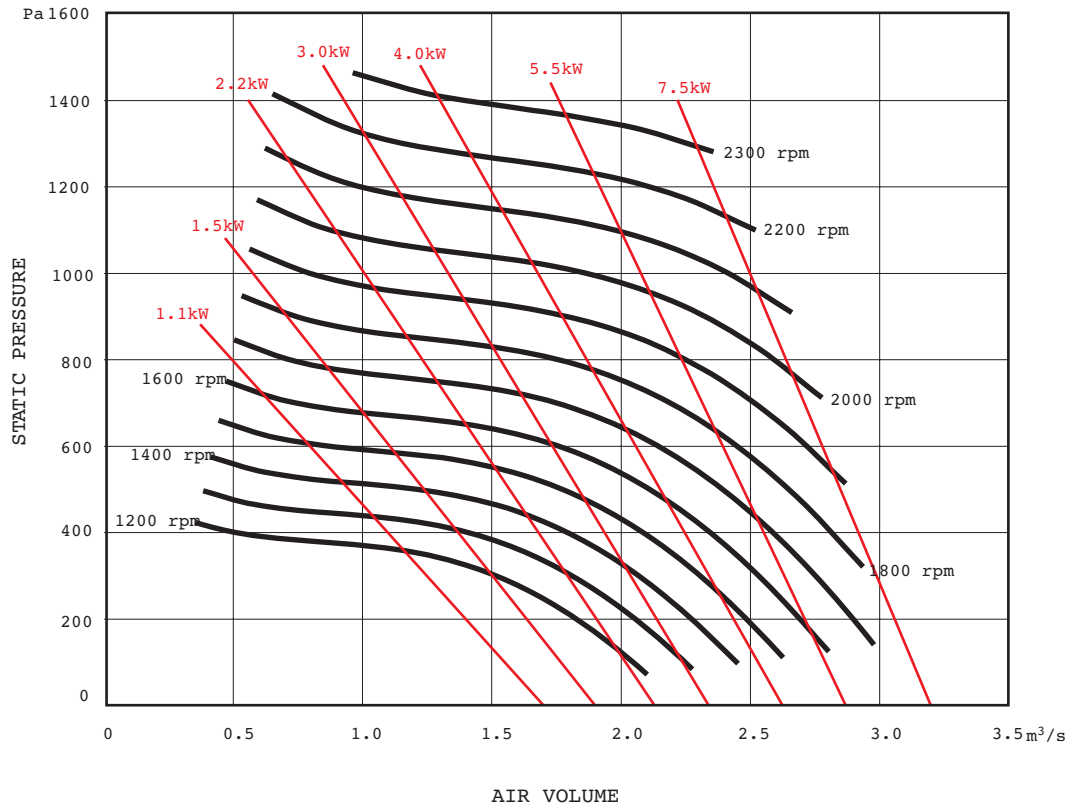
r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1500	Inlet	79	80	81	81	80	76	74	67	64
1500	Outlet	85	79	79	78	77	75	72	67	62
1500	Breakout	71	72	65	51	50	43	41	34	40
1600	Inlet	81	82	83	83	82	78	76	69	66
1600	Outlet	87	81	81	80	79	77	74	69	64
1600	Breakout	73	74	67	53	52	45	43	36	42
1700	Inlet	82	83	84	84	83	79	77	70	67
1700	Outlet	88	82	82	81	80	78	75	70	65
1700	Breakout	74	75	68	54	53	46	44	37	43
1800	Inlet	83	84	85	85	84	80	78	71	68
1800	Outlet	89	83	83	82	81	79	76	71	66
1800	Breakout	75	76	69	55	54	47	45	38	44
1900	Inlet	82	84	85	84	85	83	79	75	69
1900	Outlet	89	84	83	82	81	81	78	73	67
1900	Breakout	74	76	69	54	55	50	46	42	44
2000	Inlet	83	85	86	85	86	84	80	76	70
2000	Outlet	90	85	84	83	82	82	79	74	68
2000	Breakout	75	77	70	55	56	51	47	43	45

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
2100	Inlet	84	86	87	86	87	85	81	77	71
2100	Outlet	91	86	85	84	83	83	80	75	69
2100	Breakout	76	78	71	56	57	52	48	44	46
2200	Inlet	85	87	88	87	88	86	82	78	72
2200	Outlet	92	87	86	85	84	84	81	76	70
2200	Breakout	77	79	72	57	58	53	49	45	47
2300	Inlet	85	87	88	87	88	86	82	78	72
2300	Outlet	92	87	86	85	84	84	81	76	70
2300	Breakout	77	79	72	57	58	53	49	45	47
2400	Inlet	86	88	89	88	89	87	83	79	73
2400	Outlet	93	88	87	86	85	85	82	77	71
2400	Breakout	78	80	73	58	59	54	50	46	48
2600	Inlet	87	89	90	89	90	88	84	80	74
2600	Outlet	94	89	88	87	86	86	83	78	72
2600	Breakout	79	81	74	59	60	55	51	47	49
2800	Inlet	87	89	90	89	90	88	84	80	74
2800	Outlet	94	89	88	87	86	86	83	78	72
2800	Breakout	79	81	74	59	60	55	51	47	49

High Pressure Galaxy™ Twin Fans (BT)

Performance Curve

BT3 F28



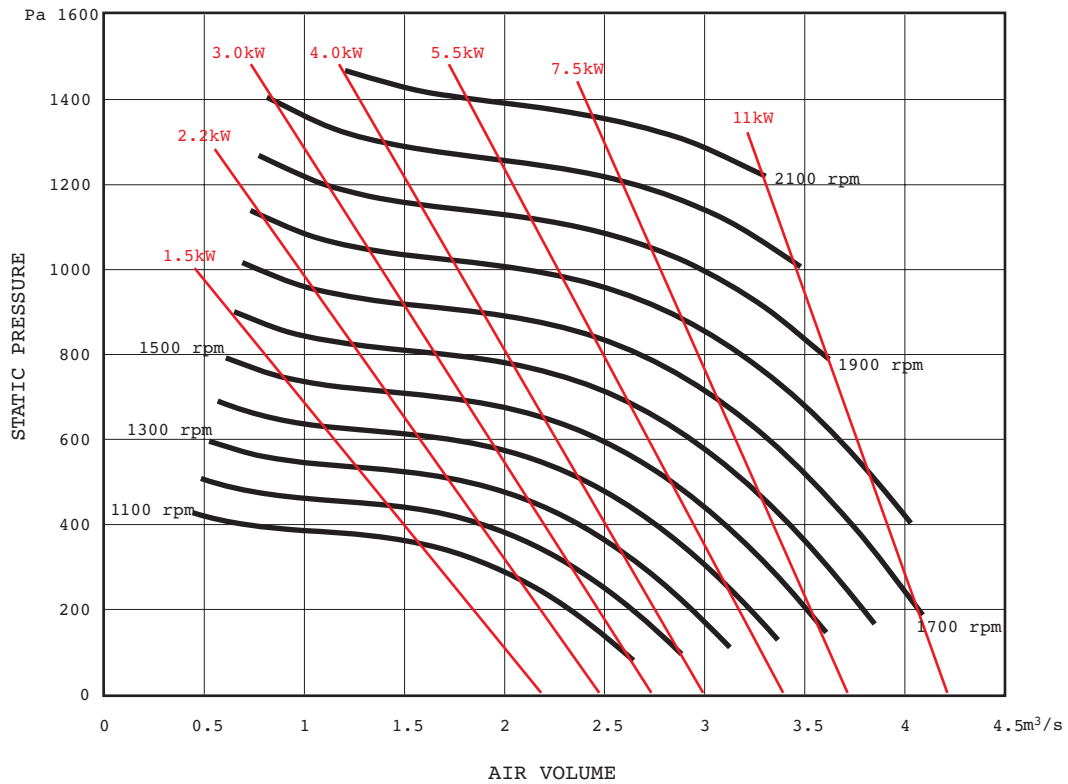
Sound Power Level Spectra dB (re 10⁻¹²Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1200	Inlet	81	82	83	83	82	78	76	69	66
1200	Outlet	87	81	81	80	79	77	74	69	64
1200	Breakout	73	74	67	53	52	45	43	36	42
1300	Inlet	82	83	84	84	83	79	77	70	67
1300	Outlet	88	82	82	81	80	78	75	70	65
1300	Breakout	74	75	68	54	53	46	44	37	43
1400	Inlet	84	85	86	86	85	81	79	72	69
1400	Outlet	90	84	84	83	82	80	77	72	67
1400	Breakout	76	77	70	56	55	48	46	39	45
1500	Inlet	85	86	87	87	86	82	80	73	70
1500	Outlet	91	85	85	84	83	81	78	73	68
1500	Breakout	77	78	71	57	56	49	47	40	46
1600	Inlet	86	87	88	88	87	83	81	74	71
1600	Outlet	92	86	86	85	84	82	79	74	69
1600	Breakout	78	79	72	58	57	50	48	41	47

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1700	Inlet	87	88	89	89	88	84	82	75	72
1700	Outlet	93	87	87	86	85	83	80	75	70
1700	Breakout	79	80	73	59	58	51	49	42	48
1800	Inlet	88	89	90	90	89	85	83	76	73
1800	Outlet	94	88	88	87	86	84	81	76	71
1800	Breakout	80	81	74	60	59	52	50	43	49
1900	Inlet	86	88	89	88	89	87	83	79	73
1900	Outlet	93	88	87	86	85	85	82	77	71
1900	Breakout	78	80	73	58	59	54	50	46	48
2100	Inlet	87	89	90	89	90	88	84	80	74
2100	Outlet	94	89	88	87	86	86	83	78	72
2100	Breakout	79	81	74	59	60	55	51	47	49
2300	Inlet	88	90	91	90	91	89	85	81	75
2300	Outlet	95	90	89	88	87	87	84	79	73
2300	Breakout	80	82	75	60	61	56	52	48	50

Performance Curve

BT4 F31



Sound Power Level Spectra dB (re 10⁻¹²Watts)

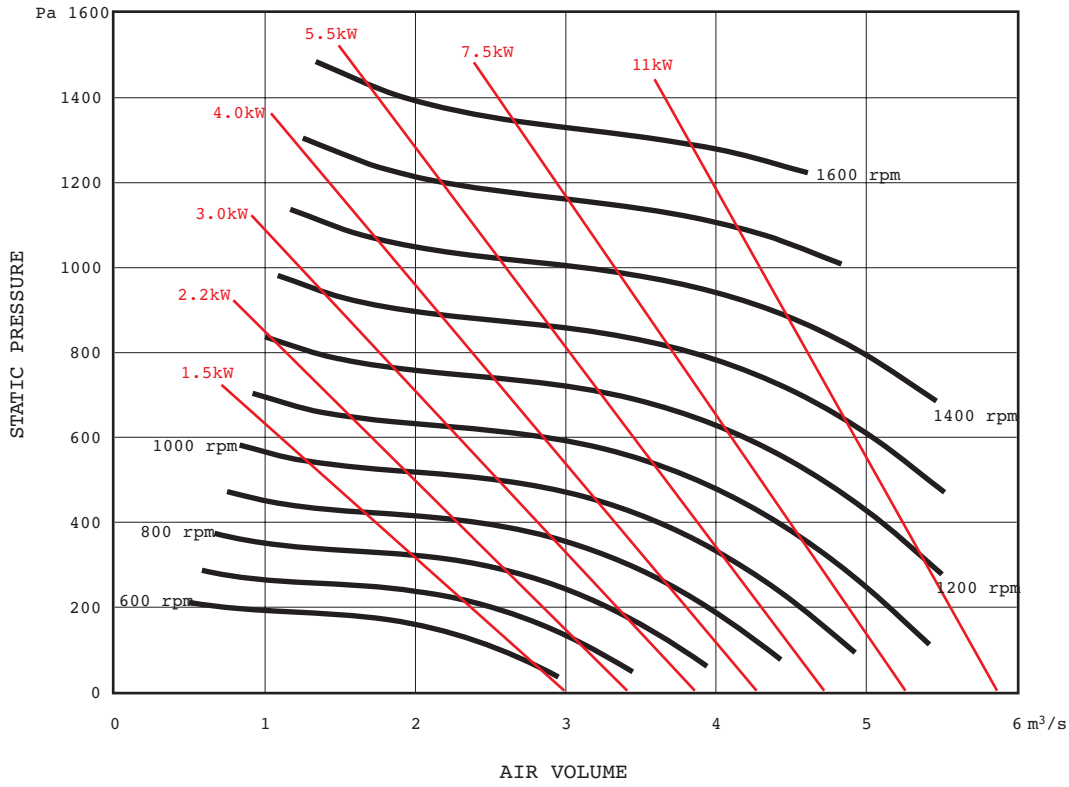
r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1100	Inlet	81	82	83	83	82	78	76	69	66
1100	Outlet	87	81	81	80	79	77	74	69	64
1100	Breakout	73	74	67	53	52	45	43	36	42
1200	Inlet	83	84	85	85	84	80	78	71	68
1200	Outlet	89	83	83	82	81	79	76	71	66
1200	Breakout	75	76	69	55	54	47	45	38	44
1300	Inlet	85	86	87	87	86	82	80	73	70
1300	Outlet	91	85	85	84	83	81	78	73	68
1300	Breakout	77	78	71	57	56	49	47	40	46
1400	Inlet	87	88	89	89	88	84	82	75	72
1400	Outlet	93	87	87	86	85	83	80	75	70
1400	Breakout	79	80	73	59	58	51	49	42	48
1500	Inlet	88	89	90	90	89	85	83	76	73
1500	Outlet	94	88	88	87	86	84	81	76	71
1500	Breakout	80	81	74	60	59	52	50	43	49
1600	Inlet	89	90	91	91	90	86	84	77	74
1600	Outlet	95	89	89	88	87	85	82	77	72
1600	Breakout	81	82	75	61	60	53	51	44	50

r.p.m		63	125	250	500	1k	2k	4k	8k	@3m
1700	Inlet	89	90	91	91	90	86	84	77	74
1700	Outlet	95	89	89	88	87	85	82	77	72
1700	Breakout	81	82	75	61	60	53	51	44	50
1800	Inlet	90	91	92	92	91	87	85	78	75
1800	Outlet	96	90	90	89	88	86	83	78	73
1800	Breakout	82	83	76	62	61	54	52	45	51
1900	Inlet	88	90	91	90	91	89	85	81	75
1900	Outlet	95	90	89	88	87	87	84	79	73
1900	Breakout	80	82	75	60	61	56	52	48	50
2000	Inlet	89	91	92	91	92	90	86	82	76
2000	Outlet	96	91	90	89	88	88	85	80	74
2000	Breakout	81	83	76	61	62	57	53	49	51
2100	Inlet	89	91	92	91	92	90	86	82	76
2100	Outlet	96	91	90	89	88	88	85	80	74
2100	Breakout	81	83	76	61	62	57	53	49	51

High Pressure Galaxy™ Twin Fans (BT)

Performance Curve

BT5 F40

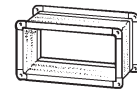
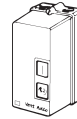
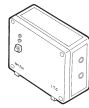


Sound Power Level Spectra dB (re 10⁻¹²Watts)

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
600	Inlet	77	78	77	76	76	72	69	63	60
600	Outlet	82	76	75	73	74	70	68	63	58
600	Breakout	69	70	61	46	46	39	36	30	37
700	Inlet	80	81	80	79	79	75	72	66	63
700	Outlet	85	79	78	76	77	73	71	66	61
700	Breakout	72	73	64	49	49	42	39	33	40
800	Inlet	83	84	83	82	82	78	75	69	66
800	Outlet	88	82	81	79	80	76	74	69	64
800	Breakout	75	76	67	52	52	45	42	36	43
900	Inlet	84	85	86	86	85	81	79	72	69
900	Outlet	90	84	84	83	82	80	77	72	67
900	Breakout	76	77	70	56	55	48	46	39	45
1000	Inlet	86	87	88	88	87	83	81	74	71
1000	Outlet	92	86	86	85	84	82	79	74	69
1000	Breakout	78	79	72	58	57	50	48	41	47

r.p.m		63	125	250	500	1k	2k	4k	8k	dBA @3m
1100	Inlet	88	89	90	90	89	85	83	76	73
1100	Outlet	94	88	88	87	86	84	81	76	71
1100	Breakout	80	81	74	60	59	52	50	43	49
1200	Inlet	89	90	91	91	90	86	84	77	74
1200	Outlet	95	89	89	88	87	85	82	77	72
1200	Breakout	81	82	75	61	60	53	51	44	50
1300	Inlet	89	90	91	91	90	86	84	77	74
1300	Outlet	95	89	89	88	87	85	82	77	72
1300	Breakout	81	82	75	61	60	53	51	44	50
1400	Inlet	90	91	92	92	91	87	85	78	75
1400	Outlet	96	90	90	89	88	86	83	78	73
1400	Breakout	82	83	76	62	61	54	52	45	51
1600	Inlet	91	92	93	93	92	88	86	79	76
1600	Outlet	97	91	91	90	89	87	84	79	74
1600	Breakout	83	84	77	63	62	55	53	46	52

Accessories



Stock Ref.	Motor kW	Phase	^ ITC Man/Auto Changeover Controller Stock Ref.	^ ITC-DS 12/24hr Auto Changeover Controller Stock Ref.	Man/Auto Changeover Controller Stock Ref.	RSC Remote Visual Indicator Stock Ref.	DOL Starter & Coil (2 Required per unit) Stock Ref.	**Isolator (Factory Fitted) Stock Ref.	Flexible Connection Stock Ref.	Inlet Damper Stock Ref.
BT1F18	0.55	1	10314200	10314210	–	10314220	444744+444703	71ISOL4	FCBT1	CDBT1
BT1F18	0.55	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT1	CDBT1
BT1F18	0.75	1	10314200	10314210	–	10314220	444744+444704	71ISOL4	FCBT1	CDBT1
BT1F18	0.75	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT1	CDBT1
BT1F18	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT1	CDBT1
BT1F18	1.1	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT1	CDBT1
BT1F18	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT1	CDBT1
BT1F18	1.5	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT1	CDBT1
BT1F18	2.2	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT1	CDBT1
BT1F18	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT1	CDBT1
BT2F22	0.55	1	10314200	10314210	–	10314220	444744+444703	71ISOL4	FCBT2	CDBT2
BT2F22	0.55	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT2	CDBT2
BT2F22	0.75	1	10314200	10314210	–	10314220	444744+444704	71ISOL4	FCBT2	CDBT2
BT2F22	0.75	3	10314200	10314210	–	10314220	444747+444701	71ISOL4	FCBT2	CDBT2
BT2F22	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT2	CDBT2
BT2F22	1.1	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT2	CDBT2
BT2F22	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT2	CDBT2
BT2F22	1.5	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT2	CDBT2
BT2F22	2.2	3	10314200	10314210	–	10314220	444747+444703	71ISOL4	FCBT2	CDBT2
BT2F22	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT2	CDBT2
BT2F22	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT2	CDBT2
BT3F28	1.1	1	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	1.1	3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT3	CDBT3
BT3F28	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	1.5	3	10314200	10314200	–	10314220	444747+444702	71ISOL4	FCBT3	CDBT3
BT3F28	2.2	3	10314200	10314210	–	10314220	444744+444705	71ISOL4	FCBT3	CDBT3
BT3F28	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT3	CDBT3
BT3F28	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT3	CDBT3
BT3F28	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT3	CDBT3
BT3F28	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT3	CDBT3
BT4F31	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT4	CDBT4
BT4F31		3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT4	CDBT4
BT4F31	2.2	3	10314200	13014210	–	10314220	444747+444703	71ISOL4	FCBT4	CDBT4
BT4F31	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT4	CDBT4
BT4F31	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT4	CDBT4
BT4F31	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT4	CDBT4
BT4F31	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT4	CDBT4
BT4F31	11	3	–	–	†	–	*444749+444708	71ISOL6	FCBT4	CDBT4
BT5F40	1.5	1	–	–	ACO/9.0-15.0/1	–	444744+444706	71ISOL4	FCBT5	CDBT5
BT5F40		3	10314200	10314210	–	10314220	444747+444702	71ISOL4	FCBT5	CDBT5
BT5F40	2.2	3	10314200	13014210	–	10314220	444747+444703	71ISOL4	FCBT5	CDBT5
BT5F40	3	3	–	–	ACO/9.0-15.0/3	–	444747+444704	71ISOL4	FCBT5	CDBT5
BT5F40	4	3	–	–	ACO/9.0-15.0/3	–	444747+444705	71ISOL4	FCBT5	CDBT5
BT5F40	5.5	3	–	–	†	–	*444748+444706	71ISOL6	FCBT5	CDBT5
BT5F40	7.5	3	–	–	†	–	*444748+444707	71ISOL6	FCBT5	CDBT5
BT5F40	11	3	–	–	†	–	*444749+444708	71ISOL6	FCBT5	CDBT5

^ Not suitable for use with eDemand controllers. For compatible changeover panel, see Accessories and Controllers Section

* Overloads sized to suit a Star/Delta Starter. ** Two Isolators required per unit.

† Star/Delta changeover controllers are available. Please enquire. Discharge Spigots including Diffusers & Matching Attenuators available on request.

Trakmaster Twin Fan Controller*

The range of intelligent Vent-Axia twin fan controllers has been designed to offer total flexibility and controlled interface with BMS (Building Management Systems) saving installation costs, and providing energy management/night setback facility

ITC - (Trakmaster twin fan control)



Provides automatic changeover on fan failure as well as enabling a manual selection of either fan for duty sharing or test purposes. (BMS compatible via volt free contacts). This controller must have a permanent live supply. Any On/Off switching must be via the sensor connections S1 and SG terminals.

Stock Ref. No. 10314200

RVC - (Remote visual indicator)



Wired in conjunction with either an ITC or ITC-DS controller the RVC can be located up to 100m away using low cost ELV wiring. The compact, single gang RVC ELV (Extra Low Voltage) remote visual controller indicates status of Fan 1 and Fan 2 with status/warning lights. Push button allows Fan 1 and Fan 2 with standby (Off) to be selected.

Stock Ref. No. 10314220

ITC-DS - (Trakmaster twin fan control - Duty sharing)



Incorporates a timing mechanism which operates alternate fans on 12 or 24 hour intervals, thus ensuring the extended life of the fan bearings. The controller also provides automatic changeover on fan failure along with the facility for manual selection of either fan. (BMS compatible via volt free contacts). This controller must have

a permanent live supply. Any On/Off switching must be via the sensor connections S1 and SG terminals.

Stock Ref. No. 10314210

RSC - (Remote setback control)



The RSC multi-speed control system offers 2 speed fan versatility eg. Energy Management for night time setback. Can be used in conjunction with Vent-Axia ITC, ITC-DS controllers using 5 step auto-transformer speed controllers for speed selection. Uses 24V output from ITC controller.

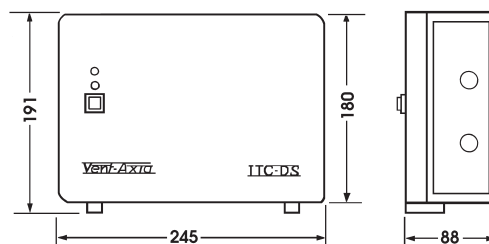
Stock Ref. No. 103 14 230A

Electrical ITC/ITC-D S

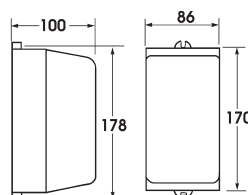
Maximum load: 9 amps on single or three phase.

Dimensions

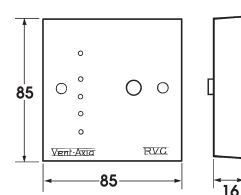
ITC-DS - 103 14 210 OR ITC - 10314200



RSC - 103 14 230A



RVC - 10314220



Note: Suitable for mounting with single gang electrical box.

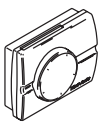
PLEASE NOTE: The ITC Controllers may be used in conjunction with a 5-Step Auto Transformer SPEED CONTROLLER for commissioning purposes to meet the required design criteria.

*For alternative eDemand twin fan controls see Accessories & Controllers Section



Sensors for use with ITC and ITC-DS controls

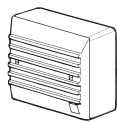
ThermoSwitch



Operates on either a fall or rise in temperature for extraction of excess heat. Range 6°C to 30°C.

Stock Ref. No. 563502B

Ecotronic Humidistat



An electronic On/Off humidistat with concealed humidity adjustment 65-90% RH with removable pullcord override. Changeover relay switch.

Stock Ref. No. 563550A

Air Quality Sensor



Automatically reacts to tobacco smoke, smells and toilet odours to trigger the system or switch speed.

Stock Ref. No. 563506B

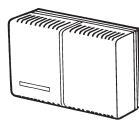
7-Day TimeSwitch



7-Day timer with analogue display. Override facility. Gives twelve On or Off positions per day.

Stock Ref. 563515

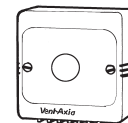
HumidiSwitch



Actuates mechanical humidistat ventilating units on either a rise or fall in humidity. Concealed adjustment. Range 20% to 80% RH.

Stock Ref. No. 563501D

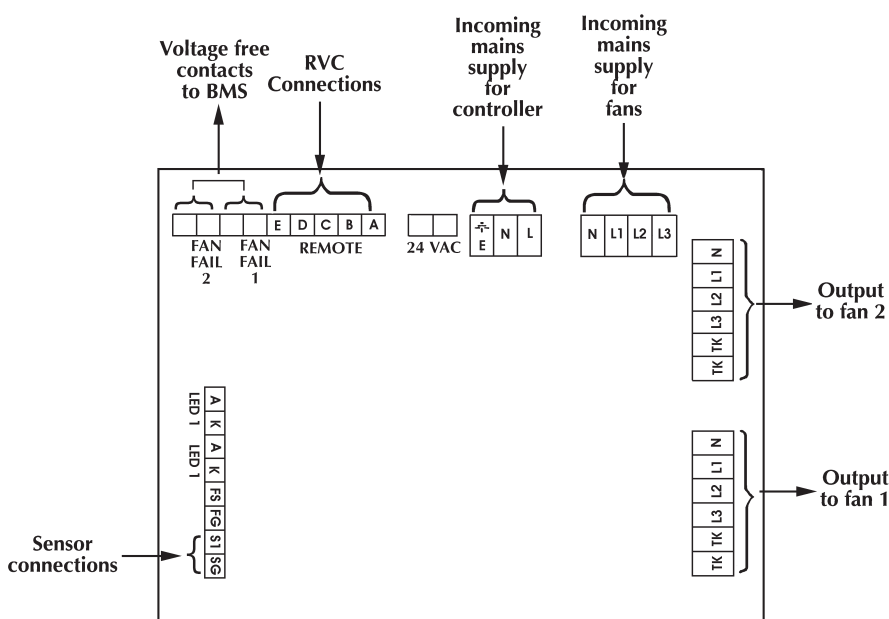
Visionex PIR Detector



Ceiling mounted movement detector. Adjustable overrun timer 5 to 25 minutes. Fits any UK single gang mounting box. Range of detection up to 10 metres.

220-240Vnce Guideui
Stock Ref. No. 459623A

Connection Layout of ITC And ITC-DS Controller



For full wiring information, refer to ITC Fitting & Wiring instructions.

Sentinel D-Box

Sentinel is the answer to key questions such as 'Why ventilate a room you're not using?' or 'Why over ventilate a room with only one or two occupants inside?'

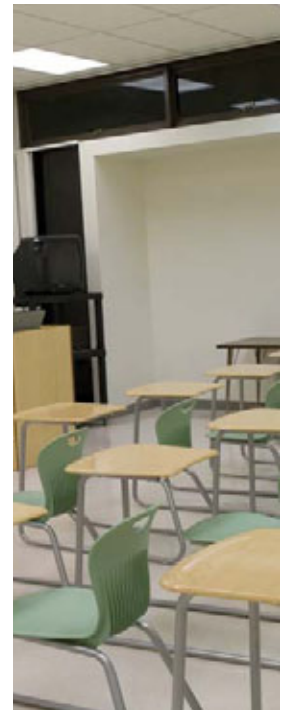
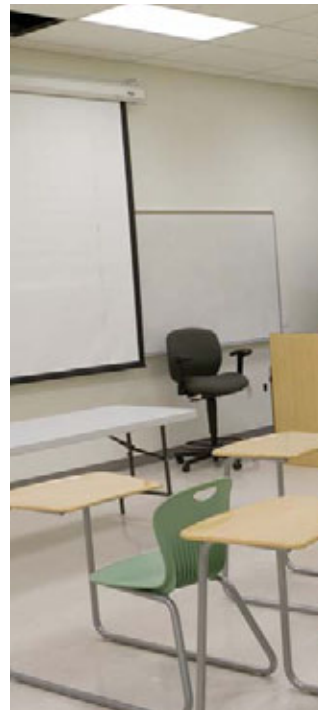
Sentinel overcomes many of the issues encountered with a traditional fixed volume ventilation system that is either on or off irrespective of the number of people in the room, risking room over ventilation, burning valuable money and a wasteful use of energy.

The Sentinel system from Vent-Axia benefits the commercial building by providing:

- Lower energy consumption than a traditional systems
- Reduced losses to ventilation under part occupancy
- Longer running life
- Reduced operating costs
- Savings in lifetime maintenance costs
- Ease of installation



Range



Vent-Axia®

Vent-Axia Sentinel D-Box Fans

Using the Vent-Axia Lo-Carbon range can reduce electrical consumption, thus reducing the overall carbon footprint.

Sentinel is a new range of ventilation systems for multi occupancy and intermittently used rooms. Using energy efficient ducted fans with intelligent sensing and control, the system meets the ventilation requirements of both new builds and refurbishment projects.

Ideal for applications where the rooms are used at different times of the day by a variable number of people, the Sentinel system will monitor occupancy, ventilation rate and air quality, and respond accordingly to maintain the atmosphere within preset limits.

Typical Applications

A network of hotel bathrooms, flats or apartments, which require ventilation, but are only used in limited periods particularly in the morning and in the evening.

School classrooms and lecture theatres which are only occupied during lesson time by a variable number of students, but when used must keep CO₂ levels within prescribed limits.

Office meeting rooms or open plan areas which again are used periodically during the day by a variable number of staff and visitors, but when occupied must meet required airflow rates.

Automatic sensing and control runs the system according to the maximum demand requirements of the building zone, whether it be carbon dioxide levels, temperature, humidity or air quality – triggered by people entering or leaving the rooms. Common configurations include Electronic Static Pressure (ESP) controllers for constant pressure systems.

System Control

The precise control of the Sentinel system, driven by the ventilation requirements of the room at any one time, means that the system is only running to the level required, using energy when it is needed. A range of sensors are employed to determine the occupancy of the rooms, and manage the system ventilation rates accordingly. This optimises the use of energy whilst meeting the legislation requirements of the building.

This compares to a 'traditional' fixed volume system, which in general is either 'ON' or

'OFF' often using energy to ventilate an empty or half occupied room, over ventilating and wasting energy.

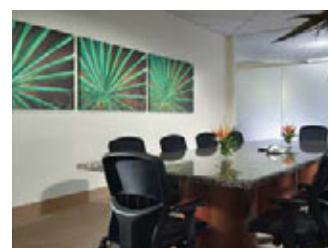
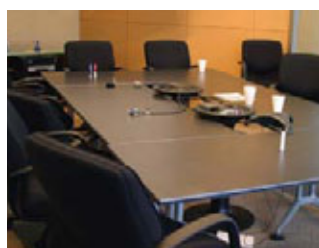
System Overview

The Sentinel System is made up of 3 parts: EC/DC Fan Motor, Sentinel Integral Control Unit, Sensors and Controls

The ventilation demands of the room are detected by the wall, ceiling or duct mounted Sentinel sensors/switches. These communicate with the Sentinel control unit, which in turn drives the fan to the required speed to deliver the airflow. As the ventilation is provided to the room, the sensors continuously feedback to the control unit, driving the fan motor to the exact level required in the room at any one time.

Accessories

For duct accessories refer to Ducting Section.

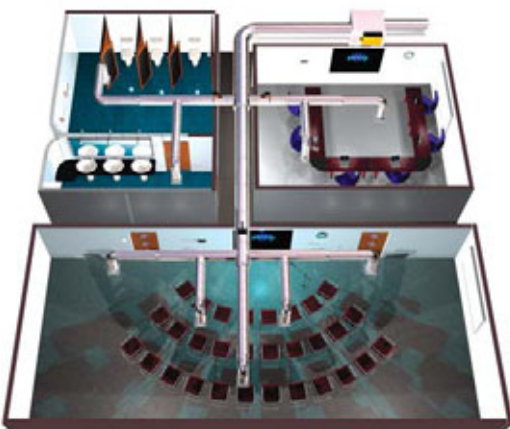




Typical network of hotel bathrooms/flats/apartments



Typical school classroom



Typical office plan with conference facilities

System Technology

Sentinel demand ventilation is a closed loop controlled ventilation system. Employing a range of sensors to manage the system, demand is sensed by PIR, temperature, humidity, air quality or carbon dioxide sensors. Depending on the levels in the rooms, Sentinel's fan speed is ramped up or down to control the parameters within the required limits. If the room is unoccupied, the system switches off, saving energy and cost to the business. Available in single or twin fan configurations, twin allowing for load sharing or 'standby' for extra reliability.

EC/DC Energy Saving Fan Motor Technology



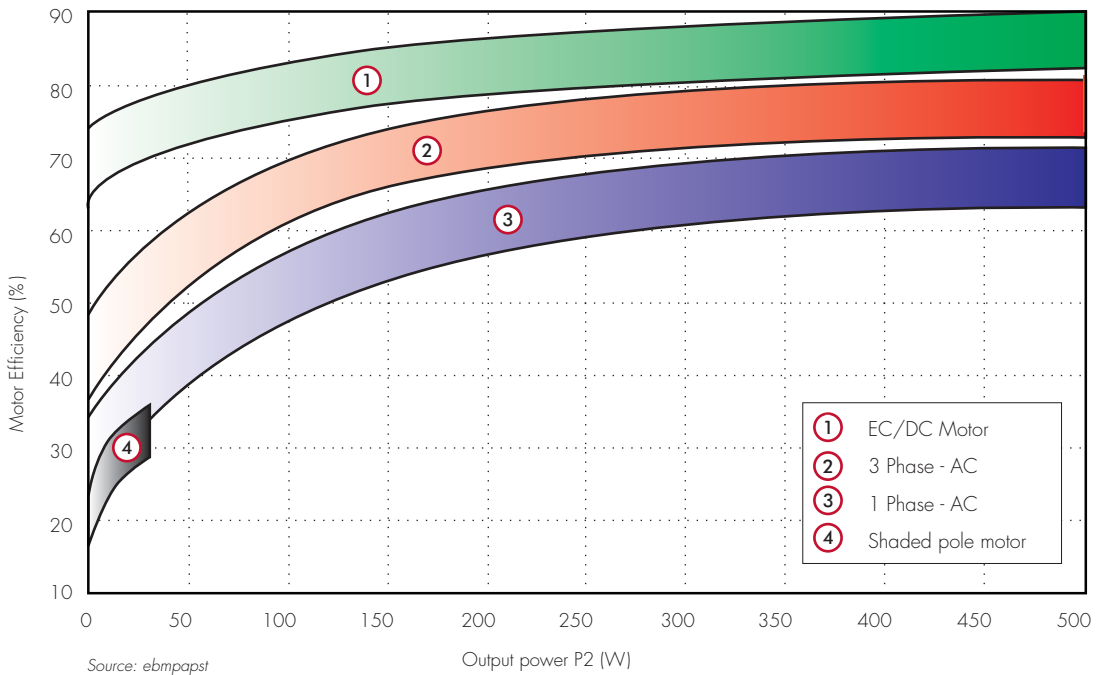
Sentinel utilises the latest EC/DC motor technology, which provides energy saving benefits even over DC motors.

This technology is also infinitely speed controllable and offers increased energy savings across the complete speed control range when compared with conventional inverter drive solutions. The result is higher efficiency, reduced noise, accurate controllability, better speed control drawing less power and as a result better overall system performance.

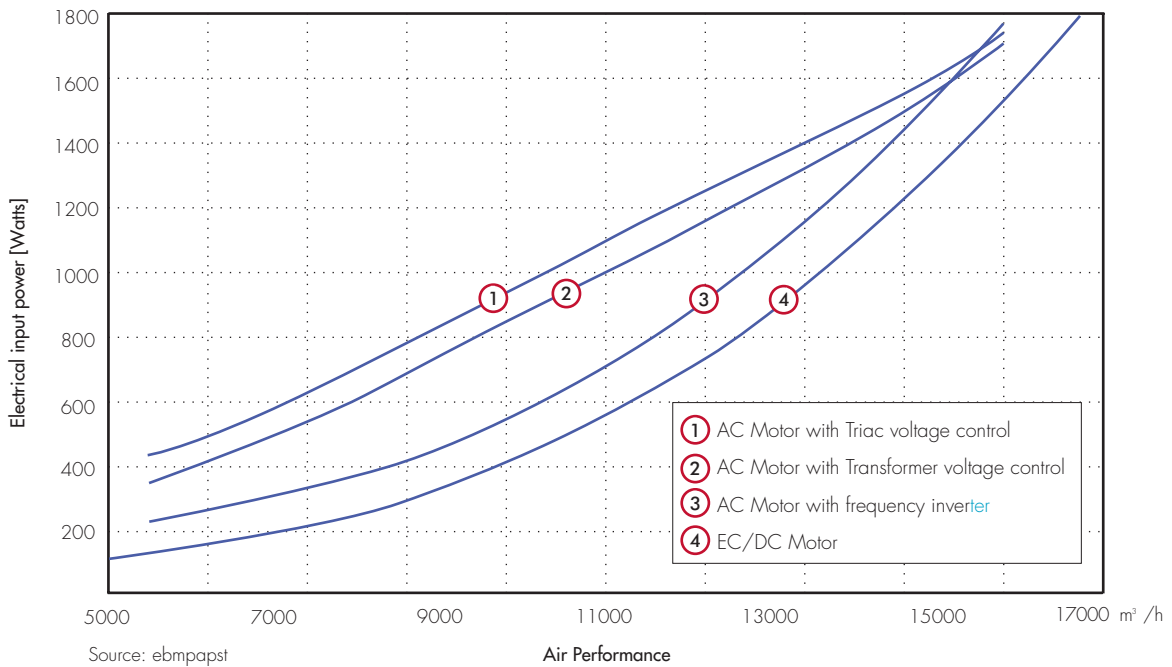
Sentinel can be used in a hierarchal system where maximum demand, for example temperature and/or CO₂ gives priority control of the fan speed or a constant pressure system with room mounted PIR/grilles or in-line damper control.

Vent-Axia Sentinel D-Box Fans

Highest Motor Efficiency



Typical EC/AC Motor Speed Control Comparison



As can be seen from above motor comparisons, the EC/DC motor offers higher efficiencies when compared to AC motors, and also consumes less power under speed control, giving both the highest motor efficiency and lowest power consumption across the speed control range.

Hierarchal Control



The system is controlled by on board electronics, with an LCD display showing fan status and allowing for simple commissioning and installation, whether as a local sensor control unit or linked into a building management system.

1. Switched on/off or minimum/maximum level control

In an environment such as an office, the system is activated and runs between minimum and maximum levels by a choice of sensors.

- AQS – Air Quality Sensor
- PIR Detector
- Thermostat
- Humidistat
- Time Clock
- BMS (remote enable)

2. Hierarchal – maximum demand multi sensor input

Used with a combination of sensors, with a

defined level of priorities to simultaneously control a number of atmospheric conditions within a room, such as a meeting room.

- CO₂/Temperature – room mounted
- CO₂ – duct mounted
- Manual speed adjuster
- Building Management System (0-10V)

Constant Pressure Extract

Applied in a discreet central extract system, such as hotel bathrooms or apartment blocks, the system grilles and/or duct dampers are controlled by the presence of a person in the room or by achieving required levels of humidity. The central system will respond to the demand depending on the number of active rooms.

- PIR/Humidity Extract Grille 125mm
- PIR 12 - 70m³/h
- Humidity: 12m³/h – 30% RH
70m³/h - 75% RH
- Motorised Duct Dampers 100mm - 315mm Dia
Built in end stop adjustment for setting minimum and maximum volume.
24V Min/Max or 0-10V proportional control options.
Motorised Duct Dampers – Sensor Control options
Each 24V powered extract damper can be controlled by one of the following sensors:-

Min-Max (DVDxxx/MM)

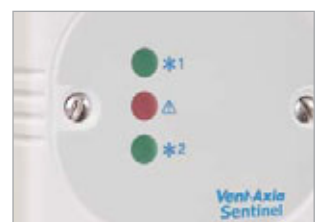
- AQS- Air Quality Sensor – Room (432953)
- PIR Detector – Room (433162)
- Thermostat - Room (563502B)
- Humidistat - Room (432945)

Proportional 0-10V (DVDxxx/PC)

- Carbon Dioxide Sensor – Room (433259)
- Carbon Dioxide Sensor – Duct (433259)
- Temperature Sensor - Room (434749)

Note Local 24V power supply required to power dampers & Sensors (426526)

Controls



* Overall potential savings based on 12 hours use

Vent-Axia Sentinel D-Box Single Fan

The Sentinel single inline duct fans are as supplied from Vent-Axia Ltd. Manufactured from prime quality galvanised sheet steel, Sentinel fan units are internally treated with an 'O' class rated, BS476 part 6 & 7, acoustic foam, which offers the benefits of high sound absorption, good thermal insulation properties, in addition to self extinguishing properties and resistance to ignition.

Weatherproof external units incorporate controller shrouds and are coated externally with a polyurethane finish.

The casing includes an inclined inlet and bellmouth entry which directs the incoming air to the impeller with minimal turbulence. The result is better air management through the unit, less noise, higher efficiency and an increased performance.

The housing is designed to be as compact as possible for concealed false ceiling applications and Sentinel casings are specially designed to allow the unit to be mounted via its unique mounting bracket, ensuring a quick and easy solution to installation.

Impellers

All Sentinel units feature a low energy, Class 1, EC/DC external rotor motor and backward curved impeller assembly specifically chosen for performance and non-overloading characteristics. The assembly is dynamically balanced to DIN

ISO 1940 Grade 6.3, duct size 500mm rated IP54, all other sizes, IP44 according to BS EN 60529. Ball bearings are greased for life. Insulation is Class 'B' (from -25°C to +60°C). All models incorporate internal electronic overload protection and soft start function.

Electrical

Every Sentinel unit is fitted with a purpose designed common PCB controller incorporating a 16-character backlit alphanumeric x 2 line display with 4 button membrane keypad for fan status and commissioning set up. The enclosure is fitted with a 4-pole 10A isolator that is suitable for fitting a locking device to prevent accidental operation.

Motors are single phase 230V +/- 10% / 50/60Hz / 1ph (size 100-400mm) or 400V +/- 10% / 50/60Hz / 3ph (size 500mm), (4 wire systems only).

24V DC power is provided from the controller for powering the matched range of Sentinel switches and sensors.

Performance/Sound

Extensively tested to BS848 parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at reference level of 2×10^{-5} Pa. The inlet/outlet sound power level spectra figures are dB with a reference of 10^{-12} watts.

Weatherproof Typical Ordering Designation

Ordering Codes are similar to existing units with Suffix.... /W/P which denotes Weatherproof finish.

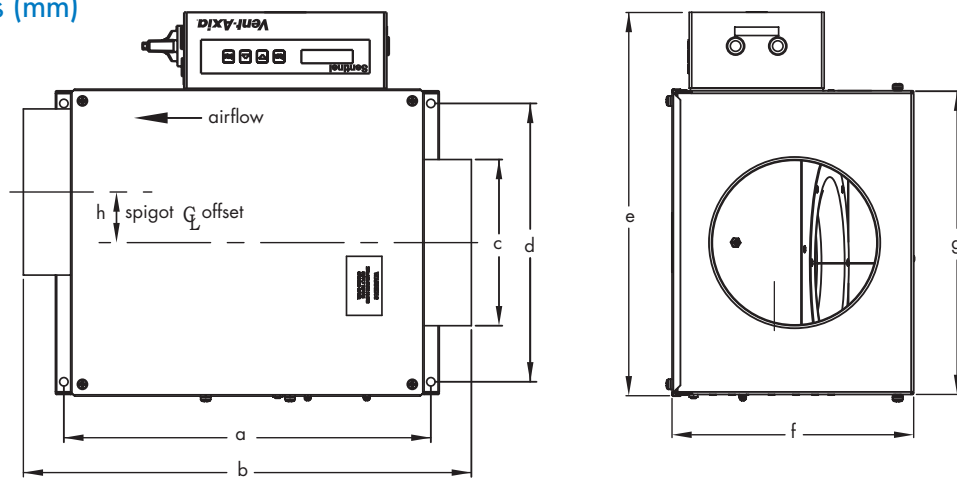
Example SENT100S/CP/W/P

Accessories

For duct accessories see Ducting and Fitting Section.



Fan Dimensions (mm)



Constant		Duct Diameter mm								Weight
Hierarchy	Pressure	c	a	b	d	e	f	g	h	Kg
Model	Model									
SENT100S	SENT100S/CP	100	380	443	275	400	192	306	62	8.5
SENT125S	SENT125S/CP	125	380	443	275	400	192	306	62	8.5
SENT150S	SENT150S/CP	150	380	443	275	400	192	306	62	8.5
SENT200S	SENT200S/CP	200	435	531	330	453	287	360	60	12.5
SENT250S	SENT250S/CP	250	435	531	330	453	287	360	35	13
SENT315S	SENT315S/CP	315	710	808	540	661	458	568	43	34
SENT400S	SENT400S/CP	400	710	808	540	661	458	568	43	36
SENT500S	SENT500S/CP	500	898	996	735	858	577	765	59	55

Accessories

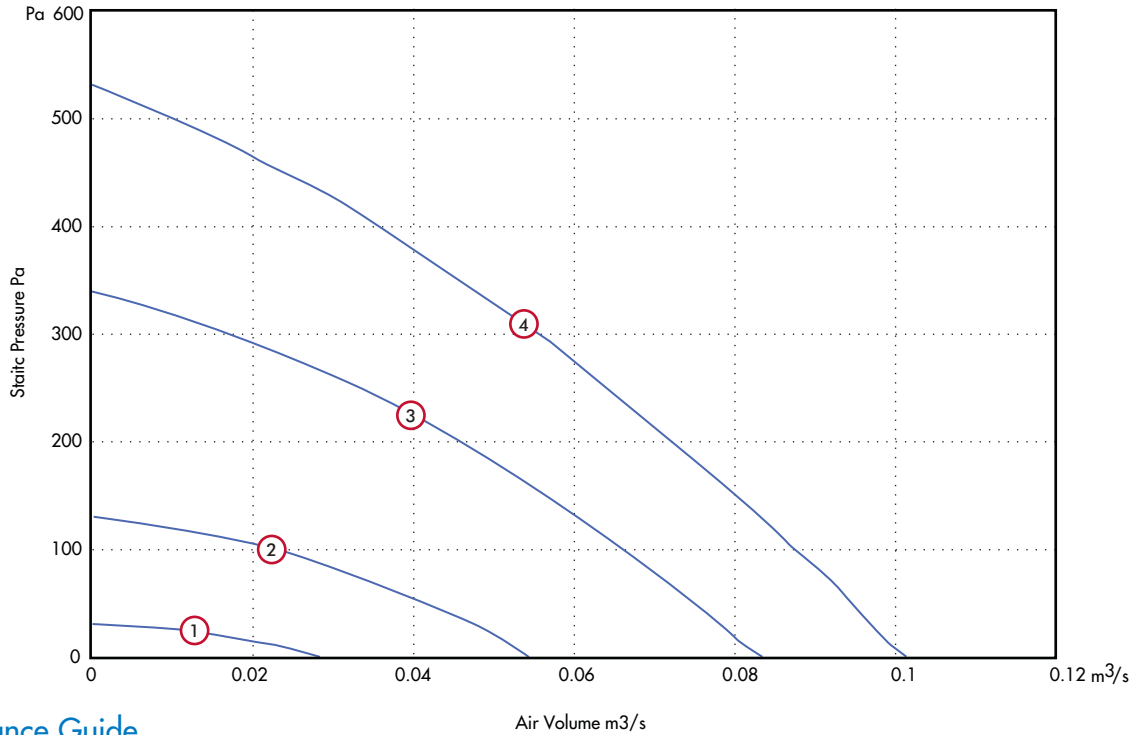
Hierarchy		Anti-Vibration	*Duct			Heat	
Model	Model	Mounts	Duct air heater	Filter cassette	Bag filter cassette	attenuator 600mm	exchange unit
		Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
SENT100S	SENT100T/CP	10523033	10531100T1	10532100A	10533100	10535100	-
SENT125S	SENT125T/CP	10523033	10531125T1	10532125A	10533125	10535125	-
SENT150S	SENT150T/CP	10523033	10531150T1	10532150A	10533150	10535150	-
SENT200S	SENT200T/CP	10523033	10531200T1	10532200A	10533200	10535200	10538290 +10577315 +10578315
SENT250S	SENT250T/CP	10523033	10531250T1	10532250A	10533250	10535250	10538290 +10577315 +10578315
SENT315S	SENT315T/CP	10523033	10531315T1	10532315A	10533315	10535315	10538290 +10577315
SENT400S	SENT400T/CP	10523033	10531400T3	10532400A	10533400	10535400	-
SENT500S	SENT500T/CP	10523033	10531500T3	10532500A	10533500	10536500*	-

*For alternative attenuator lengths, refer to Accessories and Controllers section

Vent-Axia Sentinel D-Box Single Fan

Performance Curve

Sentinel 100 Single Fan



Performance Guide

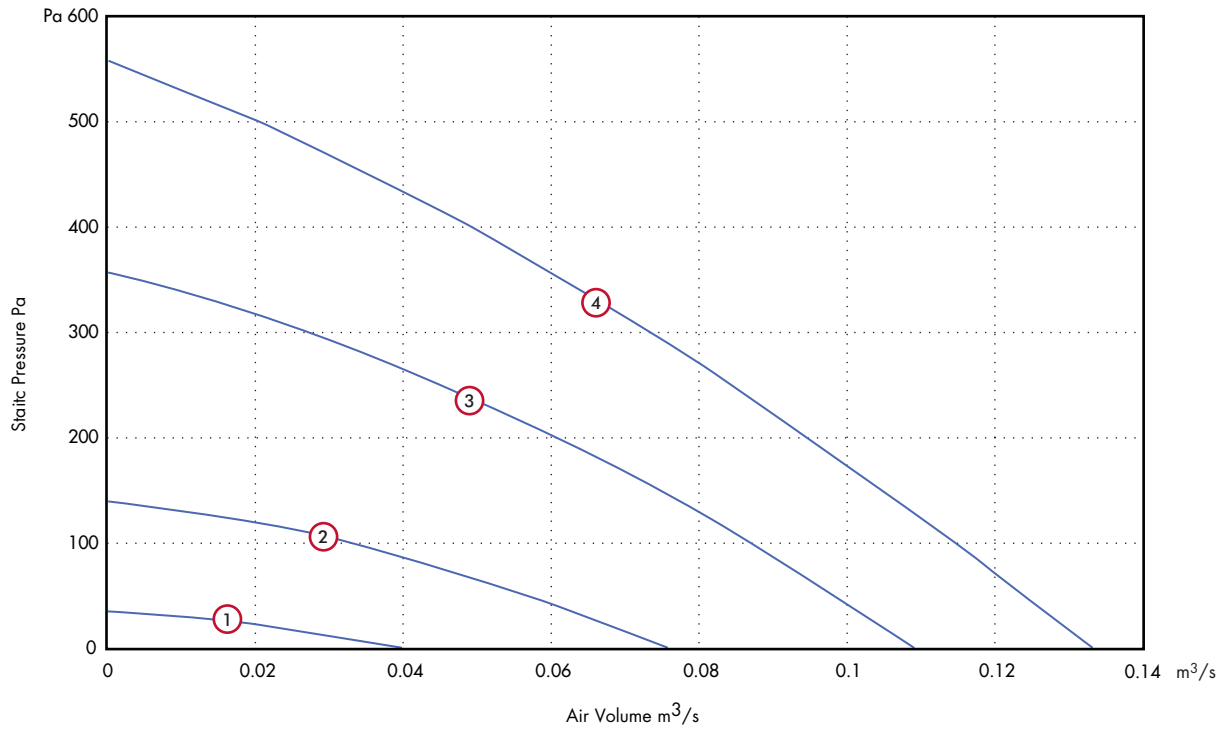
Speed	Phase	Performance	Airflow, m³/s @ Pa																Amps F.L.C
			Ref.	0	25	50	100	125	150	200	250	300	350	375	400	450	500		
100%	1	Airflow	4	0.101	0.097	0.094	0.087	0.084	0.08	0.072	0.064	0.056	0.046	0.041	0.036	0.024	0.011	0.72	
100%	1	SFP		0.84	0.88	0.9	0.98	1.01	1.06	1.18	1.33	1.52	1.85	2.07	-	-	-	0.72	
80%	1	Airflow	3	0.083	0.079	0.075	0.066	0.061	0.056	0.046	0.033	0.018						0.5	
80%	1	SFP		0.46	0.48	0.51	0.58	0.62	0.68	0.83	1.15	2.11						0.5	
50%	1	Airflow	2	0.054	0.048	0.041	0.023	0.008										0.15	
50%	1	SFP		0.33	0.38	0.44	0.78	2.75										0.15	
25%	1	Airflow	1	0.028	0.013													0.08	
25%	1	SFP		0.21	0.46													0.08	

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	57.2	68.7	68	70.1	59.4	53.1	47.3	41.8	42.5
100%	Outlet	54.9	67.7	70	70.5	68.1	64.6	57.7	49.5	49.3
100%	Breakout	58.7	63.8	63.3	63	54.8	51.2	46.4	42.1	42.2
80%	Inlet	52.2	63.7	63	65.1	54.3	48.1	42.3	36.8	37.5
80%	Outlet	50.1	62.9	65.1	65.6	63.2	59.7	52.9	44.6	44.5
80%	Breakout	53.8	58.9	58.5	58.2	49.9	46.4	41.5	37.2	37.3
50%	Inlet	42.2	53.7	52.9	55.1	44.3	38.1	32.3	26.8	27.5
50%	Outlet	39.9	52.7	54.9	55.4	53	49.5	42.7	34.4	34.3
50%	Breakout	43.6	48.7	48.3	48	39.7	36.2	31.4	27	27.1
25%	Inlet	27.1	38.6	37.9	40	29.2	23	17.2	11.7	12.4
25%	Outlet	24.8	37.6	39.9	40.4	37.9	34.5	27.6	19.4	19.2
25%	Breakout	28.6	33.7	33.2	32.9	24.7	21.1	16.3	11.9	12.1

Performance Curve

Sentinel 125 Single Fan



Performance Guide

Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	125	150	200	250	300	350	375	400	450	500			
100%	1	Airflow	4	0.133	0.129	0.124	0.115	0.11	0.105	0.095	0.084	0.073	0.068	0.061	0.049	0.035	0.02	0.72		
100%	1	SFP		0.64	0.66	0.69	0.74	0.77	0.81	0.89	1.01	1.16	1.25	1.39	1.73	2.43	-	0.72		
80%	1	Airflow	3	0.109	0.104	0.099	0.087	0.081	0.075	0.061	0.045	0.027	0.016	0.003				0.51		
80%	1	SFP		0.35	0.37	0.38	0.44	0.47	0.51	0.62	0.84	1.41	2.38	-				0.51		
50%	1	Airflow	2	0.075	0.066	0.057	0.033	0.015										0.18		
50%	1	SFP		0.29	0.33	0.39	0.67	1.47										0.18		
25%	1	Airflow	1	0.04	0.019													0.09		
25%	1	SFP		0.35	0.74													0.09		

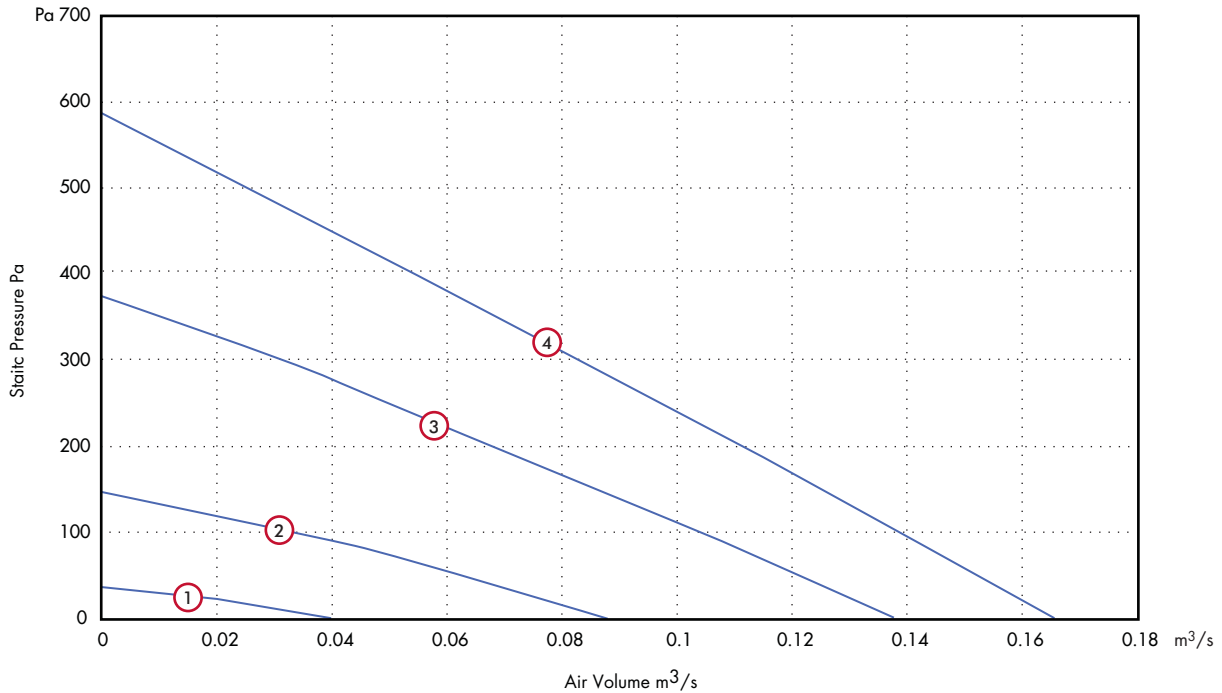
Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	57.9	68.5	68.3	70.5	62.4	57.3	50.8	45.5	44.5
100%	Outlet	58.7	68.4	69.6	74.2	69.7	67.2	61.9	53.7	51.9
100%	Breakout	56.3	59.2	63.4	62.8	56.5	52.1	45.2	38.2	42.3
80%	Inlet	53.1	63.6	63.4	65.7	57.6	52.4	46	40.6	39.7
80%	Outlet	53.9	63.6	64.7	69.4	64.9	62.4	57.1	48.8	47.1
80%	Breakout	51.5	54.3	58.6	58	51.6	47.3	40.4	33.3	37.5
50%	Inlet	42.9	53.4	53.3	55.5	47.4	42.2	35.8	30.4	29.5
50%	Outlet	43.7	53.4	54.5	59.2	54.7	52.2	46.9	38.6	36.9
50%	Breakout	41.3	44.1	48.4	47.8	41.4	37.1	30.2	23.1	27.3
25%	Inlet	27.8	38.3	38.2	40.4	32.3	27.2	20.8	15.4	14.4
25%	Outlet	28.6	38.3	39.4	44.1	39.6	37.1	31.8	23.6	21.8
25%	Breakout	26.2	29.1	33.3	32.7	26.4	22	15.1	8.1	12.2

Vent-Axia Sentinel D-Box Single Fan

Performance Curve

Sentinel 150 Single Fan



Performance Guide

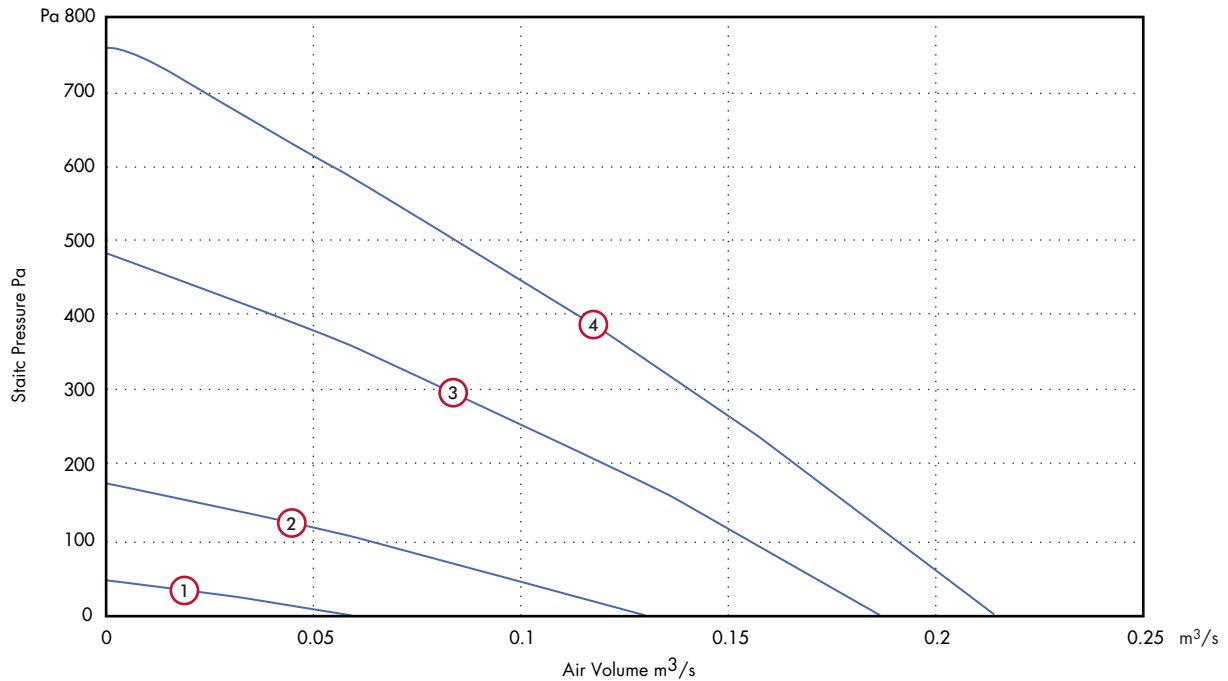
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	125	150	200	250	300	350	375	400	450	500			
100%	1	Airflow	4	0.166	0.159	0.152	0.138	0.131	0.124	0.111	0.096	0.082	0.068	0.054	0.039	0.025	0.011	0.74		
100%	1	SFP		0.52	0.55	0.57	0.63	0.66	0.7	0.78	0.91	1.06	1.28	1.61	2.23	-	-	0.74		
80%	1	Airflow	3	0.138	0.129	0.121	0.104	0.096	0.087	0.069	0.05	0.031	0.011					0.48		
80%	1	SFP		0.28	0.3	0.32	0.38	0.41	0.45	0.57	0.78	1.26	3.55					0.48		
50%	1	Airflow	2	0.088	0.075	0.063	0.033	0.016										0.16		
50%	1	SFP		0.24	0.28	0.33	0.64	1.31										0.16		
25%	1	Airflow	1	0.04	0.015													0.08		
25%	1	SFP		0.18	0.47													0.08		

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	60	71.5	74	75.2	66.6	61.5	53.6	50	49.8
100%	Outlet	60.2	71.5	73.8	73.8	73.1	70.4	64.6	57.4	55
100%	Breakout	55.8	58.3	62.8	63.9	58	54.4	47	39.6	43.5
80%	Inlet	55.1	66.7	69.1	70.3	61.8	56.7	48.8	45.2	45
80%	Outlet	55.3	66.7	68.9	68.9	68.3	65.6	57.3	52.5	50.1
80%	Breakout	50.9	53.5	57.9	59.1	53.1	49.6	42.2	34.7	38.6
50%	Inlet	44.9	56.4	58.9	60.1	51.5	46.5	38.6	35	34.8
50%	Outlet	45.1	56.5	58.7	58.7	58.1	55.3	47.1	42.3	39.9
50%	Breakout	40.7	43.3	47.7	48.9	42.9	39.4	31.9	24.5	28.4
25%	Inlet	29.9	41.4	43.9	45.1	36.5	31.4	23.6	20	19.7
25%	Outlet	30.1	41.4	43.7	43.7	43.1	40.3	32.1	27.3	24.9
25%	Breakout	25.7	28.2	32.7	33.8	27.9	24.3	16.9	9.4	13.4

Performance Curve

Sentinel 200 Single Fan



Performance Guide

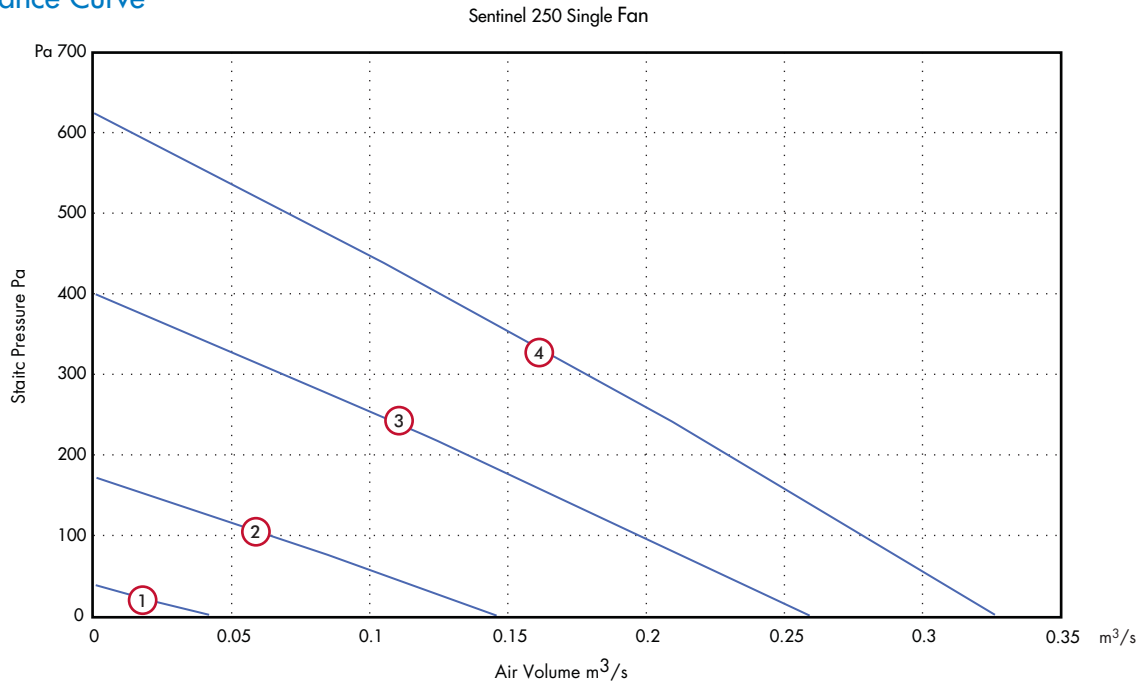
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	150	200	250	300	350	400	450	500	600	700			
100%	1	Airflow	4	0.214	0.208	0.202	0.19	0.178	0.166	0.154	0.141	0.128	0.114	0.099	0.085	0.07	0.054	0.72		
100%	1	SFP		0.81	0.83	0.86	0.91	0.97	1.04	1.12	1.23	1.35	1.52	1.75	2.04	-	-	0.72		
80%	1	Airflow	3	0.186	0.178	0.171	0.154	0.138	0.121	0.103	0.083	0.063	0.041	0.017				0.5		
80%	1	SFP		0.47	0.49	0.51	0.56	0.63	0.72	0.84	1.05	1.38	2.12	-				0.5		
50%	1	Airflow	2	0.13	0.115	0.099	0.064	0.023										0.16		
50%	1	SFP		0.23	0.25	0.3	0.46	1.27										0.16		
25%	1	Airflow	1	0.059	0.031													0.08		
25%	1	SFP		0.15	0.28													0.08		

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	65.4	74.3	75.1	76.2	70.9	65.2	63.7	57	52.9
100%	Outlet	66.2	74.4	73.7	81.2	78.5	79.2	74.9	68	62.9
100%	Breakout	63.5	61.9	63.3	68.7	63.1	63.3	55.2	41.7	49
80%	Inlet	60.6	69.4	70.3	71.3	66	60.4	58.9	52.2	48.1
80%	Outlet	61.3	69.5	68.8	76.3	73.7	74.4	70.1	63.2	58
80%	Breakout	58.6	57.1	58.4	63.8	58.2	58.4	50.3	36.9	44.2
50%	Inlet	50.4	59.2	60.1	61.1	55.8	50.2	48.7	42	37.9
50%	Outlet	53.4	60.9	68	64.5	60.7	59.6	56.1	47.7	46.6
50%	Breakout	49.6	48.2	56	51.8	44.7	42.9	34.5	30.7	32.4
25%	Inlet	35.3	44.2	45	46.1	40.8	35.1	33.7	27	22.8
25%	Outlet	36.1	44.3	43.6	51.1	48.4	49.1	44.8	37.9	32.8
25%	Breakout	33.4	31.8	33.2	38.6	33	33.2	25.1	11.6	19

Vent-Axia Sentinel D-Box Single Fan

Performance Curve



Performance Guide

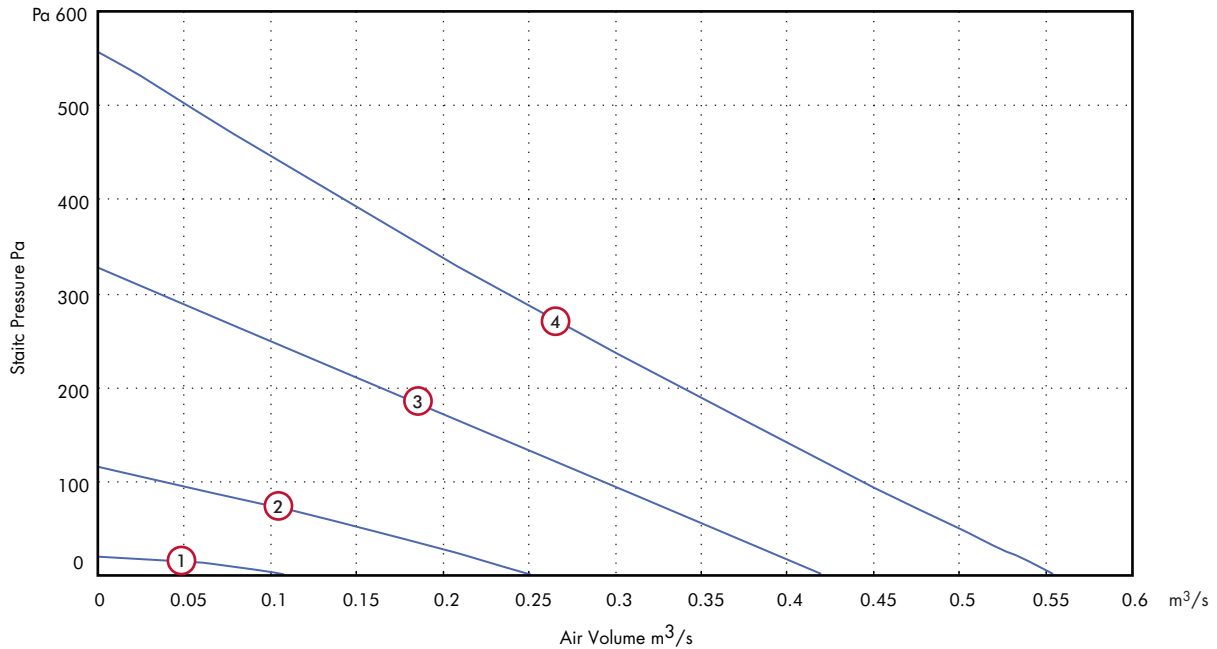
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	150	200	250	300	350	375	400	450	500	550			
100%	1	Airflow	4	0.327	0.315	0.303	0.279	0.254	0.229	0.204	0.178	0.152	0.139	0.125	0.098	0.07	0.042	1.38		
100%	1	SFP		0.43	0.45	0.47	0.51	0.56	0.62	0.69	0.79	0.93	1.01	1.13	1.44	2.01	-	1.38		
80%	1	Airflow	3	0.259	0.244	0.229	0.198	0.167	0.134	0.102	0.068	0.034	0.016					1		
80%	1	SFP		0.27	0.28	0.3	0.35	0.41	0.51	0.68	1.01	2.03	-					1		
50%	1	Airflow	2	0.145	0.124	0.104	0.061	0.017										0.2		
50%	1	SFP		0.18	0.21	0.25	0.43	1.53										0.2		
25%	1	Airflow	1	0.041	0.015													0.07		
25%	1	SFP		0.17	0.47													0.07		

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	66.7	73.4	73.5	79	69.6	64.6	62	58.8	54.1
100%	Outlet	69	72.9	73.6	78.2	75.5	76.2	70.8	66.7	60.1
100%	Breakout	63.3	64.7	65.8	69.9	64.1	63.3	52.8	43.3	49.9
80%	Inlet	61.8	68.6	68.7	74.1	64.8	59.8	57.2	53.9	49.3
80%	Outlet	64.1	68	68.8	73.3	70.7	71.4	66	61.9	55.2
80%	Breakout	58.5	59.8	61	65.1	59.3	58.5	48	38.4	45
50%	Inlet	51.8	58.5	58.6	64	54.7	49.7	47.1	43.8	39.2
50%	Outlet	50.5	59.2	65.3	59.1	56.2	57.7	55.1	41.4	43.3
50%	Breakout	48.5	51.4	59.8	50.7	45.6	44.7	37.1	31.1	33.9
25%	Inlet	36.6	43.3	43.4	48.9	39.6	34.5	31.9	28.6	24
25%	Outlet	38.9	42.8	43.5	48.1	45.4	46.1	40.7	36.6	30
25%	Breakout	33.2	34.6	35.7	39.8	34	33.2	22.7	13.2	19.8

Performance Curve

Sentinel 315 Single Fan



Performance Guide

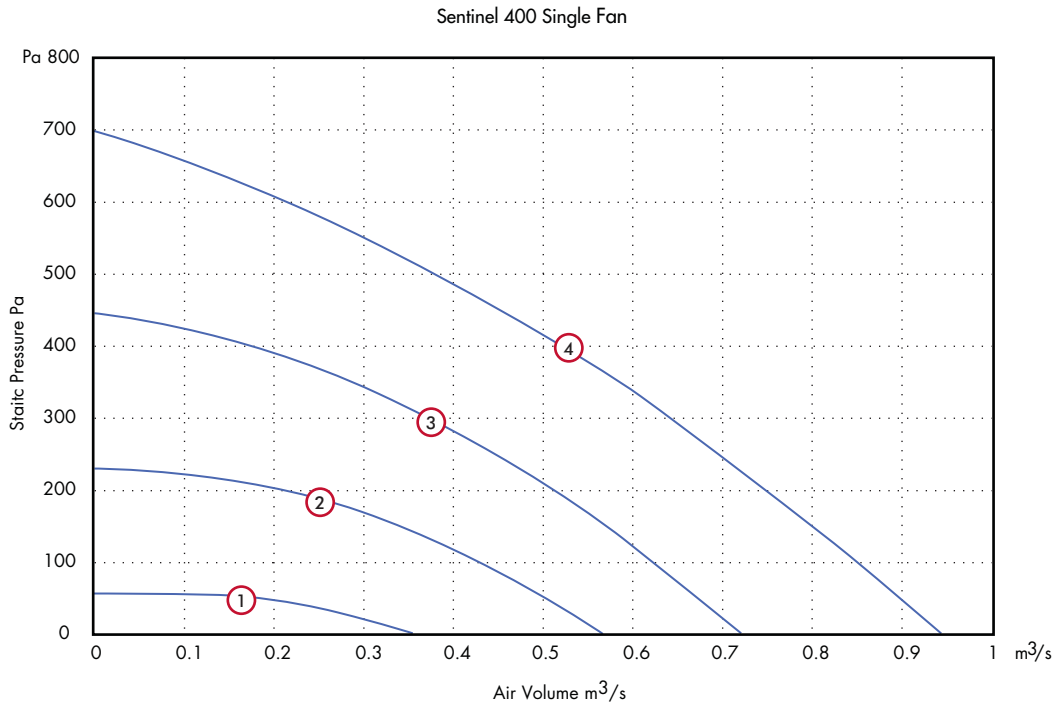
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa															FLC
				0	25	50	100	125	150	200	250	300	350	375	400	450	500	550	
100%	1	Airflow	④	0.556	0.528	0.499	0.444	0.39	0.338	0.287	0.238	0.213	0.189	0.142	0.096	0.074	0.051	0.007	1.36
100%	1	SFP		0.32	0.34	0.35	0.4	0.45	0.52	0.62	0.74	0.83	0.94	1.25	1.84	2.39	-	-	1.36
80%	1	Airflow	③	0.425	0.389	0.356	0.291	0.226	0.162	0.099	0.036	0.005							0.50
80%	1	SFP		0.21	0.23	0.25	0.31	0.39	0.55	0.9	2.47	-							0.50
50%	1	Airflow	②	0.253	0.206	0.154	0.038												0.19
50%	1	SFP		0.12	0.15	0.2	0.83												0.19
25%	1	Airflow	①	0.115															0.08
25%	1	SFP		0.12															0.08

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	67.1	74.6	77.5	73.8	66.2	62.8	58.1	53.6	51
100%	Outlet	70.6	75.3	78.9	78.7	76.8	76.4	69.2	63.9	60.5
100%	Breakout	62.8	66.5	69.2	64	58.9	56	47.5	37.9	45.3
80%	Inlet	62.2	69.7	72.7	68.9	61.4	57.9	53.3	48.7	46.1
80%	Outlet	65.7	70.5	74.1	73.9	71.9	71.6	64.4	59.1	55.7
80%	Breakout	57.9	61.6	64.4	59.2	54.1	51.1	42.6	33.1	40.5
50%	Inlet	52	59.5	62.4	58.6	51.1	47.7	43	38.4	35.8
50%	Outlet	55.6	66	66.7	59.2	57.9	58.3	50	38.6	43.8
50%	Breakout	51.4	55.2	55.2	46.1	41.8	36.8	28.4	31.2	29.6
25%	Inlet	37	44.5	47.5	43.7	36.1	32.7	28	23.5	20.9
25%	Outlet	40.4	45.2	48.8	48.6	46.7	46.3	39.1	33.8	30.5
25%	Breakout	32.7	36.4	39.1	33.9	28.8	25.9	17.4	7.8	15.3

Vent-Axia Sentinel D-Box Single Fan

Performance Curve



Performance Guide

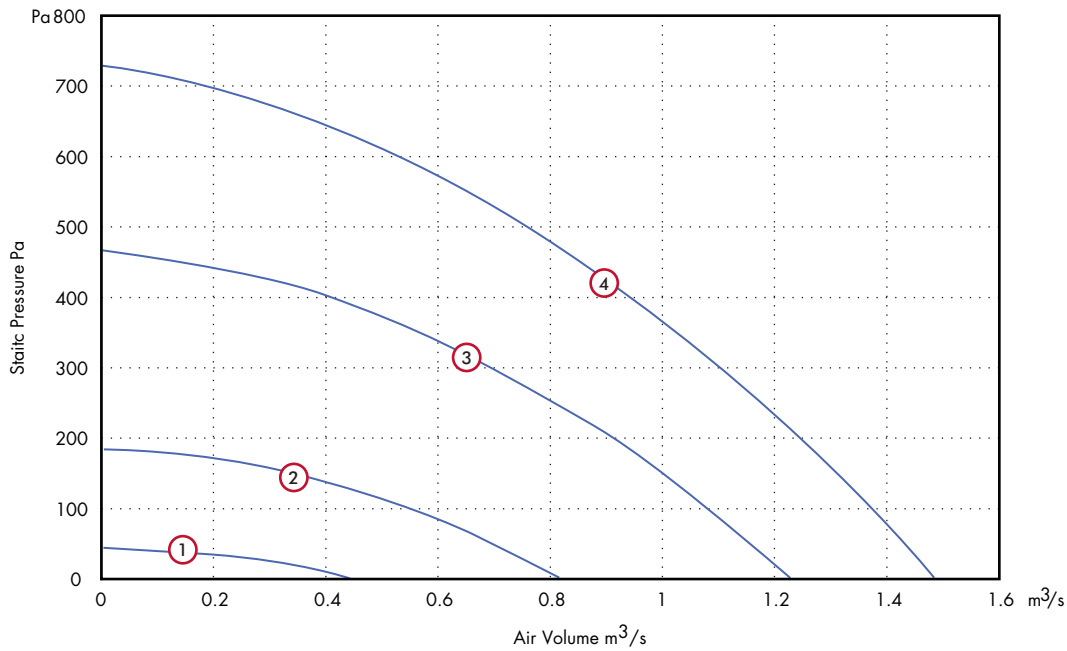
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																	Amps F.L.C
				0	25	50	100	150	200	225	250	300	350	400	425	450	500	550	600		
100%	1	Airflow	4	0.945	0.923	0.899	0.852	0.802	0.751	0.724	0.698	0.641	0.582	0.519	0.487	0.453	0.381	0.302	0.214	2.47	
100%	1	SFP		0.51	0.52	0.54	0.57	0.6	0.64	0.67	0.69	0.76	0.83	0.93	0.99	1.07	1.27	1.60	2.26	2.47	
80%	1	Airflow	3	0.72	0.697	0.673	0.623	0.569	0.51	0.478	0.445	0.372	0.285	0.174	0.098						1.80
80%	1	SFP		0.3	0.31	0.32	0.35	0.38	0.43	0.45	0.49	0.58	0.76	1.25	2.21						1.80
50%	1	Airflow	2	0.566	0.535	0.503	0.43	0.341	0.214	0.089											0.59
50%	1	SFP		0.22	0.24	0.25	0.3	0.37	0.59	1.43											0.59
25%	1	Airflow	1	0.353	0.288	0.177															0.13
25%	1	SFP		0.05	0.06	0.1															0.13

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	78	86.2	86.7	74.6	69.9	66.3	60.9	53.1	57.1
100%	Outlet	77.7	87	92.3	80.5	79.4	75.6	70.3	62.8	64.3
100%	Breakout	76.8	84.9	84.8	78.9	74	68.5	60.6	51.9	65.3
80%	Inlet	72	80	79.9	74.1	69.2	63.7	55.7	47.1	55.5
80%	Outlet	72.8	82.2	87.5	75.6	74.6	70.8	65.4	58	59.4
80%	Breakout	73.2	81.4	81.9	69.7	65.1	61.5	56	48.3	52.2
50%	Inlet	61.8	69.8	69.7	63.9	59	53.5	45.5	36.9	45.3
50%	Outlet	62.6	72	77.3	65.4	64.4	60.6	55.2	47.8	49.1
50%	Breakout	62.9	71.2	71.7	59.5	54.9	51.2	45.8	38.1	42
25%	Inlet	46.8	54.8	54.7	48.8	44	38.4	30.5	21.8	30.3
25%	Outlet	47.6	56.9	62.3	50.4	49.4	45.5	40.2	32.7	34.3
25%	Breakout	47.9	56.2	56.7	44.5	39.8	36.2	30.8	23.1	27

Performance Curve

Sentinel 500 Single Fan



Performance Guide

Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																	Amps F.L.C
				0	25	50	100	150	175	200	250	300	350	400	450	500	550	600	650		
100%	3	Airflow	4	1.489	1.46	1.43	1.37	1.307	1.275	1.242	1.173	1.101	1.024	0.943	0.855	0.759	0.653	0.531	0.383	2.10	
100%	3	SFP		0.6	0.62	0.63	0.66	0.69	0.7	0.72	0.77	0.82	0.88	0.95	1.05	1.18	1.38	1.69	2.34	2.10	
80%	3	Airflow	3	1.234	1.198	1.16	1.082	0.998	0.954	0.907	0.808	0.696	0.566	0.404	0.159						1.60
80%	3	SFP		0.32	0.33	0.34	0.37	0.4	0.41	0.44	0.49	0.57	0.7	0.98	2.48						1.60
50%	3	Airflow	2	0.822	0.762	0.698	0.546	0.335	0.148												0.67
50%	3	SFP		0.29	0.31	0.34	0.44	0.71	1.61												0.67
25%	3	Airflow	1	0.449	0.312																0.23
25%	3	SFP		0.1	0.15																0.23

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	81.1	95.1	86.7	79.6	71.2	67.2	61.2	62.5	60.3
100%	Outlet	81.6	92.9	88	84.9	81.5	76	70.4	69.9	65.7
100%	Breakout	78.4	88.8	84.8	81.7	75.3	67.8	59.7	55.4	61.9
80%	Inlet	76.3	90.3	81.9	74.8	66.4	62.4	56.4	57.7	55.5
80%	Outlet	76.8	88.1	83.2	80.1	76.7	71.2	65.6	65.1	60.9
80%	Breakout	73.6	84	79.9	76.8	70.5	62.9	54.8	50.6	57
50%	Inlet	66.1	80.1	71.7	64.6	56.2	52.2	46.2	47.5	45.3
50%	Outlet	66.6	77.9	73	69.9	66.5	61	55.4	54.9	50.7
50%	Breakout	63.4	73.8	69.7	66.6	60.3	52.7	44.6	40.4	46.8
25%	Inlet	51	65	56.6	49.5	41.1	37.1	31.1	32.4	30.2
25%	Outlet	51.6	62.8	57.9	54.8	51.4	45.9	40.3	39.8	35.6
25%	Breakout	48.3	58.8	54.7	51.6	45.2	37.6	29.6	25.3	31.8

Vent-Axia Sentinel D-Box Twin Fan

Features and Benefits

- Duct Sizes 100 – 500mm
- Performance - Airflow 0.01 to 1.2m³/s, Pressure up to 650Pa
- Sentinel demand ventilation fan controller with lockable isolator
- Latest energy saving EC/DC motors
- Internal or external models (IPX2 or IPX5)
- Manufactured controlled to BS EN ISO 9001
- Performance tested to BS848 Part 1 & 2

The Sentinel twin in-line duct fans are as supplied from Vent-Axia Ltd. Manufactured from prime quality galvanised sheet steel, Sentinel fan units are internally treated with an 'O' class rated, BS476 part 6 & 7, acoustic foam, which offers the benefits of high sound absorption, good thermal insulation properties in addition to self extinguishing properties and resistant to ignition.

Weatherproof external units incorporate controller shrouds and are coated externally with a polyurethane finish.

The housing is designed to be as compact as possible for concealed false ceiling applications and Sentinel casings are specially designed to allow the unit to be mounted via its unique mounting bracket, ensuring a quick and easy solution to installation.

The unit is suitable for ceiling or floor mounting, non-return dampers can be easily rotated on site to suit.

Impellers

All Sentinel units feature a low energy, Class 1, EC/DC external rotor motor and backward curved impeller assembly specifically chosen for performance and non-overloading characteristics. The assembly is dynamically balanced to DIN ISO 1940 Grade 6.3, duct size 500mm rated IP54, all other sizes, IP44 according to BS EN 60529. Ball bearings are greased for life. Insulation is Class 'B' (from -25°C to +60°C).

All models incorporate internal electronic overload protection and soft start function.

Electrical

Every Sentinel unit is fitted with a purpose designed common PCB controller incorporating a 16-character backlit alphanumeric x 2 line display with 4 button membrane keypad for fan status & commissioning set up. The enclosure is fitted with a 4-pole 10A isolator that is suitable for fitting a locking device to prevent accidental operation.

The twin unit controller features automatic 6hr duty/share and run/standby in the event of motor failure.

Motors are single phase 230V +/- 10% / 50/60Hz / 1ph (size 100-400mm) or 400V +/- 10% / 50/60Hz / 3ph (size 500mm), (4 wire systems only).

24V DC power is provided from the controller for powering the matched range of Sentinel switches and sensors.

Performance/Sound

Extensively tested to BS848 parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at reference level of 2x10⁻⁵Pa. The inlet/outlet sound power level spectra figures are dB with a reference of 10⁻¹² watts.

Weatherproof Typical Ordering Designation

Ordering Codes are similar to existing units with Suffix.... /WP which denotes Weatherproof finish.

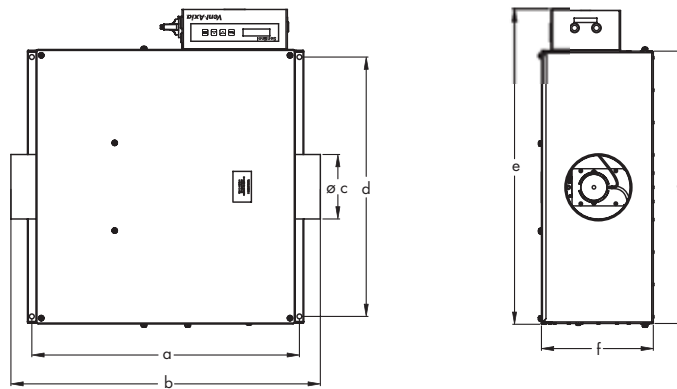
Example SENT100T/CP/WP

Accessories

For duct accessories see Ducting and Fitting Section.



Fan Dimensions (mm)



Hierarchy	Constant	Duct Diameter mm							Weight
Model	Pressure Model	c	a	b	d	e	f	g	Kg
SENT100T	SENT100T/CP	100	610	705	591	717	256	622	26
SENT125T	SENT125T/CP	125	610	705	591	717	256	622	26
SENT150T	SENT150T/CP	150	610	705	591	717	256	622	26
SENT200T	SENT200T/CP	200	801	896	703	830	343	734	39
SENT250T	SENT250T/CP	250	925	1020	798	925	354	829	48
SENT315T	SENT315T/CP	315	1255	1353	1145	1272	536	1176	88
SENT400T	SENT400T/CP	400	1255	1353	1145	1272	536	1176	90
SENT500T	SENT500T/CP	500	1492	1590	1533	1661	675	1564	175

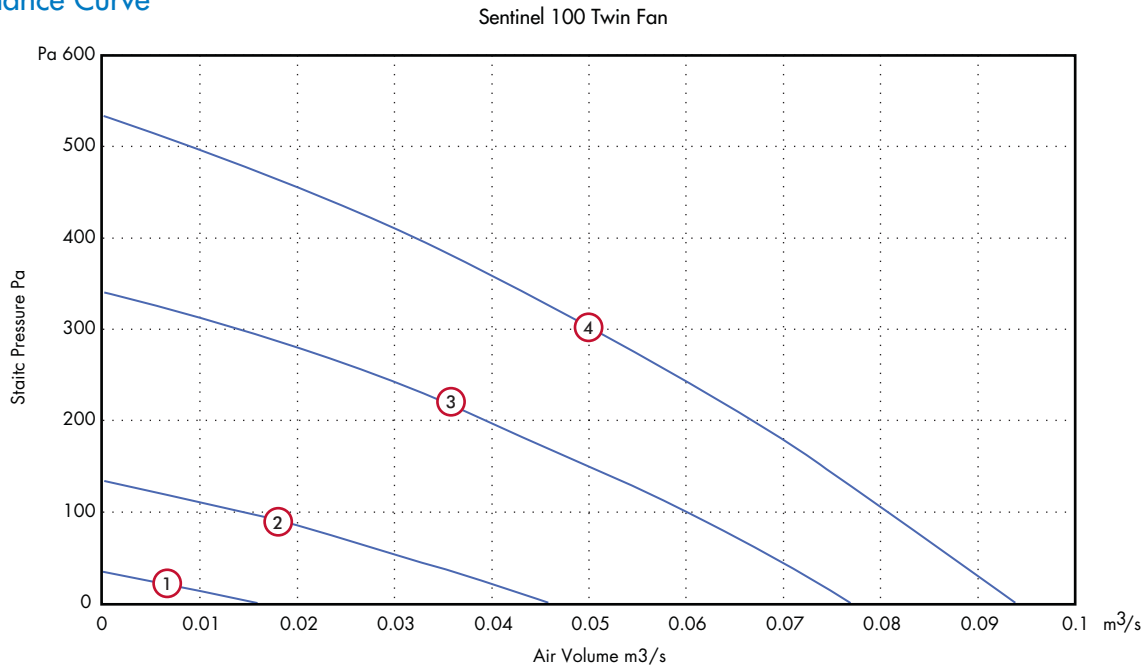
Accessories

Hierarchy		Anti-Vibration				*Duct	Heat
Model	Model	Mounts	Duct air heater	Filter cassette	Bag filter cassette	attenuator 600mm	exchange unit
		Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
SENT100T	SENT100T/CP	10523033	10531100T1	10532100A	10533100	10535100	-
SENT125T	SENT125T/CP	10523033	10531125T1	10532125A	10533125	10535125	-
SENT150T	SENT150T/CP	10523033	10531150T1	10532150A	10533150	10535150	-
SENT200T	SENT200T/CP	10523033	10531200T1	10532200A	10533200	10535200	10538290 +10577315 +10578315
SENT250T	SENT250T/CP	10523033	10531250T1	10532250A	10533250	10535250	10538290 +10577315 +10578315
SENT315T	SENT315T/CP	10523033	10531315T1	10532315A	10533315	10535315	10538290 +10577315
SENT400T	SENT400T/CP	10523033	10531400T3	10532400A	10533400	10535400	-
SENT500T	SENT500T/CP	10523033	10531500T3	10532500A	10533500	10536500*	-

*For alternative attenuator lengths, refer to Accessories and Controllers section

Vent-Axia Sentinel D-Box Twin Fan

Performance Curve



Performance Guide

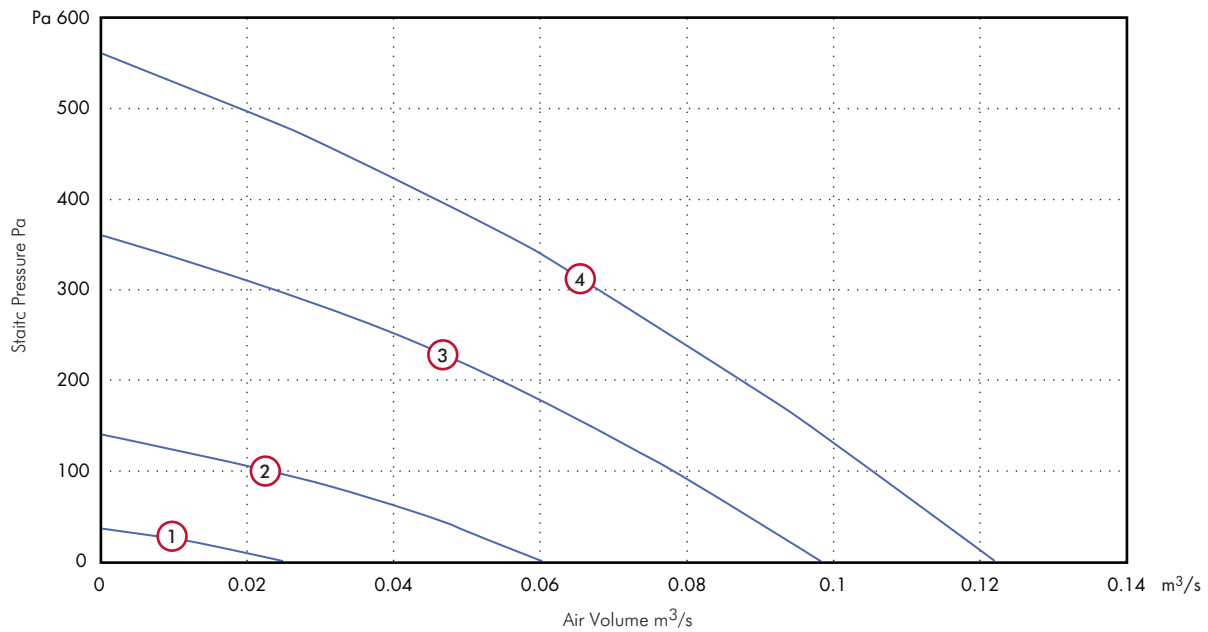
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	75	100	125	150	200	250	300	350	400	450	500	550		
100%	1	Airflow	4	0.094	0.091	0.087	0.084	0.081	0.077	0.074	0.067	0.059	0.051	0.042	0.032	0.021	0.009	0.002	0.69	
100%	1	SFP		0.9	0.93	0.97	1.01	1.04	1.1	1.14	1.26	1.43	1.66	2.01	-	-	-	-	0.69	
80%	1	Airflow	3	0.077	0.073	0.069	0.064	0.06	0.055	0.05	0.039	0.027	0.014	0.007	-	-	-	-	0.5	
80%	1	SFP		0.5	0.53	0.56	0.6	0.64	0.7	0.77	0.99	1.43	2.75	-	-	-	-	-	0.5	
50%	1	Airflow	2	0.046	0.039	0.031	0.023	0.014	0.004	-	-	-	-	-	-	-	-	-	0.16	
50%	1	SFP		0.46	0.55	0.69	0.92	1.52	-	-	-	-	-	-	-	-	-	-	0.16	
25%	1	Airflow	1	0.016	0.004	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	
25%	1	SFP		0.49	1.95	-	-	-	-	-	-	-	-	-	-	-	-	-	0.08	

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	54.7	61.5	61.3	60.5	51.1	47.2	40.5	36.6	34.2
100%	Outlet	58.6	63.8	58.4	57.3	53.8	55.5	49.1	41.3	38.4
100%	Breakout	58.4	64	62.6	55.7	45.7	42.7	39.4	37.6	37
80%	Inlet	49.8	56.6	56.5	55.7	46.3	42.4	35.7	31.7	29.4
80%	Outlet	53.7	58.9	53.5	52.5	48.9	50.6	44.3	36.4	33.6
80%	Breakout	53.5	59.2	57.8	50.8	40.9	37.9	34.5	32.7	32.2
50%	Inlet	39.6	46.4	46.3	45.5	36.1	32.1	25.5	21.5	19.1
50%	Outlet	43.5	48.7	43.3	42.3	38.7	40.4	34.1	26.2	23.3
50%	Breakout	43.3	49	47.6	40.6	30.7	27.6	24.3	22.5	22
25%	Inlet	24.5	31.3	31.2	30.4	21	17.1	10.4	6.5	19.7
25%	Outlet	28.4	33.6	28.2	27.2	23.6	25.3	19	11.1	14.9
25%	Breakout	28.2	33.9	32.5	25.5	15.6	12.6	9.2	7.4	20.4

Performance Curve

Sentinel 125 Twin Fan



Performance Guide

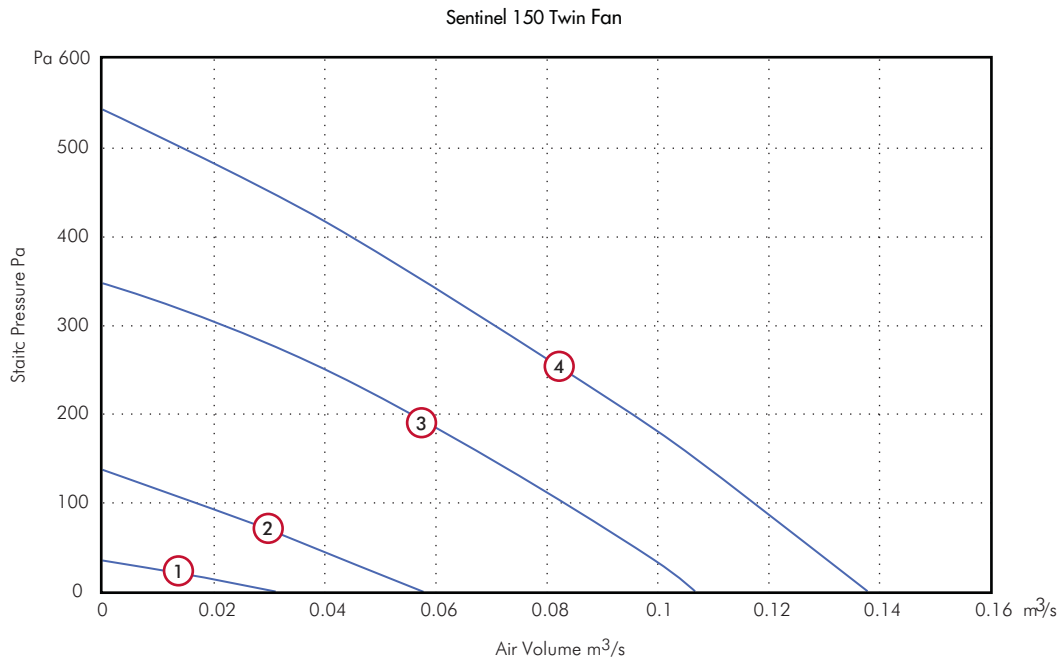
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	125	150	200	250	300	350	400	450	500	550			
100%	1	Airflow	4	0.122	0.118	0.114	0.106	0.101	0.097	0.088	0.078	0.068	0.057	0.046	0.033	0.019	0.004	0.72		
100%	1	SFP		0.71	0.73	0.76	0.81	0.85	0.89	0.98	1.11	1.27	1.51	1.88	-	-	-	0.72		
80%	1	Airflow	3	0.098	0.093	0.088	0.078	0.072	0.066	0.054	0.04	0.024	0.004					0.51		
80%	1	SFP		0.4	0.42	0.45	0.51	0.55	0.6	0.73	0.99	1.64	-					0.51		
50%	1	Airflow	2	0.06	0.052	0.044	0.023	0.01										0.18		
50%	1	SFP		0.36	0.42	0.5	0.95	2.19										0.18		
25%	1	Airflow	1	0.025	0.009													0.09		
25%	1	SFP		0.33	0.92													0.09		

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	62.6	64	66.6	64.1	54	49.7	40.8	38.4	37.3
100%	Outlet	61.9	65.7	63.5	62.4	58.4	60.4	53.7	47.3	43.3
100%	Breakout	69.7	61.5	62.4	56	47.2	45.2	38.3	33.8	37.2
80%	Inlet	57.8	59.1	61.8	59.2	49.2	44.8	36	33.6	32.5
80%	Outlet	57.1	60.8	58.7	57.5	53.5	55.5	48.9	42.4	38.4
80%	Breakout	64.8	56.7	57.6	51.2	42.4	40.4	33.4	28.9	32.4
50%	Inlet	47.6	48.9	51.6	49	39	34.6	25.8	23.4	22.3
50%	Outlet	46.9	50.6	48.5	47.4	43.3	45.3	38.7	32.2	28.2
50%	Breakout	54.6	46.5	47.4	41	32.2	30.2	23.2	18.7	23.2
25%	Inlet	32.5	33.9	36.5	34	23.9	19.6	10.7	8.3	18.8
25%	Outlet	31.8	35.6	33.4	32.3	28.3	30.3	23.6	17.2	14.5
25%	Breakout	39.6	31.4	32.3	25.9	17.1	15.1	8.2	3.7	22.3

Vent-Axia Sentinel D-Box Twin Fan

Performance Curve



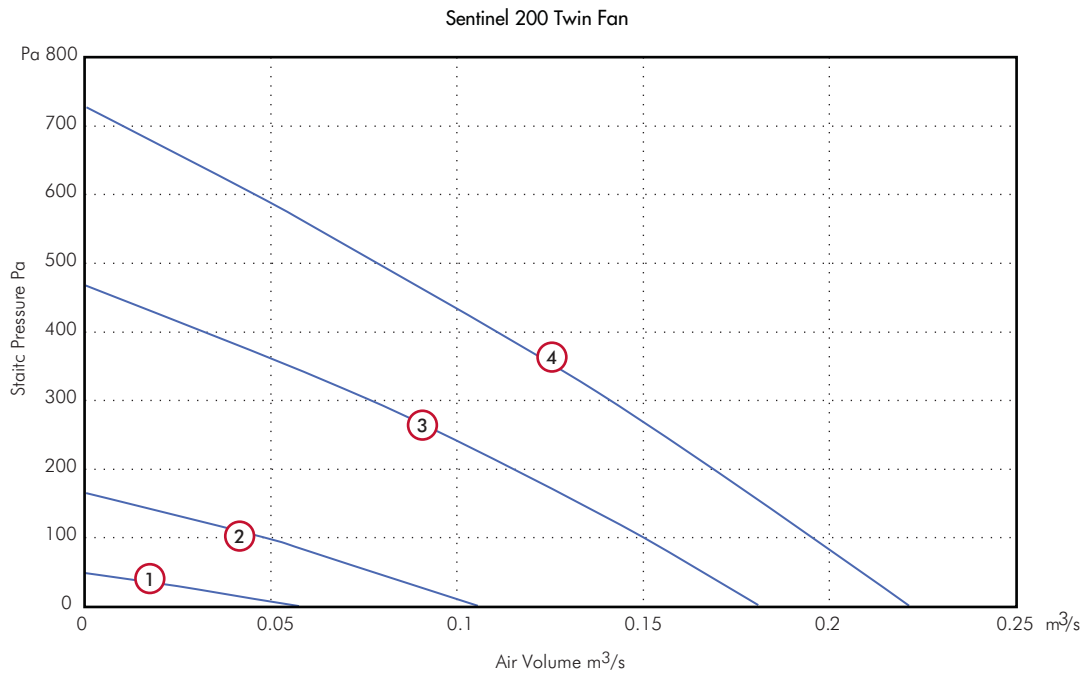
Performance Guide

Speed	Phase	Performance	Curve	Airflow, m³/s @ Pa																Amps
				Ref.	0	25	50	100	125	150	200	250	300	325	350	400	450	500	525	
100%	1	Airflow	4	0.138	0.133	0.128	0.117	0.112	0.106	0.095	0.083	0.071	0.065	0.058	0.044	0.03	0.014	0.006	0.71	
100%	1	SFP		0.62	0.64	0.66	0.73	0.76	0.8	0.9	1.03	1.2	1.31	1.47	1.93	-	-	-	0.71	
80%	1	Airflow	3	0.107	0.101	0.096	0.083	0.077	0.07	0.056	0.04	0.021	0.011						0.48	
80%	1	SFP		0.37	0.39	0.41	0.48	0.51	0.57	0.71	0.99	1.89	-						0.48	
50%	1	Airflow	2	0.058	0.048	0.038	0.016	0.005											0.17	
50%	1	SFP		0.37	0.45	0.57	1.35	-											0.17	
25%	1	Airflow	1	0.031	0.011														0.08	
25%	1	SFP		0.26	0.73														0.08	

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	58.6	65.9	68.1	65.8	54.1	50.6	42.9	41.5	39.7
100%	Outlet	59.3	68.7	66.8	63.5	60	61.9	56	49.5	45.2
100%	Breakout	66	62	61.9	59.8	50.8	48.4	40.2	37.1	39.2
80%	Inlet	53.7	61.1	63.2	61	49.2	45.8	38.1	36.7	33.8
80%	Outlet	54.5	63.8	62	58.7	55.2	57.1	51.1	44.7	40.4
80%	Breakout	61.1	57.2	57	55	45.9	43.6	35.3	32.3	34.4
50%	Inlet	43.5	50.9	53	50.8	39	35.6	27.8	26.5	24.6
50%	Outlet	44.3	53.6	51.8	48.5	45	46.9	40.9	34.5	30.1
50%	Breakout	50.9	47	46.8	44.8	35.7	33.4	25.1	22.1	24.2
25%	Inlet	28.5	35.8	38	35.7	24	20.6	12.8	11.4	17.2
25%	Outlet	29.2	38.6	36.7	33.5	30	31.8	25.9	19.4	15.1
25%	Breakout	35.9	32	31.8	29.7	20.7	18.3	10.1	7	19.6

Performance Curve



Performance Guide

Speed	Phase	Perfor mance	Curve Ref.	Airflow, m³/s @ Pa																	Amps F.L.C
				0	25	50	100	150	200	250	300	350	400	450	500	550	600	650	700		
100%	1	Airflow	4	0.222	0.216	0.209	0.196	0.182	0.168	0.154	0.14	0.125	0.11	0.094	0.079	0.062	0.046	0.028	0.011	1.4	
100%	1	SFP		0.77	0.79	0.82	0.87	0.94	1.02	1.11	1.22	1.37	1.56	1.82	2.17	-	-	-	-	1.4	
80%	1	Airflow	3	0.181	0.173	0.165	0.149	0.132	0.115	0.096	0.076	0.056	0.033	0.009						1.07	
80%	1	SFP		0.47	0.5	0.52	0.57	0.65	0.74	0.89	1.13	1.53	2.6	-						1.07	
50%	1	Airflow	2	0.106	0.092	0.077	0.046	0.011												0.2	
50%	1	SFP		0.27	0.31	0.37	0.62	2.58												0.2	
25%	1	Airflow	1	0.058	0.029															0.09	
25%	1	SFP		0.15	0.3															0.09	

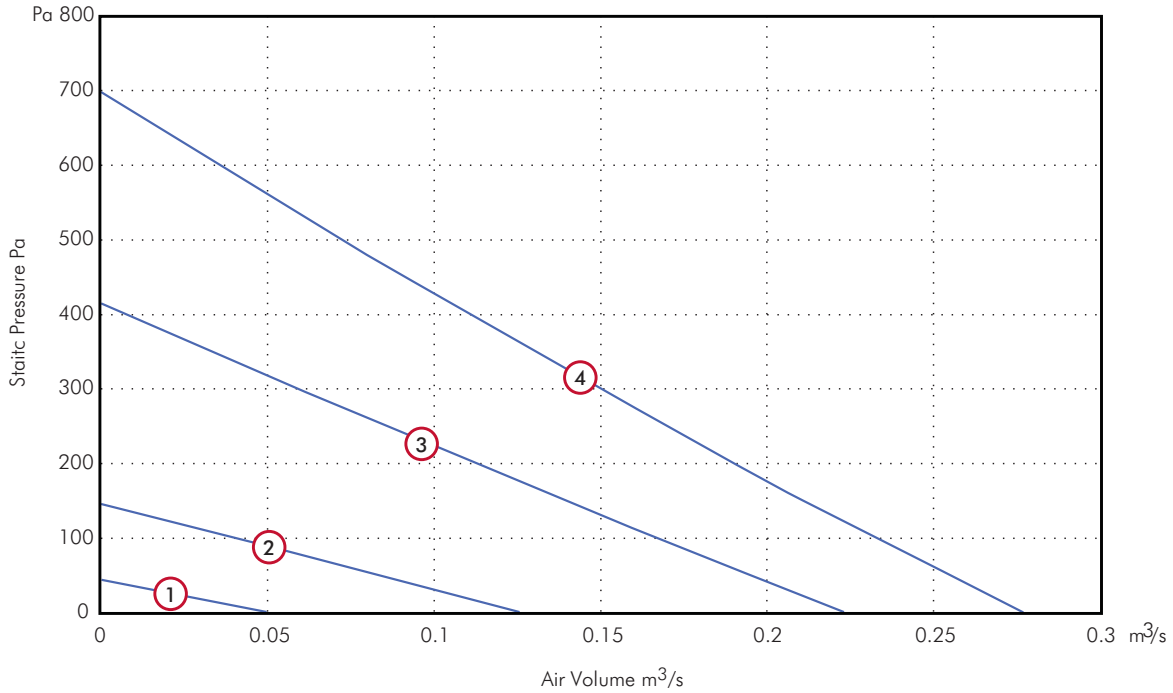
Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	60.6	71.5	66.8	70.7	64.1	57.3	53.2	49	46
100%	Outlet	63.3	74.7	66.6	80.4	70.2	68.6	64.6	58	55
100%	Breakout	66	69	63.2	66.3	57.4	52.6	45.5	37	44.7
80%	Inlet	55.8	66.7	61.9	65.8	59.3	52.5	48.4	44.2	41.1
80%	Outlet	58.4	69.8	61.7	75.6	65.4	63.7	59.8	53.2	50.3
80%	Breakout	61.2	64.2	58.4	61.4	52.5	47.8	40.6	32.1	39.9
50%	Inlet	45.6	56.5	51.7	55.6	49.1	42.2	38.2	34	30.9
50%	Outlet	48.2	59.6	51.5	65.3	55.2	53.5	49.6	43	40.1
50%	Breakout	51	54	48.2	51.2	42.3	37.6	30.4	21.9	29.7
25%	Inlet	30.5	41.4	36.7	40.6	34	27.2	23.1	18.9	15.9
25%	Outlet	33.2	44.6	36.5	50.3	40.1	38.5	34.5	27.9	25
25%	Breakout	36	38.9	33.2	36.2	27.3	22.6	15.4	6.9	19.2

Vent-Axia Sentinel D-Box Twin Fan

Performance Curve

Sentinel 250 Twin Fan



Performance Guide

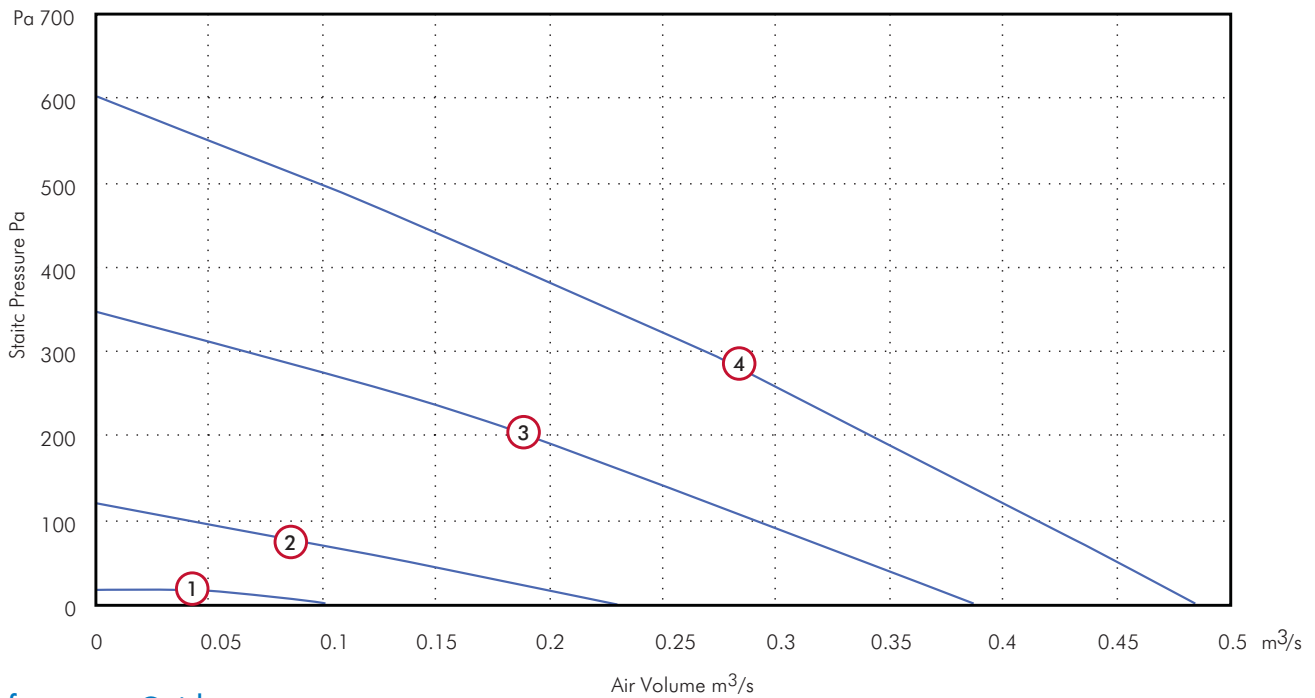
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	125	150	200	250	300	350	400	450	500	550	600	650	
100%	1	Airflow	4	0.277	0.265	0.254	0.232	0.221	0.211	0.189	0.169	0.148	0.129	0.109	0.09	0.071	0.053	0.035	0.017	1.4
100%	1	SFP		0.56	0.58	0.61	0.66	0.7	0.73	0.81	0.91	1.04	1.19	1.41	1.71	2.17	-	-	-	1.4
80%	1	Airflow	3	0.223	0.209	0.194	0.166	0.152	0.139	0.111	0.085	0.059	0.033	0.008						0.92
80%	1	SFP		0.34	0.37	0.39	0.46	0.5	0.55	0.69	0.9	1.29	2.31	-						0.92
50%	1	Airflow	2	0.126	0.104	0.082	0.039	0.017												0.2
50%	1	SFP		0.22	0.27	0.34	0.72	1.65												0.2
25%	1	Airflow	1	0.05	0.021															0.09
25%	1	SFP		0.18	0.43															0.09

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	61.7	70.5	62.2	70.9	60.2	51.8	51.2	47.8	45.1
100%	Outlet	63.9	74.3	63.6	76.2	67.5	66.2	60.9	55.9	52.4
100%	Breakout	66.7	66.8	62.3	67.8	56.3	52.3	44.2	39.9	45.4
80%	Inlet	56.9	65.7	57.3	66	55.4	46.9	46.3	43	40.2
80%	Outlet	59.1	69.5	58.8	71.3	62.6	61.4	56	51.1	47.6
80%	Breakout	61.8	62	57.4	62.9	51.4	47.5	39.3	35	40.5
50%	Inlet	46.8	55.6	47.3	56	45.3	36.8	36.2	32.9	30.1
50%	Outlet	49	59.4	48.7	61.2	52.5	51.3	46	41	37.5
50%	Breakout	51.7	51.9	47.4	52.8	41.4	37.4	29.2	25	30.4
25%	Inlet	31.6	40.4	32.1	40.8	30.1	21.6	21	17.7	16.7
25%	Outlet	33.8	44.2	33.5	46.1	37.3	36.1	30.8	25.8	22.3
25%	Breakout	36.6	36.7	32.2	37.6	26.2	22.2	14.1	9.8	18.3

Performance Curve

Sentinel 315 Twin Fan



Performance Guide

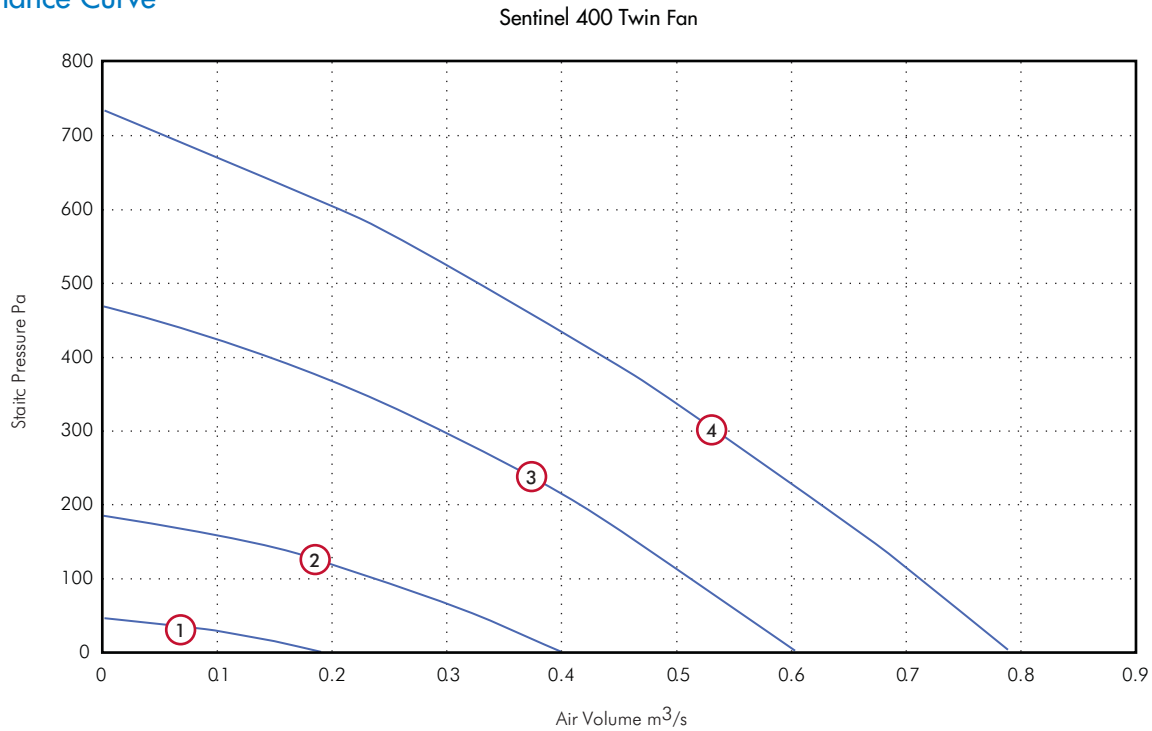
Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps FLC
				0	50	100	150	200	250	300	325	350	400	450	500	525	550	600		
100%	1	Airflow	4	0.485	0.451	0.416	0.381	0.344	0.306	0.268	0.248	0.228	0.186	0.143	0.098	0.075	0.051	0.002	1.40	
100%	1	SFP		0.36	0.39	0.43	0.46	0.51	0.58	0.66	0.71	0.78	0.95	1.24	1.81	2.36	-	-	1.40	
80%	1	Airflow	3	0.387	0.342	0.295	0.246	0.192	0.134	0.07	0.036								0.60	
80%	1	SFP		0.23	0.26	0.30	0.36	0.46	0.66	1.27	2.47								0.60	
50%	1	Airflow	2	0.233	0.143	0.041													0.20	
50%	1	SFP		0.13	0.22	0.77													0.20	
25%	1	Airflow	1	0.106															0.09	
25%	1	SFP		0.13															0.09	

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	64.4	70	65.8	64.6	58.6	50.3	47.4	44.6	41.5
100%	Outlet	65.7	72	64.5	71.9	64.7	64.2	58.1	51.9	49.7
100%	Breakout	68	65.9	64	60.1	53.3	48.9	41.3	34.1	40.5
80%	Inlet	59.6	65.1	61	59.7	53.7	45.4	42.5	39.7	36.7
80%	Outlet	60.8	67.2	59.7	67.1	59.9	59.3	53.2	47.1	44.9
80%	Breakout	63.1	61.1	59.2	55.2	48.4	44	36.5	29.3	35.7
50%	Inlet	49.3	54.9	50.7	49.5	43.5	35.2	32.3	29.5	26.4
50%	Outlet	50.6	56.9	49.4	56.8	49.6	49.1	43	36.8	34.6
50%	Breakout	52.8	50.8	48.9	45	38.2	33.7	26.2	19	25.4
25%	Inlet	34.3	39.9	35.7	34.5	28.5	20.2	17.3	14.5	14.8
25%	Outlet	35.6	42	34.4	41.8	34.6	34.1	28	21.8	19.6
25%	Breakout	37.9	35.8	33.9	30	23.2	18.8	11.2	4	20.4

Vent-Axia Sentinel D-Box Twin Fan

Performance Curve



Performance Guide

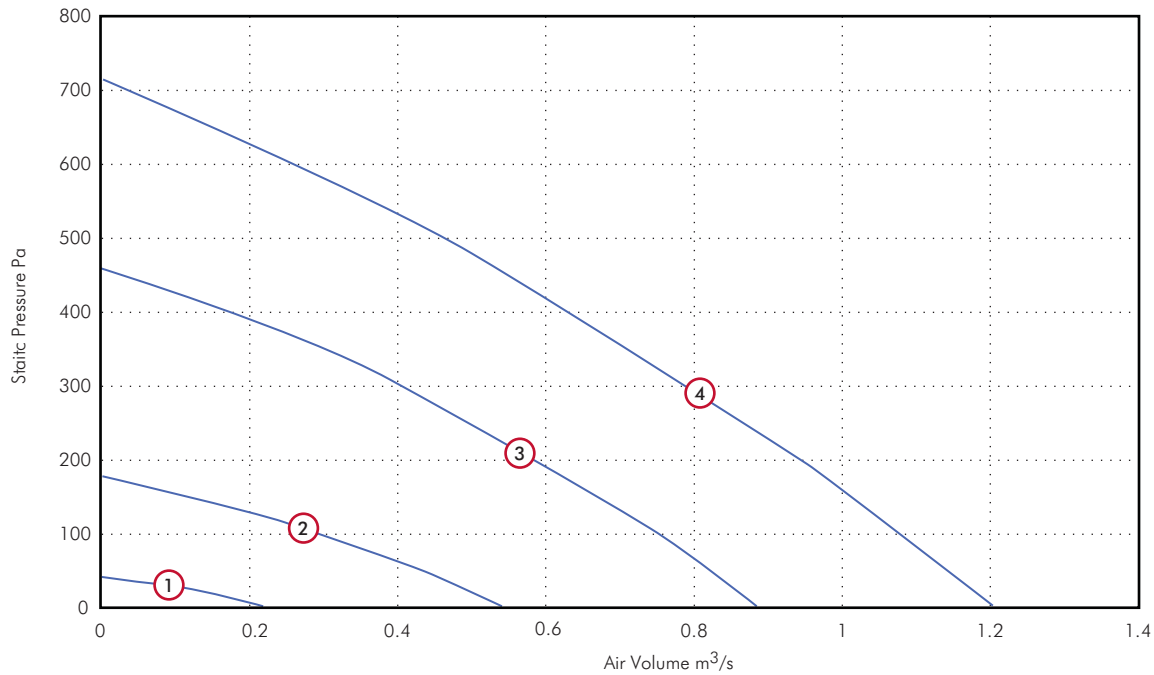
Speed	Phase	Performance	Curve Ref.	Airflow, m ³ /s @ Pa																Amps F.L.C	
				0	25	50	100	125	150	200	250	300	350	400	450	500	550	600	650		
100%	1	Airflow	④	0.79	0.771	0.751	0.711	0.669	0.648	0.626	0.582	0.536	0.488	0.437	0.384	0.328	0.269	0.205	0.136	2.86	
100%	1	SFP		0.58	0.59	0.61	0.64	0.68	0.71	0.73	0.79	0.85	0.94	1.05	1.19	1.4	1.7	2.23	-	2.86	
80%	1	Airflow	③	0.605	0.583	0.561	0.515	0.466	0.44	0.414	0.357	0.295	0.226	0.146	0.048						2.02
80%	1	SFP		0.35	0.36	0.37	0.41	0.45	0.48	0.5	0.59	0.71	0.93	1.43	-						2.02
50%	1	Airflow	②	0.399	0.363	0.325	0.236	0.121	0.038												0.77
50%	1	SFP		0.27	0.3	0.34	0.46	0.9	-												0.77
25%	1	Airflow	①	0.193	0.113																0.19
25%	1	SFP		0.11	0.19																0.19

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	73	82.9	75.8	69.4	63	55.9	53.6	49.8	49.2
100%	Outlet	75.5	83.8	79.5	78.5	74.7	71	64.8	57.3	58.7
100%	Breakout	77.6	80.7	80.5	72.8	66.6	60.4	50.9	41.7	54.7
80%	Inlet	68.2	78.1	71	64.6	58.2	51.1	48.8	44.9	44.3
80%	Outlet	70.6	78.9	74.6	73.7	69.9	66.1	59.9	52.4	53.6
80%	Breakout	72.7	75.9	75.6	68	61.7	55.5	46.1	36.9	49.9
50%	Inlet	58	67.9	60.7	54.4	47.9	40.9	38.6	34.7	34.1
50%	Outlet	60.4	68.7	64.4	63.5	59.7	55.9	49.7	42.2	43.6
50%	Breakout	62.5	65.6	65.4	57.8	51.5	45.3	35.9	26.7	39.7
25%	Inlet	42.9	52.9	45.7	39.4	32.9	25.8	23.6	19.7	19.1
25%	Outlet	45.4	53.7	49.4	48.4	44.6	40.9	34.7	27.2	28.6
25%	Breakout	47.5	50.6	50.4	42.8	36.5	30.3	20.8	11.6	24.9

Performance Curve

Sentinel 500 Twin Fan



Performance Guide

Speed	Phase	Performance	Curve Ref.	Airflow, m³/s @ Pa																Amps F.L.C
				0	25	50	100	150	175	200	250	300	350	400	450	500	550	600	650	
100%	3	Airflow	4	1.203	1.173	1.141	1.077	1.01	0.976	0.942	0.871	0.797	0.72	0.64	0.555	0.466	0.371	0.269	0.159	2.1
100%	3	SFP		0.54	0.55	0.57	0.6	0.64	0.66	0.68	0.74	0.81	0.9	1.01	1.16	1.38	1.74	-	-	2.1
80%	3	Airflow	3	0.887	0.853	0.819	0.746	0.669	0.629	0.588	0.499	0.403	0.296	0.173	0.024					1.6
80%	3	SFP		0.3	0.31	0.33	0.36	0.4	0.43	0.46	0.54	0.67	0.91	1.55	-					1.6
50%	3	Airflow	2	0.544	0.489	0.43	0.297	0.129	0.018											0.67
50%	3	SFP		0.36	0.4	0.46	0.67	1.53	-											0.67
25%	3	Airflow	1	0.224	0.115															0.39
25%	3	SFP		0.36	0.71															0.39

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Inlet	74.9	86.2	77.4	72.7	62.3	56.4	52.6	52.5	52.1
100%	Outlet	78.6	85.1	84.5	78	74.3	69	63.5	58.5	59.2
100%	Breakout	68.5	63.6	60.3	54.5	47.6	41.1	30.4	30.9	35.8
80%	Inlet	70	81.4	72.6	67.9	57.4	51.6	47.7	47.7	47.3
80%	Outlet	73.7	80.3	79.6	73.2	69.4	64.2	58.7	53.6	54.3
80%	Breakout	63.6	58.8	55.4	49.7	42.7	36.3	25.6	26.1	31
50%	Inlet	59.8	71.2	62.4	57.7	47.2	41.4	37.5	37.5	37.1
50%	Outlet	63.5	70.1	69.4	63	59.2	54	48.5	43.4	44.1
50%	Breakout	53.4	48.6	45.2	39.5	32.5	26.1	15.4	15.9	21.4
25%	Inlet	44.8	56.1	47.3	42.6	32.1	26.3	22.5	22.4	22
25%	Outlet	48.5	55	54.3	47.9	44.2	38.9	33.4	28.4	29
25%	Breakout	38.3	33.5	30.1	24.4	17.4	11	10.7	9.9	21

Vent-Axia Sentinel D-Box Sensors & Controls

* PLEASE NOTE: These sensors/controls are unique to Sentinel and CANNOT be used with any other product.

Ambient Response Humidity Sensor*



Humidity Sensor control is fixed at 72 - 75%RH. Incorporates a night time 'set back' function to avoid nuisance tripping as the humidity level rises when the air cools. An integral pullcord provides a manual override function if required. Can be wired for either On/Off or Trickle Boost operation. Pullcord override and neon indicator. Changeover relay switch. Operating range: 30% - 90%RH. Ambient operating temperature +5°C to +40°C. 24V DC SELV. Dimensions: 87 x 87 x 33mm (H x W x D). Will fit single gang box for surface mounting.

Stock Ref: 432945

Ecotronic Humidity Sensor*



Humidity Control is automatic and can be set to switch between 65 and 90%RH. An integral pullcord provides a manual override function if required. Can be wired for either ON/OFF or Trickle Boost operation. Set Point adjustable. Maximum switching load 1 amp inductive. Pullcord override indicator Ambient operating temperature 0°C to +40°C. Dimensions: 87 x 87 x 33mm (H x W x D). Supply voltage 24V DC SELV.

Humidity sensors should be sited approx. 100mm below ceiling level and not above cupboards, refer to siting details in fitting and wiring instructions supplied with product.

Stock Ref: 432949

Vent-Axia ThermoSwitch®



Automatically switches on fans on either a rise or fall in air temperature. Can be used for Trickle/Boost operation on either intake or extract systems. Setting range: +6°C to +30°C. Two internal range limit/locking rings are included to allow setting within a limited temperature range or locking at a fixed set-point. IP20 rated. Sealed sensing mechanism. Mounting direct on surface only. Dimensions: 80 x 104 x 36mm (H x W x D). Volt free switch connection to Sentinel.

Stock Ref: 563502B

Air Quality Sensor (AQS)*



Automatically reacts to the deterioration of air quality, sensing tobacco smoke, smells and toilet odours to regulate mechanically ventilated areas, such as cinemas, pubs, clubs, restaurants, kitchens, toilets and conference rooms.

The sensor switches when the air quality declines below an adjustable preset level. This is registered by a self-cleaning ceramic sensing head. The air quality sensor should not be used for the detection of combustible gases. Ambient operating temperature range 0°C to +50°C. MIN - MAX mode or direct Damper control. Dimensions: 87 x 157 x 47mm (H x W x D) Surface mounted. 1 - 25 min O/R timer. Supply voltage 24V DC SELV.

Stock Ref: 432953

Vent-Axia Visionex PIR*



A wall or ceiling person presence detector for use with Sentinel. Can be used in MIN - MAX mode or for direct damper control.

Fits any UK single gang mounting box. Adjustable timer overrun (5-25 minutes). Range of detection up to 10 metres. Designed to meet IP43. Ambient operating temperature range 0°C to +50°C. Supply voltage 24V DC SELV.

Stock Ref: 433162

7 Day TimeSwitch



For applications where regular switching is required at fixed periods or at different times on different days of the week, eg: offices, shops, pubs and restaurants.

The 7 Day TimeSwitch gives twelve On or Off positions per day and can be set for 7 days. The cycle will repeat until changed. Volt free switch connection to Sentinel.

Analogue clock display and integral time switches for ease of setting. Manual override. Removable clear plastic cover protects timeswitch face. Time base: 7 days. Shortest switching time: 2 hours. Ambient operating temperature range -20°C to +85°C. Dimensions: 104 x 74 x 52mm (H x W x D). Supply voltage 220-240V/1/50Hz.

Stock Ref: 563515



Remote Speed Control*



Provides infinitely variable Sentinel fan speed control between the 2 set points in Proportional mode. This control does NOT provide an ON/OFF switching facility.

Manual control. located remotely. 24V DC SELV. Ambient operating temperature -5°C to +40°C. Dimensions: 84 x 84 x 30mm (H x W x D). Will fit single gang box for surface mounting.

Stock Ref: 426332

CO₂ Duct Probe



High CO₂ levels promote increased fatigue and reduced concentration. Sensor monitors CO₂ level in extract ducts from conference areas, offices, theatres etc. With Sentinel in Proportional control mode, air extraction rate tracks the CO₂ level to improve indoor air quality.

24V DC SELV. 0 - 2000ppm CO₂ working range. Auto-calibrating NDIR absorption sensor. Stable drift compensation. Adjustable probe length. MAX. IP Rating 65.

Stock Ref: 433259

CO₂ + Temp Room Sensor*



HVAC temperature and carbon dioxide room sensor for ventilation control of residential areas, office

areas and classrooms. Used with Sentinel in Proportional control mode. Sensor will monitor both CO₂ and temperature levels between the set points, the air extraction rate following the higher of the 2 outputs.

24V DC SELV. 0 - 2000ppm CO₂ working range. 0 - 50°C working range. Auto-calibrating NDIR CO₂ absorption sensor. Thin film platinum temperature sensor for high accuracy. Dimensions: 100 x 84 x 25mm (H x W x D).

Stock Ref: 433257

Remote Fan Status Indicator*



This Remote Display unit will indicate the running status and condition of the fan or fans. Can be used in all Sentinel operating modes for fan mounting.

24V DC SELV. Directly connects into the SCU. Used for single and twin fan mounting. Ambient operating temperature -5°C to +50°C. Dimensions: 86 x 86 x 28mm (H x W x D).

Stock Ref: 433816

Constant Press System Accessories

PIR Grille*



PIR grille is on extract grille with an integral flap damper. Suitable for bathrooms and WC's. The PIR function fully opens the damper

when a person presence is detected. The opening time is fixed at 20 mins. Spigot size is 125mm.

12V AC SELV unit using the main transformer unit supplied. Integral PIR person presence sensor controlling damper. Auto-humidity control damper response at all times. 100° viewing angle. Temperature range 0 - 50°C. Size: 158 x 150 x 35mm (H x W x D). MAX airflow 70m³/hr @100 Pa.

Stock Ref: 434184

Dampers*



Two types available:
a) MM type - opening shut/MIN to open/MAX controlled by switches and
b) PC type - opening proportionally when controlled by sensors.

Duct sizes available: 100, 125, 150, 200, 250 and 315. Industry standard actuators.

Typical ordering designation: DVD size MM or PC

Power Supply*



For those situations where a separate 24V DC SELV supply source is required. 24W output capacity.

See F & W for connection details.

Stock Ref: 433193

Sentinel Totus D-ERV

Following on from the highly successful award winning Sentinel demand ventilation system, Vent-Axia has taken the next step by incorporating the Sentinel demand control philosophy with a state of the art high efficiency heat recovery cell to create the Sentinel Totus D-ERV, Demand Energy Recovery Ventilation System.

Totus incorporates the same 'Sentinel' high efficiency EC/DC backward curved motors/impellers, Sentinel Demand Controlled ventilation strategies and a market leading high efficiency counterflow heat recovery cell which achieves up to 90% energy recovery.

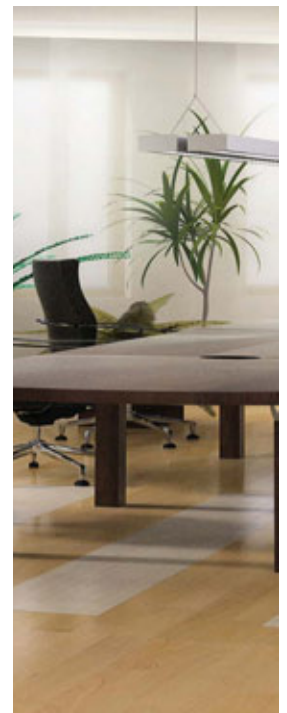
The Energy recovery capabilities are independently tested and rated to EN308.

Sentinel is the answer to key questions such as 'Why ventilate a room you're not using?' or 'Why over ventilate a room with only one or two occupants inside?'

Sentinel overcomes many of the issues encountered with a traditional fixed volume ventilation system that is either on or off irrespective of the number of people in the room, risking room over ventilation, burning valuable money and a wasteful use of energy.



Range



Vent-Axia®



Welcome to the world of Sentinel Demand Energy Recovery Ventilation

Sentinel Totus Demand Energy Recovery Ventilation, D-ERV, is a new heat recovery demand ventilation system designed to meet modern building management control principles. It responds to the exact ventilation requirements of a room at any one time providing airflow only when it is required and to the level that is required – therefore using only the energy that is needed; no more no less, whilst recovering maximum energy from the extracted air and transferring it to the fresh supply air. This overcomes many of the issues encountered with a traditional fixed volume ventilation system that is either on or off irrespective of the occupancy of the room, risking over ventilation, burning valuable money and a wasteful use of energy.

In support of Sentinel Totus D-ERV, Vent-Axia's dedicated HEVAC team offers:

- ✓ Practical advice on HEVAC selection and installation
- ✓ Guidance on solutions to meet legislation requirements
- ✓ Project management and site deliveries
- ✓ After sales support and maintenance information

The need to recover energy

The high efficiency cell incorporated within the Totus range achieves a market leading 90% efficiency (EN308 independently tested). This enables Sentinel Totus to recover 30% more energy, than a 70% efficient device. This high efficiency means that heating and cooling loads associated with 'extract to waste' type systems can be reduced by up to 25% in both heating and cooling seasons. The high efficiency also means that expensive after heaters, often required in lower efficiency heat recovery devices, are not required.

The need to save costs

Rising fuel prices are placing an increasing burden on organisations as they seek to reduce consumption.

- ✓ High efficiency heat exchanger – up to 90% energy recovery offering savings of up to 25% on heating and cooling loads
- ✓ Integral automatic summer bypass - provides free cooling during summer
- ✓ Double skin construction with high thermal acoustic insulation – 60kg/m³
- ✓ Low stand by power only 0.6W
- ✓ Energy efficient EC/DC motors - 1/3 less energy lost to heat than a conventional AC motor

The need for system integration

With the drive towards 'whole building' philosophy costing information, maintenance schedules and costs are all now essential elements of the project in addition to the initial capital costs. Sentinel Totus D-ERV incorporates a number of integrated features to offer maximum flexibility during design, build and operation including:-

- ✓ Air conditioning interlock – to optimise energy recovery
- ✓ Heating system interlock – summer bypass optimisation
- ✓ Interfaces for BMS control and monitoring
- ✓ EC/DC motors with lower maintenance requirements and longer service life
- ✓ Platisol coated case – suitable for external installation as standard
- ✓ Optional cowl for roof mounting
- ✓ Integral condensate pump – reduces installation costs and space requirements
- ✓ In-built automatic frost protection – prevents heat exchanger freezing at very low temperatures
- ✓ In-built backlit LCD user control interface which can be remotely mounted to suit site requirements
- ✓ Night time purge facility to reduce overheat during warm summer periods

The need for better health

Removal of pollutants, such as moisture, carbon dioxide and external fumes are all important factors in maintaining indoor air quality. Studies within schools have demonstrated that maintaining lower carbon dioxide levels helps create a better learning environment.

- ✓ Hierarchical control maintains CO₂ levels within levels described in Building Bulletin 101
- ✓ Low sound levels meet requirements of Building Design
- ✓ Automatic summer bypass providing free summer cooling
- ✓ Demand control optimising indoor air quality
- ✓ Closed loop control system ensures maximum comfort levels at minimum energy levels

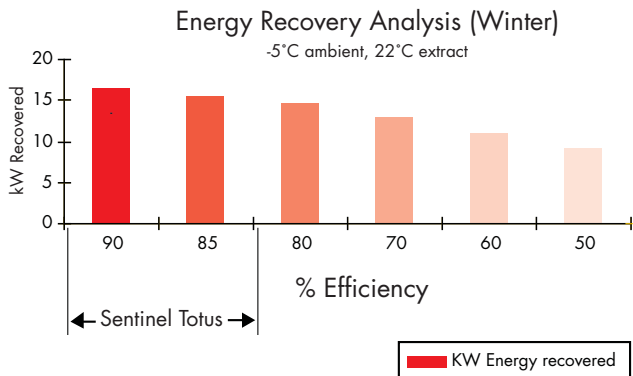
The need to meet legislation

Through the Energy Performance of Building Directive, the EU is aiming for over 20% saving in building energy consumption by 2010.

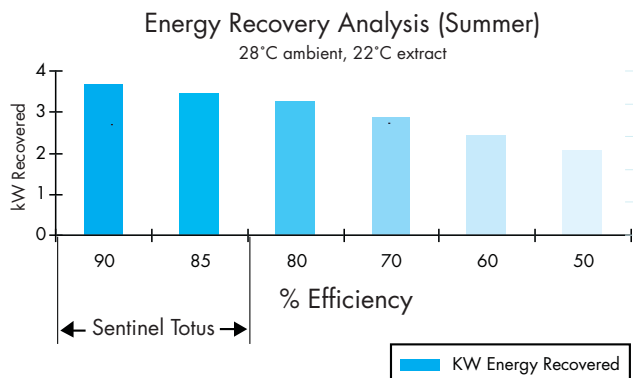
- ✓ Meets Building Regulations Part L2A and L2B – achieving a specific fan power at 25% of design flow rate no greater than that achieved at 100% design flow rate.
- ✓ Market leading 90% heat exchange efficiency independently tested to EN 308
- ✓ Meets carbon footprint reduction targets
- ✓ Lowest Specific Fan Power figures of any D-ERV product



Sentinel Totus D-ERV



Airflow m ³ /s	Efficiency %	kW Heat recovered	Supply temp °C
0.555	90	16.51	19.3
	85	15.59	18.0
	80	14.67	16.6
	70	12.84	13.9
	60	11.00	11.2
	50	9.17	8.5



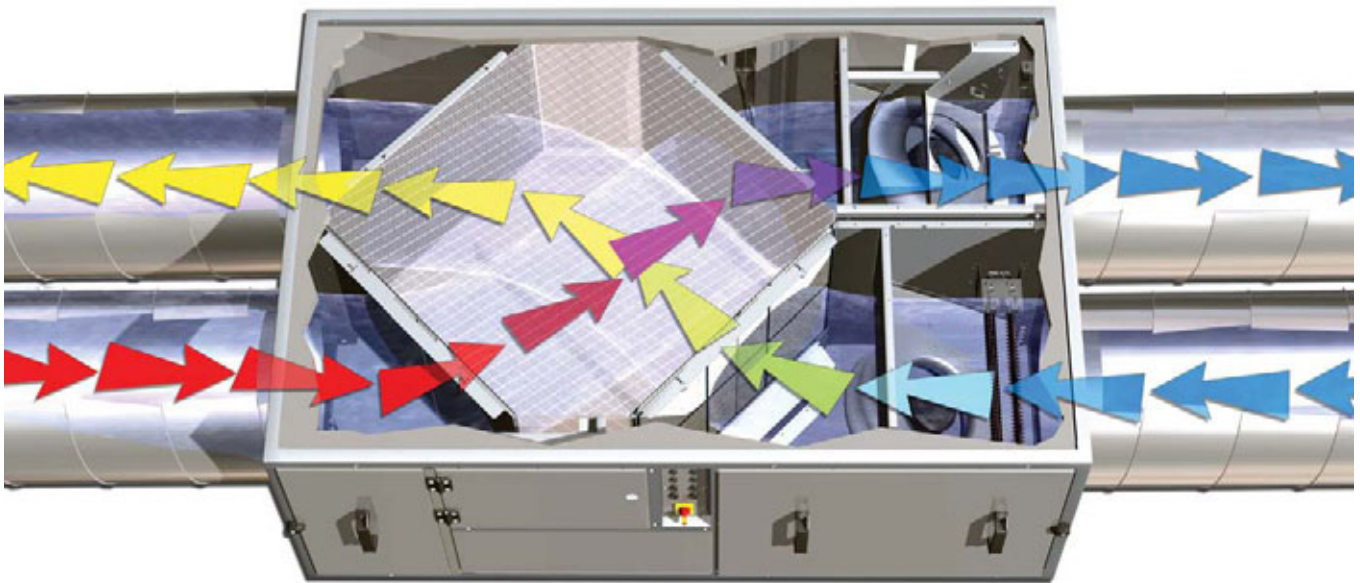
m ³ /s	Efficiency %	kW Cool Recovered	Supply temp °C
0.555	90	3.67	22.6
	85	3.46	22.9
	80	3.26	23.2
	70	2.85	23.8
	60	2.45	24.4
	50	2.04	25.0

The need for energy recovery

Rising fuel prices are placing an increased burden on organisations as they seek to reduce consumption.

Sentinel Totus D-ERV incorporates a number of market leading technologies and control strategies to take commercial heat recovery ventilation to the next level and further reduce energy consumption and waste.

- ✓ **Sentinel demand ventilation control** - matching air quality with low power consumption using high efficiency, low energy EC/DC motor technology.
- ✓ **Energy saving control functions** -
 - i. Automatic summer bypass - provides free cooling during summer
 - ii. Low standby power - 0.6 watts
 - iii. Night time purge facility - reducing air conditioning start up loads
- ✓ **System interfaces** - to optimise interface with environmental control systems.
 - i. Air conditioning interlock - to maximise energy recovery opportunities
 - ii. Heating system interlock - to optimise summer bypass functionality
 - iii. BMS interfaces - control and monitoring
- ✓ **High efficiency energy recovery cell**
 - i. Up to 90% energy recovery - reducing associated heating and cooling loads by up to 25%
 - ii. High efficiency eliminates the need for re-heaters eg. typically at -5°C ambient, 22°C room conditions the supply air temperature is maintained above 19°C.



The Sentinel Totus D-ERV units incorporate a brand new market leading counterflow heat exchanger.

The Sentinel Totus D-ERV range has been independently tested to EN 308 to achieve energy savings of up to 90% and higher in the case of condensation.

The plate heat exchanger is a true counterflow device, incorporating a special plate edge seal, to enhance air tightness and stability, eliminating the transfer of odours or humidity and ensuring the highest efficiency levels.

The aluminium construction make it insensitive to frost and heat damage and tolerant to pressure in-balance conditions, unlike equivalent plastic variants.

This high efficiency energy recovery ventilation system also includes further functions to reduce energy usage and maintain high levels of indoor air quality.

- ✓ High efficiency EC/DC motors and backward curved impellers with 'Sentinel' demand control logic to optimise IAQ, whilst using the minimum amount of energy.
- ✓ Built-in automatic summer bypass, to take advantage of free cooling opportunities (with air conditioning interlock).
- ✓ Heating system interlock to ensure free cooling is optimised.
- ✓ Low standby power 0.6 watts (PIR actuation).
- ✓ Night time purge facility to reduce overheat during the operational day and reduce air conditioning start up loads.



Sentinel Totus Mini/Midi D-ERV Unit



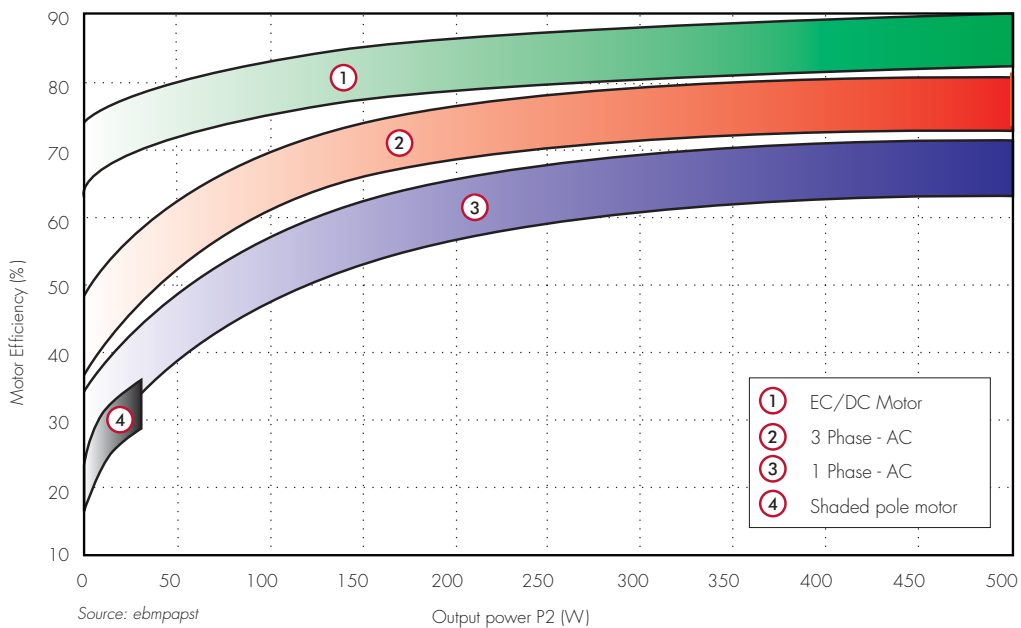
Sentinel Totus Maxi D-ERV Unit

Sentinel Totus D-ERV

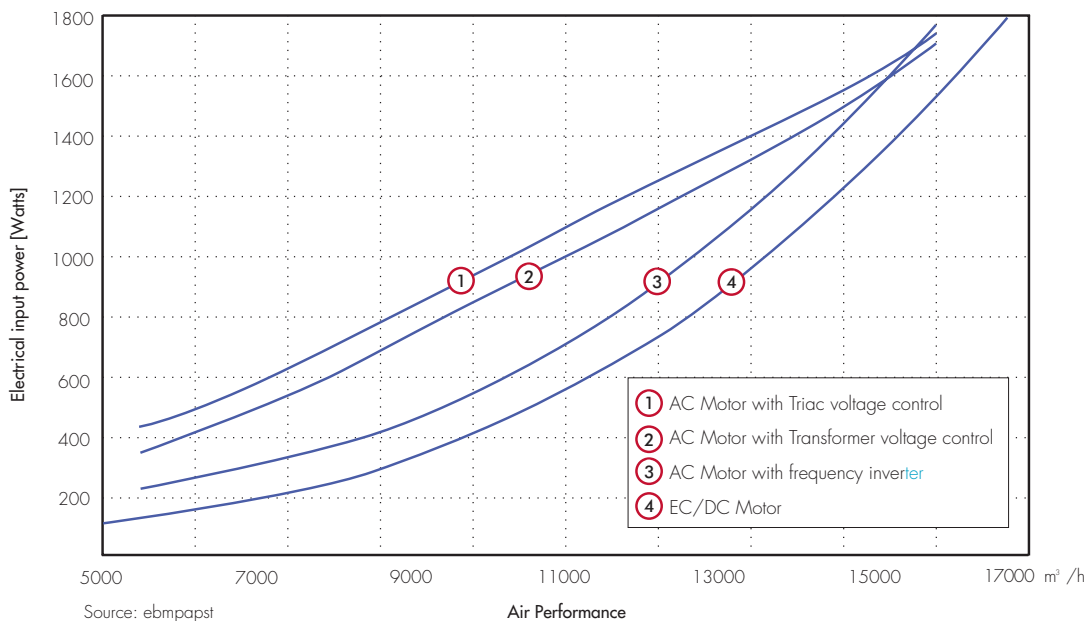
EC/DC energy saving fan motor benefits

- ✓ Higher efficiency at full speed - at 50% reduction in motor speed gives an 88% reduction in power usage.
- ✓ Continuous speed control across the full operating range giving an increased tolerance to high and low pressure.
- ✓ Low noise compared to a step control motor.
- ✓ Improved service life.
- ✓ Power input lost as heat is reduced by $\frac{1}{3}$ compared to a conventional AC motor.
- ✓ Lower maintenance requirements and longer service life.

Highest Motor Efficiency



Typical EC/AC Motor Speed Control Comparison



As can be seen from above motor comparisons, the EC/DC motor offers higher efficiencies when compared to AC motors, and also consumes less power under speed control, giving both the highest motor efficiency and lowest power consumption across the speed control range.

Demand Control



The precise control of the Sentinel Totus D-ERV system, driven by the ventilation requirements of the room at any one time, means that the system is only running to the level required, using energy when it is needed. A range of sensors are employed to determine the occupancy of the rooms, and manage the system ventilation rates accordingly. This optimises the use of energy whilst meeting the legislation requirements of the building.

This compares to a 'traditional' fixed volume system, which in general is either 'ON' or 'OFF' often using energy to ventilate an empty or half occupied room, over ventilating and wasting energy.

System Overview

The Sentinel Totus D-ERV system is made up of 4 parts:

- ✓ Up to 90% energy recovery (EN 308)
- ✓ Low energy EC/DC motors
- ✓ Sentinel Totus D-ERV, Demand Energy Recovery control
- ✓ Sensors and Controls

The ventilation demands of the room are detected by the wall or ceiling mounted Sentinel Totus D-ERV sensors/switches. These communicate with the Sentinel Totus D-ERV unit, which in turn drives the fan to the required speed to deliver the airflow. As the ventilation is provided to the room, the sensors continuously feedback to the

control unit, driving the fan motor to the exact level required in the room at any one time.

Hierarchical Control

The system is controlled by on board electronics, with an LCD display showing fan status and allowing for simple commissioning and installation, whether as a local sensor control unit or linked into a building management system. The LCD display unit can be remotely mounted if required.

1. Switched on/off or minimum/maximum level control

In an environment such as an office, the system is activated and runs between minimum and maximum levels by a choice of sensors.

- PIR Detector
- Thermostat
- Humidistat
- BMS (remote enable)

2. Hierarchical – maximum demand multi sensor input used with a combination of sensors, with a defined level of priorities to simultaneously control a number of atmospheric conditions within a room, such as a meeting room.

- CO₂/temperature – room mounted
- CO₂ – duct mounted
- Building Management System (0-10V)

Constant Pressure extract

Applied in a discreet central extract system, such as hotel bathrooms or apartment blocks, the system grilles and/or duct dampers are controlled by the presence of a person in the room or by achieving required levels of humidity. The central system will respond to the demand depending on the number of active rooms.

- PIR/Humidity Extract Grille 125mm
- PIR 12 - 70m³/h
- Humidity: 12m³/h – 30% RH
70m³/h - 75% RH
- Motorised Duct Dampers 100mm - 315mm Dia
Built in end stop adjustment for setting minimum and maximum volume.
24V Min/Max or 0-10V proportional control options.
Motorised Duct Dampers – Sensor Control options
Each 24V powered extract damper can be controlled by one of the following sensors:-

Min-Max (DVDxxx/MM)

- AQS- Air Quality Sensor – Room (432953)
- PIR Detector – Room (433162)
- Thermostat - Room (563502B)
- Humidistat - Room (432945)

Proportional 0-10V (DVDxxx/PC)

- Carbon Dioxide Sensor – Room (433259)
- Carbon Dioxide Sensor – Duct (433259)
- Temperature Sensor - Room (434749)

Note Local 24V power supply required to power dampers & Sensors (426526)

Sentinel Totus D-ERV

Totus Units



Mini fan unit



Midi fan unit



Maxi fan unit

The Sentinel Totus D-ERV units are plastisol finished as standard and are suitable for internal or external mounting.

System Technology

Sentinel Totus D-ERV is a closed loop controlled ventilation system. Employing a range of sensors to manage the system, demand is sensed by PIR, temperature, humidity, air quality or carbon dioxide sensors. Depending on the levels in the rooms, Sentinel Totus D-ERV's fan speed is ramped up or down to control the parameters within the required limits. If the room is unoccupied, the system switches off, saving energy and cost to the business.

The unit standby power consumption is only 0.6 watts.

The EC/DC Energy Saving Fan Motor Technology



- ✓ Higher efficiency at full speed - at 50% reduction in motor speed gives an 87.5% reduction in power usage.
- ✓ Continuous speed control across the full operating range giving an increased tolerance to high and low pressure.
- ✓ Low noise compared to a step control motor.
- ✓ Improved service life.
- ✓ Power input lost as heat is reduced by $\frac{1}{3}$ compared to a conventional AC motor.
- ✓ Lower maintenance requirements and longer service life.

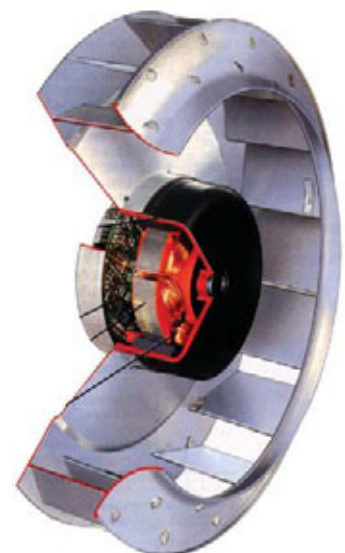
Sentinel Totus D-ERV utilises the latest EC/DC motor technology, which provides energy saving benefits even over DC motors.

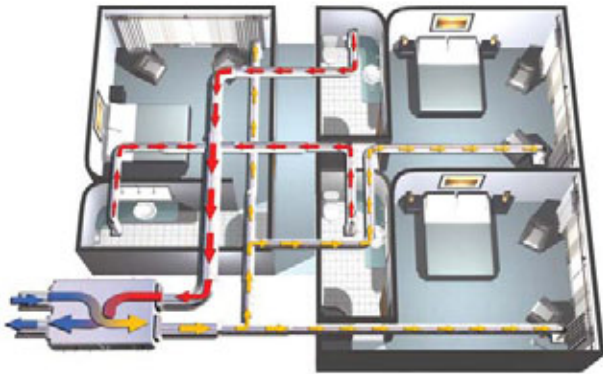
This technology is also infinitely speed controllable and offers increased energy savings across the complete speed control range when compared with conventional inverter drive solutions. The result is higher efficiency, reduced noise, accurate controllability, better speed control drawing less power and as a result better overall system performance. Volume reduction also increases energy recovery efficiency beyond the published figures.

Sentinel Totus D-ERV can be used in a hierarchical system where maximum demand, for example temperature and/or CO₂ gives priority control of the fan speed or a constant pressure system with room mounted PIR/grilles or in-line damper control.

Heart of EC/DC Motor

- Rotor with magnet
- Stator with bearing
- Integrated electronics
- Stator lamination
- Stator winding





Typical network of hotel bathrooms/flats/apartments



Typical school classroom



Mini/Midi fan unit



Maxi fan unit

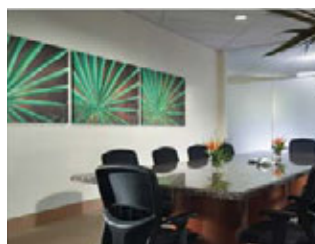
Sentinel Totus D-ERV is a new range of energy recovery ventilation systems for multi occupancy and variable demand rooms. Using energy efficient EC/DC fans, 90% HR with intelligent sensing and control, the system meets the ventilation requirements of both new builds and refurbishment projects.

Ideal for applications where the rooms are used at different times of the day by a variable number of people, the Sentinel Totus D-ERV system will monitor occupancy, ventilation rate and air quality, and respond accordingly to maintain the atmosphere within preset limits and recovery up to 90% of extracted energy.

Typical applications include:

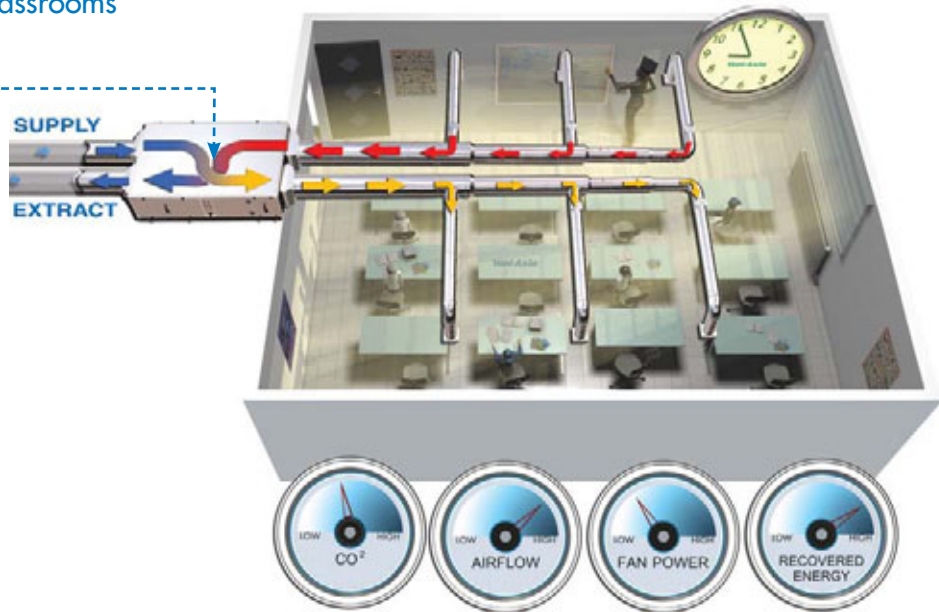
- ✓ A network of hotel bathrooms, flats or apartments, which require ventilation, but are only used in limited periods particularly in the morning and in the evening.
- ✓ School classrooms and lecture theatres which are only occupied during lesson time by a variable number of students, but when used must keep CO₂ levels within prescribed limits.
- ✓ Office meeting rooms or open plan areas which again are used periodically during the day by a variable number of staff and visitors, but when occupied must meet required airflow rates.

Automatic sensing and control runs the system according to the maximum demand requirements of the building zone, whether it be carbon dioxide levels, temperature, humidity or air quality – triggered by people entering or leaving the rooms. Common configurations include Electronic Static Pressure (ESP) controllers for constant pressure systems.



Sentinel Totus D-ERV

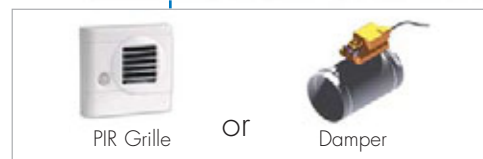
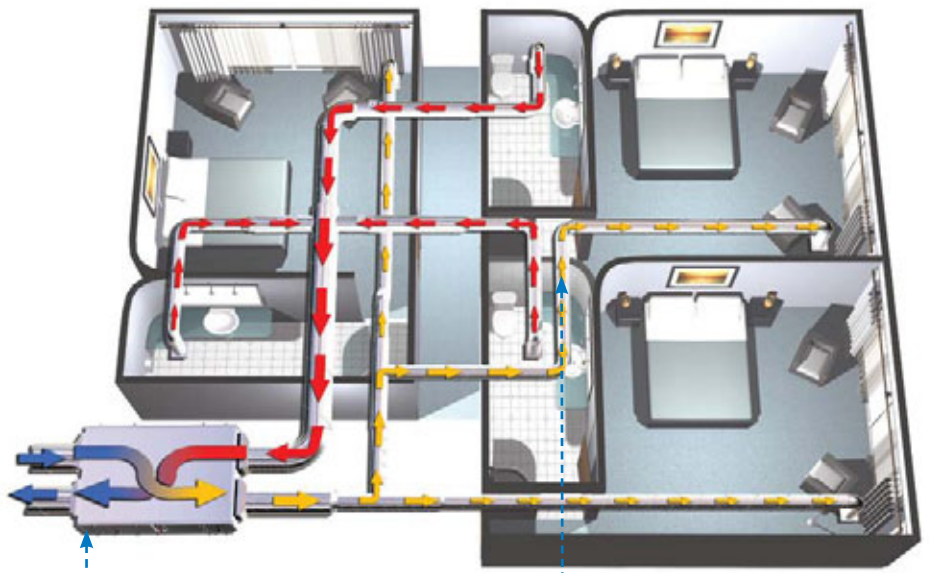
Meeting Rooms and Classrooms



Network Supply and Extract hierarchical Sensor Control

Typical networked supply and extract balanced hierarchical System with enabling switching control (ON/OFF, time clock or PIR) and proportional hierarchical maximum demand control from combined temperature and/or CO₂ sensors.

Central Extract Controlled System - Hotels or Apartments



Electronic Static Pressure (ESP) Control

Typical Central extract system using discreet in-line duct mounted dampers controlled by individual room mounted switching devices or proportional control sensors (MIN/MAX) within each toilet/bathroom to control individual extract zones. Fan speed control with electronic static pressure control (ESP) maintaining target pressure set point as individual zones open/close based on presence of occupants

Operation

The supply and extract ventilation unit shall be as Sentinel Totus D-ERV, as manufactured by Vent-Axia and shall be sized as indicated on the drawings and shall be in accordance with the particular specification.

Supply air to the room shall be pre-heated by the extract air via the integrated aluminium counterflow heat recovery cell. The D-ERV unit shall automatically vary the ventilation rate via EC/DC motors, as it receives signals from one of the optional interconnected sensors. When a signal is received, the fans shall either vary their speed proportionally or on a trickle and boost principle.

The unit shall have the facility to commission the supply and extract fans individually via in-built minimum and maximum speed adjustment, the fans themselves shall have infinitely variable speed control.

Sentinel Totus D-ERV -

Unit specification

The unit shall be manufactured with an aluminium frame construction, and incorporate double skinned panels with a plastisol outer coating making the unit suitable for internal or external mounting. The double skinned panels shall incorporate 60kg/m³ infill giving high thermal and acoustic performance.

The unit shall have a high efficiency aluminium counterflow heat exchanger, supply and extract filters, automatic summer bypass, integral minimum and maximum infinitely variable speed controls with fascia mounted failure indication.

The unit shall have low energy, high efficiency EC/DC fan/motor assemblies with sealed for life bearings. The impellers shall be high efficiency backward curved centrifugal type.

The unit shall have a heat exchanger cell with a thermal efficiency of up to 90% when tested to EN 308. This shall be protected by G4 grade synthetic filters on supply and extract. Complete with a condensate drip tray, internal condensate pump and drain connection.

The unit shall incorporate 2 stage electric frost heaters to protect the cell from freezing under low ambient conditions. The unit shall be constructed with removable side panels allowing full maintenance access.

The removable panels shall provide access to the following:

- ✓ Supply or extract fan
- ✓ Supply and extract filter
- ✓ Heat exchanger
- ✓ Frost heater

Within a separate side access lockable hinged door section access shall be provided for wiring termination and set-up/commissioning. The backlit LCD user interface therein shall be removable for remote mounting if required.

Units shall be as manufactured by Vent-Axia Ltd.

Sentinel Totus D-ERV -

Standard controls

All Sentinel Totus D-ERV units shall incorporate the following functions integrally mounted, pre-wired and factory fitted by the manufacturer: -

- ✓ Integral infinitely variable fan speed control on supply and extract.
- ✓ Integral min/max ventilation control/set point.
- ✓ Integral BMS interfaces – control and status indication
- ✓ Cooling and heating interlocks (summer/winter)
- ✓ 0-10V speed adjustment.
- ✓ Integral on/off or trickle boost function from remote switch, e.g. PIR occupancy detector.
- ✓ Automatic frost protection by in-built electric frost heaters.
- ✓ User settable night time purge function to purge the room automatically over night to reduce morning start up loads within the space during hot summer periods.
- ✓ The unit shall be controlled by the 'Sentinel' control devices (enablers and sensors) as detailed in the schedule or on the drawings.

Frost protection and control

The control for the in-built electric frost coils shall be 2 stage fully integrated and automatic and will ensure the energy recovery cell does not freeze up under low ambient conditions. The frost protection system will switch in each of the 2 stages as required when ambient temperature falls below 0° C.

Vent-Axia Sentinel Totus D-ERV

Features and Benefits

- 3 unit sizes covering 500-2000m³/h
- Sentinel demand ventilation control
- Low energy EC/DC motors
- Internal or external mounting IPX4
- Up to 90% energy recovery cell
- Independently Tested to EN 308
- Proportional or constant pressure control
- Performance tested to BS848 Parts 1 & 2
- Manufacture controlled to BS EN ISO 9001

Manufactured with an aluminium frame construction with double skinned panels fitted with 60kg/m³ thermal acoustic insulation. All external panels are plastisol coated making the unit suitable for internal or external applications (IPX4). An optional inlet cowl is available for roof mounting applications if required.

The casing includes an inclined inlet and bellmouth entry which directs the incoming air to the impeller with minimal turbulence. The result is better air management through the unit, less noise, higher efficiency and an increased performance.

The housing is designed to be as compact as possible for concealed false ceiling applications and Sentinel Totus D-ERV, Demand Energy Recovery casings incorporate side access panels for maintenance.

Impellers

All Sentinel Totus D-ERV units feature low energy, Class 1, EC/DC external rotor motor and backward curved impeller assemblies specifically chosen for performance and non-overloading characteristics. The assembly is dynamically balanced to DIN ISO 1940 Grade 6.3. Ball bearings are greased for life. Insulation is Class 'B' (from -25°C to +60°C). All models incorporate internal electronic overload protection and soft start function.

Filters

All Sentinel Totus D-ERV units are complete with G4 replaceable synthetic filters, complete with filter change warning.

Electrical

Every Sentinel Totus D-ERV unit is fitted with integrated controls and a purpose designed common user interface controller incorporating a 16-character backlit alpha numerical x 2 line display with 4 button

membrane keypad for fan status and commissioning set up. This can be removed and remotely fixed if required. The unit also incorporates a isolator that is suitable for fitting a locking device to prevent accidental operation.

Motors are single phase 230V +/- 10% / 50/60Hz / 1ph.

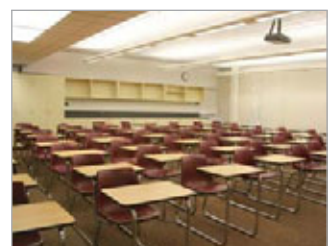
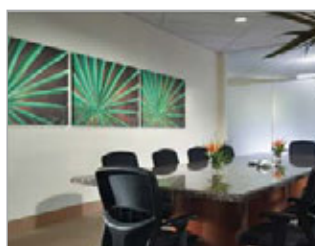
24V DC power is provided from the unit for powering the matched range of Sentinel Demand Ventilation switches and sensors.

Performance/Sound

Extensively tested to BS848 parts 1 & 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at reference level of 2×10^{-5} Pa. The inlet/outlet sound power level spectra figures are dB with a reference of 10^{-12} watts.

Models

Sensor Control	Constant Pressure
Mini	Mini/CP
Midi	Midi/CP
Maxi	Maxi/CP



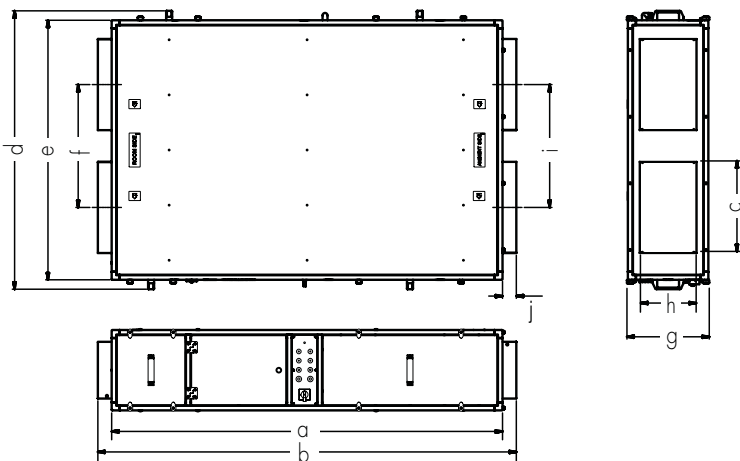


Fan Dimensions (mm)

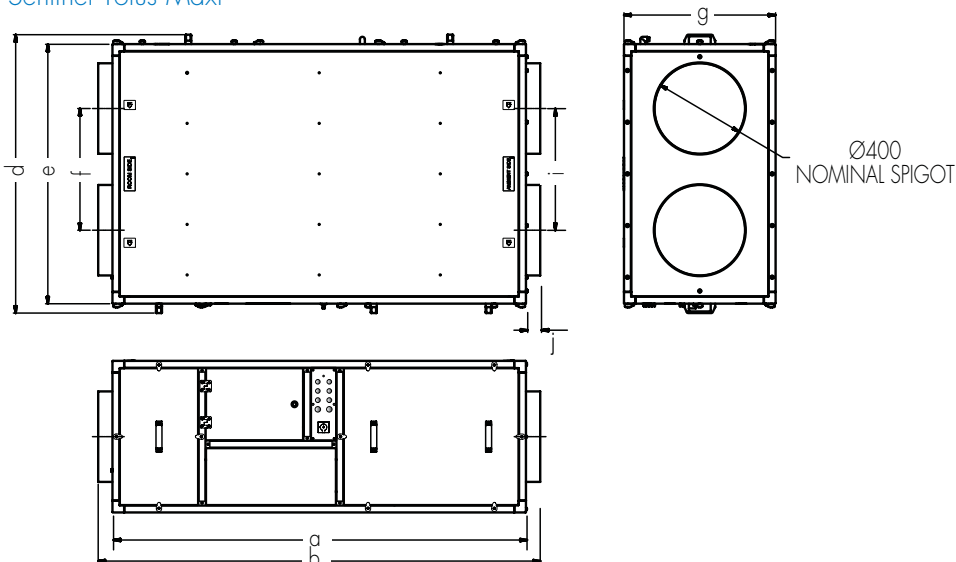
Dimensions in mm

Model	a	b	c	d	e	f	g	h	i
Mini/Midi	1700	1820	400	1212	1130	535	358	250	60
Maxi	1800	1924	-	1212	1130	530	660	-	60

Sentinel Totus Mini/ Midi

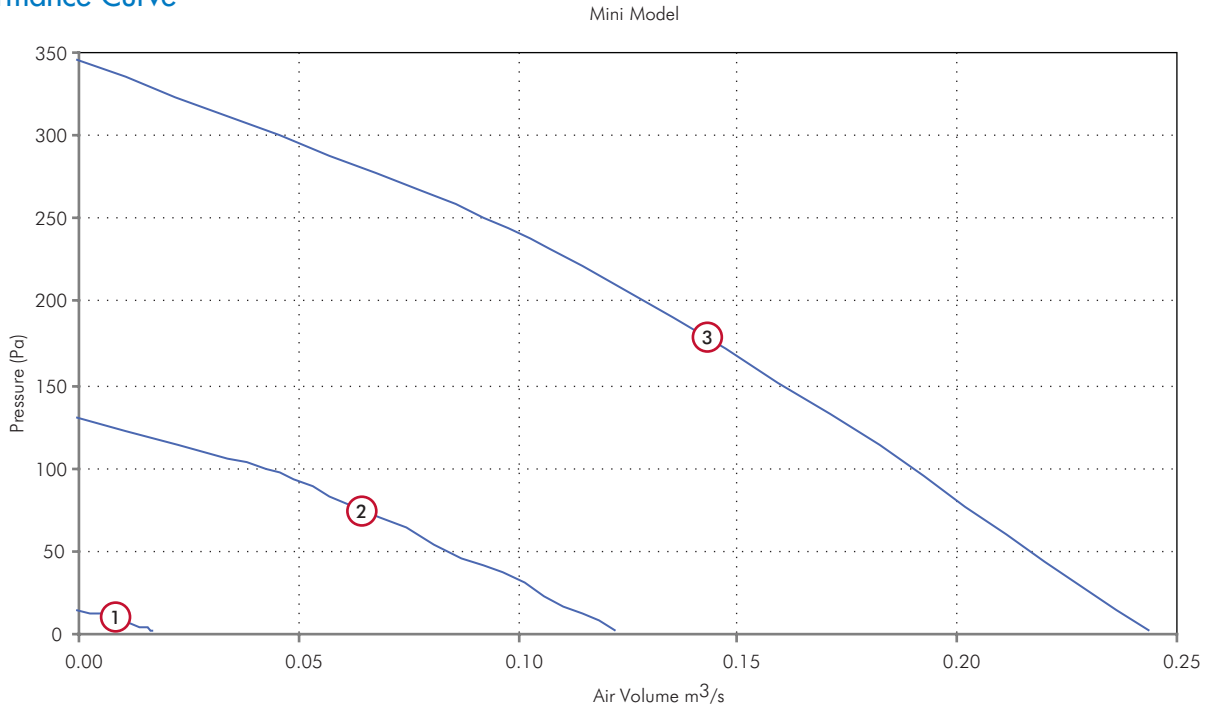


Sentinel Totus Maxi



Mini Model

Performance Curve



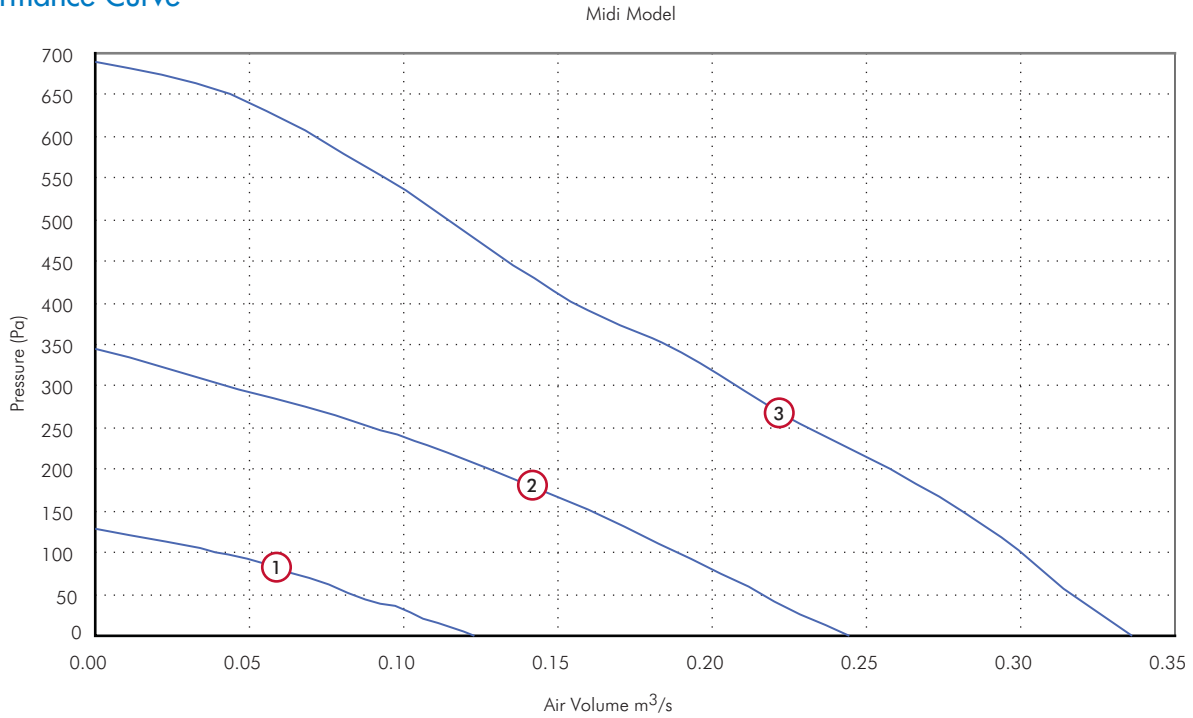
Performance Guide

Speed	Curve Ref.	Airflow, m³/s @ Pa						Fans F.L.C	Frost Heater kW	Unit F.L.C
		0	50	100	150	200	250			
100%	③	0.224	0.215	0.19	0.16	0.13	0.09	3	2	12A
SFP		1.25	1.42	1.6	1.9	2.34	3.38	3	2	12A
62%	②	0.1229	0.08	0.04				1.5	2	12A
SFP		0.79	1.21	2.42				1.5	2	12A
31%	①	0.018						0.5	2	12A
SFP		0.34						0.5	2	

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Intake	61	75	67	64	61	59	55	51	35
100%	Supply	57	66	66	62	56	49	39	39	35
100%	Discharge	66	73	72	72	70	66	61	55	35
100%	Extract	57	68	63	59	53	46	37	38	35
62%	Intake	59	62	55	54	51	46	41	33	28
62%	Supply	51	58	53	49	45	38	32	38	28
62%	Discharge	59	66	61	60	58	54	48	39	28
62%	Extract	51	56	50	48	43	35	31	38	28
31%	Intake	45	44	44	32	27	24	23	29	19
31%	Supply	46	41	41	32	31	30	31	39	19
31%	Discharge	48	45	45	39	36	32	27	29	19
31%	Extract	44	41	40	31	31	30	31	38	19

Performance Curve



Performance Guide

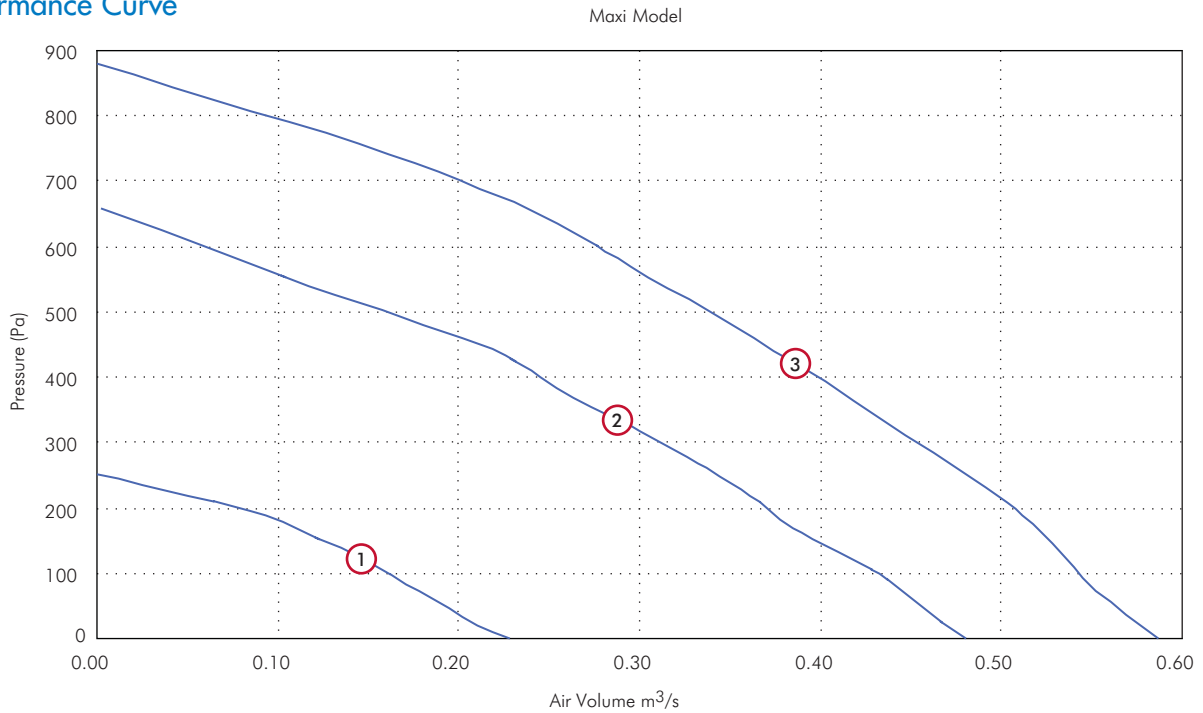
Speed	Curve Ref.	Airflow, m³/s @ Pa									Fans F.L.C	Frost Heater kW
		0	50	100	150	200	250	300	350	400		
100%	3	0.336	0.325	0.3	0.275	0.26	0.235	0.21	0.185	0.158	3	2
SFP		1.75	1.81	1.96	2.14	2.26	2.5	2.8	3.18	3.72	3	2
80%	2	0.244	0.215	0.19	0.16	0.13	0.09				1.5	2
SFP		1.25	1.42	1.6	1.5	2.34	3.38				1.5	2
50%	1	0.123	0.08	0.04							0.5	2
SFP		0.79	1.21	2.42							0.5	2

Sound Data

Speed	Test Mode	Octave Band Frequency SWL								dB(A) @3m
		63	125	250	500	1k	2k	4k	8k	
100%	Intake	65	74	75	70	67	64	62	56	37
100%	Supply	60	64	73	66	61	54	45	42	37
100%	Discharge	70	75	80	77	75	72	68	61	37
100%	Extract	62	63	71	64	58	52	43	40	37
80%	Intake	61	75	67	64	61	59	55	51	35
80%	Supply	57	66	66	62	56	49	39	39	35
80%	Discharge	66	73	72	72	70	66	61	55	35
80%	Extract	57	68	63	59	53	46	37	38	35
50%	Intake	59	62	55	54	51	46	41	33	28
50%	Supply	51	58	53	49	45	38	32	38	28
50%	Discharge	59	66	61	60	58	54	48	39	28
50%	Extract	51	56	50	48	43	35	31	38	28
25%	Intake	45	44	44	32	27	24	23	29	19
25%	Supply	46	41	41	32	31	30	31	39	19
25%	Discharge	48	45	45	39	36	32	27	29	19
25%	Extract	44	41	40	31	31	30	31	38	19

Maxi Model

Performance Curve



Performance Guide

Curve	Speed	Ref.	Airflow, m³/s @ Pa													Fans	Frost Heater kW
			0	50	100	150	200	250	300	350	400	450	500	550	600		
100%	3	0.587	0.58	0.54	0.52	0.51	0.48	0.43	0.415	0.4	0.365	0.34	0.31	0.268	5	4	
SFP		1.73	1.75	1.88	1.95	1.99	2.11	2.36	2.44	2.53	2.78	2.98	3.27	3.78	5	4	
80%	2	0.48	0.46	0.43	0.4	0.38	0.345	0.315	0.28	0.24	0.22	0.16		3	4		
SFP		1.31	1.37	1.46	1.57	1.66	1.82	3	2.25	2.62	2.86	3.93		3	4		
50%	1	0.228	0.19	0.16	0.125	0.07								1	4		
SFP		0.82	0.99	1.17	1.5	2.67											

Sound Data

Speed	Test Mode	Octave Band Frequency SWL									dB(A) @3m
		63	125	250	500	1k	2k	4k	8k		
100%	Intake	67	72	75	72	73	71	68	62	41	
100%	Supply	62	65	75	66	65	61	53	46	41	
100%	Discharge	67	70	83	72	75	73	70	65	41	
100%	Extract	62	64	74	63	60	54	44	39	41	
80%	Intake	64	71	79	70	69	68	65	58	40	
80%	Supply	60	64	77	63	62	57	49	43	40	
80%	Discharge	65	69	82	69	72	70	67	59	40	
80%	Extract	59	63	75	60	57	51	42	38	40	
50%	Intake	56	68	57	57	57	53	49	40	30	
50%	Supply	52	66	57	51	50	44	35	31	30	
50%	Discharge	56	64	61	56	59	57	50	41	30	
50%	Extract	52	62	52	46	43	37	28	28	30	
25%	Intake	48	47	40	37	35	29	23	29	20	
25%	Supply	46	43	39	33	31	25	23	29	20	
25%	Discharge	46	45	42	40	41	34	25	29	20	
25%	Extract	48	41	37	31	26	23	23	29	20	

CO₂ + Temp Room Sensor *



HVAC temperature and carbon dioxide room sensor for proportional ventilation control. Sensor will monitor both CO₂ and temperature levels between the set points, the air flow rate following the higher of the 2 outputs.

24V DC SELV. 0 - 2000ppm CO₂ working range. 0 - 50°C working range. Auto-calibrating NDIR CO₂ absorption sensor. Dimensions: 100 x 84 x 25mm (H x W x D).

Stock Ref: 433257

CO₂ Duct Probe



Sensor monitors CO₂ level in extract ducts from conference areas, offices, theatres etc. In proportional control mode, air flow rate tracks the CO₂ level to improve indoor air quality.

24V DC SELV. 0 - 2000ppm CO₂ working range. Auto-calibrating NDIR absorption sensor. Adjustable probe length. MAX. IP Rating 65.

Stock Ref: 433259

Vent-Axia PIR *



A wall or ceiling mounted presence detector for use with Sentinel Totus D-ERV. Can be used in MIN - MAX mode or for direct damper control.

Fits any UK single gang mounting box. Adjustable timer overrun (5-25 minutes). Range of detection up to 10 metres. Designed to meet IP43. Ambient operating temperature range 0°C to +50°C. Supply voltage 24V DC SELV.

Stock Ref: 433162

Vent-Axia ThermoSwitch®



Automatically switches on fans on either a rise or fall in air temperature. Used for Trickle/ Boost operation. Setting range: +6°C to +30°C. IP20 rated. Sealed sensing mechanism. Mounting direct on surface only. Dimensions: 80 x 104 x 36mm (H x W x D). Volt free switch connection to Sentinel Totus

D-ER, Demand Energy Recover.

Stock Ref: 563502B



Constant Pressure System Accessories

PIR Grille *

PIR grille is on extract grille with an integral flap damper. Suitable for bathrooms and WC's. The PIR function fully opens the damper when a person presence is detected. The opening time is fixed at 20 mins. Spigot size is 125mm.

12V AC SELV unit using the main transformer unit supplied. Integral PIR person presence sensor controlling damper. Auto-humidity control damper response at all times. 100° viewing angle. Temperature range 0 - 50°C. Dimensions: 158 x 150 x 35mm (H x W x D). MAX airflow 70m³/hr @100 Pa.

Stock Ref: 434184

Dampers *



Two types available:

- a) MM type - opening shut/MIN to open/MAX controlled by switches and b) PC type - opening proportionally when controlled by sensors.

Duct sizes available: 100, 125, 150, 200, 250 and 315. Industry standard actuators.

Typical ordering designation: DVD size MM or PC

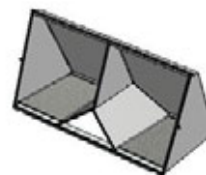
Power Supply *



For those situations where a separate 24V DC SELV supply source is required to power duct dampers. 24W output capacity. See F & W for connection details.

Stock Ref: 433193

Inlet Cowl



For these situations where there is no ducted inlet or extract and the unit is roof mounted. Offers, weather protection to ensuring air paths do not recirculate.

Mini/Midi: 441205

Maxi: 441366

* PLEASE NOTE: These sensors/controls are unique to Sentinel Totus D-ERV and CANNOT be used with any other product.

Roof Fans

With one of the widest ranges of roof mounted fans Vent-Axia can provide a solution to any consultant's ventilation requirement whether in public, commercial or industrial applications. The architects need for an aesthetically pleasing low profile cowl are also provided for.

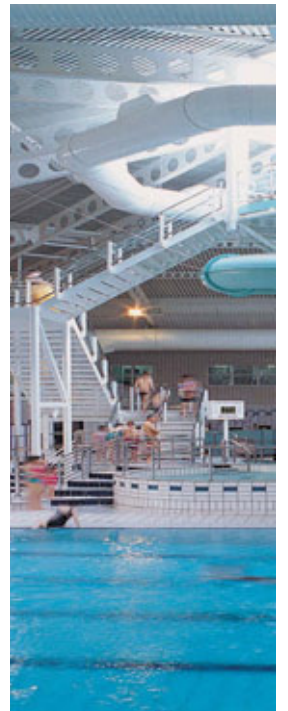
The range will be shortly extended to include the high performance Sickle blade profile up to 1000mm diameter. This wider range of impeller sizes and types combined with matching silencers will provide the optimum acoustic partnership.

Optional integral backdraught shutters limit heat loss from the building when the unit is off.

Our new range of VSR sickle bladed fans offers optimum blade balancing for quieter and maintenance free operation.



Range



Vent-Axia®

Vent-Axia Sabre® Sickle Roof Fans (VSR)

Features and Benefits

- **High performance roof sickle fan**
- **Fully assembled cowl.**
- **Optional backdraught shutters and birdguard**
- **Moulded from recyclable polymeric material, optional coloured units available**
- **One shot die cast aluminium impeller dynamically balanced for smooth operation**
- **All sizes resistant to UV light**
- **All models speed controllable and can be wired for reverse running**
- **Thermal Overload Protection for motor protection**
- **2 Year Guarantee**

The high pressure industrial sickle roof fans have been developed around a new advanced, aerodynamically shaped sickle blade, for high efficiency, maximum performance, reliability and excellent speed controllability.

All cowl and roof mounting plates are moulded from specially formulated polymeric materials, which are high impact resistant and provide a rigid profile against strong winds and are resistant to UV light. Standard Colour BS00A05.

Alternative colours available on request. Suitable for flat or inclined roofs (max. angle 30°). Sickle Roof Fans are designed for either kerb or purlin box mounting. All sizes are fitted with inlet wire guards, giving protection to BS 848 part 5. Bird guards are available as optional accessories.

The Sabre range is available in 27 models with extract performances ranging from 0.12m³/s up to 4.12m³/s with pressure characteristics of up to 150Pa.

Impellers

The motors and impellers are factory matched, statically and dynamically balanced to ISO 1940, part 1 Quality Class G.6.3

Motors

The external rotor motors are specifically designed and styled for this range of fan. Ball bearings are greased for life. Sizes 315 - 710 are protected to IP54, against dust and moisture complying with BS EN 60529. They have ribbed aluminium body castings for efficient cooling with Motor insulation to Class 'F' (from -40°C to + 70°C). Speed controlled sizes 450 to 710, 6 & 8 pole motors are only suitable for operating temperatures of up to 40°C.

Electrical

The Sabre range is available for either single phase 220-240V 50 Hz capacitor start and run or three phase 380-415V 50Hz. Motors are fitted with Thermal Overload Protection which should be wired into all controller circuits and into starter contactors to prevent motor damage due to overloading / overheating. Units are suitable for speed control by either electronic, voltage reduction or frequency inverters where permissible.

Terminal Box

An IP54 terminal box is supplied with all models with M20 x 1.5mm gland entry offering protection against dust and water.

Performance

The fan performance, is in accordance with tests to ISO 5801.

Sound Levels

Fan sound levels, measured in a reverberant chamber in accordance with ISO 3744 Part 1. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10⁻¹² Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

Packing

Sabre sickle roof fans consist of two elements - a boxed cowl assembly and a plate mounted fan.

Fan & cowl are supplied separately to assist with transportation.

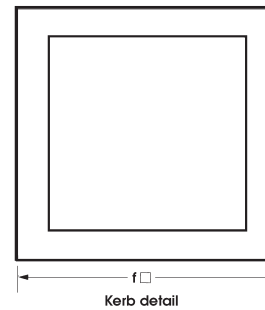
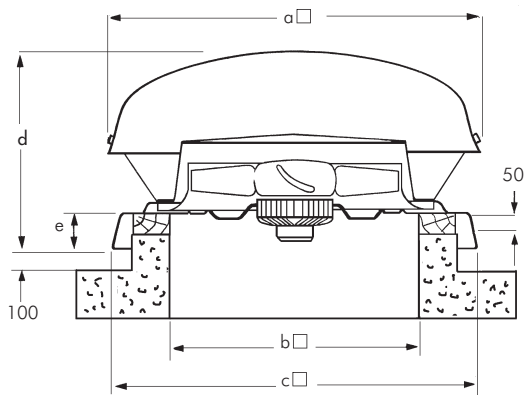
Accessories

A full range of accessories is available with the Sabre Sickle Roof fans:

Electronic Speed Controllers
Auto Transformer Speed Controllers D.O.L.
Starters
Soaker Flanges
Purlin Boxes
Backdraught Shutters
Bird Guards
Roof Attenuators



Fan Dimensions (mm)

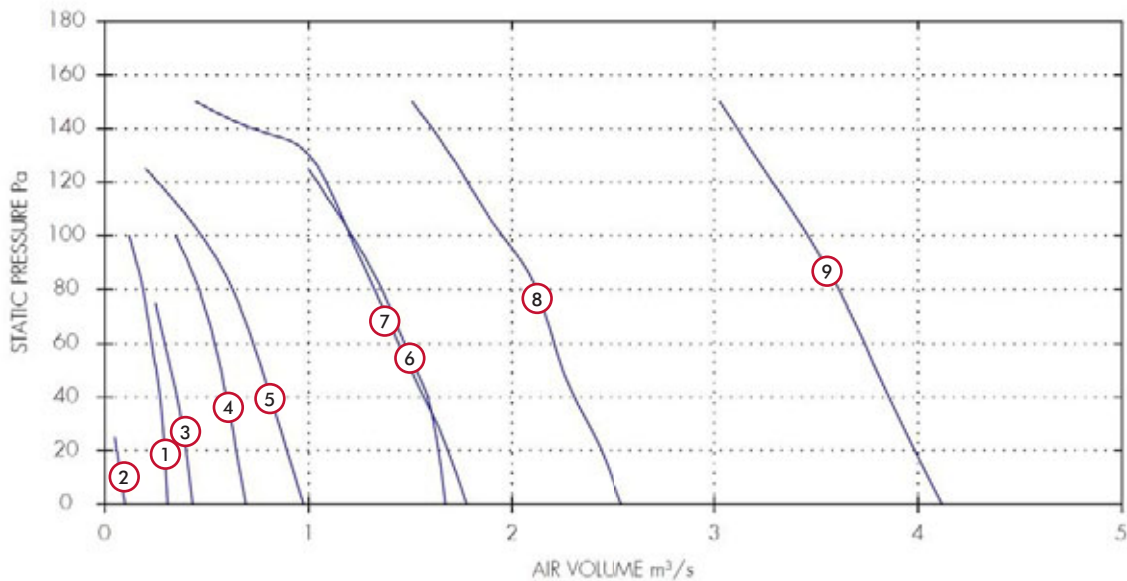


Dia	a	b	c	d	e	f	Kg max Kerb detail
250	700	475	737	411	97	675	11.7
315	700	475	737	411	97	675	12.8
355	700	475	737	411	97	675	13.8
400	800	575	830	466	97	775	19.2
450	800	575	830	466	97	775	24.8
500	950	715	1000	579	100	915	30.3
560	950	715	1000	579	100	915	37
630	1230	840	1100	731	105	1040	64
710	1230	840	1100	731	105	1040	50

Vent-Axia Sabre Sickle Roof Fans (VSR)

Performance Curve

250 - 630 dia. - 2 & 4 Pole - 1 Phase



Performance Guide

Dia.	Motor		Stock Ref. No.	r.p.m.	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
	Phase	Pole					0	25	50	75	100	125	150					
250	1	2	VSR25012	2240	IP44	①	0.31	0.29	0.25	0.2	0.12				0.14	0.84	0.59	57
250	1	4	VSR25014	1370	IP44	②	0.1	0.05							0.14	0.4	0.24	57
315	1	4	VSR31514	1400	IP54	③	0.43	0.39	0.33	0.25					0.13	1.5	0.59	49
355	1	4	VSR35514	1400	IP54	④	0.69	0.64	0.57	0.48	0.35				0.2	2.5	0.9	50
400	1	4	VSR40014	1280	IP54	⑤	0.98	0.88	0.77	0.66	0.47	0.2			0.29	2.9	1.35	49
450	1	4	VSR45014	1310	IP54	⑥	1.67	1.63	1.53	1.39	1.21	1			0.61	7	2.8	59
500	1	4	VSR50014	1250	IP54	⑦	1.78	1.66	1.5	1.36	1.2	1.05	0.44		0.78	7.1	3.4	55
560	1	4	VSR56014	1350	IP54	⑧	2.54	2.41	2.25	2.15	1.95	1.74	1.51		1.1	15	5.1	66
630	1	4	VSR63014	1370	IP54	⑨	4.12	3.95	3.8	3.64	3.46	3.24	3.03		1.75	21	7.7	69

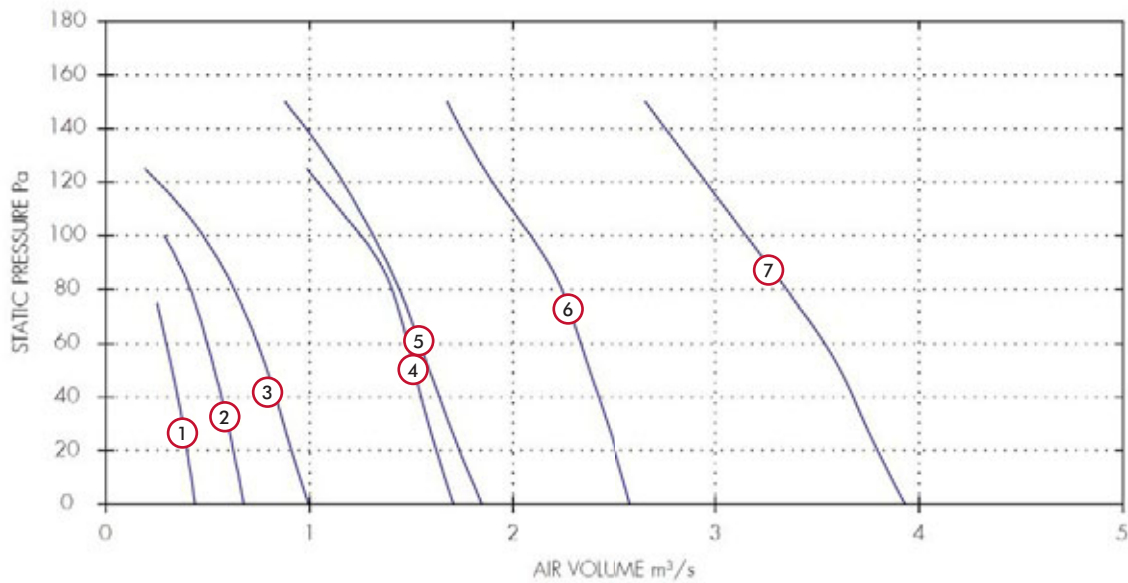
S.C. = STARTING CURRENT F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Stock Ref	Dia	Phase	Poles	63	125	250	500	1k	2k	4k	8k	dBA@ 3m
VSR25012	250	1	2	73	79	77	72	68	67	63	57	57
VSR25014	250	1	4	73	79	77	72	68	67	63	57	57
VSR31514	315	1	4	70	68	66	61	60	61	58	51	49
VSR35514	355	1	4	70	70	68	64	65	66	62	54	50
VSR40014	400	1	4	70	72	65	64	65	64	63	56	49
VSR45014	450	1	4	69	81	72	72	74	70	63	56	59
VSR50014	500	1	4	80	78	72	70	71	69	63	57	55
VSR56014	560	1	4	73	76	80	76	79	78	74	67	66
VSR63014	630	1	4	88	85	82	82	82	80	75	68	69

Performance Curve

315 - 630 dia. - 4 Pole - 3 Phase



Performance Guide

Motor		Stock		IP	Curve	m³/s at Pa							Motor	S.C.	F.L.C.	dBA @	
Dia.	Phase	Pole	Ref. No.	r.p.m.	Rating	Ref.	0	25	50	75	100	125	150	kW	Amps	Amps	3m
315	3	4	VSR31534	1410	IP54	①	0.44	0.39	0.33	0.25				0.12	1	0.29	48
355	3	4	VSR35534	1360	IP54	②	0.68	0.61	0.53	0.44	0.29			0.18	1	0.35	48
400	3	4	VSR40034	1250	IP54	③	0.99	0.89	0.79	0.66	0.48	0.19		0.17	1.35	0.47	52
450	3*	4	VSR45034	1360	IP54	④	1.71	1.6	1.52	1.43	1.25	0.99		0.38	4	1.05	57
500	3*	4	VSR50034	1330	IP54	⑤	1.85	1.71	1.59	1.47	1.31	1.12	0.88	0.49	5.2	1.45	58
560	3*	4	VSR56034	1280	IP54	⑥	2.58	2.49	2.38	2.27	2.08	1.86	1.68	0.65	7	2.4	63
630	3*	4	VSR63034	1380	IP54	⑦	3.93	3.77	3.61	3.4	3.15	2.9	2.66	1.15	9	3.1	66

S.C. = STARTING CURRENT F.L.C. = FULL LOAD CURRENT

NOTE: All * models are supplied with 2 speed connection motors as standard. (Sizes 450-630 dia. are 4/6 pole, 710 are 6/8 pole).

For details of sizes above 710mm please consult www.vent-axia.com or call 0844 856 0595

DELTA = HIGH SPEED

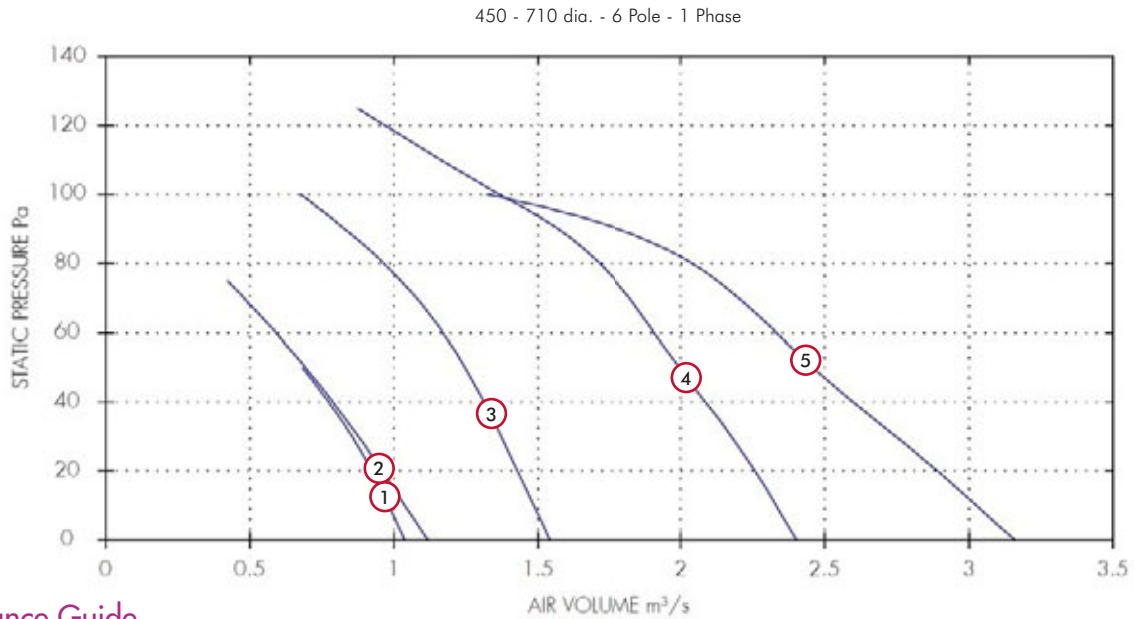
STAR = LOW SPEED

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Stock Ref	Dia	Phase	Poles	63	125	250	500	1k	2k	4k	8k	dBA@ 3m
VSR31534	315	3	4	67	68	63	60	60	60	56	49	48
VSR35534	355	3	4	65	68	63	62	63	63	60	54	48
VSR40034	400	3	4	64	72	64	66	66	63	62	53	52
VSR45034	450	3	4	73	68	65	64	65	63	56	48	51
VSR50034	500	3	4	72	71	69	68	71	68	60	53	53
VSR56034	560	3	4	77	70	67	65	68	64	57	49	53
VSR63034	630	3	4	72	80	80	76	77	75	70	62	63

Vent-Axia Sabre Sickle Roof Fans (VSR)

Performance Curve



Performance Guide

Dia.	Phase	Pole	Stock Ref. No.	r.p.m.	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
							0	25	50	75	100	125	150				
450	1	6	VSR45016	910	IP54	1	1.04	0.89	0.68					0.19	1.95	0.84	50
500	1	6	VSR50016	890	IP54	2	1.12	0.92	0.69	0.42				0.29	2.5	1.25	47
560	1	6	VSR56016	920	IP54	3	1.54	1.4	1.25	1.02	0.68			0.51	5.3	2.3	58
630	1	6	VSR63016	900	IP54	4	2.4	2.22	2	1.77	1.37	0.87		0.78	3.5	7.5	58
710	1	6	VSR71016	790	IP54	5	3.16	2.82	2.46	2.12	1.32			0.76	10	3.4	59

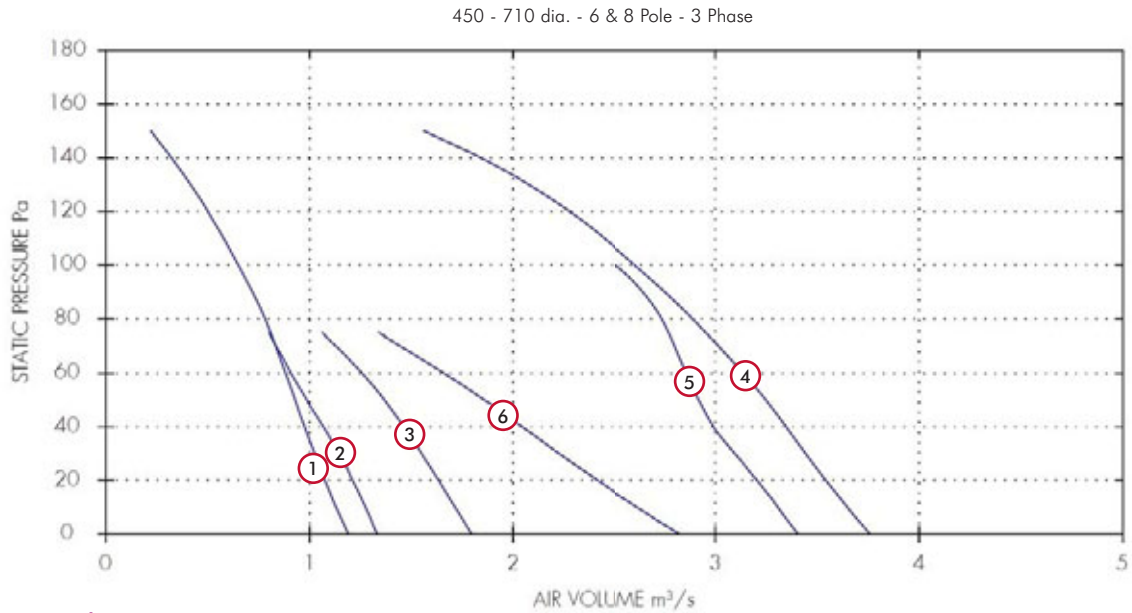
S.C. = STARTING CURRENT

F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Stock Ref	Dia	Phase	Poles	63	125	250	500	1k	2k	4k	8k	dBA@ 3m
VSR45016	450	1	6	64	72	64	62	64	61	54	48	50
VSR50016	500	1	6	64	67	66	64	63	61	56	48	47
VSR56016	560	1	6	77	75	74	71	71	69	64	56	58
VSR63016	630	1	6	63	70	64	66	69	64	56	49	58
VSR71016	710	1	6	71	76	76	73	73	69	63	55	59

Performance Curve



Performance Guide

Dia.	Motor		Stock Ref. No.	r.p.m.	IP Rating	Curve Ref.	m³/s at Pa							Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
	Phase	Pole					0	25	50	75	100	125	150					
450	3	6	VSR45036	1030	IP54	①	1.33	1.18	0.99	0.8					0.38	1.35	0.68	51
500	3	6	VSR50036	980	IP54	②	1.19	1.05	0.93	0.81	0.65	0.46	0.22	0.49	1.85	0.89	53	
560	3	6	VSR56036	880	IP54	③	1.8	1.59	1.37	1.06				0.65	2.3	1.25	53	
630	3	6	VSR63036	1140	IP54	④	3.76	3.49	3.25	2.96	2.6	2.18	1.56	1.15	6	2	63	
710	3	6	VSR71036	900	IP54	⑤	3.41	3.15	2.92	2.77	2.51			0.76	6.1	1.65	59	
710	3	8	VSR71038	690	IP54	⑥	2.82	2.32	1.86	1.34				0.62	2	1.05	58	

S.C. = STARTING CURRENT

F.L.C. = FULL LOAD CURRENT

NOTE: All * models are supplied with 2 speed connection motors as standard. (Sizes 450-630 dia. are 4/6 pole, 710 are 6/8 pole).

For details of sizes above 710mm please consult www.vent-axia.com or call 0844 856 0595

DELTA = HIGH SPEED

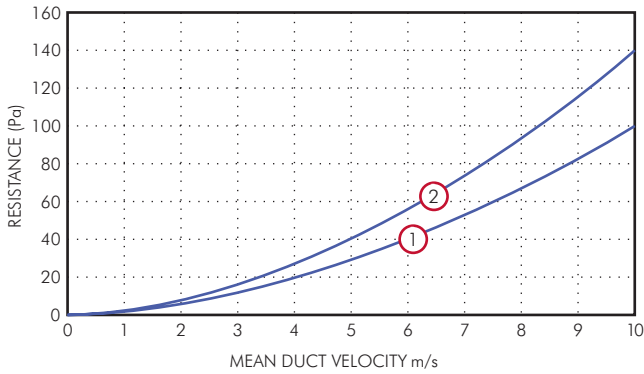
STAR = LOW SPEED

Sound Power Level Spectra dB (ref 10⁻¹² Watts)

Stock Ref	Dia	Phase	Poles	63	125	250	500	1k	2k	4k	8k	dBA@ 3m
VSR45036	450	3	6	63	76	67	68	69	70	66	59	57
VSR50036	500	3	6	76	77	74	73	75	72	65	58	58
VSR56036	560	3	6	83	80	74	74	77	75	70	61	63
VSR63036	630	3	6	84	83	78	77	79	79	74	67	66
VSR71036	710	3	6	72	69	66	64	66	64	56	48	58
VSR71038	710	3	8	69	81	76	71	75	70	64	57	59

Vent-Axia Sabre Sickle Roof Fans (VSR)

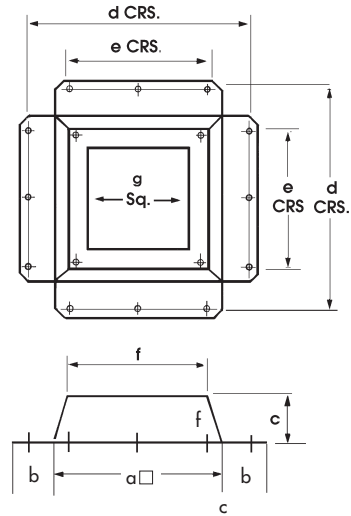
Pressure Drop For Industrial Roof Cowl Used For Intake With Remote Fan



Stock Ref. No.	Free area m ²	Resistance curve	Cowl only weight kg
RCZ300	0.099	①	7.5
RCZ400	0.159	②	9
RCZ500	0.246	②	13
RCZ630	0.396	②	19

Purlin Box

(Manufactured from 1.5mm pre-galv. mild steel)



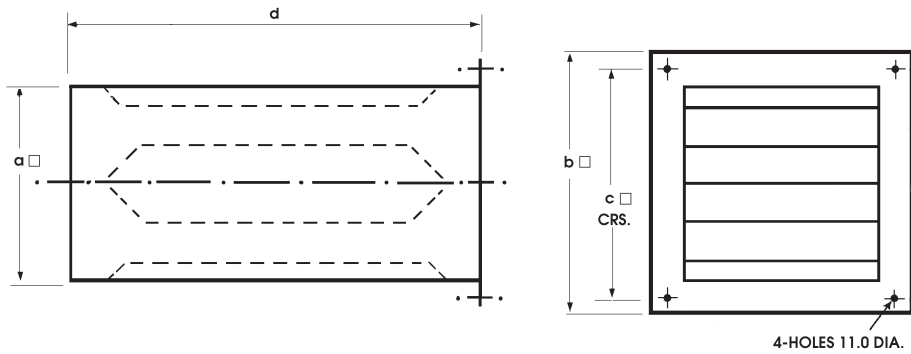
size	a	b	c	d	e	f	g
250/315/355	625	90	240	765	400	590	460
400/450	725	90	240	865	500	705	565
500	890	70	250	990	650	864	640
560	890	70	250	990	650	864	700
630	1030	75	250	1140	760	985	775
710	1030	75	250	1140	760	985	840

Vertical Backdraught Shutters

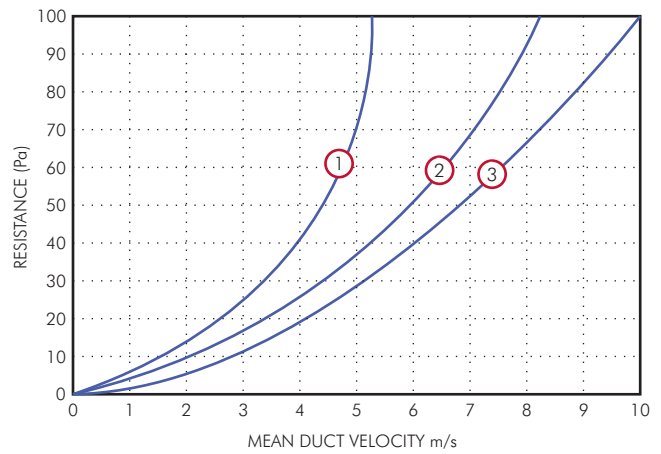
Size	Percentage reduction in performance at 4 pole speeds
315	7%
355	12%
400	10%
450	*3%
500	*4%
560	*6%
630	*3%
710	*7%

* For 6 and 8 pole fans, reduce percentages by ratio of fan speeds.

Roof Attenuators

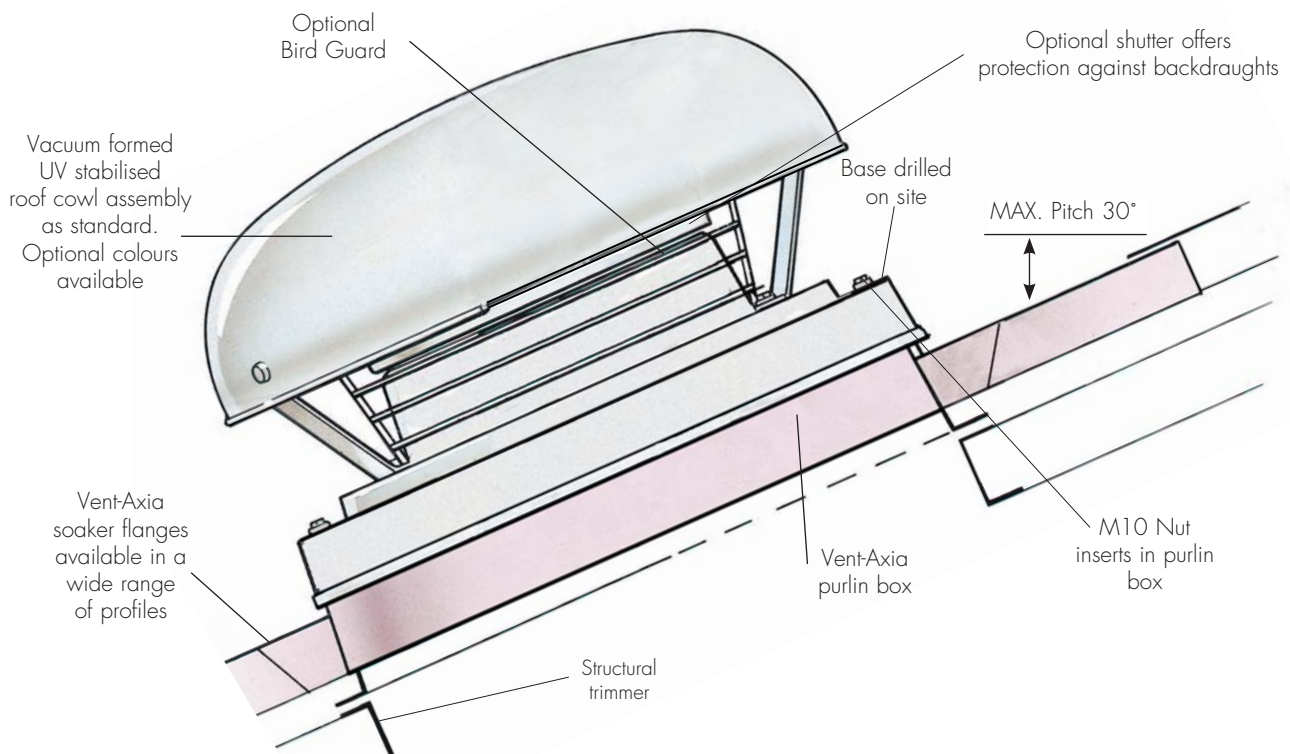


Stock Ref. No.	a	b	c	d	Kg approx	Free area m ²	Resistance curve
RAZ300600	455	535	505	600	18	0.156	①
RAZ400600	555	635	605	600	22	0.245	②
RAZ500600	635	790	745	600	31	0.416	②
RAZ600600	770	935	890	600	44	0.616	③
RAZ300900	455	535	505	900	21	0.156	①
RAZ400900	555	635	605	900	28	0.245	②
RAZ500900	635	790	745	900	39	0.416	②
RAZ600900	770	935	890	900	52	0.616	③
RAZ3001200	455	535	505	1200	25	0.156	①
RAZ4001200	555	635	605	1200	35	0.245	②
RAZ5001200	635	790	745	1200	48	0.416	②
RAZ6001200	770	935	890	1200	61	0.616	③



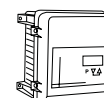
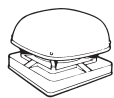
* Recommended maximum duty velocity 10m/s

Typical Installation



Vent-Axia Sabre Sickle Roof Fans (VSR)

Accessories



Unit Code Stock Ref.	Electronic Controller Stock Ref.	Auto Transformer Stock Ref.	D.O.L. Starter & Overload Stock Ref.	**eDemand Controller	
				Voltage Control Stock Ref.	3 Phase Inverter Stock Ref.
VSR25012	W10303102M	10314103	444744 + 444699	444164	-
VSR25014	W10303102M	10314103	444744 + 444697	444164	-
VSR31514	W10303102M	10314103	444744 + 444699	444164	-
VSR31534	-	10314301	444747 + 444697	444166	444172
VSR35514	W10303102M	10314103	444744 + 444700	444164	-
VSR35534	-	10314301	444747 + 444697	444166	444172
VSR40014	W10303102M	10314103	444744 + 444700	444164	-
VSR40034	-	10314301	444747 + 444698	444166	444172
VSR45014	10303103A	10314103	444744 + 444702	444164	-
VSR45034*	-	10314301	444744 + 444699	444166	444172
VSR50014	10303106A	10314105	444747 + 444700	444164	-
VSR50034*	-	10314304	444747 + 444699	444166	444172
VSR56014	10303106A	10314107	444744 + 444702	444164	-
VSR56034*	-	10314304	444744 + 444700	444166	444172
VSR63014	-	10314113	444747 + 444701	444165	-
VSR63034*	-	-	444747 + 444699	444166	444173
VSR45016	W10303102M	10314103	444744 + 444703	444164	-
VSR45036*	-	10314301	444744 + 444702	444166	444172
VSR50016	W10303102M	10314103	444747 + 444702	444164	-
VSR50036*	-	10314301	444747 + 444700	444166	444172
VSR56016	10303103A	10314103	444744 + 444705	444164	-
VSR56036*	-	10314301	444744 + 444705	444166	444172
VSR63016	10303106A	10314105	444747 + 444702	444164	-
VSR63036*	-	10314304	444747 + 444701	444166	444172
VSR71016	10303106A	10314105	444744 + 444702	444164	-
VSR71036*	-	10314304	444747 + 444701	444166	444172
VSR71038*	-	10314304	444747 + 444700	444166	444172

NOTE:

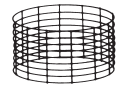
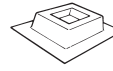
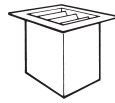
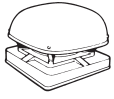
** For full range of speed controller options, see Accessories & Controllers Section

*Three phase models are supplied with 2 speed delta/star connection motors, as standard. (Sizes 450 to 630 are 4/6 Pole, 710 are 6/8 pole).

When low noise levels are required on all other models 5 a step auto transformer speed controller is recommended.

Optional coloured Cowls and Bases available on request.

Accessories



Unit Code Stock Ref.	**Roof Attenuator			Purlin Boxes Stock Ref.	Shutter Stock Ref.	Bird guard Stock Ref.
	600mm Stock Ref.	900mm Stock Ref.	1200mm Stock Ref.			
	VSR25012	RAZ300600	RAZ300900			
VSR25014	RAZ300600	RAZ300900	RAZ3001200	PBZ300	RSZ300	BGZ300
VSR31514	RAZ300600	RAZ300900	RAZ3001200	PBZ300	RSZ300	BGZ300
VSR31534	RAZ300600	RAZ300900	RAZ3001200	PBZ300	RSZ300	BGZ300
VSR35514	RAZ300600	RAZ300900	RAZ3001200	PBZ300	RSZ300	BGZ300
VSR35534	RAZ300600	RAZ300900	RAZ3001200	PBZ300	RSZ300	BGZ300
VSR40014	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR40034	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR45014	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR45034*	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR50014	RAZ500600	RAZ500900	RAZ5001200	PBZ500	RSZ500	BGZ500
VSR50034*	RAZ500600	RAZ500900	RAZ5001200	PBZ500	RSZ500	BGZ500
VSR56014	RAZ500600	RAZ500900	RAZ5001200	PBZ560	RSZ500	BGZ500
VSR56034*	RAZ500600	RAZ500900	RAZ5001200	PBZ560	RSZ500	BGZ500
VSR63014	RAZ630600	RAZ630900	RAZ6301200	PBZ630	RSZ630	BGZ630
VSR63034*	RAZ630600	RAZ630900	RAZ6301200	PBZ630	RSZ630	BGZ630
VSR45016	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR45036*	RAZ400600	RAZ400900	RAZ4001200	PBZ400	RSZ400	BGZ400
VSR50016	RAZ500600	RAZ500900	RAZ5001200	PBZ500	RSZ500	BGZ500
VSR50036*	RAZ500600	RAZ500900	RAZ5001200	PBZ500	RSZ500	BGZ500
VSR56016	RAZ500600	RAZ500900	RAZ5001200	PBZ560	RSZ500	BGZ500
VSR56036*	RAZ500600	RAZ500900	RAZ5001200	PBZ560	RSZ500	BGZ500
VSR63016	RAZ630600	RAZ630900	RAZ6301200	PBZ630	RSZ630	BGZ630
VSR63036*	RAZ630600	RAZ630900	RAZ6301200	PBZ630	RSZ630	BGZ630
VSR71016	RAZ630600	RAZ630900	RAZ6301200	PBZ710	RSZ630	BGZ630
VSR71036*	RAZ630600	RAZ630900	RAZ6301200	PBZ710	RSZ630	BGZ630
VSR71038*	RAZ630600	RAZ630900	RAZ6301200	PBZ710	RSZ630	BGZ630

Mixed Flow Roof Fans (RMH)

Features and Benefits

- Motors protected to IP44
- Motor insulation Class 'B'
- Maximum operating temperature 40°C
- Standard Thermal Overload Protection IP65
- P65 service isolator
- Guard included as standard
- All models speed controllable
- Performance tested to BS 848 parts 1 & 2
- Manufacture controlled to BS EN ISO 9001
- 2 Year Guarantee

Specially designed for use when medium pressure characteristics are required, the Vent-Axia Mixed Flow roof range is delivered on-site fully assembled and ready for installation. To meet COSHH requirements, a service isolator is fitted and pre-wired as standard. Equally suitable for flat or inclined roofs, the range is suitable for kerb or purlin box mounting and boasts a wide range of accessories to suit many different industrial applications. There are five sizes available with duties ranging from 0.606m³/s to 3.63m³/s (2182m³/h to 13068m³/h) with pressure development available up to 600 Pa.

The mounting plate is moulded with a fixed integral bellmouth to ensure optimum efficiency and precise alignment. The weather-cowl is also moulded to produce a smooth, internal surface and a tough, stable UV resistant finish. Colour: **BS 10A07**. Alternative colours available on request.

Vent-Axia mixed flow roof fans are designed for either kerb or inclined fixing (maximum angle 30°).

Electrical

Single phase 220-240V 50 Hz. Capacitor start and run. Three phase 380-415V 50Hz. A **service isolator** switch is provided for local isolation and the enclosure is protected to IP65 according to **BS EN 60529**. All motors are fitted with **Standard Thermal Overload Protection (S.T.O.P.)**, which for three phase fans should be wired into all controller circuits and into starter contactors. Most models are available with 4 and 6 pole motors.

Motors



The Mixed Flow roof range features a proven external rotor motor and backward curved mixed flow aluminium impeller assembly (35.5 dia. in polyamide) selected for performance and non-overloading characteristics. The assembly is dynamically balanced to **VDI 2060**. The motors in this range are rated **IP44** according to **BS EN 60529**. Ball bearings are greased for life and are designed to run at any angle. Insulation is **Class 'B'** (from -30°C to +40°C). Manufacture is controlled to **BS EN ISO 9001** standards.

Sound Levels

Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10^{-12} Watts (1 picowatt).

Performance

Tested to **BS 848** Parts 1 & 2.

Accessories

Soaker Flanges

The Vent-Axia range of soaker flanges are a simple and neat solution to weathering when a roof extract unit is required on a pitched corrugated roof.

Colour: **BS 00A 05**.

Purlin boxes

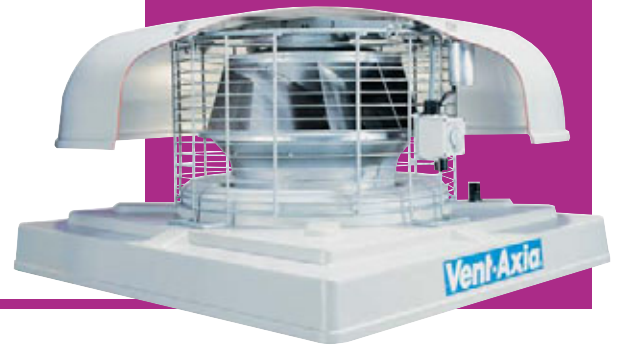
Available in sizes to suit all models and should be used to support the fan in conjunction with a soaker flange sheet.

Roof attenuators

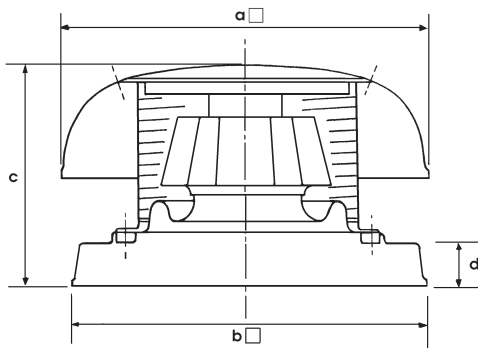
Available in all sizes to cover the range of Mixed Flow roof fans in three lengths: 600, 900 or 1200mm according to the attenuation required.

Shutters

Robust construction, designed to fit beneath the fan using the fittings provided. Airflow operated, manual or motorised shutter. A minimum distance of half the attenuator width is required between an airflow shutter and a roof attenuator for satisfactory operation.



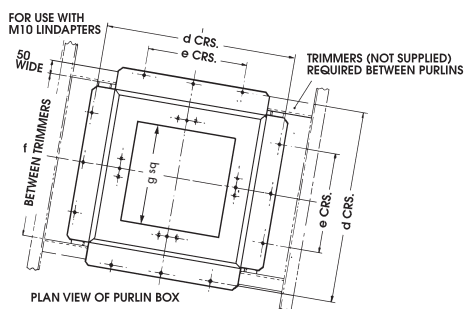
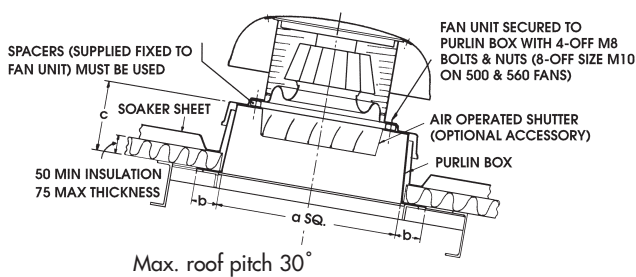
Fan Dimensions (mm)



Fan size	a □	b □	c	d	Weight Kg
355 / 400	800	780	480	83	24/27
450	950	930	575	103	45
500 / 560	1230	1055	630	103	48 / 64

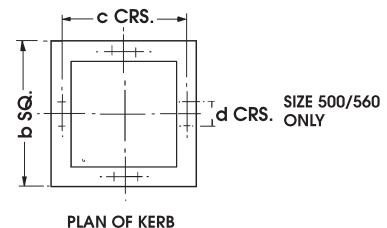
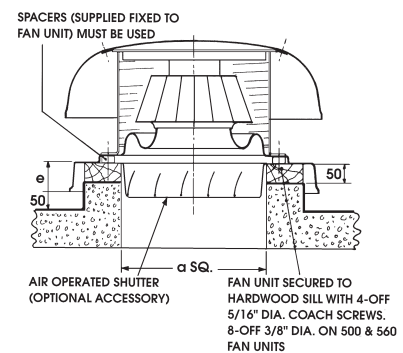
Details for Purlin Mounting

(Manufactured from 1.5mm pre-galv. mild steel).



Fan size	a □	b	c	d	e	f	g □
355 / 400	725	90	240	865	500	753	500
450	890	70	250	990	650	878	650
500 / 560	1030	75	250	1140	760	1028	790

Details Kerb Mounting

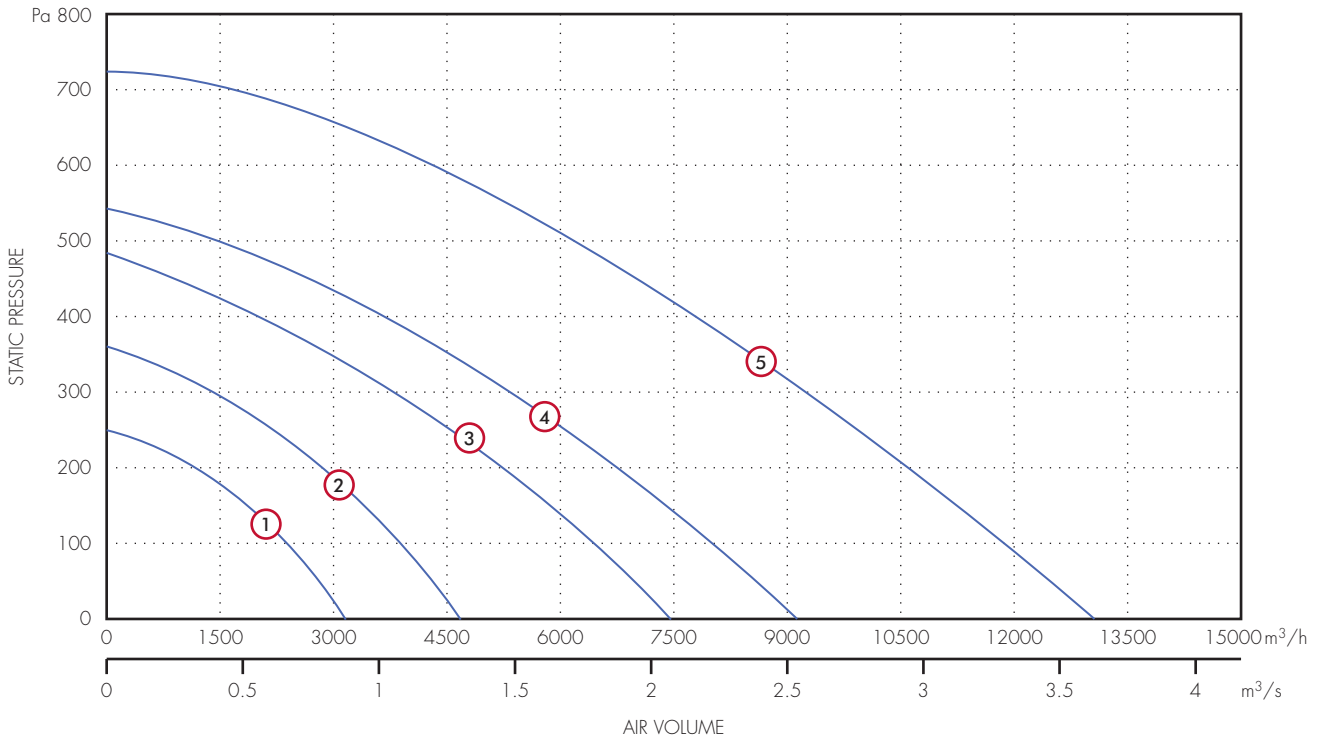


Fan size	a	b	c	d	e
355 / 400	500	700	570	-	83
450	650	850	690	-	103
500 / 560	790	990	842	100	103

Mixed Flow Roof Fans (RMH)

Performance Curve

355 - 560 dia - 4 Pole - 1 & 3 Phase



Performance Guide

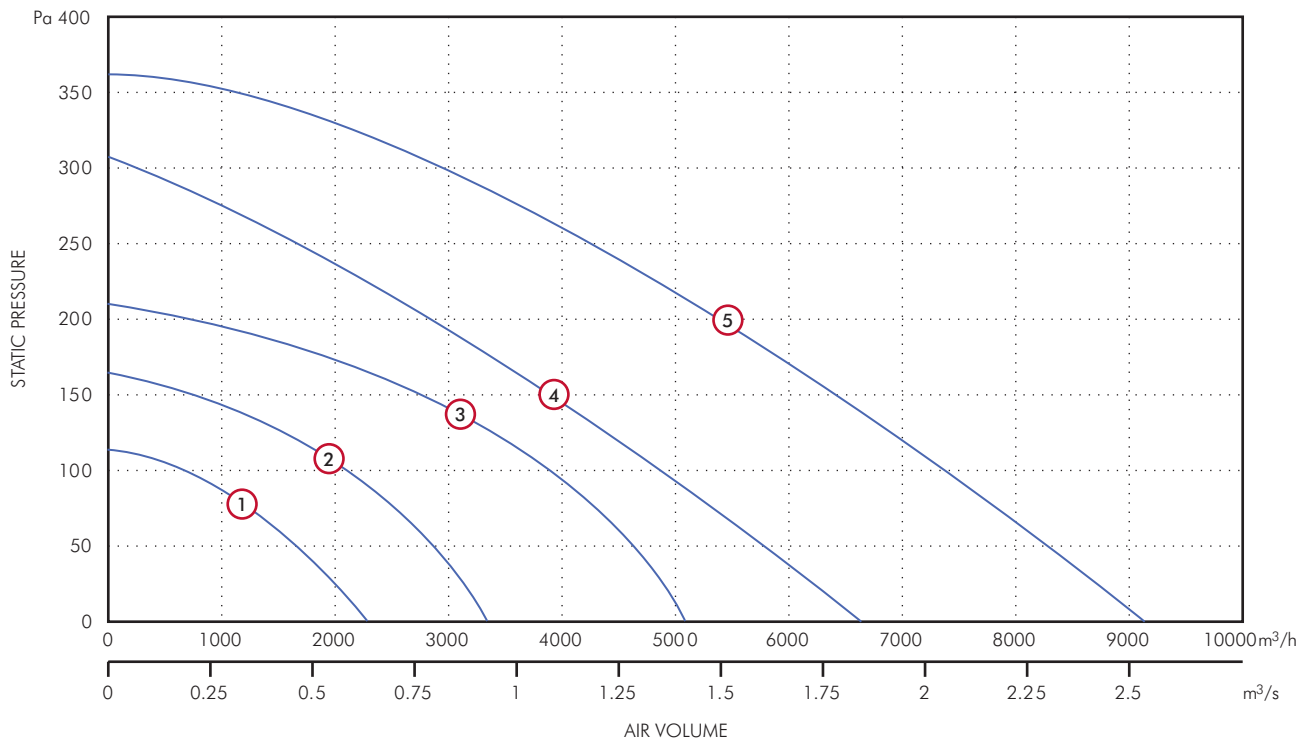
Dia.	Phase	Stock Model	Ref.	Pole	r.p.m.	Curve Ref.	m³/s at Pa							Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m			
							0	25	50	100	150	200	250					300	350	400
355	1	RMH355-14		4	1410	①	0.868	0.819	0.77	0.652	0.51	0.333				0.31	4	1.45	56	
355	3	RMH355-34		4	1410	①	0.868	0.819	0.77	0.652	0.51	0.333				0.25	1.55	0.5	56	
400	1	RMH400-14		4	1340	②	1.297	1.24	1.187	1.069	0.947	0.795	0.595	0.365		0.52	6	2.4	58	
400	3	RMH400-34A		4	1340	②	1.297	1.24	1.187	1.069	0.947	0.795	0.595	0.365		0.54	4.2	1.05	58	
450	1	RMH450-14		4	1380	③	2.053	1.986	1.916	1.77	1.618	1.451	1.256	1.045	0.82	0.57	0.96	10.5	4.7	64
450	3	RMH450-34A		4	1380	③	2.053	1.986	1.916	1.77	1.618	1.451	1.256	1.045	0.82	0.57	0.89	5.9	1.65	64
500	1	RMH500-14		4	1370	④	2.508	2.445	2.35	2.18	2.023	1.83	1.64	1.435	1.22	0.99	1.45	16	6.6	69
500	3	RMH500-34A		4	1370	④	2.508	2.35	2.18	2.023	1.83	1.64	1.435	1.22	0.99	1.35	10	2.4	69	
560	3	RMH560-34		4	1380	⑤	3.631	3.541	3.458	3.305	3.13	3	2.817	2.589	2.45	2.24	2.4	22	4.7	70

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Diameter	Pole	63	125	250	500	1k	2k	4k	8k
355	4	65	68	75	73	73	70	59	53
400	4	66	73	79	77	73	72	68	61
450	4	71	76	84	83	83	80	77	65
500	4	73	82	87	84	84	82	76	68
560	4	75	83	90	87	85	85	82	73

Performance Curve

355 - 560 dia - 6 Pole - 1 & 3 Phase



Performance Guide

Dia.	Phase	Stock Model	Pole	r.p.m.	Curve Ref.	m³/s at Pa					Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
						0	25	50	100	150					200
355	1	RMH355-16	6	920	①	0.606	0.55	0.466	0.16		0.09	1.1	0.44	47	
355	3	RMH355-36	6	920	①	0.606	0.55	0.466	0.16		0.1	0.57	0.25	47	
400	1	RMH400-16	6	910	②	0.919	0.863	0.794	0.588	0.204	0.19	1.3	0.88	49	
400	3	RMH400-36A	6	910	②	0.919	0.863	0.794	0.588	0.204	0.39	1.4	0.67	49	
450	1	RMH450-16	6	920	③	1.417	1.35	1.288	1.067	0.728	0.149	0.4	5.1	2.3	55
450	3	RMH450-36A	6	920	③	1.417	1.35	1.288	1.067	0.728	0.149	0.59	2	0.96	55
500	1	RMH500-16	6	910	④	1.831	1.716	1.6	1.34	1.047	0.731	0.43	4.1	2.1	60
500	3	RMH500-36A	6	910	④	1.831	1.716	1.6	1.34	1.047	0.731	0.88	4.4	1.45	60
560	1	RMH560-16	6	870	⑤	2.556	2.425	2.324	2.074	1.821	1.541	0.68	7.1	3.3	61
560	3	RMH560-36	6	870	⑤	2.556	2.425	2.324	2.074	1.821	1.541	0.67	4.1	1.55	61

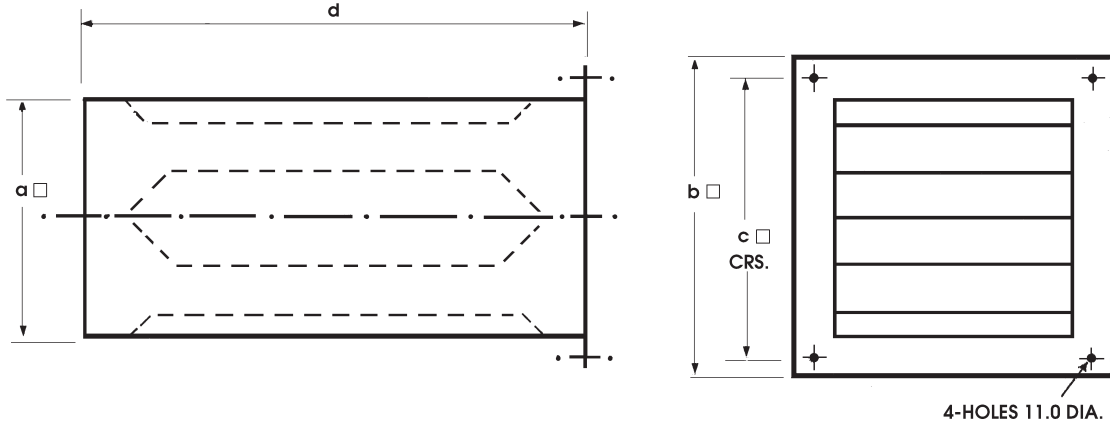
Sound Power Level Spectra dB (re 10⁻¹²Watts)

Diameter	Pole	63	125	250	500	1k	2k	4k	8k
355	6	59	60	66	63	63	61	50	46
400	6	60	63	69	77	64	62	59	52
450	6	65	67	75	73	72	70	68	55
500	6	67	73	77	75	75	72	67	59
560	6	68	73	80	78	76	75	73	64

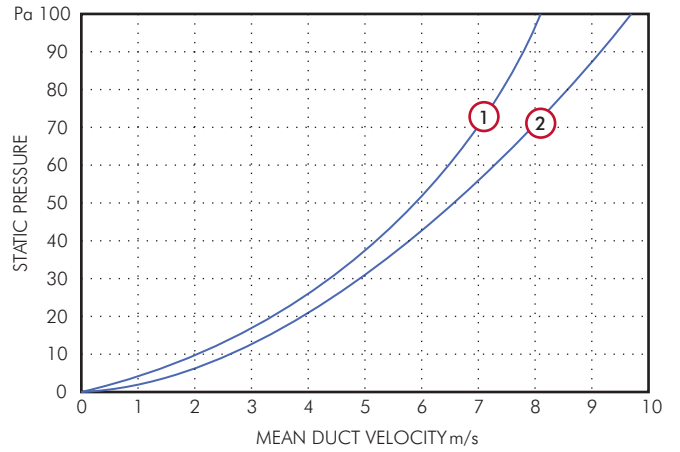
Mixed Flow Roof Fans (RMH)

Accessories Dimensions (mm)

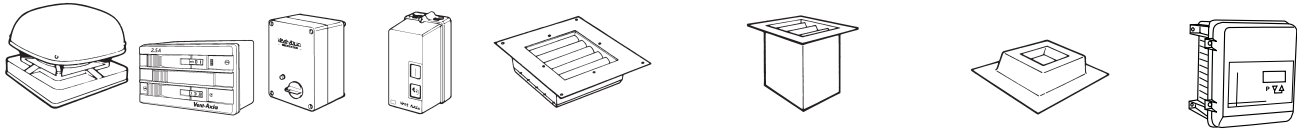
Roof Attenuators



Stock Ref. No.	a □	b □	c □	d	Kg approx	Face Area m ²	Resistance curve
10520400	495	595	545	600	22	0.245	①
10520500	645	745	695	600	31	0.416	①
10520630	785	885	835	600	44	0.616	②
10521400	495	595	545	900	28	0.245	①
10521500	645	745	695	900	39	0.416	①
10521630	785	885	835	900	52	0.616	②
10522400	495	595	545	1200	35	0.245	①
10522500	645	745	695	1200	48	0.416	①
10522630	785	885	835	1200	61	0.616	②



Accessories



Stock Ref.	Electronic controller	Auto transformer	D.O.L. starter & Overload	Air operated Shutters †	Roof attenuators			Purlin boxes	*eDemand Controller		
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	600mm †	900mm †	1200mm †		Voltage Control	1/3 Phase Inverter	3 Phase Inverter
	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
RMH35514	W10303102M	10314103	444744 + 444701	10517400	10520400	10521400	10522400	10516400	444164	-	-
RMH35534	-	10314301	444744 + 444698	10517400	10520400	10521400	10522400	10516400	444164	-	-
RMH40014	10303103A	10314103	444747 + 444698	10517400	10520400	10521400	10522400	10516400	444166	444177	444172
RMH40034A	-	10314301	444747 + 444697	10517400	10520400	10521400	10522400	10516400	444166	444177	444172
RMH45014	10303106A	10314105	444744 + 444702	-	10520500	10521500	10522500	10516500	444164	-	-
RMH45034A	-	10314304	444744 + 444700	-	10520500	10521500	10522500	10516500	444164	-	-
RMH50014	10303110A	10314107	444747 + 444700	-	10520630	10521630	10522630	10516630	444166	444177	444172
RMH50034A	-	10314304	444747 + 444698	-	10520630	10521630	10522630	10516630	444166	444177	444172
RMH56034	-	10314307	444744 + 444703	-	10520630	10521630	10522630	10516630	444164	-	-
RMH35516	W10303102M	10314103	444744 + 444702	10517400	10520400	10521400	10522400	10516400	444164	-	-
RMH35536	-	10314301	444747 + 444701	10517400	10520400	10521400	10522400	10516400	444166	444177	444172
RMH40016	W10303102M	10314103	444747 + 444699	10517400	10520400	10521400	10522400	10516400	444166	444177	444172
RMH40036A	-	10314301	444744 + 444704	10517400	10520400	10521400	10522400	10516400	444165	-	-
RMH45016	10303103A	10314103	444744 + 444701	-	10520500	10521500	10522500	10516500	444164	-	-
RMH45036A	-	10314301	444747 + 444702	-	10520500	10521500	10522500	10516500	444166	444177	444173
RMH50016	W10303102M	10314103	444747 + 444700	-	10520630	10521630	10522630	10516630	444166	444177	444172
RMH50036A	-	10314304	444744 + 444702	-	10520630	10521630	10522630	10516630	444164	-	-
RMH56016	10303106A	10314105	444747 + 444703	-	10520630	10521630	10522630	10516630	444167	-	444174
RMH56036	-	10314304	444747 + 444701	-	10520630	10521630	10522630	10516630	444166	444177	444172

† Air operated shutters and manual/motorisable shutters are not suitable for use in combination with roof attenuators. Special manual/motorisable shutters can be fitted to the bottom of the roof attenuator. Supplied by others.

* For full range of speed controller options, see Accessories & Controllers Section

Centrifugal Roof Fans (RBH)

Features and Benefits

- **Motors protected to IP44.**
- **Motor insulation Class 'B'.**
- **Maximum operating temperature 40°C.**
- **Standard Thermal Overload Protection.**
- **IP65 service isolator, except on size 250 dia where a service switch is provided**
- **Bird guard.**
- **Speed controllable motors.**
- **Manufacture controlled to BS EN ISO 9001.**
- **Performance tested to BS 848 Part 1 & 2.**
- **2 Year Guarantee.**

Specially designed for use when high pressure characteristics are required. Centrifugal roof models are delivered on-site ready for installation, fully assembled including service isolator. The range consists of 9 sizes with duties from 0.248m³/s to 4.5m³/s (892m³/h to 16200m³/h) with high pressure development available up to 900 Pa making this range particularly suited for ducted applications.

The mounting plate is moulded with an integral fixed bellmouth to ensure optimum efficiency and precise alignment. The weather-cowl is also moulded to produce a smooth internal surface and a tough UV resistant finish. Colour: BS 10A07. Alternative colours available on request. Equally suitable for flat or inclined roofs, backward curve centrifugal roof models are suitable for kerb or purlin box mounting and feature a wide range of accessories for many different industrial applications.

Vent-Axia centrifugal roof fans are designed for either kerb or inclined fixing (max. angle 30°).

Motors

The Centrifugal roof range features a proven external rotor motor and backward curved aluminium impeller assembly selected for performance and non-overloading characteristics. The assembly is dynamically balanced to VDI 2060. The motors in this range are protected to IP44 according to BS EN 60529. Ball bearings are greased for life and are designed to run at any angle. Insulation is Class 'B' (from -30°C to +40°C). Manufacture is controlled to BS EN ISO 9001 standards.

Electrical

Single phase 220-240V Hz. Capacitor start and run. Three phase 380-415V 50Hz. A service isolator switch is provided for local isolation to meet COSHH requirements. The enclosure is protected to IP65 according to BS EN 60529, except on size 250 dia where a service switch is provided.

All motors are fitted with Standard Thermal Overload Protection (S.T.O.P.), which for three phase fans should be wired into all controller circuits and into starter contactors. Most models are available with 4, 6 and 8 pole motors.

Sound Levels

Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa (20 micro-Pascals).

The sound power levels spectra figures are dB with a reference level of 10⁻¹² Watts (1 pico watt).

Centrifugal Roof Fan Accessories

Purlin boxes

Available in sizes to suit all models. Should be used to support the fan in conjunction with a soaker flange sheet.

Roof attenuators

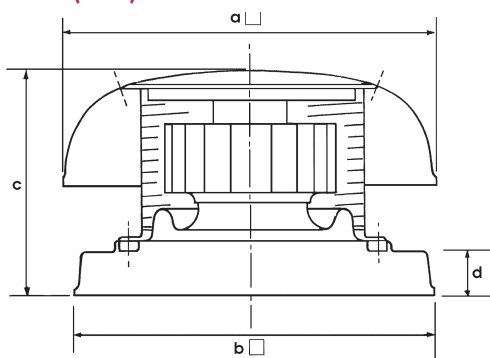
Available in all sizes to cover the range of centrifugal roof fans in three lengths: 600, 900 or 1200mm according to the attenuation required.

Shutters

Robust construction and designed to fit beneath the fan using the fittings provided. Airflow operated, manual or motorisable shutter. A minimum distance of half the attenuator width is required between an airflow shutter and a roof attenuator for satisfactory operation.



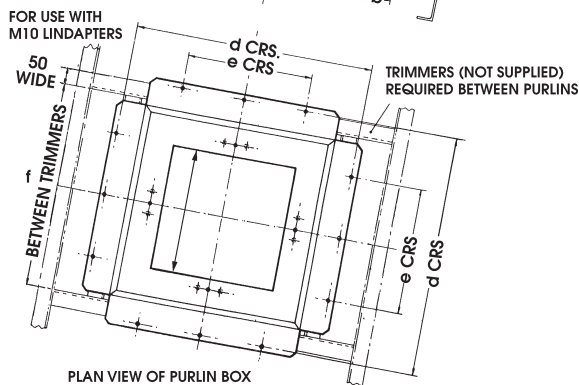
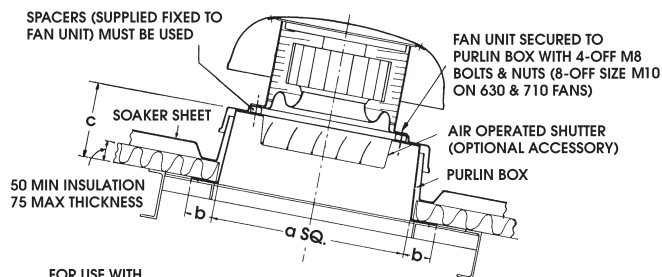
Dimensions (mm)



Fan size	a □	b □	c	d	Weight Kg
250	500	500	280	90	16
315/355	700	680	410	83	16/22
400/450	800	780	480	83	24/27
500/560	950	930	575	103	35/46
630/710	1230	1055	630	103	57/73

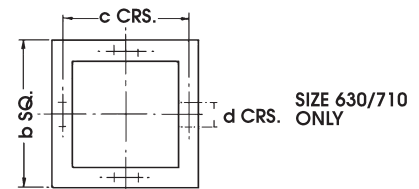
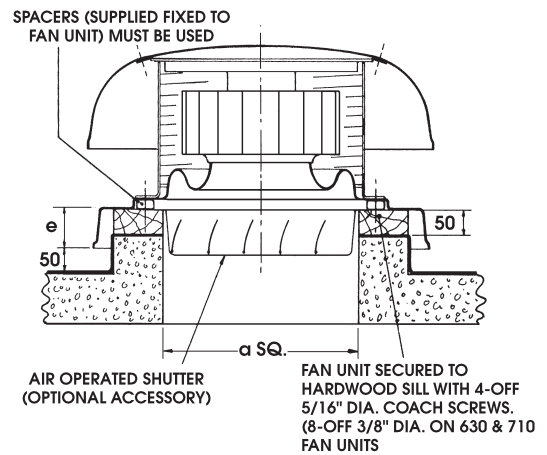
Details for Purlin Mounting

(Manufactured from 1.5mm pre-galv. mild steel).



Fan size	a □	b	c	d □	e □	f	g □
315/355	625	90	240	765	400	653	400
400/450	725	90	240	865	500	753	500
500/560	890	70	250	990	650	878	650
630/710	1030	75	250	1140	760	1028	790

Details for Kerb Mounting

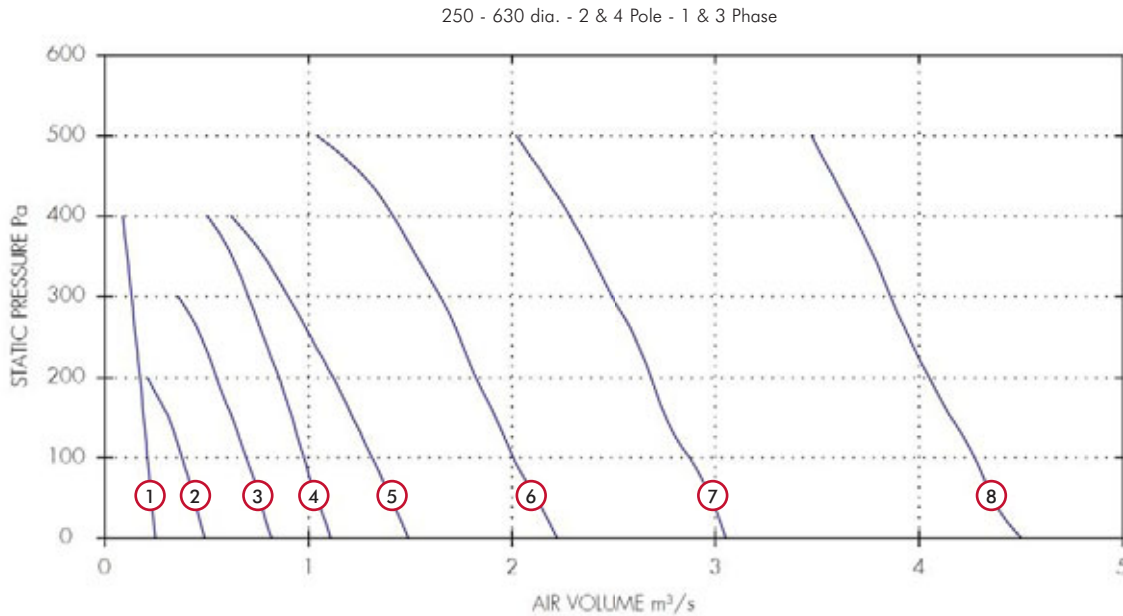


PLAN OF KERB

Fan size	a □	b □	c	d	e
250	350	450	400	-	90
315/355	400	600	470	-	83
400/450	500	700	570	-	83
500/560	650	850	690	-	103
630/710	790	990	842	100	103

Centrifugal Roof Fans (RBH)

Performance Curve



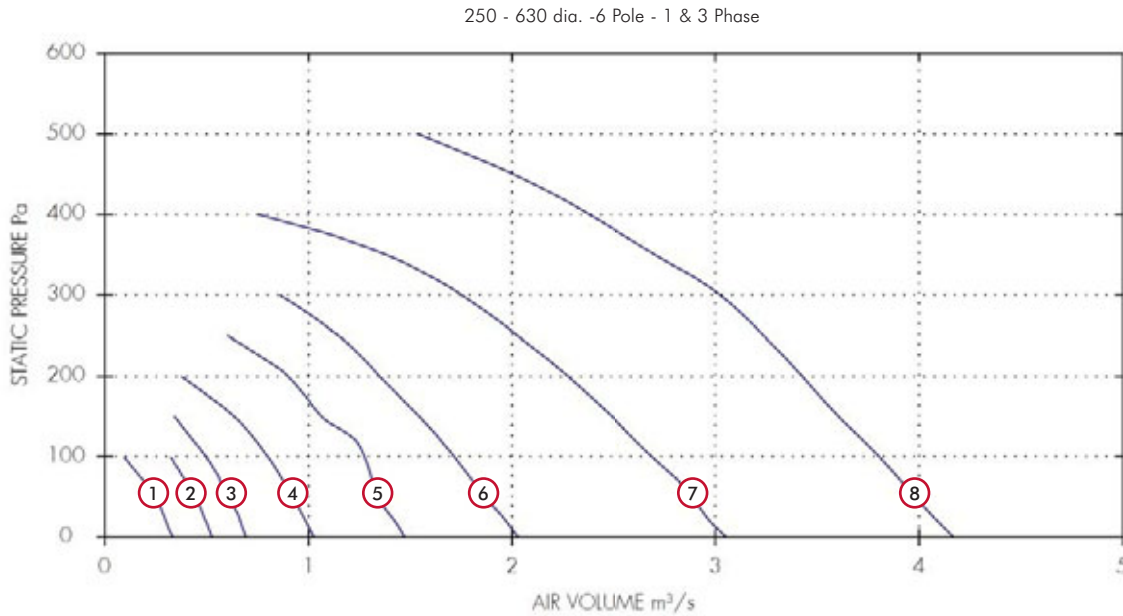
Performance Guide

Dia	Pole	Phase	Stock Motor	Ref. No.	r.p.m.	Curve Ref.	m³/s at Pa								Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
							0	50	100	150	200	250	300	350					400
250	2	1	RBH250-12	2720	①	0.248	0.229	0.211	0.192	0.174	0.152	0.132	0.111	0.088	0.16	2.1	0.7	62	
315	4	1	RBH31514	1400	②	0.493	0.439	0.381	0.314	0.21					0.17	1.4	0.8	52	
355	4	1	RBH35514	1425	③	0.819	0.761	0.694	0.625	0.55	0.475	0.36			0.34	4	1.54	55	
400	4	1	RBH40014	1420	④	1.111	1.04	0.978	0.92	0.856	0.78	0.705	0.625	0.503	0.55	5.9	2.3	57	
400	4	3	RBH40034	1420	④	1.111	1.04	0.978	0.92	0.856	0.78	0.705	0.625	0.503	0.43	2.3	0.78	57	
450	4	1	RBH45014	1380	⑤	1.491	1.405	1.314	1.22	1.122	1.011	0.9	0.78	0.62	0.76	6.8	3.1	61	
450	4	3	RBH45034	1380	⑤	1.491	1.405	1.314	1.22	1.122	1.011	0.9	0.78	0.62	0.64	3.7	1.3	61	
500	4	1	RBH50014	1435	⑥	2.222	2.121	2.006	1.92	1.822	1.742	1.647	1.53	1.417	1.04	1.25	22	5.5	65
500	4	3	RBH50034	1435	⑥	2.222	2.121	2.006	1.92	1.822	1.742	1.647	1.53	1.417	1.04	1.25	11	2.3	65
560	4	3	RBH56034	1415	⑦	3.054	2.981	2.875	2.758	2.686	2.606	2.491	2.392	2.283	2.019	1.9	16.8	3.5	67
630	4	3	RBH63034	1465	⑧	4.504	4.361	4.275	4.16	4.05	3.95	3.86	3.778	3.681	3.472	3.7	46	6.5	72

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Dia	Pole	63	125	250	500	1k	2k	4k	8k
250	2	69	75	80	78	76	74	73	66
315	4	64	75	77	70	60	63	63	51
355	4	65	79	80	74	64	65	67	53
400	4	69	84	82	77	66	69	71	59
450	4	71	86	86	80	70	72	72	62
500	4	74	91	90	82	74	74	81	68
560	4	77	94	93	83	78	77	85	69
630	4	81	99	99	87	84	81	85	84

Performance Curve



Performance Guide

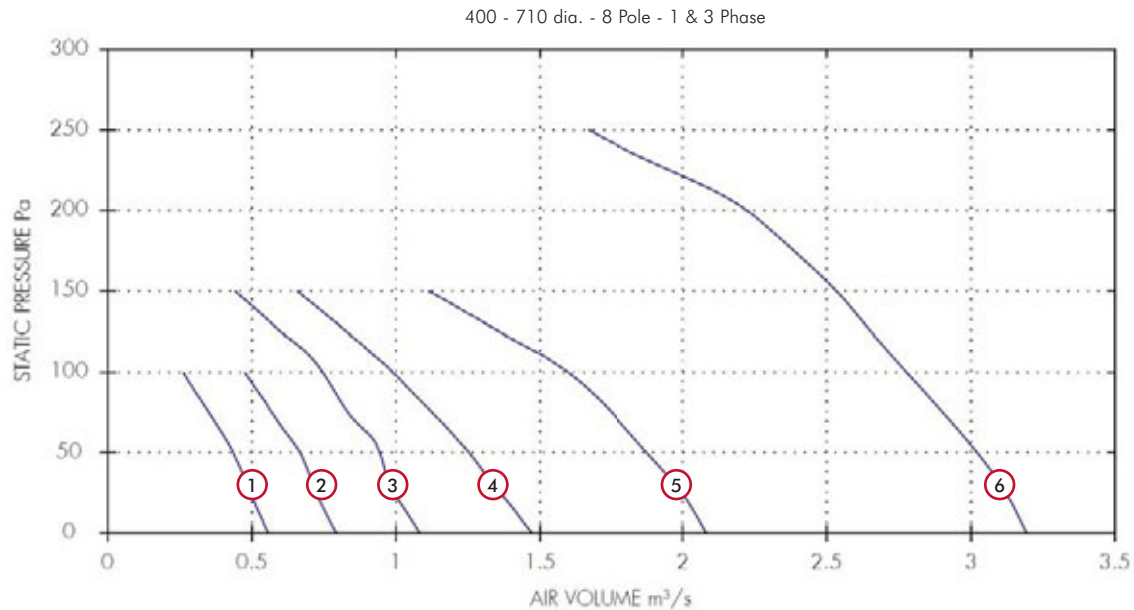
Dia	Pole	Phase	Stock Motor Ref. No.	r.p.m.	Curve Ref.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
						0	50	100	150	200	250	300	350	400	500					
315	6	1	RBH31516	945	①	0.333	0.251	0.094									0.08	0.75	0.39	43
355	6	1	RBH35516	910	②	0.528	0.444	0.323									0.15	1.2	0.56	44
400	6	1	RBH40016	925	③	0.694	0.61	0.497	0.34								0.17	2.1	0.75	49
400	6	3	RBH40036	925	③	0.694	0.61	0.497	0.34								0.17	1	0.41	49
450	6	1	RBH45016	930	④	1.029	0.924	0.8	0.635	0.376							0.3	2	1.5	52
450	6	3	RBH45036	930	④	1.029	0.924	0.8	0.635	0.376							0.22	1.1	0.46	52
500	6	1	RBH50016	945	⑤	1.472	1.342	1.213	1.064	0.9	0.602						0.45	4.2	2.1	55
500	6	3	RBH50036	945	⑤	1.472	1.342	1.213	1.064	0.9	0.602						0.4	1.65	0.86	55
560	6	3	RBH56036	945	⑥	2.028	1.869	1.717	1.544	1.35	1.145	0.858					0.69	2.9	1.5	58
630	6	3	RBH63036	945	⑦	3.054	2.885	2.69	2.49	2.275	2.025	1.75	1.375	0.75			1.2	17	2.7	61
710	6	3	RBH71036	975	⑧	4.168	3.98	3.808	3.604	3.428	3.239	3.022	2.7	2.38	1.533	2.01	27	3.6	64	

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Dia	Pole	63	125	250	500	1k	2k	4k	8k
315	6	61	62	65	58	52	58	50	36
355	6	63	67	67	63	55	62	50	39
400	6	70	78	72	66	58	66	59	49
450	6	73	79	75	70	62	65	60	50
500	6	73	81	81	71	64	67	71	51
560	6	78	86	84	73	68	72	72	54
630	6	80	87	88	73	71	71	70	58
710	6	82	87	87	77	75	78	79	65

Centrifugal Roof Fans (RBH)

Performance Curve



Performance Guide

Dia	Pole	Phase	Stock Motor Ref. No.	r.p.m.	Curve Ref.	m ³ /s at Pa						Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m	
						0	25	50	100	150	200					250
400	8	1	RBH40018	675	①	0.556	0.496	0.436	0.261				0.13	1	0.68	37
400	8	3	RBH40038	675	①	0.556	0.496	0.436	0.261				0.09	0.5	0.26	37
450	8	1	RBH45018	695	②	0.792	0.724	0.667	0.475				0.15	1	0.63	44
450	8	3	RBH45038	695	②	0.792	0.724	0.667	0.475				0.12	0.55	0.27	44
500	8	1	RBH50018	705	③	1.083	0.992	0.913	0.747	0.44			0.23	2.05	1.14	49
500	8	3	RBH50038	705	③	1.083	0.992	0.913	0.747	0.44			0.18	1.1	0.45	49
560	8	3	RBH56038	690	④	1.472	1.364	1.253	0.989	0.656			0.3	1.48	0.61	50
630	8	3	RBH63038	650	⑤	2.083	2	1.875	1.597	1.111			0.43	4.1	1.1	50
710	8	3	RBH71038	710	⑥	3.194	3.122	3.022	2.778	2.533	2.222	1.667	0.93	15	2.1	57

Sound Power Level Spectra dB (re 10⁻¹²Watts)

Dia	Pole	63	125	250	500	1k	2k	4k	8k
400	8	64	66	61	56	65	60	47	43
450	8	69	68	65	62	59	61	46	39
500	8	76	73	71	65	58	67	55	41
560	8	76	75	72	65	62	67	56	46
630	8	78	77	74	63	63	62	59	45
710	8	86	81	78	70	70	73	62	56

Roof Attenuator, Insertion Losses

Attenuator Length 600mm

Impeller Ø	Stock Ref. No.								
		63	125	250	500	1k	2k	4k	8k
315/355	105 20 315	2	4	9	16	20	22	18	14
400/450	105 20 400	2	4	8	15	18	20	17	13
500/560	105 20 500	2	4	9	16	20	22	18	14
630/710	105 20 630	2	4	8	15	18	20	17	13

Attenuator Length 900mm

Impeller Ø	Stock Ref. No.								
		63	125	250	500	1k	2k	4k	8k
315/355	105 21 315	3	6	13	22	30	31	22	17
400/450	105 21 400	2	6	12	20	25	27	20	16
500/560	105 21 500	3	6	13	22	30	31	22	17
630/710	105 21 630	2	6	12	20	25	27	20	16

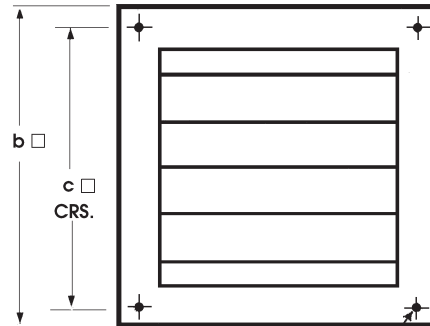
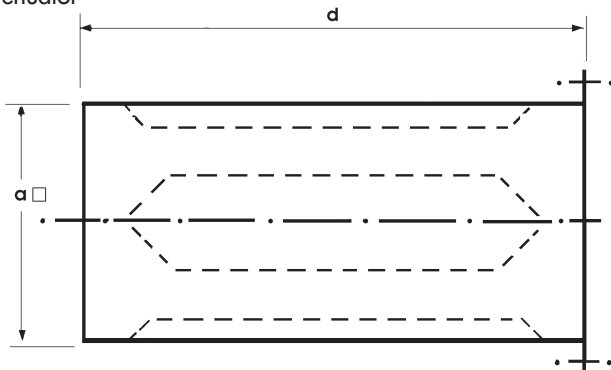
Attenuator Length 1200mm

Impeller Ø	Stock Ref. No.								
		63	125	250	500	1k	2k	4k	8k
315/355	105 22 315	4	9	16	28	34	35	23	19
400/450	105 22 400	4	8	15	26	32	33	21	18
500/560	105 22 500	4	9	16	28	34	35	23	19
630/710	105 22 630	4	8	15	26	32	33	21	18

Centrifugal Roof Fans (RBH)

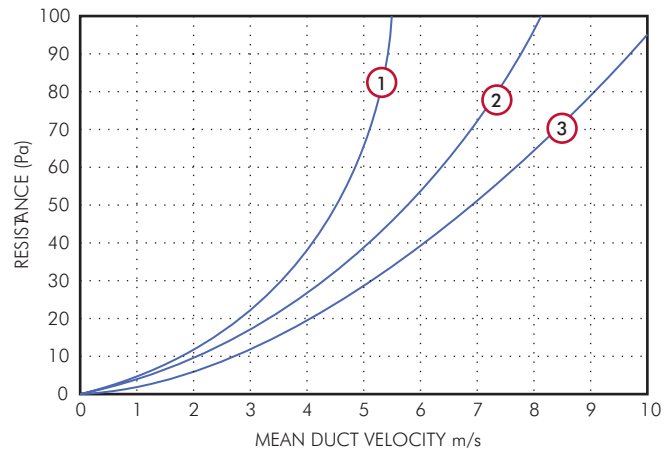
Accessories Dimensions (mm)

Roof Attenuator

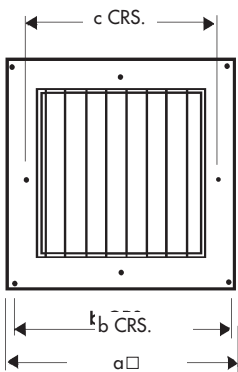


4-HOLES 11.0 DIA.

Stock Ref. No.	a □	b □	c □	d	Kg approx	Area m ²	Resistance curve
10520315	395	495	445	600	18	0.156	②
10520400	495	595	545	600	22	0.245	①
10520500	645	745	695	600	31	0.416	①
10520630	785	885	835	600	44	0.616	③
10521315	395	495	445	900	21	0.156	②
10521400	495	595	545	900	28	0.245	①
10521500	645	745	695	900	39	0.416	①
10521630	785	885	835	900	52	0.616	③
10521315	395	495	445	1200	25	0.156	②
10522400	495	595	545	1200	35	0.245	①
10522500	645	745	695	1200	48	0.416	①
10522630	785	885	835	1200	61	0.616	③



Air Operated Shutters



Fan Model	Percentage reduction in performance at 4 Pole speeds
RBH 315	10%
RBH 355	19%
RBH 400	6%
RBH 450	17%

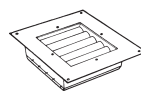
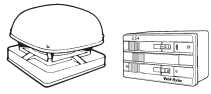
For 6 pole fans, reduce percentages by ratio of fan speeds.

When air operated shutters are used in conjunction with roof attenuators, there must be a minimum spacing of half the attenuator width between them.

Stock Ref. No.	a □	b	c	d
10517315	600	560	470	105
10517400	700	670	570	105

Note:
When shutters are fitted the max. temperature permissible is limited to 40°C

Accessories



Manual/
motorisable



Stock Ref.	Electronic controller Stock Ref.	*eDemand Controller			Auto transformer Stock Ref.	Air operated Shutters † Stock Ref.	Manual/ motorisable shutter Stock Ref.	600mm † Stock Ref.	Roof attenuators			Purlin boxes Stock Ref.
		Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.					900mm † Stock Ref.	1200mm † Stock Ref.		
RBH25012	W10303102M	444164	-	-	10314103	-	-	-	-	-	-	-
RBH31514	W10303102M	444164	-	-	10314103	10517315	10518315	10520315	10521315	10522315	10516315	10516315
RBH35514	W10303102M	444164	-	-	10314103	10517315	10518315	10520315	10521315	10522315	10516315	10516315
RBH40014	10303103A	444164	-	-	10314103	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH40034	-	444164	-	-	10314301	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH45014	10303106A	444164	-	-	10314105	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH45034	-	444164	-	-	10314304	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH50014	10303110A	444164	-	-	10314107	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH50034	-	444166	444177	444172	10314304	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH56034	-	444166	444177	444172	10314304	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH63034	-	444166	444177	444172	10314311	-	10518630	10520630	10521630	10522630	10516630	10516630
RBH31516	W10303102M	444164	-	-	10314103	10517315	10518315	10520315	10521315	10522315	10516315	10516315
RBH35516	W10303102M	444164	-	-	10314103	10517315	10518315	10520315	10521315	10522315	10516315	10516315
RBH40016	W10303102M	444164	-	-	10314103	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH40036	-	444166	444177	444172	10314301	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH45016	W10303102M	444166	444177	444172	10314103	10517400	10518400	10520500	10521500	10522500	10516400	10516400
RBH45036	-	444166	444177	444172	10314301	10517400	10518400	10520500	10521500	10522500	1051640	1051640
RBH50016	W10303102M	444165	-	-	10314103	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH50036	-	444164	-	-	10314301	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH56036	-	444164	-	-	10314304	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH63036	-	444166	444177	444173	10314304	-	10518630	10520630	10521630	10522630	10516630	10516630
RBH71036	-	444166	444177	444172	10314307	-	10518630	10520630	10521630	10522630	10516630	10516630
RBH40018	W10303102M	444166	444177	444172	10314103	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH40038	-	444166	444177	444173	10314301	10517400	10518400	10520400	10521400	10522400	10516400	10516400
RBH45018	W10303102M	444166	444177	444172	10314103	10517400	10518400	10520500	10521500	10522500	10516400	10516400
RBH45038	-	444166	444177	444172	10314301	10517400	10518400	10520500	10521500	10522500	10516400	10516400
RBH50018	W10303102M	444167	-	444174	10314103	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH50038	-	444166	444177	444173	10314301	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH56038	-	444166	444177	444172	10314301	-	10518500	10520500	10521500	10522500	10516500	10516500
RBH63038	-	444166	444177	444173	10314301	-	10518630	10520630	10521630	10522630	10516630	10516630
RBH71038	-	444166	444177	444172	10314304	-	10518630	10520630	10521630	10522630	10516630	10516630

† Air operated shutters and manual/motorisable shutters are not suitable for use in combination with roof attenuators. Special manual/motorisable shutters can be fitted to the bottom of the roof attenuator. Supplied by others.

* For full range of speed controller options, see Accessories & Controllers Section

Vertical Discharge Mixed Flow Roof Fans (RMV)

Features and Benefits

- **Handles air temperatures up to +100°C**
- **Motor mounted outside of the airstream**
- **Manufactured from glass reinforced polyester**
- **IP65 service isolator**
- **Bird guard fitted as standard**
- **Manufacture controlled to BS EN ISO 9001**
- **Performance tested to BS 848 Part 1 & 2**
- **2 Year Guarantee**

The vertical discharge backward curved mixed flow roof fan - the RMV range - is specifically designed for high velocity vertical discharge applications.

The motor is located out of the main airstream in a separately ventilated enclosure to handle continuous in duct air temperatures up to +100°C when in operation. A duct temperature sensor must be used to automatically operate the fan unit to protect the motor from excessive heat whilst idle.

To meet COSHH requirements, a service isolator switch is fitted and pre-wired as standard.

Ideal for many commercial or industrial applications such as kitchen extract systems, the RMV range discharges vertically at high velocity to give fast dilution. Available in six models with extract performance ranging from 0.344m³/s up to 5.62m³/s (1240m³/h to 20240m³/h). With pressure characteristics of up to 1000Pa this range is particularly suitable for ducted applications.

Suitable for horizontal kerb mounting only (maximum angle of 3° from horizontal).

For pitched roof applications a special upstand will be needed to compensate for the angular difference - not supplied.

Motors

The motor is mounted on a corrosion resistant stainless steel support in a ventilated enclosure out of the airstream and drives a highly efficient aluminium, mixed flow impeller which offers non-overloading characteristics.

The motors are rated at IP54 to BS EN 60529, the bearings are greased for life. Insulation is Class 'B'. The motor is pre-wired to a service isolator protected to IP65 with 20mm entry fitted as standard and providing local isolation conforming to the latest COSHH regulations.

Protection of the motor is provided by a current overload protection switch (DOL Starter) which is required on all installations. Sizes 500 and 560, 3ph 4 pole must be wired STAR/DELTA or the guarantee will be invalidated.

Electrical

Single phase 220-240V 50 Hz. Capacitor start and run. Three phase 380-415V 50 Hz.

Models are available with 4 and 6 pole motors.

Sound Levels

Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2 x 10⁻⁵Pa

(20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10⁻¹² Watts (1 pico-watt).

Accessories

Roof attenuators

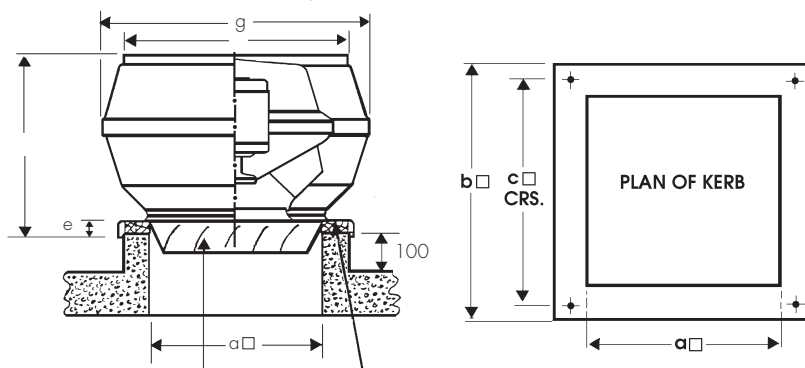
Available in three lengths: 600, 900 or 1200mm according to the attenuation required.

Shutters

Made of a robust construction and designed to fit beneath the fan using the fittings provided. Airflow operated. A minimum distance of half the attenuator width is required between an airflow shutter and a roof attenuator for satisfactory operation. When shutters are fitted the maximum temperature permissible is 50°C.



Details of Kerb Mounting



Air operated shutter (optional accessory.)
Fan unit secured to hardwood sill with coach screws or similar.

Fan size	a □	b □	c □	d	e	Øf	Øg
RMV200	300	400	330	400	40	404	500
RMV280	400	525	450	487	40	571	700
RMV355	400	600	560	563	50	622	770
RMV450	500	660	620	642	50	718	900
RMV500	650	850	800	709	50	890	1060
RMV560	650	850	800	801	50	988	1200

Typical Installation

Bird Guard fitted as standard

A Current Overload Protection switch (DOL or STAR/DELTA starter) is required on all installations.

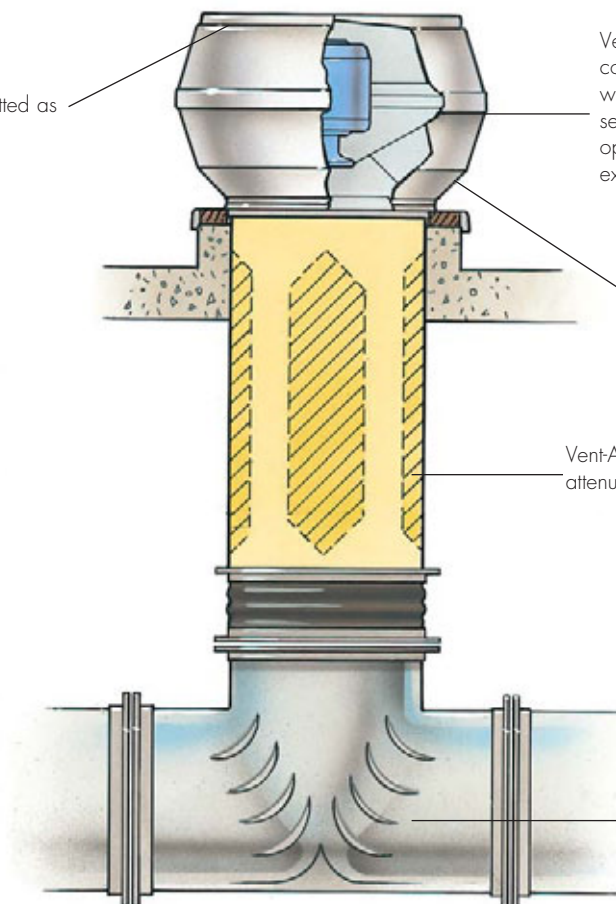
Suitable for horizontal mounting only. For pitched roof applications a special upstand will be needed to compensate for the angular difference - to be manufactured by others.

Vertical discharge fan suitable for handling continuous air temperatures up to 100°C when in operation. A duct temperature sensor must be used to automatically operate the fan unit to protect the motor from excessive heat whilst idle.

IP65 Isolator fitted as standard

Vent-Axia rectangular roof attenuator

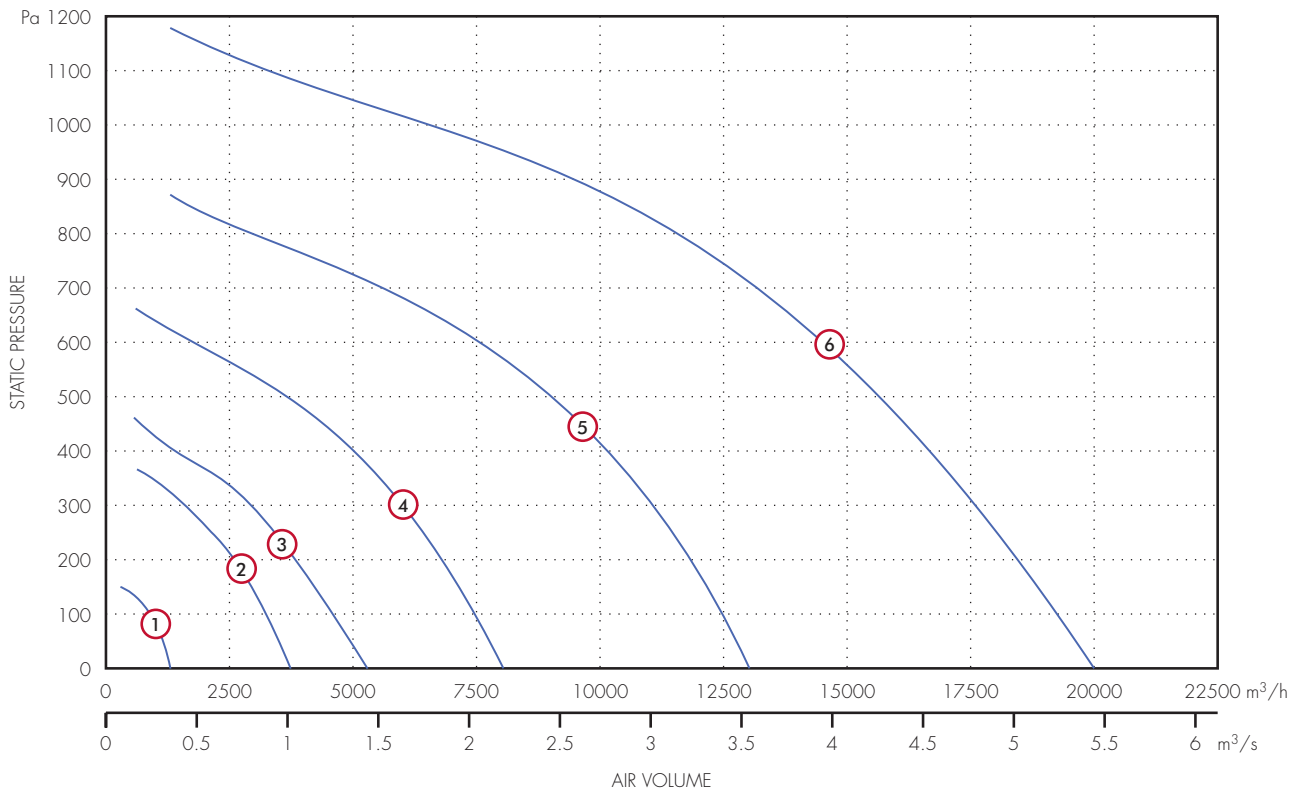
Airflow guide vanes



Vertical Discharge Mixed Flow Roof Fans (RMV)

Performance Curves

200 - 560 dia. - 4 Pole - 1 & 3 Phase



Performance Guide

Dia.	Phase	Stock	Pole	Ref.	r.p.m.	Curve Ref.	m³/s at Pa										Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m
							0	25	50	100	150	200	250	300	350	400				
200	1	4	RMV20014	1320	①	0.345	0.317	0.289	0.226	0.091							0.095	1.1	0.44	44
280	1	4	RMV28014	1340	②	1.044	1.008	0.972	0.9	0.819	0.725	0.605	0.425	0.2			0.41	4.2	1.97	56
355	1	4	RMV35514	1320	③	1.475	1.416	1.366	1.266	1.18	1.075	0.97	0.83	0.661	0.425	0.775	14	3.5	60	
355	3	4	RMV35534	1320	③	1.475	1.416	1.366	1.266	1.18	1.075	0.97	0.83	0.661	0.425	0.78	7.2	1.5	60	
450	3	4	RMV45034	1430	④	2.247	2.222	2.165	2.075	2.02	1.92	1.813	1.683	1.564	1.421	1.55	12	2.95	64	
500	3	4	RMV50034	1425	⑤	3.669	3.63	3.59	3.514	3.423	3.333	3.229	3.113	2.995	2.88	3.6	34	6.9	69	
560	3	4	RMV56034	1415	⑥	5.62	5.601	5.532	5.462	5.347	5.25	5.15	5.025	4.9	4.72	6.5	58	11.6	72	

TEMPERATURE RANGE

The range is designed to handle duct air temperatures from -30°C to + 100°C on a continuous operation basis. The external ambient temperature should not exceed + 40°C.

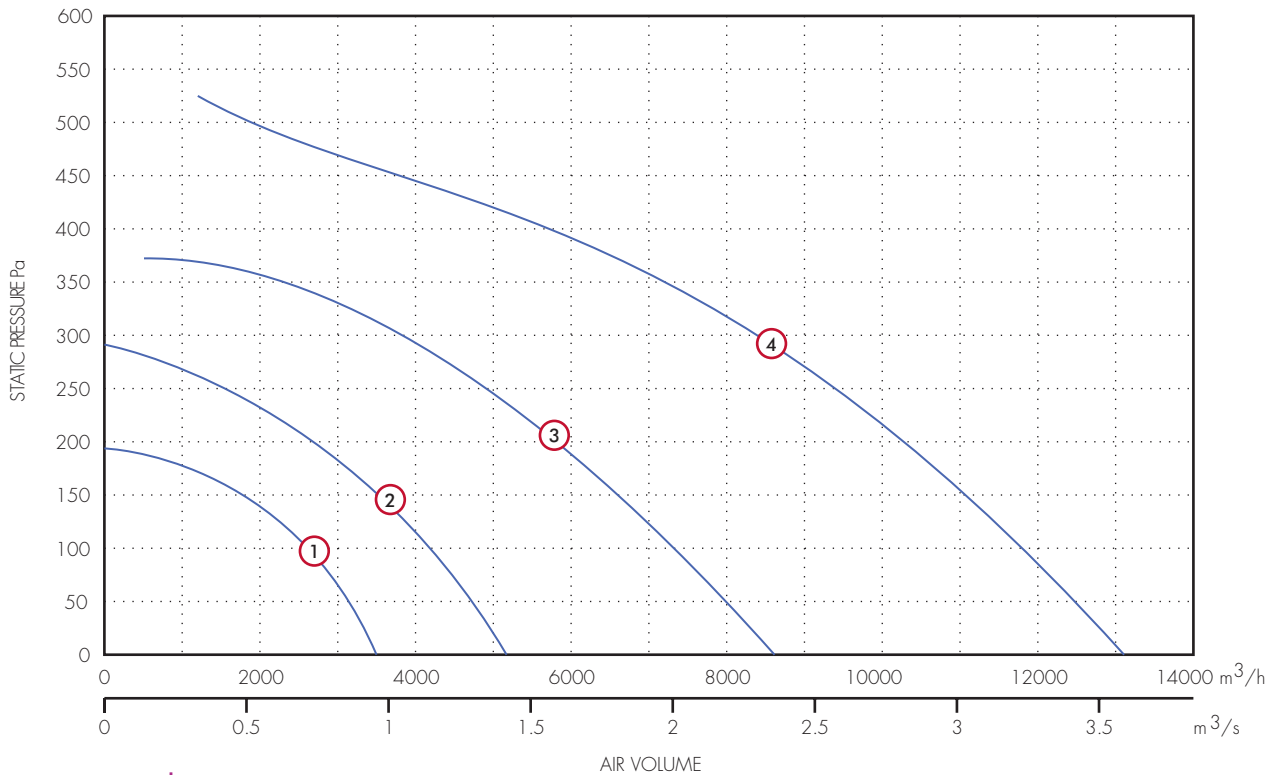
S.C. = STARTING CURRENT
F.L.C. = FULL LOAD CURRENT

Sound Power Level Spectra dB (re 10⁻¹² Watts)

Stock Ref. No.	Pole	125	250	500	1k	2k	4k	8k
RMV20014	4	67	63	62	61	56	49	38
RMV28014	4	79	76	75	71	69	60	52
RMV35514	4	86	81	78	75	72	66	55
RMV35534	4	86	81	78	75	72	66	55
RMV45034	4	89	86	83	77	74	69	58
RMV50034	4	94	92	88	81	77	71	61
RMV56034	4	99	94	91	87	80	75	66

Performance Curves

355 - 560 dia. - 6 Pole - 1 & 3 Phase



Performance Guide

Dia.	Phase	Motor Pole	Stock Ref.	Curve r.p.m.	Curve Ref.	m³/s at Pa								Motor kW	S.C. Amps	F.L.C. Amps	dBA @ 3m		
						0	25	50	100	150	200	250	300					350	400
355	1	6	RMV35516	880	①	0.966	0.907	0.846	0.704	0.455						0.3	3.4	1.34	51
355	3	6	RMV35536	880	①	0.966	0.907	0.846	0.704	0.455						0.35	2.2	0.85	51
450	1	6	RMV45016	910	②	1.462	1.4	1.322	1.16	0.855	0.71					0.54	7.5	2.66	54
450	3	6	RMV45036	910	②	1.462	1.4	1.322	1.16	0.855	0.71					0.47	3.6	1.2	54
500	3	6	RMV50036	960	③	2.383	2.295	2.222	2.026	1.83	1.62	1.385	0.97			1.1	7.2	2.4	58
560	3	6	RMV56036	970	④	3.647	3.565	3.488	3.307	3.1	2.855	2.571	2.286	1.87	1.495	1.95	13	4.2	63

S.C. = STARTING CURRENT

F.L.C. = FULL LOAD CURRENT

TEMPERATURE RANGE

The range is designed to handle duct air temperatures from -30°C to + 100°C on a continuous operation basis. The external ambient temperature should not exceed + 40°C.

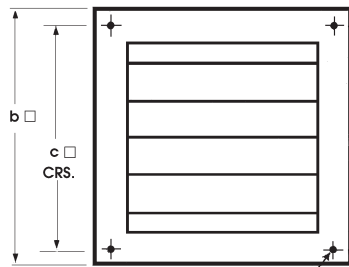
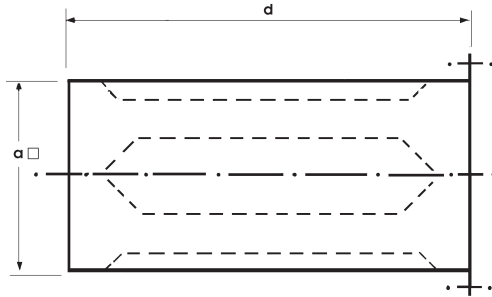
Sound Power Level Spectra dB (re 10⁻¹² Watts)

Stock Ref. No.	Pole	125	250	500	1k	2k	4k	8k
RMV35516	6	78	73	69	66	60	53	46
RMV35536	6	78	73	69	66	60	53	46
RMV45016	6	80	77	72	67	63	57	46
RMV45036	6	80	77	72	67	63	57	46
RMV50036	6	84	82	78	70	67	59	51
RMV56036	6	90	86	82	77	69	63	55

Vertical Discharge Mixed Flow Roof Fans (RMV)

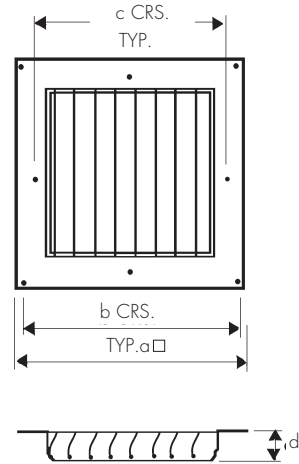
Accessories Dimensions (mm)

Roof Attenuators



4-HOLES 11.0 DIA.

Air Operated Shutters



Approx. percentage reduction in performance at 4 Pole speeds

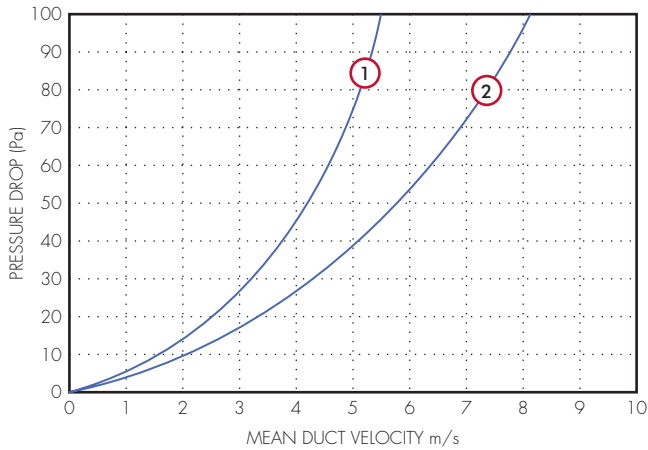
Fan Model	Approx. percentage reduction in performance at 4 Pole speeds
RMV 280	20%
RMV 355	34%
RMV 450	25%

For 6 pole fans, reduce percentages by ratio of fan speeds

When air operated shutters are used in conjunction with roof attenuators, there must be a minimum spacing of half the attenuator width between them.

Stock Ref.	a □	b	c	d
10517315	600	560	470	105
10517400	700	670	570	105

Note:
When shutters are fitted the max. temperature permissible is limited to 50°C



Stock Ref. No.	a □	b □	c □	d	Kg approx	Face area m ²	Resistance curve
10520315	395	495	445	600	18	0.156	①
10520400	495	595	545	600	22	0.245	②
10520500	645	745	695	600	31	0.416	②
10521315	395	495	445	900	21	0.156	①
10521400	495	595	545	900	28	0.245	②
10521500	645	745	695	900	39	0.4160	②
10522315	395	495	445	1200	25	0.1560	①
10522400	495	595	545	1200	35	0.2450	②
10522500	645	745	695	1200	48	0.4160	②

Roof Attenuator, Insertion Losses

Attenuator Length 600mm

Impeller Ø	Stock Ref.	125	250	500	1k	2k	4k	8k
280	10520315	7	12	17	21	22	14	7
355	10520315	4	8	15	17	10	5	1
450	10520400	4	8	15	17	10	5	1
500	10520500	7	10	16	23	24	10	3

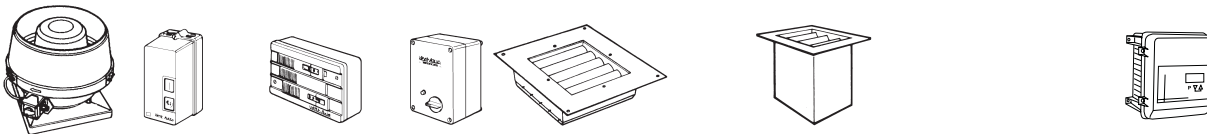
Attenuator Length 900mm

Impeller Ø	Stock Ref.	125	250	500	1k	2k	4k	8k
280	10521315	9	15	23	28	30	17	8
355	10521315	5	10	16	19	12	6	1
450	10521400	5	10	16	19	12	6	1
500	10521500	8	13	20	27	28	12	4

Attenuator Length 1200mm

Impeller Ø	Stock Ref.	125	250	500	1k	2k	4k	8k
280	10522315	11	18	29	34	35	19	9
355	10522315	6	11	18	21	14	8	2
450	10522400	6	11	18	21	14	8	2
500	10522500	9	15	24	31	32	14	5

Accessories



Stock Ref.	D.O.L. & starter Stock Ref.	Electronic controller Stock Ref.	Auto transformer Stock Ref.	Air operated Shutters † Stock Ref.	Roof attenuators			*eDemand Controller		
					600mm † Stock Ref.	900mm † Stock Ref.	1200mm † Stock Ref.	Voltage Control Stock Ref.	1/3 Phase Inverter Stock Ref.	3 Phase Inverter Stock Ref.
RMV20014	444744 + 444698	W10303102M	10314103	-	-	-	-	444164	-	-
RMV28014	444744 + 444701	W10303102M	10314103	10517315	10520315	10521315	10522315	444164	-	-
RMV35514	444744 + 444703	*	*	10517315	10520315	10521315	10522315	-	-	-
RMV35534	444744 + 444700	-	10314304	-	-	-	-	444164	-	-
RMV45034	444747 + 444701	*	*	10517400	10520400	10521400	10522400	444166	444177	444172
RMV50034	444747 + 444699	*	*	-	10520500	10521500	10522500	444166	444177	444172
RMV56034	444744 + 444701	*	*	-	-	-	-	444164	-	-
RMV35516	444747 + 444702	W10303102M	10314103	-	-	-	-	-	-	-
RMV35536	444747 + 444700	-	10314301	10517315	10520315	10521315	10522315	444166	444177	444172
RMV45016	444747 + 444704	10303103A	10314103	10517400	10520400	10521400	10522400	-	-	-
RMV45036	444744 + 444702	-	10314304	-	-	-	-	-	-	-
RMV50036	444748 + 444706	*	*	-	10520500	10521500	10522500	-	-	-

† When air operated shutters are used in conjunction with roof attenuators, there must be a minimum spacing of half the attenuator width between them. When an attenuator is located directly below a roof fan a motorised shutter should be used.

* For full range of speed controller options, see Accessories & Controllers Section

Lo-Carbon Energy Saver MX Roof Fans (MX)

Features and Benefits

- Reduces your carbon footprint
- Three stylish diagonal discharge models
- 70% energy savings
- Customised performance from 2200m³/h to 6700m³/h
- Can be remotely monitored
- The Vent-Axia Lo-Carbon MX range is designed for easy inspection access for cleaning, maintenance or servicing
- Long life DC motor

The Lo-Carbon MX Roof Range, offers longer life, lower maintenance and energy savings to a variety of commercial and industrial applications. Three stylish diagonal discharge models MX10, MX20 and MX30 offer customised performances up to 5,500m³/h.

The units are moulded in tough recyclable material, fully UV stabilised and are suitable for arduous external conditions. The design features a mixed flow impeller with the motor out of the airstream and a slanted diagonal discharge pattern which creates an upwardly spiralling discharge pattern. Suitable for horizontal mounting only (max. of 3° from horizontal).

Motors

At the heart of the range is the latest Lo-Carbon energy saver DC technology, eliminating the need for expensive transformer controllers to achieve customised duties. Due to Lo-Carbon DC design, the motors run cooler, prolonging the life of the bearings and motor lubricants.

The motor is integral to the mixed flow impeller and is designed for ambient duct temperatures up to +80°C.

MX motors are up to 80% efficient in converting energy into rotation, providing large energy savings throughout the speed range. They are also precisely controllable, typically offering energy savings of 40-60% compared with AC equivalents.

On Board Control

The electronics in the Lo-Carbon MX range offer the possibility of setting any working point/speed whenever required without a controller. The standard unit is ready to connect to a single phase electrical supply. However, an ideal working point can be set either at the factory or on site to suit a system duty. If the system resistance or volume requirement changes, the fan duty can be re-programmed to meet this new performance on site. Traditional AC products are tied to 4, 6 and 8 pole models and costly transformers – the Lo-Carbon MX is simply set up at the desired speed and, if required, can be controlled using inexpensive switches connected by four core low voltage wire. The Lo-Carbon DC system can be controlled down to much lower speeds than AC motors providing very quiet performance when required.

Maintenance

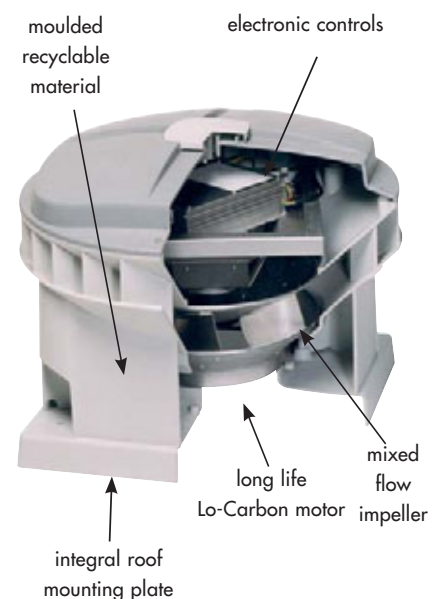
Vent-Axia Lo-Carbon MX units have a built in fault diagnosis system. An installation of several units can be interconnected using simple two core wire to form a BUS network for flexible remote maintenance monitoring tailored to meet your needs. Vent-Axia MX maintenance

software is available, the installation can be used on a laptop/PC. Alternatively a hand held diagnostics/programmer is available for on site use. Lo-Carbon MX units have their own encoded signature, allowing ease of identification and full performance history access.

The Vent-Axia Lo-Carbon MX range is designed for easy inspection access for cleaning. Four screws secure the main cover. Disconnect the internal mains plug and four bolts release the chassis holding the fan/motor assembly and the electronic module.

The Lo-Carbon MX range is constructed from fully recyclable plastics. The diagonal vortex discharge pattern throws air and sound upwards and away from the roof surface.

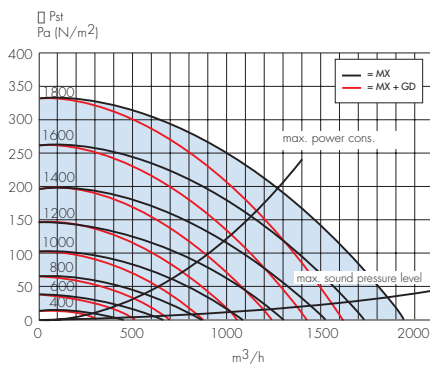
Lo-Carbon MX Sectional View





Performance

MX 10/10



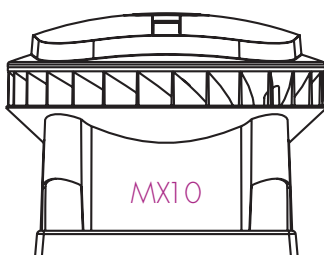
MX 10/10 - Stock Ref No: 45 46 12

max. 2000 rpm/2200 m³/h

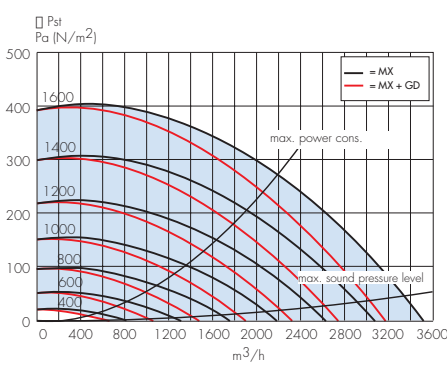
Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1800	0.76	174	57	72	63
1600	0.55	125	54	70	61
1400	0.39	87	50	66	58
1200	0.26	60	46	63	55
1000	0.17	39	41	58	51
800	0.12	27	36	56	49
600	0.09	19	30	49	42
400	0.07	12	24	41	35

* with GD silencer

max. 2000 rpm/2200 m³/h



MX 20/10



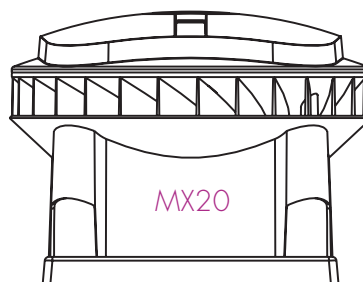
MX 20/10 - Stock Ref No: 45 46 13

max. 1600 rpm/3600 m³/h

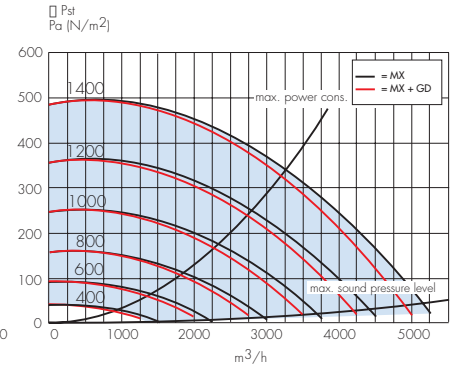
Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1600	1.8	409	62	77	64
1400	1.16	266	58	74	62
1200	0.73	169	53	69	57
1000	0.44	100	48	65	54
800	0.25	57	42	59	49
600	0.14	31	36	55	45
400	0,09	17	28	48	39

* with GD silencer

max. 1600 rpm/3600 m³/h



MX 30/20



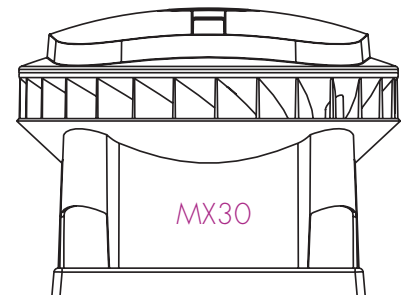
MX 30/20 - Stock Ref No: 45 46 14

max. 1500 rpm/6700 m³/h

Speed rpm	Current A	Power Watts	del. dB(A)	Sound level	
				intake dB(A)	intake* dB(A)
1200	1.9	433	60	75	65
1000	1.1	250	56	71	61
800	0.59	135	50	66	56
600	0.28	64	43	60	50
400	0.11	24	34	51	42

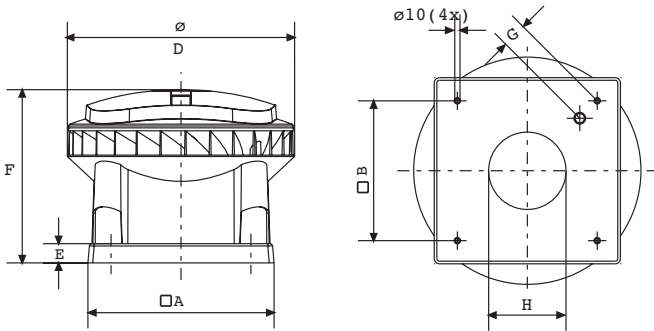
* with GD silencer

max. 1500 rpm/6700 m³/h



Lo-Carbon Energy Saver MX Roof Fans (MX)

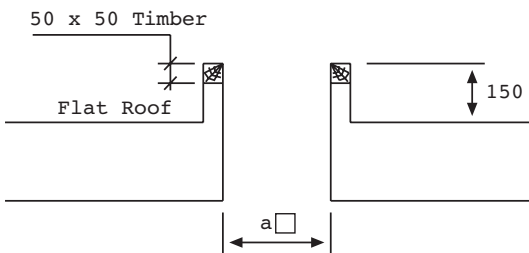
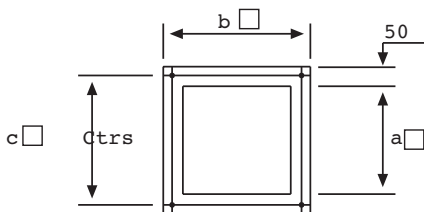
Fan Dimensions



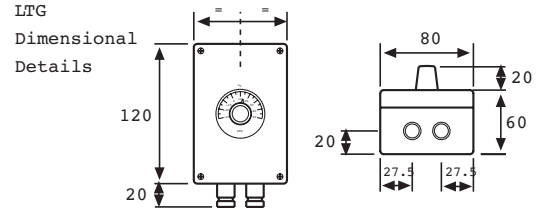
	MX10/10	MX20/10	MX30/20
A	460	580	665
B	330	450	535
D	575	708	863
E	60	60	60
F	473	540	601
G	44	48	64
H	196	241	302

Upstand Dimensions

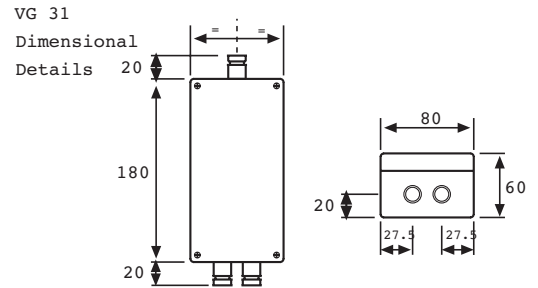
Model	a	b	c
MX 10/10	275	375	330
MX 20/10	400	500	450
MX 30/20	485	585	535



LTG Temperature Sensitive Speed Controller



VG 31 Multi Unit Controller

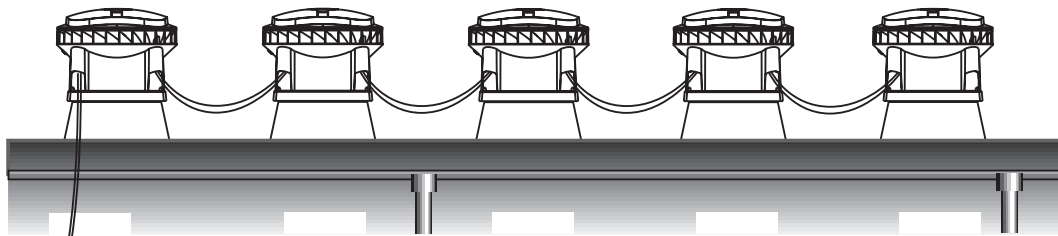


The LTG is an air temperature sensitive speed controller, which can be set between 20°C and 50°C . The controller is suitable for controlling up to 5 MX units when used in conjunction with a VG31 Multi Unit Controller.

The fan will run at a minimum speed, until the air temperature reaches the set point on the controller. When the set point is reached the controller will gradually increase the speed of the fan, until the fan has reached its maximum speed. The fan speed gradient (min/max bandwidth), can be set from between 0.5°C and 10°C by adjusting a potentiometer within the controller housing. A probe fixed within the fan housing measures the air temperature.

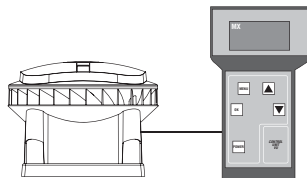
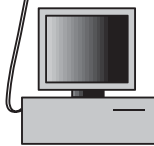
LoWatt MX Roof Range Alternative Management Controls

Easy to monitor and maintain



BMS OR REMOTE LOCATION – CONNECT UP TO 31 UNITS

NOTE: Please enquire as to the compatibility of an existing or proposed BMS. A BMS programme is available on request



HAND HELD PROGRAMMER
(Available upon request)

PC SOFTWARE
(Available if required)

LoWatt MX Roof Range Fan Controls



SAG 0-2

2-step controller step 1 and 2 are separately adjustable
Stock Ref. No. 454616



SAG 0-5

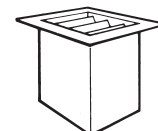
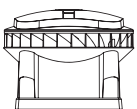
5-step controller adjustable maximum capacity
Stock Ref. No. 454617



SAG 0-M

Infinitely variable controller adjustable maximum capacity
Stock Ref. No. 454618

Accessories



	SAG 0-2	SAG 0-5	SAG 0-M	VG31	DNG 31	LTG	Roof attenuators		
	Stock Ref.	Stock Ref.	Stock Ref.	Multi-Unit	2 Speed	Temperature	600mm	900mm	1200mm
Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.	Stock Ref.
MX 10/10	454616	454617	454618	456929	456930	456931	-	-	-
MX 20/10	454616	454617	454618	456929	456930	456931	10520315	10521315	10522315
MX 30/20	454616	454617	454618	456929	456930	456931	-	-	-

Specialist Application Fans

The Vent-Axia fume and smoke fan range has been designed, tested and manufactured to meet the demanding requirements.

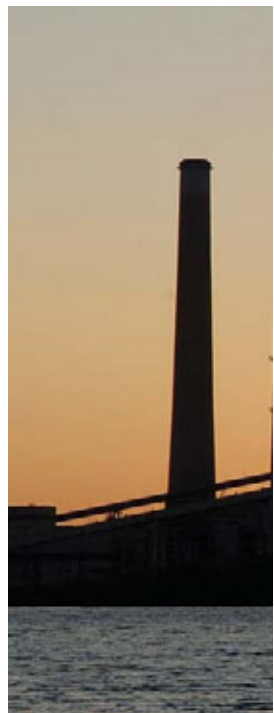
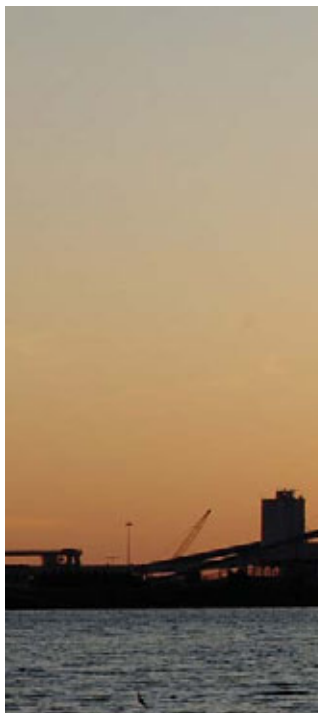
The smoke range offers a combination of fans, which are temperature resistant to 400°C or 200°C, depending on model, for a period of 2 hours when used for emergency smoke extract to European Standard, EN12101-3.

The extensive range covers :

- Adjustable pitch axial fans up to 1250mm diameter
- Vertical & horizontal discharge roof mounted fans
- Direct drive inline multi position inlet/outlet centrifugal fans
- Belt drive centrifugal cabinet fans



Units



Vent-Axia®

Bifurcated Axial Flow Fume Handling Units (BIF)

Features and Benefits

- Manufactured from UV stabilised polypropylene
- Motor mounted outside the airstream
- Suitable for extracting aggressive corrosive air
- Internal or external mounting
- Quality Assurance to BS EN ISO 9001
- Performance tested to BS 848 Part 1

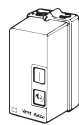
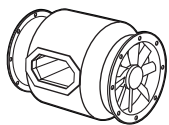
A range of axial flow bifurcated fans designed to complement the centrifugal fume handling units we offer, and withstand the rigours of fume extraction systems. Features high performance axial flow fans and powerful high quality motors built to withstand hostile environments.

Specification

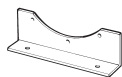
Casings

The fan casing is constructed in heavy gauge polypropylene UV stabilised with the bore

Accessories



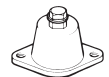
D.O.L.
Starter & Coil
Stock Ref. No.



Mounting Feet
(Pair)
Stock Ref. No.



Matching
Flange
Stock Ref. No.



Flexible
Connections
Stock Ref. No.

Stock Ref. No.	Stock Ref. No.	Stock Ref. No.	Stock Ref. No.	Stock Ref. No.	Stock Ref. No.
BIF250/4/1	444744+444700	BIF250FT	BIFMF250	BIF250FC	AVM220
BIF250/2/3	444744+444701	BIF250FT	BIFMF250	BIF250FC	AVM220
BIF315/4/1	444744+444702	BIF315FT	BIFMF315	BIF315FC	AVM220
BIF315/4/3	444747+444700	BIF315FT	BIFMF315	BIF315FC	AVM220
BIF315/2/3	444747+444700	BIF315FT	BIFMF315	BIF315FC	AVM220
BIF400/4/1	444747+444700	BIF400FT	BIFMF400	BIF400FC	AVM220
BIF400/4/3	444747+444700	BIF400FT	BIFMF400	BIF400FC	AVM220

specially engineered to provide a tight clearance fit. It is complete with drilled flanges at each end to which, either ducting can be directly connected (adequately supported) or, matching flanges with flexible connectors.

Motor and Impeller

A high performance aerofoil section axial-flow impeller in durable polypropylene statically and dynamically balanced. Driven through an extension shaft by a totally enclosed, fan cooled single speed motor to BS 5000/99 out of the airstream and is wound to suit standard UK voltages all complete with terminal box (and capacitor on single phase types).

Electrical

The BIF range is available for either single phase 220-240V 50 Hz capacitor start and run or three phase 380-415V 50Hz.

Terminal Box

An IP54 terminal box is supplied with all models with 20mm and PGII entry offering protection against dust and water jets from any angle.

Performance

The fan performance, is in accordance with tests to BS848 Part 1.

Sound Levels

Fan sound levels, measured in a reverberant chamber in accordance with BS 848 Part 2. Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10^{-12} Watts (1 pico-watt). To ensure minimum noise levels during speed control, an auto transformer speed control is recommended.

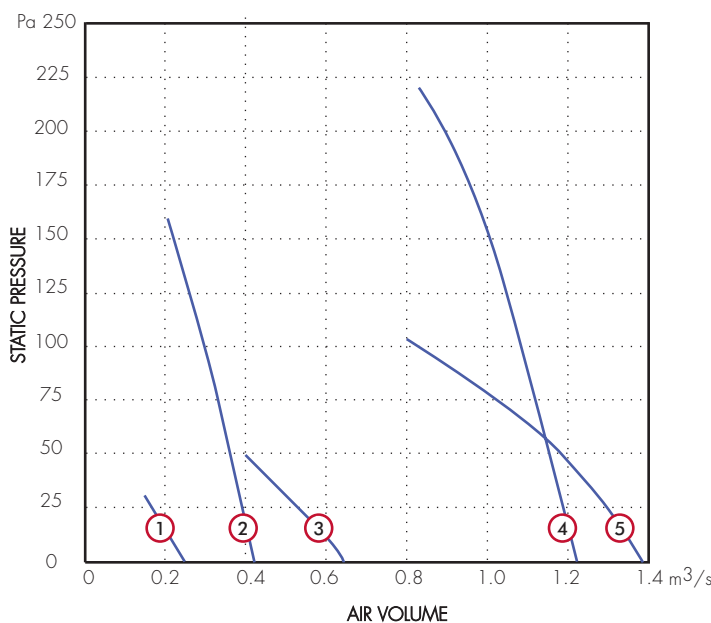
Accessories

A full range of accessories is available with the Fume Handling Bifurcated Fans:

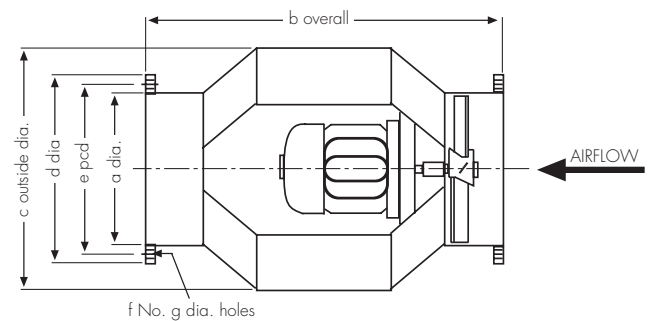
- D.O.L. Starters
- Flexible Connections
- Mounting Feet
- Coupling Flanges
- Anti-Vibration Mounts
- Attenuators



Performance Curve



Dimensions (mm)



Size	a	b	c	d	e	f	g
250	250	600	400	325	290	8 off	8
315	315	650	480	400	360	16 off	9
400	400	800	620	500	455	16 off	9

Ancillaries: Flexible connectors, AV's, mounting feet and silencers are available

Performance Guide

Stock Ref. No.	Phase Motor	r.p.m	Curve Ref.	FID	m³/s at Pa						kW	Amps	S.C Amps	F.L.C. dBA @ 3m
					25	50	75	100	150	200				
BIF250/4/1	1	1400	①	0.235	0.172	-	-	-	-	-	0.18	7	1.35	49
BIF250/2/3	3	2800	②	0.47	0.442	0.404	0.376	0.338	0.244	-	0.37	4	0.93	67
BIF315/4/1	1	1400	③	0.635	0.545	0.432	-	-	-	-	0.25	10	1.9	55
BIF315/4/3	3	1400	③	0.635	0.545	0.432	-	-	-	-	0.37	4.73	1.2	55
BIF315/2/3	3	2800	④	1.222	1.208	1.175	1.152	1.109	0.997	0.87	0.55	6.6	1.32	71
BIF400/4/1	1	1400	⑤	1.363	1.269	1.157	1.015	0.804	-	-	0.37	14	2.7	61
BIF400/4/3	3	1400	⑤	1.363	1.269	1.157	1.015	0.804	-	-	0.37	4.73	1.2	61

Sound Power Level Spectra db (ref 10-12) Watts

Stock Ref No.	63	125	250	500	1k	2k	4k	8k
BIF250/4	66	67	66	65	65	62	58	54
BIF250/2	81	82	81	80	80	77	73	69
BIF315/4	72	74	73	72	71	68	64	61
BIF315/2	87	89	93	87	86	83	79	76
BIF400/4	76	77	80	75	75	72	68	64

Electrical Supply: Single phase motors are wound for 220-240V/50Hz/1ph AC supply and 3 phase motors are wound for 380-415V/50Hz/3ph AC supply.

NB. Motors must have overload protection and 3 phase motors should also have single phasing prevention.

Specialist Application Fans

Typical Applications in Fire Rated Areas

The new Vent-Axia smoke fan range has been designed, tested and manufactured to meet the demanding requirements of European Standard, EN12101-3.

The range offers a combination of fans, which are temperature resistant to 400°C or 200°C, depending on model, for a period of 2 hours when used for emergency smoke extract.

The extensive range covers :-

- Adjustable pitch axial fans up to 1250mm diameter
- Vertical & horizontal discharge roof mounted fans
- Direct drive inline multi position inlet/outlet centrifugal fans
- Belt drive centrifugal cabinet fans

With most models available with 2 speed motors, this makes the products usable for both general extract ventilation and emergency smoke extract.

Centrifugal fan cabinets (CVHT) - Centrifugal Fans (ILHT) 400°C/2h with Standard Motors

Installed outside the fire rated areas or on the outside building.

Applications: (with reference to installation) Commercial/In kitchens, Car Parks, Public Buildings...

The following section details example applications for smoke fan systems, which include commercial/industrial kitchens, car parks, factories, shopping malls and public buildings.



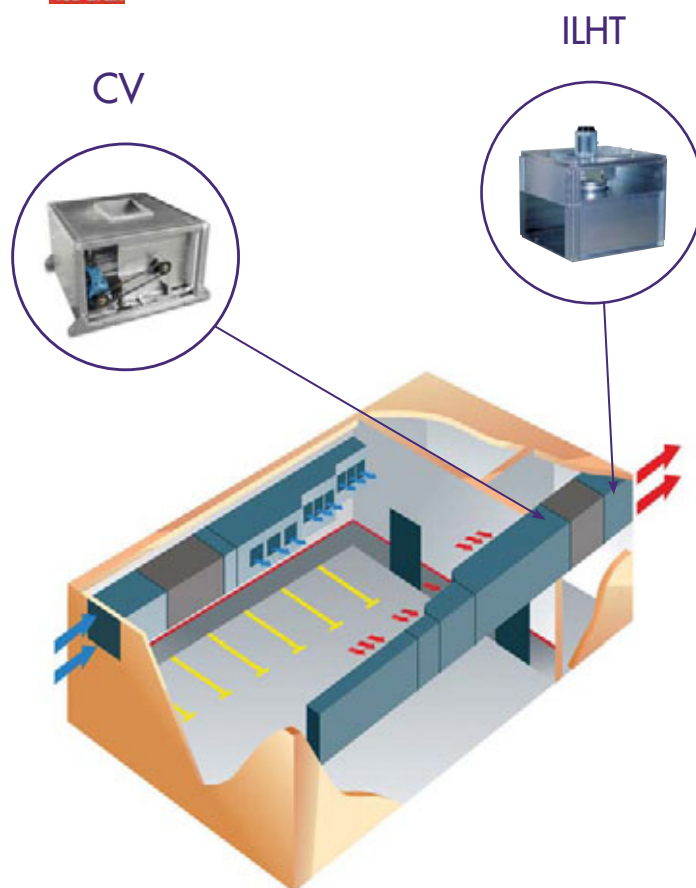
Fans to operate within areas rated 400°C/2h.

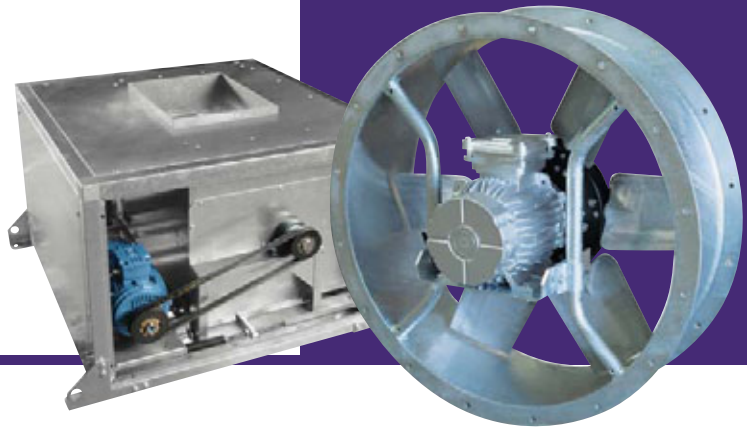


Fans to operate within areas rated 200°C/2h.



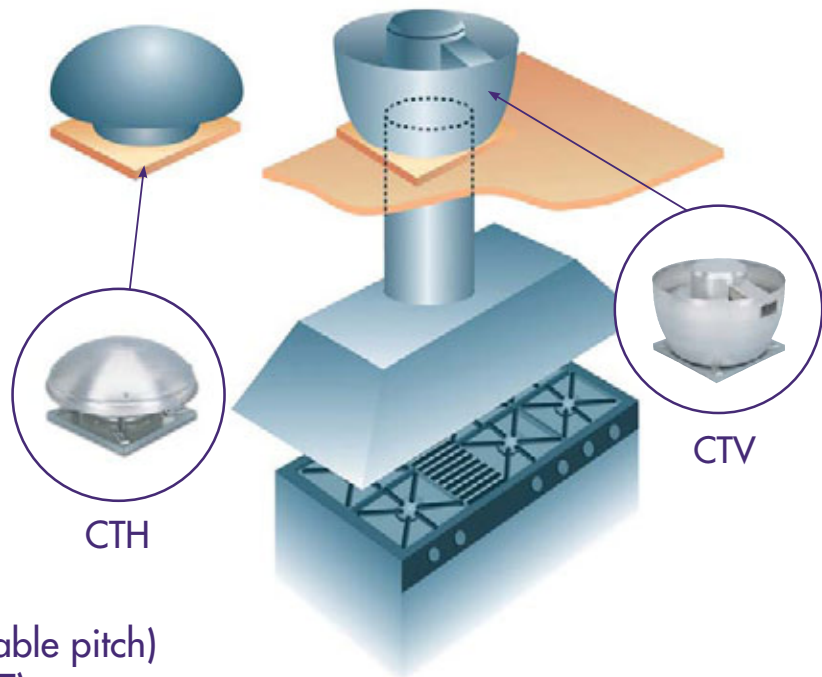
Fans to carry air rated 400°C/2h - installed outside the fire rated area.





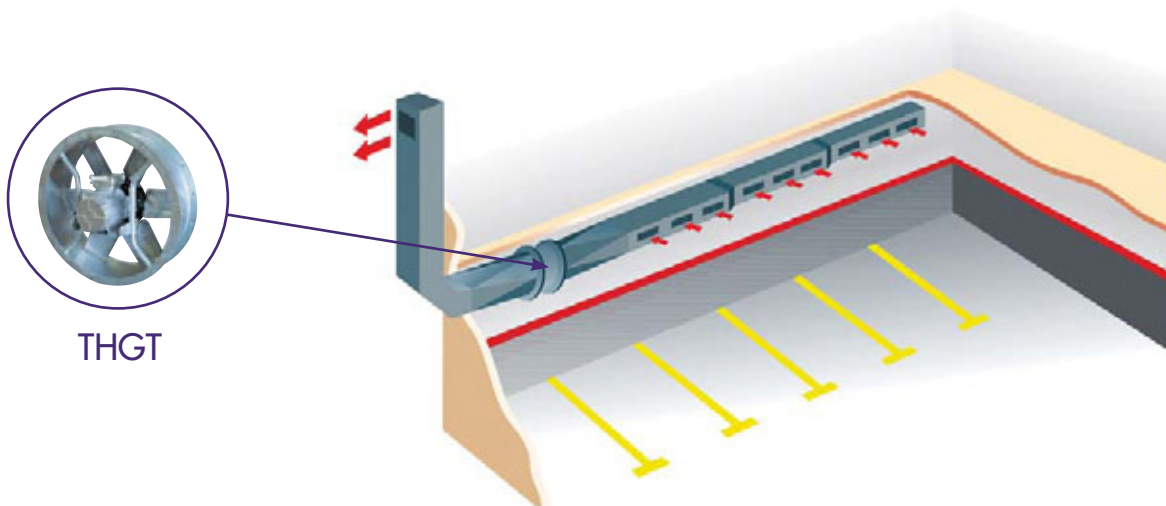
Roof mounted centrifugal fans 400°C/2h (CTHT/CTVT)

Installed on the outside of a building.
Applications: Commercial/Industrial kitchens, Factories, Public Buildings...



In-Line cased axial fan (adjustable pitch) 400°C/2h or 200°C/2h (THGT)

Installed in the interior of a building.
Applications: Car Parks, Shopping Malls, Public Buildings...



Vent-Axia Axial Flow Fans (THGT)

Features and Benefits

- Two ratings available either, 200°C/2h to EN12101-3 or 400°C/2h to EN12101-3
- Available in short & long case models
- 500-1250 diameter
- Adjustable pitch (560-1250)
- Single & two speed motor options
- IP55 Class H motors

Range of adjustable pitch case axial fans specifically designed and certified to extract air or smoke at 400°C for a minimum period of 2 hours in the case of a fire.

Certified to EN12101-3 Standards.

Applications

Car parks, Public buildings, Shopping Malls

Casing

Manufactured from hot dipped galvanised steel.

Impeller

Precision die cast aluminium, available with 3, 5, 6, 7 or 9 blades, with adjustable pitch angle depending on diameter. The complete adjustment of this impeller provides precise selection of pressure and airflow.

Motors

Asynchronous, three phase, rated at 400°C/2h and available in four (4) and six (6) poles. Rated at 230/400V for motors up to 3.0kW and 400V 50Hz for those greater.

IP-55, Class H.

Available on request:

- Two (2) speed motors
- Motors rated at 200°C/2h

Performance

Airflow tested in accordance with BS848 Part 1
AMCA 210-85
ASHRAE 51-1985
UNE 100-212-89

General Performance Characteristics

The range is extensive, covering 8 standard duct diameters from 500-1250mm. Airflow range up to 31m³/s Available with 4, 6 pole, single speed motors and 4/8, 6/12 pole, two speed motors.

Accessories

A full range of accessories is available to compliment the fan including

- Duct Connection Flange (ARO-BRIDA)
- Flexible Connections (ACOP-ELAST.)
- Inlet Guards
- Discharge Guards
- Support Feet

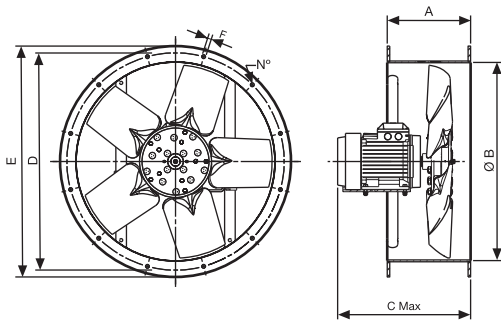
Typical Ordering

Model	Motor Poles	Dia.	No Blades	Blade Pitch	Airflow Direction	Motor 1kW	Fire Rating	Voltage
THGT	/ 4	- 560	- 5	/ 12L	- B	- 0.55	- E400	- 400V/50Hz

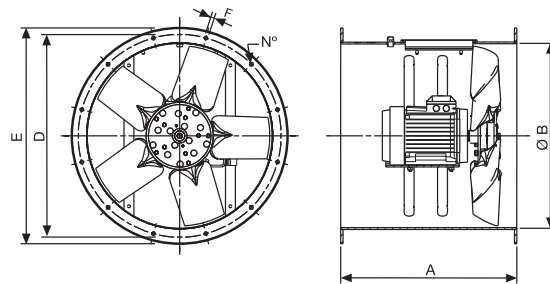


Dimensions (mm)

Short Case



Long Case



Type	A		ØB	C Max.	D	ØE	ØF	N*
	Short casing	Long casing						
THGT-500	180	-	500	390	560	595	12	12
THGT-560	250	600	560	434	620	664	12	12
THGT-630	380	600	630	622	690	734	12	12
THGT-710	270	650	710	512	770	815	12	16
THGT-800	380	650	800	622	860	905	12	16
THGT-900	420	750	900	737	970	1005	15	16
THGT-1000	450	780	1000	767	1070	1105	15	16
THGT-1250	500	1150	1250	985	1320	1355	15	20

For full performance and selection, please contact our Technical Support Team on 0844 856 0595 for details.

Vent-Axia In-Line Duct Fans (ILHT)

Features and Benefits

- Rated at 400°C/2h to EN12101-3
- Direct drive backward curved centrifugal fans
- Single & three phase options
- Single & two speed motor options
- Suitable for horizontal or vertical mounting
- Internal & external models
- Site configurable inlet/outlet positions

The ILHT range of direct drive in-line fans is designed to withstand the extract of air streams (only air stream within fan enclosure) of 400°C for a minimum period of two hours. All models are supplied with the motor located out of the air stream mounted on the external face of the casing.

All models are certified for 400°C/2hr for the purpose of extracting hot smoke in the case of a fire. The ILHT series of centrifugal in-line fans offers a truly flexible solution to installation whereby the configuration of both the inlet and discharge ports can be changed by simply altering the positioning of casing side panels.

Certified to EN12101-3 Standards.

Application

The ILHT Series is suitable for a wide variety of applications including commercial kitchen and car park extract ventilation systems.

Casing

The casing of the ILHT fans is manufactured from high grade robust galvanised steel and are suitable for direct connection in-line with standard nominal rectangular steel ducting. Due to the flexible design and configuration the ILHT units can be installed in any position, both horizontal or vertical, and are suitable for both indoor and outdoor mounted installations.

Impeller

All ILHT fans incorporate a centrifugal backward curved impeller manufactured from high grade galvanised steel. The motor is directly coupled to the impeller which is dynamically balanced.

Motors

All motors are designed for continuous operation in ambient air temperatures up to +70°C and are manufactured in accordance with European CEI standards.

The following motor specification include:

- Single speed models available with 230V or 400V 50Hz Three Phase motors.
- Two speed models available with 400V 50Hz Three Phase motors.
- All motors are Class F, IP-55

Performance

Airflow tested in accordance with BS848 Part 1
AMCA 210-85
ASHRAE 51-1985
UNE 100-212-89

General Performance Characteristics

The range consists of 8 unit sizes, covering an airflow range up to 5.2m³/s

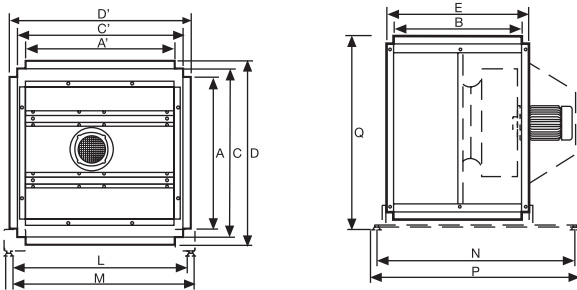
Accessories

A full range of accessories is available to compliment the fan including:

- Discharge Protection Grille
- Flexible Connections
- Motor Cover (external application)
- Mounting Support

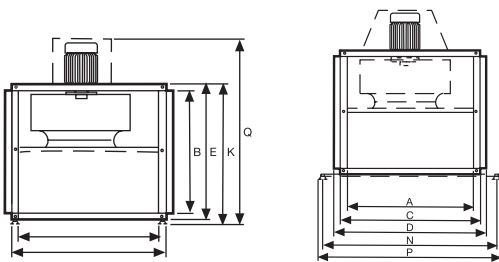


Dimensions (mm) - Mounting configuration with horizontal motor shaft.



Type	A	B	C	D	E	L	M	N	P	Q	Weight (kg)
035	700	600	780	850	675	727	927	1038	1122	928	70
050	700	600	780	850	675	727	927	1038	1122	928	90
060	800	700	880	950	775	827	1027	1182	1266	1028	110
065	800	700	880	950	775	827	1027	1182	1266	1028	135
085	900	800	1015	1085	875	962	1162	1330	1414	1175	145
110	900	800	1015	1085	875	962	1162	1330	1414	1175	160
140	1000	900	1115	1185	975	1062	1262	1430	1514	1275	175
190	1100	1000	1215	1315	1075	1162	1362	1530	1614	1375	210

Dimensions (mm) - Mounting configuration with vertical motor shaft.



Type	A	B	C	D	E	K	L	M	N	P	Q	Weight (kg)
035	700	600	780	850	675	722	587	787	1038	1122	928	70
050	700	600	780	850	675	722	587	787	1038	1122	928	90
060	800	700	880	950	775	822	687	887	1182	1266	1028	110
065	800	700	880	950	775	822	687	887	1182	1266	1028	135
085	900	800	1015	1085	875	934	822	1022	1330	1414	1175	145
110	900	800	1015	1085	875	934	822	1022	1330	1414	1175	160
140	1000	900	1115	1185	975	1034	922	1122	1430	1514	1275	175
190	1100	1000	1215	1315	1075	1134	1022	1222	1530	1614	1375	210

For full performance and selection, please contact our Technical Support Team on 0844 856 0595 for details.

Vent-Axia Roof Mounted Fan (CTH)



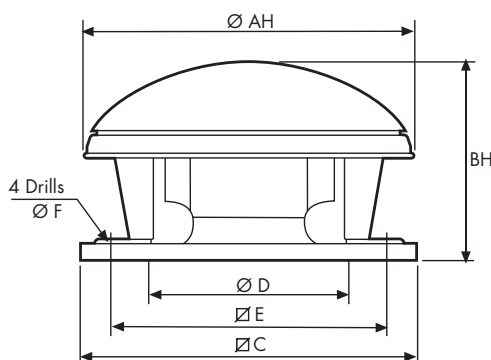
Features and Benefits

- Rated at 400°C/2h to EN12101-3
- All models are suitable for continuous operation, air steam temperatures up 120°C
- All metallic construction
- Single & three phase options
- Single & two speed motor options
- Backward curved impellers
- IP55 Protection

The CTH range of roof extract fans is available in horizontal discharge formats, and is suitable for many applications including:

- General ventilation - Industrial ventilation
- Industrial / Commercial kitchens
- Models:
CTHB single phase
CTHT three phase
- Air stream temperature: 40°C <T> =120°C
- Complete metallic construction

Dimensions (mm)



Certified to EN12101-3 Standards.

Application

Suitable for any smoke extract application where the fan must be roof mounted.

Impeller

Backward curved impellers manufactured in galvanised sheet steel (sizes 225-400) or double coated (cataphoresis + polyester) painted sheet steel (sizes 450-630). All models are dynamically balanced.

Bases

All base parts are manufactured from galvanised sheet steel.

Cowls

All cowls are manufactured from spun aluminium.

Motors

Asynchronous induction motors in die-cast aluminium:

- 230V 50Hz Single Phase
- 400V 50Hz Three Phase (230/400V under request)
- Sealed controllable in single and three phase for models 140-400.
- Sealed for life ball bearing assemblies.

Accessories

A full range of accessories is available to complement this fan range including

- Sealing frame - JMS circular duct adaptor - JCC
- Flat Roof Up-Stand - JBS
- Acoustic Up-Stand - JAA
- Back Draught Shutter - JCA
- S Flange - JBR
- Flexible Coupling - JPE
- Circular Duct Adaptor - JCC
- Support for individual curb mounted installation - CT/HCT

Size	ØAH	BH	C	ØD*	E	ØF
225	561	383	435	250	330	12
250	762	425	560	355	450	12
315	762	469	560	355	450	12
400	850	532	630	400	535	12
450	962	713	710	500	590	14
500	1214	824	905	630	750	14
560	1214	874	905	630	750	14
630	1336	1029	1100	710	840	14

For full performance and selection, please contact our Technical Support Team on 0844 856 0595 for details.

Vent-Axia Roof Mounted Fans (CTV)



Features and Benefits

- Rated at 400°C/2h to EN12101-3
- All models are suitable for continuous operation, air steam temperatures up to 120°C
- All metallic construction
- Single & three phase options
- Single & two speed motor options
- Backward curved impellers
- IP55 Protection

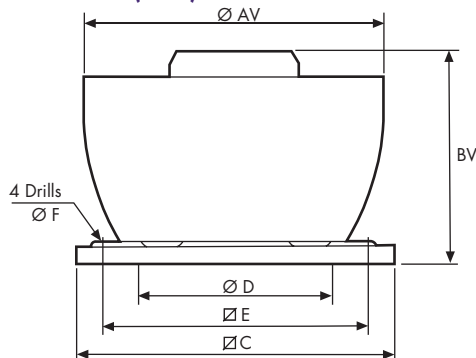
The CTV range of roof extract fans is available in vertical discharge formats, and is suitable for many applications including:

- General ventilation - Industrial ventilation
- Industrial / Commercial kitchens
- Smoke Extract
- Models: Vertical discharge - CTVB single phase - CTVT three phase
- Air stream temperature - 40°C <T>=120°C
- Complete metallic construction
- Certified to EN12101-3 Standards.

Applications

Suitable for any smoke extract application

Dimensions (mm)



where the fan must be roof mounted.

Impeller

Backward curved impellers manufactured in galvanised sheet steel (sizes 225-400) or double coated (cataphoresis + polyester) painted sheet steel (sizes 450-630). All models are dynamically balanced.

Bases

All base parts are manufactured from galvanised sheet steel.

Cowls

All cowls are manufactured from spun aluminium.

Motors

Asynchronous induction motors in die-cast aluminium:

- 230V 50Hz Single Phase
- 400V 50Hz Three Phase (230/400V under request)
- Speed controllable in single and three phase for models 140-400
- Sealed for life ball bearing assemblies.

In three phase voltage, the motors can be

operated in connection at 380-415, which allows two speed operation of the fans.

General Performance Characteristics

The range consists of 11 unit sizes, covering an airflow range of up to 2.73m³/s. Available with 4, 6, 8 pole, single speed motors and 4/8, 6/12 pole, two speed motor options.

Accessories

A full range of accessories is available to compliment this fan range including

- Sealing frame - JMS circular duct adaptor - JCC
- Flat Roof Up-Stand - JBS
- Acoustic Up-Stand - JAA
- Back Draught Shutter - JCA
- S Flange - JBR
- Flexible Coupling - JPE
- Circular Duct Adaptor - JCC
- Support for individual curb mounted installation - CT/HCT

Typical Ordering Designation

Model	Motor	Di.
Poles		
CTVT	/ 4	- 315

Size	ØAV	BV	C	ØD*	E	ØF
225	556	452	435	250	330	12
250	750	522	560	355	450	12
315	750	564	560	355	450	12
400	850	608	630	400	535	12
450	950	741	710	500	590	14
500	1216	832	905	630	750	14
560	1216	832	905	630	750	14
630	1327	1053	1100	710	840	14

For full performance and selection, please contact our Technical Support Team on 0844 856 0595 for details.

Vent-Axia Cabinet Fans (CV)

Features and Benefits

- **Rated at 400°C/2h to EN12101-3**
- **Horizontal & vertical discharge models**
- **Automatic belt tensions - no maintenance required**
- **Double inlet forward curved impellers**
- **IP55 3 Phase Motors**
- **Available for exterior rated applications horizontal discharge only**

The CV series has been designed and certified to withstand the extract of air temperatures of up to +400°C for a minimum period of 2 hours. All CV models incorporate galvanized steel casings and include forward curved belt driven centrifugal fans, which are mounted on anti-vibration mounts within the casing. These powerful centrifugal fans are driven from an automatically tensioned and maintenance free, belt and pulley drive system, which is directly connected to IP55 rated 3Ph motors, which include safety thermal overload protection devices as standard.

Certified to EN12101-3 Standards

Applications

Car Parks.

Motors

The CV series is available with a selection of standard 3Ph motor sizes from 0.25 to 15kW. Motors up to 2.2kW are mounted on the fan scroll casings, whilst larger motor sizes are mounted on a separate base frame.

As standard the CV units are supplied with 3Ph motors. Up to 3kW the motors are available in 230/400V 50Hz 3Ph, whilst larger sizes are available in 400V 50Hz. Single phase motors up to 1kW. Two speed motors are available to special order.

Configuration

The CV units are supplied as standard with the motor on the RHS when viewed from the inlet side of the fan and are fitted with rectangular inlet/outlet flanges.

To special order the CV units are available with the motor to the LHS, or with circular inlet/outlet flanges - please enquire.

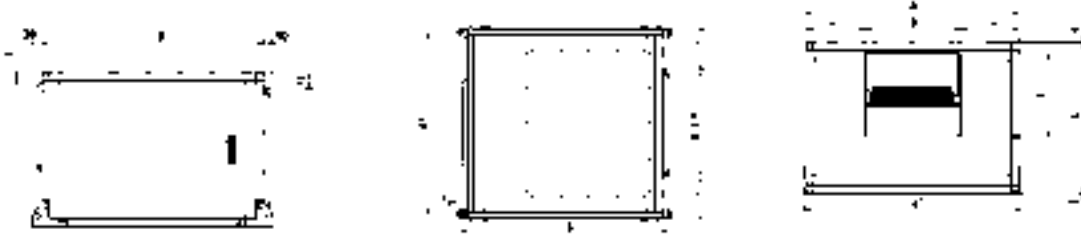
Performance

Airflow tested in accordance with BS848 Part 1
AMCA 210-85
ASHRAE 51-1985
UNE 100-212-89



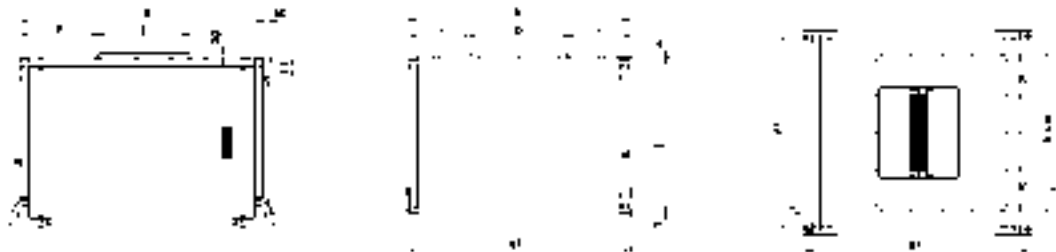
Fan Dimensions (mm)

CVHT 9-10-12-15-18 Horizontal



Type	A	A1	a1	B	B1	C	D	∅ d1	E	F	F1	GxH
CVHT-9/9-H	759	701	782	783	862.5	592	304	15	264	65.5	96	400 x 400
CVHT-10/10-H	821	763	844	837	916.5	618	337	15	293.5	65.5	84	450 x 450
CVHT-12/12-H	945	887	968	959	1038.5	680.5	400	15	345	65.5	90.25	500 x 500
CVHT-15/15-H	1104	1046	1127	1092	1171.5	776	476	15	407	65.5	88	600 x 600
CVHT-18/18-H	1250	1192	1273	1278	1357.5	882	560	15	485	65.5	91	700 x 700

CVHT 9-10-12-15-18 Vertical

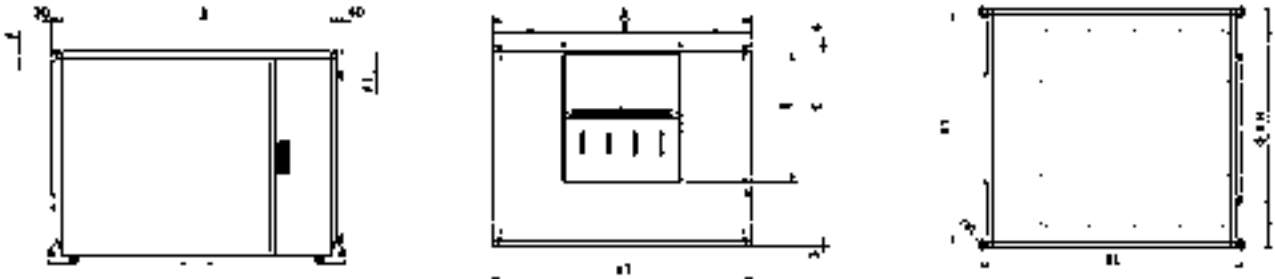


Type	A	A1	a1	B	B1	C	D	∅ d1	E	F	F1	GxH
CVHT-9/9-V	759	701	782	783	862.5	592	304	15	264	316.5	96	400 x 400
CVHT-10/10-V	821	763	844	837	916.5	618	337	15	293.5	316.5	84	450 x 450
CVHT-12/12-V	945	887	968	959	1038.5	680.5	400	15	345	343.5	90.25	500 x 500
CVHT-15/15-V	1104	1046	1127	1092	1171.5	776	476	15	407	368.5	88	600 x 600
CVHT-18/18-V	1250	1192	1273	1278	1357.5	882	560	15	485	408.5	91	700 x 700

Cabinet Fans (CV)

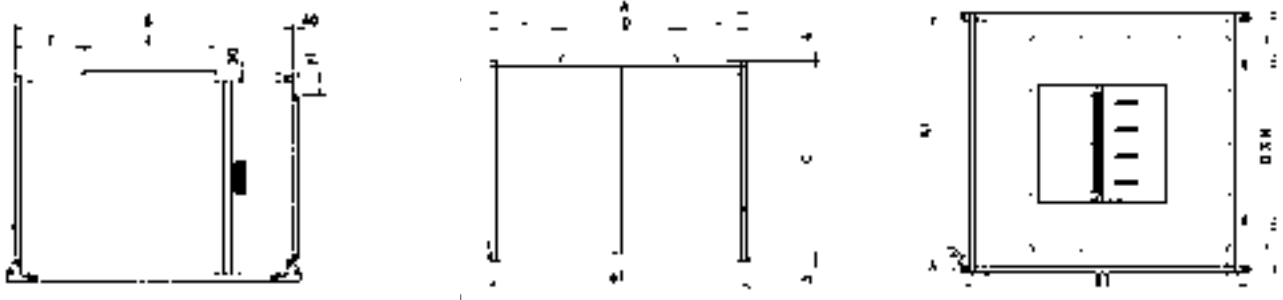
Fan Dimensions (mm)

CVHT 20-22-25-30 Horizontal



Type	A	A1	a1	B	B1	C	D	ø d1	E	F	F1	GxH
CVHT-20/20-H	1414	1356	1437	1495	1574.5	1051	636	15	631	65.5	125.5	800 x 800
CVHT-22/22-H	1542	1448	1565	1638	1717.5	1142.5	697.5	15	705.5	65.5	121.25	900 x 900
CVHT-25/25-H	1697	1639	1720	1800	1879.5	1278	801	15	805	65.5	139	1000 x 1000
CVHT-30/28-H	1914	1856	1937	2005	2084.2	1495.5	874.5	15	952.5	65.5	147.75	1200 x 1200

CVHT 20-22-25-30 Vertical



Type	A	A1	a1	B	B1	C	D	ø d1	E	F	F1	GxH
CVHT-20/20-V	1414	1356	1437	1495	1574.5	1051	636	15	631	451.5	125.5	800 x 800
CVHT-22/22-V	1542	1448	1565	1638	1717.5	1142.5	697.5	15	705.5	498	121.25	900 x 900
CVHT-25/25-V	1697	1639	1720	1800	1879.5	1278	801	15	805	497.5	139	1000 x 1000
CVHT-30/28-V	1914	1856	1937	2005	2084.2	1495.5	874.5	15	952.5	496.5	147.75	1200 x 1200

General Performance Characteristics

The range consists of 9 unit sizes with either horizontal or vertical discharge models covering an airflow range of up to 15.8m³/s.

Accessories

A full range of accessories is available to compliment this fan range including

- Discharge Protection Guard - CVD
- Cover for exterior mounted application (Horizontal discharge) - CHTI

Typical Ordering Designation

Model	Dia.	Discharge	Speed	Motor kW
CVHT -	18/18	- V	- 500rpm	- 0.75

For full performance and selection, please contact our Technical Support Team on 0844 856 0595 for details.

Vent-Axia Project Partners

The Vent-Axia Technical Support Team is trained to provide assistance in fan selection, picking the right product for the right application, as well as working as project partners offering design advice, project management and after sales support.

The experienced team uses a purpose designed Fan Selection Program to select the correct product and provide comprehensive performance and dimensional information.

For full performance and selection, please contact our Technical Support Team

Tel: 0844 856 0595

Fax: 01293 455197

E-mail: info@vent-axia.com

Accessories & Controls - Non-Residential

Whether you are looking for ducting, controllers or accessories this is the section where you can find the details.

Within each product area you can find product specific accessories here you can find common items which fit a range of fans.

This simple easy to use reference section provides you with all the details you need to complete the selection and specification of your project.



Range



Vent-Axia®

eDemand Controllers Electronic voltage controller



Features and Benefits

- Demand ventilation control for A/C speed controllable Fans
- Quick start-up by pre-programmed modes
- IP54 Rated
- Total motor protection using thermistor connection
- LCD multi function display
- Menu language – English, German, French, Italian
- 2 x analogue input for sensors (0-10V – separate power supply required, 0-20mA)
 - CO₂ Control
 - Temperature Control
 - Constant Pressure Control
 - Manual remote speed adjuster (0-20 mA)
- Min/Max speed limitation - Volume range set point adjustment
- 2 x Programmable relay output - Fault Condition, master slave
- Programmable 2x Digital inputs – On/Off, external fault, Manual speed control
- RS485 Modbus Interface
- Master/Slave capability via 0-10V output

Equipment/Function

- Mains switch with by-pass function
- Pin protection, to save user settings
- Quick start up by pre-programmed modes
- Max environmental conditions 40 Deg C, 85% Humidity no condensation
- Readout events memory (checking Fault log)

Technical

Line voltage 1~ 230V (-15% / + 10%)
50/60 Hz

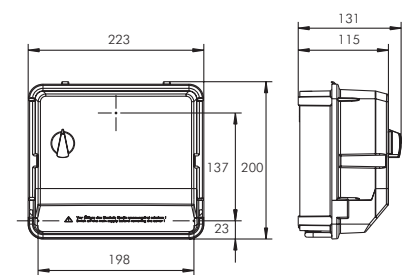
Line Voltage 3~208V - 415V (-10%/+6%),
50/60 Hz

Part No	444164	444165	444166	444167	444168
Voltage	1 Phase	1 Phase	3 Phase	3 Phase	3 Phase
Rated current / A	6	10	5	10	15
Max. line fuse / A	10	16	10	16	20
Max. heat dissip. /W	20	40	25	50	70
Weight / kg	1.4	2.4	2.4	2.8	4.8

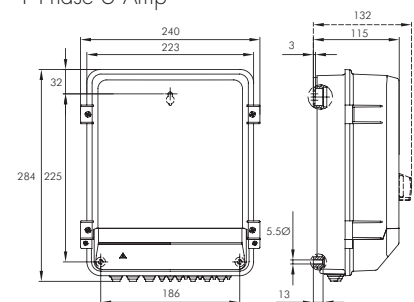
Interference emissions EN 61000-6-3
(unshielded motor cable)
Interference immunity EN 61000-6-2

For suitability check relevant fan accessory section

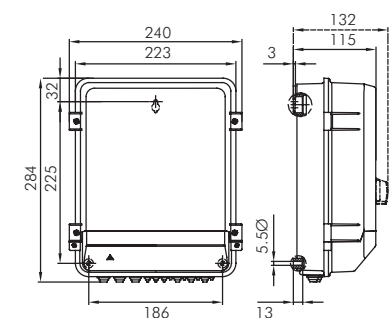
Dimensions (mm)



1 Phase 6 Amp



1 Phase 10 Amp



3 Phase 5/10 /15 Amp

eDemand Controllers

Frequency Inverter 1~ to 3~



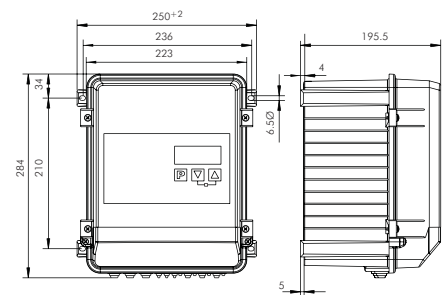
Features and Benefits

- Demand ventilation control for A/C speed controllable Fans
- Quick start-up by pre-programmed modes
- IP54 Rated
- Total motor protection using thermistor connection
- LCD multi function display
- Menu language – English, German, French, Italian
- 2 x analogue input for sensors (0-10V – separate power supply required, 0-20mA)
 - CO₂ Control
 - Temperature Control
 - Constant Pressure Control
 - Manual remote speed adjuster (0-20 mA)
- Min/Max speed limitation - Volume range set point adjustment
- 2 x Programmable relay output - Fault Condition, master slave
- Programmable 2x Digital inputs – On/Off, external fault, Manual speed control
- RS485 Modbus Interface
- Master/Slave capability via 0-10V output

Equipment/Function

- Pin protection, to save user settings
- Quick start up by pre-programmed modes
- Integrated SINEFILTER
- Max environmental conditions 40 Deg C, 85% Humidity no condensation
- Readout events memory (checking Fault log)
- Speed control of fans without additional (electromagnetic) motor noise
- Parallel operation of fans, no risk of motor damage (screened motor cables are not required)
- Active power factor adjustment for sinusoidal input current
- Integrated process controller (PID free programmable)

Dimensions (mm)



1 Phase 5 Amp

Technical

Line voltage 1~ 208 ... 277 V (-10 % / +10 %), 50/60 Hz

Output voltage 3~230V (max. 250V) for 3~ motors in Δ connection

Part No	444177
Voltage	1 Phase
Rated current / A	5
Max. line fuse / A	10
Max. heat dissip. /W	205
Weight / kg	6.6

Max output Frequency 100 Hz
 Clock frequency 16 Hz
 Interference emissions EN 61000-6-3
 (unshielded motor cable)
 Interference immunity EN 61000-6-2

For suitability check relevant fan accessory section

eDemand Controllers Frequency Inverter 3~



Features and Benefits

- Demand ventilation control for A/C speed controllable Fans
- Quick start-up by pre-programmed modes
- IP54 Rated
- Total motor protection using thermistor connection
- LCD multi function display
- Menu language – English, German, French, Italian
- 2 x analogue input for sensors (0-10V – separate power supply required, 0-20mA)
 - CO₂ Control
 - Temperature Control
 - Constant Pressure Control
 - Manual remote speed adjuster (0-20 mA)
- Min/Max speed limitation - Volume range set point adjustment
- 2 x Programmable relay output - Fault Condition, master slave
- Programmable 2x Digital inputs – On/Off, external fault, Manual speed control
- RS485 Modbus Interface
- Master/Slave capability via 0-10V output

Equipment/Function

- Pin protection, to save user settings
- Quick start up by pre-programmed modes
- Integrated SINEFILTER
- Max environmental conditions 40 Deg C, 85% Humidity no condensation
- Readout events memory (checking Fault log)
- Speed control of fans without additional (electromagnetic) motor noise
- Integrated SINEFILTER between phase to phase & phase to ground
- Parallel operation of fans, no risk of motor damage (screened motor cables are not required)
- Active power factor adjustment for sinusoidal input current
- Integrated process controller (PID free programmable)

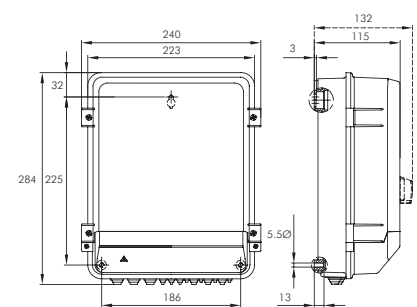
Technical

Line voltage 3 ~ 208...480 V (-15 % / +10 %), 50/60 Hz

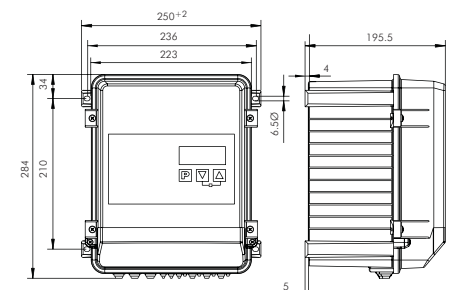
Part No	444172	444173	444174	444175	444176
Rated current / A	2.5	5	8	14	18
Max. line fuse / A	6	10	10	16	20
Max. heat dissip. /W	50	100	150	310	400
Weight / kg	3.3	7.2	7.9	8.7	9.1

Max output Frequency 100 Hz
 Clock frequency 16 Hz
 Interference emissions EN 61000-6-3 (unshielded motor cable)
 Interference immunity EN 61000-6-2
 For suitability check relevant fan accessory section

Dimensions (mm)



2.5 Amps



5/8/14/18 Amps

eDemand Controllers Frequency Inverter 1~



Features and Benefits

- Demand ventilation control for A/C speed controllable Fans
- Quick start-up by pre-programmed modes
- IP54 Rated
- Total motor protection using thermistor connection
- LCD multi function display
- Menu language – English, German, French, Italian
- 2 x analogue input for sensors (0-10V – separate power supply required, 0-20mA)
 - CO₂ Control
 - Temperature Control
 - Constant Pressure Control
 - Manual remote speed adjuster (0-20 mA)
- Min/Max speed limitation - Volume range set point adjustment
- 2 x Programmable relay output - Fault Condition, master slave
- Programmable 2x Digital inputs – On/Off, external fault, Manual speed control
- RS485 Modbus Interface
- Master/Slave capability via 0-10V output

Equipment/Function

- Pin protection, to save user settings
- Quick start up by pre-programmed modes
- Integrated SINEFILTER
- Max environmental conditions 35 Deg C, 85% Humidity no condensation
- Readout events memory (checking Fault log)
- Speed control of fans without additional (electromagnetic) motor noise
- Parallel operation of fans, no risk of motor damage (screened motor cables are not required)
- Active power factor adjustment for sinusoidal input current
- Integrated process controller (PID free programmable)

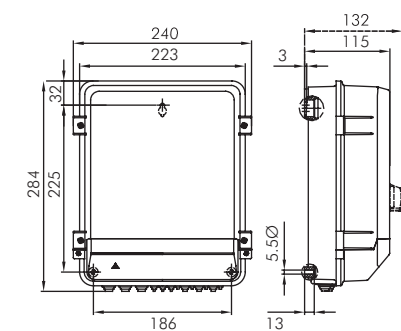
Technical

Line voltage 1~ 208 ... 277 V (-10 % / +10 %), 50/60 Hz

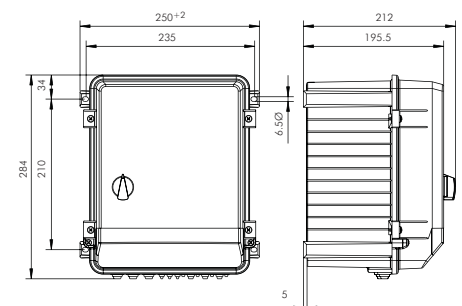
Part No	444169	444170	444171
Voltage	1 Phase	1 Phase	1 Phase
Rated current / A	4	6	10
Input rated Current/ A	3.85	5.85	-
Max. line fuse / A	6	10	16
Max. heat dissip. /W	57	102	130
Weight / kg	3.4	5.7	6.8

Max output Frequency 100 Hz
 Clock frequency 16 Hz
 Interference emissions EN 61000-6-3 (unshielded motor cable)
 Interference immunity EN 61000-6-2
 For suitability check relevant fan accessory section

Dimensions (mm)



4 Amps



6/10 Amps

eDemand Auto Changeover Panels

Features and Benefits

- IP54 Enclosure
- eDemand compatible
- Single & Three Phase models
- Adjustable Duty/Share Timer
- Automatic Changeover (Fan Fail)
- Fan Failure Alarm contacts

Offering Demand Ventilation control for the wide range of standard AC speed controllable Twin fans, these new changeover panels have been designed to compliment the new range of eDemand Controllers and are fully compatible.

Speed control input is suitable for use with the following eDemand Controller ranges

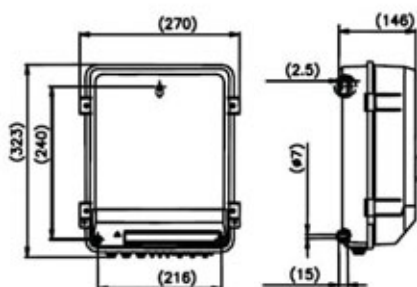
- Single & Three Phase electronic speed controllers.
- Single & Three Phase inverters.
- Single to Three Phase inverter.

Models

Three Phase 10 Amp
Single Phase 10 Amp
Single Phase 20 Amp

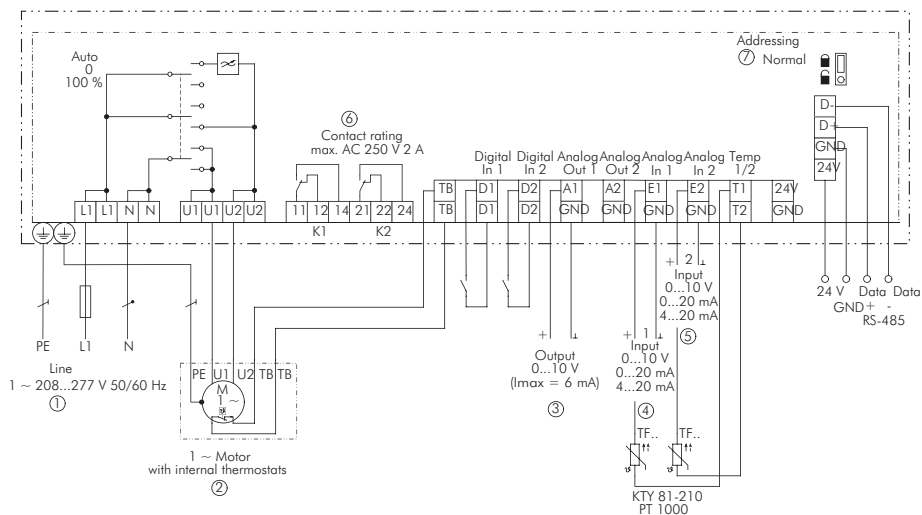
Stock Ref
444179
444180
444181

Dimensions (mm)



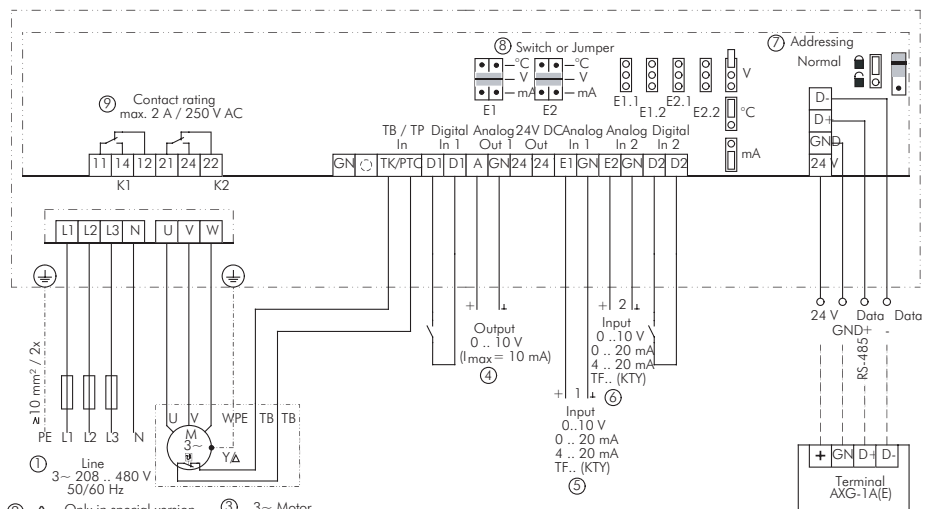
Connection Diagrams

Single Phase Inverters for 444169, 444170 & 444171



- 1 Line 1 ~ 208...277 V, 50/60 Hz
- 2 1 ~ Motor with internal thermostats
- 3 Output 0...10 V (I_{max} = 6 mA)
- 4 Input 1: 0...10 V, 0...20 mA, 4...20 mA, TF.. (KTY81-210), PT1000
- 5 Input 2: 0...10 V, 0...20 mA, 4...20 mA, TF.. (KTY81-210), PT1000
- 6 Contact rating max. 2A / 250 V AC
- 7 Addressing, normal lock closed

Three Phase Inverters for 444172, 444173, 444174, 444175 & 444176

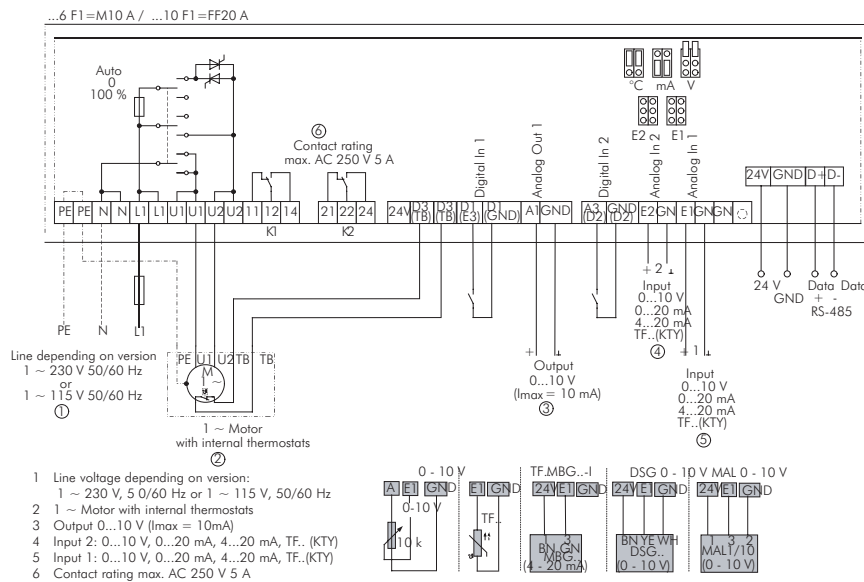


- 1 Line 3 ~ 208...480 V, 50/60 Hz
- 2 Only in special version suitable for IT network!
- 3 3 ~ Motor with internal thermostats
- 4 Output 0...10 V (I_{max} = 10 mA)
- 5 Input 1: 0...10 V, 0...20 mA, 4...20 mA, TF.. (KTY)
- 6 Input 2: 0...10 V, 0...20 mA, 4...20 mA, TF.. (KTY)
- 7 Addressing, normal lock closed
- 8 Switch or jumper depending on version

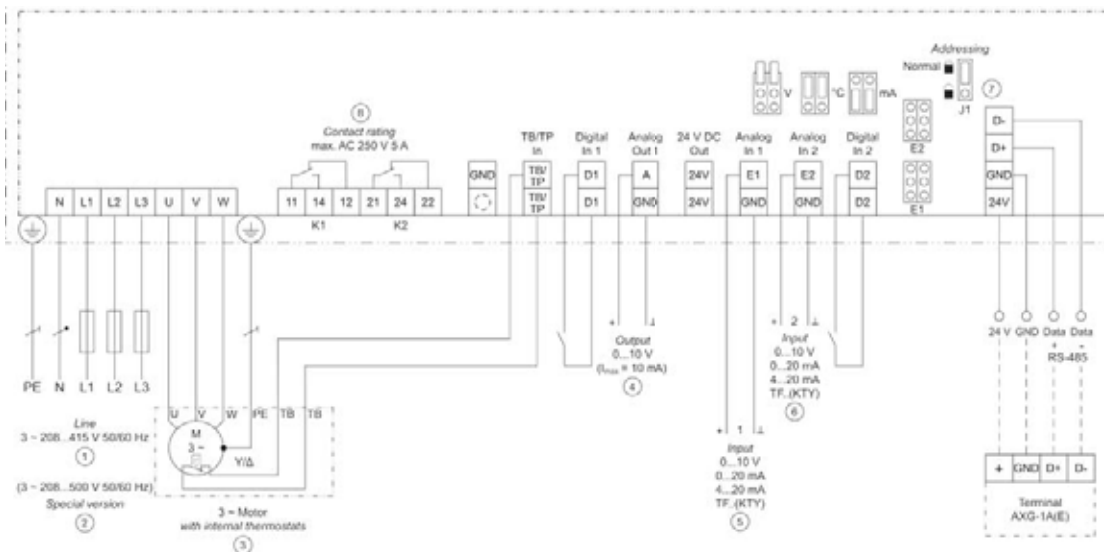


Connection Diagrams

Single Phase Electronic for 444164 & 444165



Three Phase Electronic for 444166, 444167 & 444168



AirTrack Heaters



Features and Benefits

- Supply and extract fan outputs
- Air Flow proving switch
- Run on timer
- Solid state switching - no mechanical switching breakdown
- Indicators for control status
- Temperature sensor

The Vent-Axia range of sheathed element air duct heaters with built in control system provide a safe method of air heating which is economical to install and operate.

Construction

Circular Duct Air Heaters comprise of electric resistance elements, mounted in a pre-galvanised steel casing. Elements consist of a nickel/chromium resistance wire, spirally wound, insulated by compacted magnesium oxide powder and fitted within a stainless steel tube. The ends of each element are sealed with silicone rubber. Elements are return bent and mounted in the terminal box with airtight fixing glands.

Standard terminal boxes are made from pre-galvanised sheet steel, 25mm conduit holes and earth stud are provided. The terminal boxes conform to IP30.

Every heater is fitted with a high temperature safety cut out operating at 120°C complete with push button manual reset.

Available in 100, 125, 150, 200, 250, 315, 400 and 500mm diameter sizes. The air velocity across the heater elements must be greater than 2m/s and installed a minimum distance of one metre from the exhaust outlet of the fan unit.

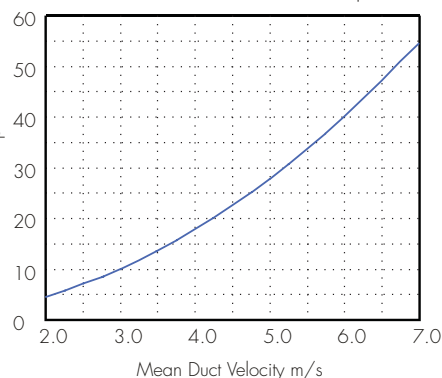
Mounting

Heaters can be mounted in any position, vertical or horizontal. Care should be taken to ensure the cut out remains operational.

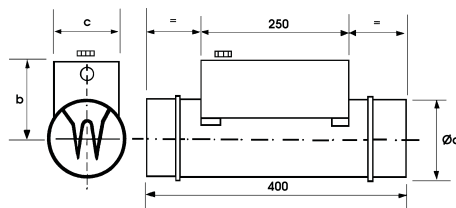
Controls

The Vent-Axia range of duct heaters with built in controls are designed to be cost effective and space saving whilst maintaining the features normally associated with larger control panels.

Duct Air Heater Resistance Graph

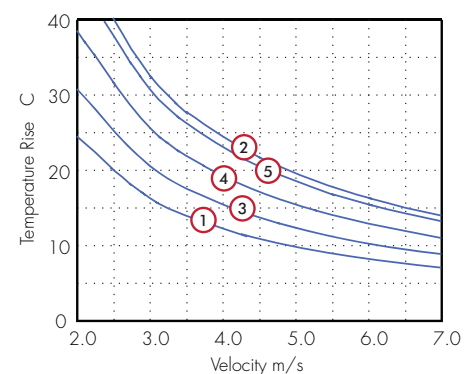


Dimensions (mm)

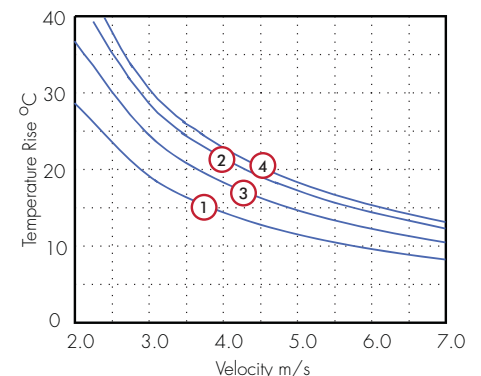


Stock Ref. No.	a	b	c	kg
105 31 100T1	100	160	117	3
105 31 125T1	125	160	117	3.8
105 31 150T1	150	160	117	4
105 31 200T1	200	160	117	6
105 31 250T1	250	160	117	7.5
105 31 315T1	315	160	117	8.2
105 31 315T3	315	160	117	8.5
105 31 400T3	400	160	117	9.2
105 31 500T3	500	160	117	10

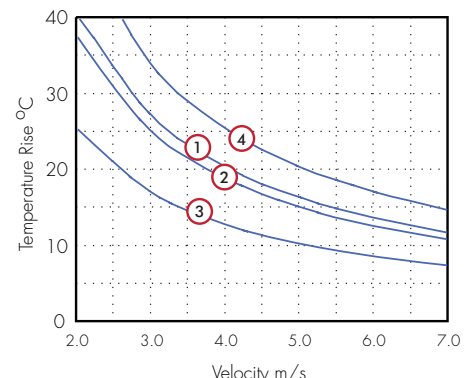
Duct Air Temperature Rise



- | | |
|--------------------|-----------------------|
| ① 10531250T1 (3kW) | ④ 10531315T1 (7.5 kW) |
| ② 10531250T1 (6kW) | ⑤ 10531315T1 (9kW) |
| ③ 10531315T1 (6kW) | 10531315T3 (6kW) |



- | | |
|------------------------|------------------------|
| ① 10531400T3 (9 kW) | ③ 10531500T3 (18 kW) |
| ② 10531400T3 (13.5 kW) | ④ 10531500T3 (22.5 kW) |



- | | |
|-----------------------|---------------------|
| ① 10531125T1 (1.25kW) | ③ 10531200T1 (2kW) |
| ② 10531100T1 (0.75kW) | ④ 10531200T1 (4 kW) |
| 10531150T1 (1.6kW) | |



Electronic Controllers

The 2.5 amp controller provides electronic motor speed control. On/Off with neon indicator, infinitely variable speed slider control, minimum speed presettable and optional sensor mode. Connections for use with external sensors are provided.

3 and 6 amp electronic controllers provide infinitely variable speed control from preset minimum to maximum. Features an On/Off switch with neon indicator and speed control knob. Built in 'Hard Start' auto maximum speed for a few seconds.

10 amp electronic controller provides infinitely variable speed control from preset minimum to maximum and feature On/Off Override switch for maximum speed. Neon indicator and built-in 'Hard Start' auto-maximum speed for a few seconds.

NB. For ambient temperatures between 30-40°C the controller rating must be reduced by 2% for every 1°C above 30°C, eg. reduce by 10% at 35°C.

Stock Ref. No.	Max. amps	Dimensions (mm) W x H x D	Weight (kg)
W10303102M	2.5	156 x 86 x 53	0.4
10303103A	3	150 x 90 x 65	0.5
10303106A	6	150 x 90 x 65	0.5
10303110A	10	167 x 220 x 130	1.3



Five Step Auto Transformers

Used in conjunction with speed controllable fans to provide 5 stepped speed without electronic motor 'hum'. Several fans can be connected to one transformer provided their combined load does not exceed the controller rating.

Single phase: 3.0, 5.0, 7.5 and 13.6 amp. Three phase: 1.4, 4.0, 7.0 and 11.0 amp.

Rotary switch giving On/Off and five speeds.

Output voltages at 240V/1PH/50Hz 0, 90, 115, 140, 175, 240 volts.

Output voltages at 415V/3PH/50Hz 0, 65, 110, 175, 285, 415 volts.

Neon indicator. Enclosures are protected to **IP54**.

Multi-unit Speed Control

When more than one fan is required to be controlled by one Auto Transformer, then the total combined FLC of all the fan units must not exceed 90% of the controllers maximum rating and not more than 2 x the total SC. The TKs must be wired in series. **Fans without TKs or in-built S.T.O.P must not be wired in multiples.**

Single Phase

Stock Ref. No.	Max. amps	Dimensions (mm) W x H x D	Weight (kg)
10314103	3	135 x 170 x 117	4
10314105	5	167 x 219 x 108	5
10314107	7.5	200 x 253 x 170	9
10314113	13.6	320 x 240 x 190	13

Three Phase

Stock Ref. No.	Max. amps	Dimensions (mm) W x H x D	Weight (kg)
10314301	1.4	200 x 253 x 170	6
10314304	4	240 x 320 x 190	13
10314307	7	300 x 400 x 150	27.2
10314311	11	300 x 400 x 150	34.2



Direct on-line starters

Suitable for all models. Push button Start/Stop. 240V contactor coil for single phase applications and three phase supplies where a neutral is present. 415V contactor coil for three phase supplies where a neutral is not present or required.

Protection is given by an overload relay which is selected to match the load of the fan.

Enclosures are protected to **IP65**.

Overloads

Stock Ref.	DOL Rating (Amps)	Star Delta Rating (Amps)
444696	0.16-0.25	-
444697	0.25-0.4	-
444698	0.4-0.63	-
444699	0.63-1.0	-
444700	1.0-1.6	-
444701	1.6-2.25	2.7-4.3
444702	2.5-4.0	4.3-6.9
444703	4.0-6.0	6.9-10
444704	5.5-8.0	9.5-13.8
444705	7-10	12-17
444706	10-13	17-22
444707	13-18	22-31
444708	18-25	31-43
444709	23-32	39-55

DOL & Star Delta Starters

Part No	Phase	DOL Rating (Amps)	Star Delta Rating (Amps)
444744	1	12	-
444745	1	25	-
444746	1	32	-
444747	3	12	-
444748	3	25	-
444749	3	32	-
444750	3	50	-
444842	-	-	21
444843	-	-	30

RSC ELV Speed Selector (Extra Low Voltage)



Features and Benefits

- Stand alone two speed remote control of any industrial Vent-Axia speed controllable fan.
- Maximum rating 9 amp, 1 phase or 3 phase.
- Remote control via Vent-Axia sensors or relay in the BMS system.
- Night setback facility - saves energy.
- Extra low voltage wiring between controller and remote sensor.
- Enclosure protected to IP65.

Speed Selector

The RSC ELV (Extra Low Voltage) two speed selector has been especially developed for use with Industrial products to offer energy saving on all ventilation systems. Typically, ventilation systems are designed to cope with periods of peak demand, extracting expensively heated and conditioned air even through periods of low occupancy. Vent-Axia's Two Speed Selector works by switching the power source between mains supply and a speed controller enabling reduction in the volume of air extracted during periods of low demand. The selection of power can be achieved by a Vent-Axia sensor or timer with volt free contacts or via a relay from the BMS (Building Management System). Connections between the RSC and the sensor are Extra Low Voltage.

The RSC ELV two speed selector comprises of three modules, the RSC controller (103 14 230A) an electronic or 5-step auto-transformer appropriately rated to suit the fan and a Vent-Axia compatible sensor.

The two speed changeover of the RSC ELV 24 is controlled by Vent-Axia compatible auto sensors utilising Extra Low Voltage wiring.

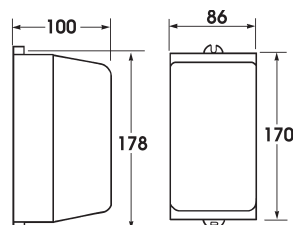
With up to five speeds being available selected from a 5-step auto transformer, controller.

Electrical

9 Amp maximum rating on single phase 220V-240V/1/50Hz and three phase 380-415V/3/50Hz.

Dimensions

RSC 10314230A



Compatible Auto Sensors



ThermoSwitch

Operates on either a fall or rise in temperature for extraction of excess heat. Range 6°C to 30°C.

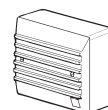
Stock Ref. No. 563502B



7-Day TimeSwitch

7-Day timer with analogue display. Override facility. Gives twelve On or Off positions per day.

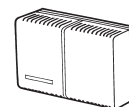
Stock Ref. 563515



Ecotronic Humidistat

An electronic On/Off humidistat with concealed humidity adjustment 65-90% RH with pullcord override. Neon indicator. Changeover relay switch.

Stock Ref. No. 563550A

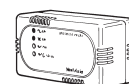


HumidiSwitch

Actuates ventilating units on either a rise or fall in humidity.

Range 20% to 80% RH.

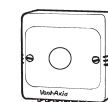
Stock Ref. No. 563501D



Air Quality Sensor

Automatically reacts to tobacco smoke, smells and toilet odours to trigger the system or switch to high speed.

Stock Ref. No. 563506B



Visionex PIR Detector

Ceiling mounted movement detector. Adjustable overrun timer 5 to 25 minutes. Fits any UK single gang mounting box. Range of detection up to 10 metres. 220-240V

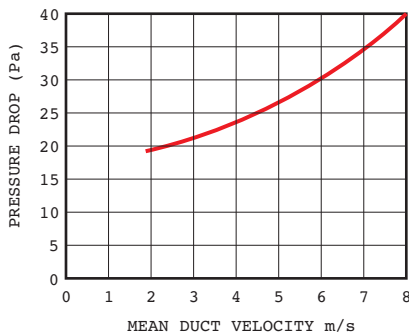
Stock Ref. No. 459623A

Accessories

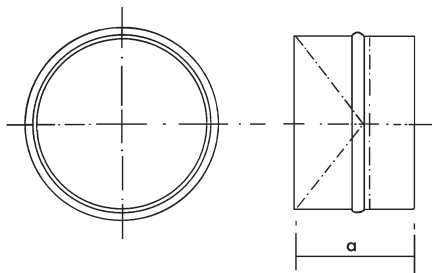


Backdraught Shutters

Duct sleeve manufactured from galvanised steel. The circular butterfly shutter is fitted with a return spring for positive closing. Available in 100, 125, 150, 200, 250, and 315mm diameter sizes.



Dimensions



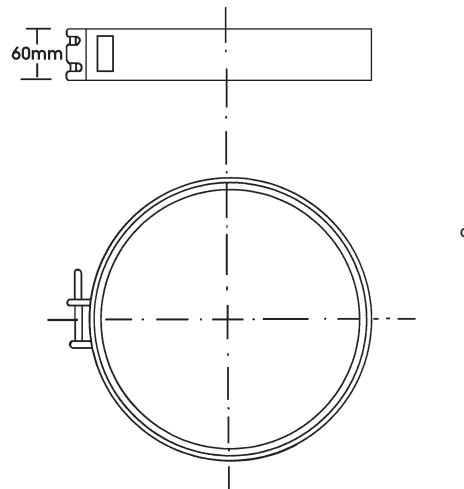
Dia	a	Stock Ref. No.
100mm	80mm	10542100
125mm	100mm	10542125
150mm	100mm	10542150
200mm	140mm	10542200
250mm	140mm	10542250
315mm	140mm	10542315



Fast Clamps

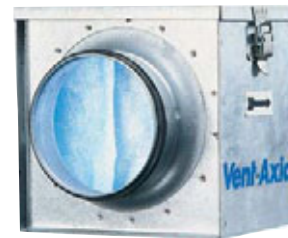
Used to connect rigid ductwork to Airtrak fans. The clamp is manufactured from galvanised steel and features a thick neoprene rubber pad which is fixed on the inside. The clamp acts effectively as a vibration absorber and a noise suppressor. The fast clamp is tightened by two quick release bolts. Available in 100, 125, 150, 200, 315 and 400mm diameter sizes. Max. operating temperature 150°C.

Dimensions



Dia	Stock Ref. No.
100mm	10540100
125mm	10540125
150mm	10540150
200mm	10540200
250mm	10540250
315mm	10540315

Accessories & Dimensions



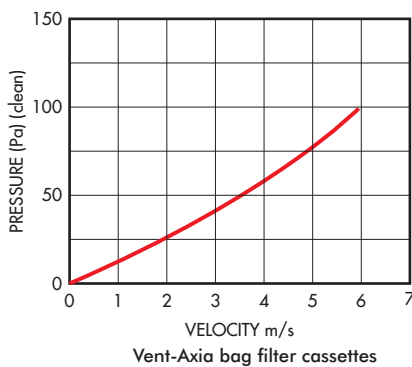
Bag Filter Cassettes

Bag filter cassettes are available in a range of seven sizes. The synthetic filter medium is to EU5 Eurovent 4/5 94% arrestance. The housing is galvanised sheet metal with spigots fitted with integral seals. Quick release catches allow easy access to the bag filter. Replacement bag filters are available.

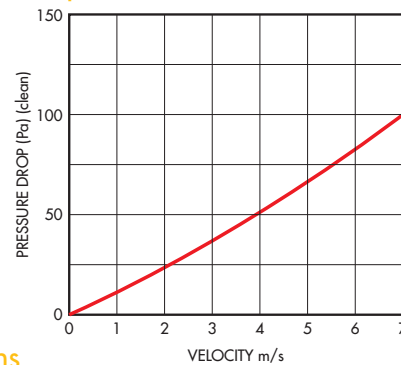
Pre-Filter Cassettes

Pre-filter cassettes are available in a range of seven sizes and are tested to EU3 (Eurovent 4/5) 85% arrestance. Housing is in galvanised sheet metal. Spigots are fitted with integral seals. Quick release catches allow access to the filter medium. Replacement pre-filters are available.

Resistance Graph

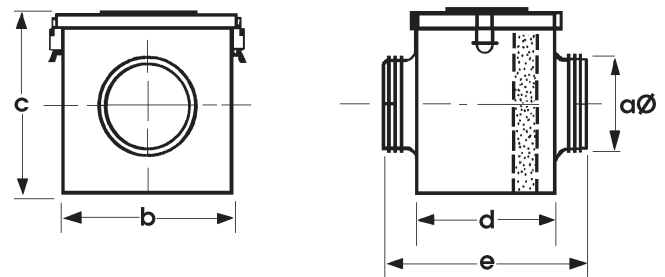


Resistance Graph



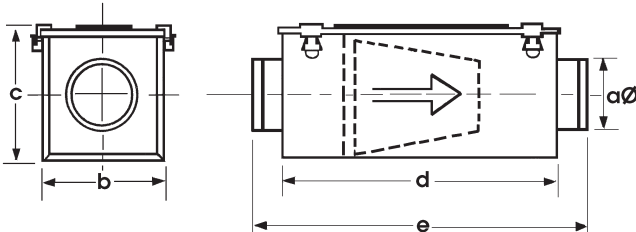
Dia	Stock Ref. No.	Spare filter
100mm	10533100	10557150
125mm	10533125	10557150
150mm	10533150	10557150
200mm	10533200	10557200
250mm	10533250	10557250
315mm	10533315	10557315
400mm	10533400	10557400
500mm	10533500	10557500

Dimensions



Stock Ref.	Øa	b	c	d	e	kg
10532100A	100	205	170	120	227	2
10532125A	125	215	205	140	252	2
10532150A	150	265	235	155	267	3
10532200A	200	315	275	180	302	3.5
10532250A	250	365	325	230	352	5.5
10532315A	315	425	390	330	452	7
10532400A	400	515	495	455	487	10.5

Dimensions



Stock Ref.	Øa	b	c	d	e	kg
10533100	100	200	203	450	540	4
10533125	125	200	203	450	540	4
10533150	150	200	203	450	540	4
10533200	200	245	248	450	560	5
10533250	250	295	298	500	620	7
10533315	315	345	348	550	670	8.5
10533400	400	445	448	650	770	12
10533500	500	600	600	650	770	12

Diameter	Pre-filter cassettes Stock Ref. No.	Spare filter Stock Ref. No.
100mm	10532100A	10556100
125mm	10532125A	10556125
150mm	10532150A	10556150
200mm	10532200A	10556200
250mm	10532250A	10556250
315mm	10532315A	10556315
400mm	10532400A	10556400

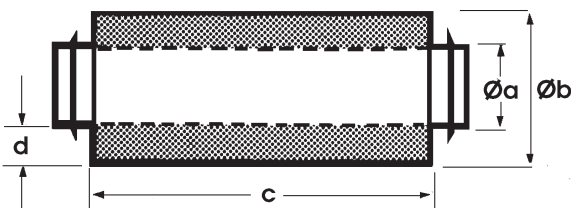
Duct Attenuators



Duct Attenuators

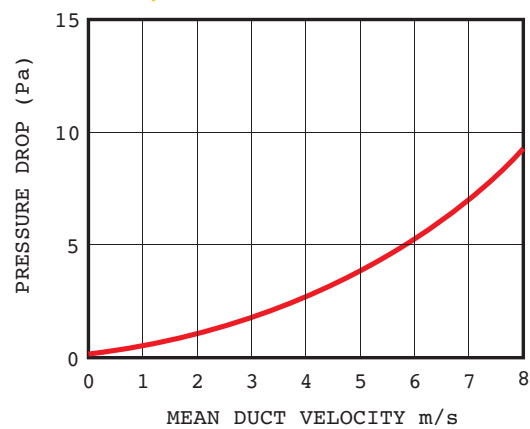
Easily installed, the duct attenuator is used in the system to absorb sound. Available in 100, 125, 150, 200, 250, 315 and 400mm diameter sizes. Manufactured in galvanised sheet metal with 50mm Rockwool sound absorption material. Maximum operating temp. 100°C.

Dimensions



Stock Ref.	Øa	Øb	c	d	kg
10534100	100	200	300	50	2.4
10534125	125	225	300	50	2.6
10534150	150	250	300	50	4.1
10535100	100	200	600	50	2.9
10535125	125	225	600	50	4.5
10535150	150	250	600	50	5.8
10535200	200	315	600	57.5	7
10535250	250	355	600	52.5	8.6
10535315	315	450	600	67.5	9.8
10535400	400	630	600	115	18
10536100	100	200	900	50	6.6
10536125	125	225	900	50	7.6
10536150	150	250	900	50	9
10536200	200	315	900	57.5	10
10536250	250	355	900	52.5	12.2
10536315	315	450	900	67.5	15
10536400	400	630	900	115	21
10537200	200	315	1200	57.5	14
10537250	250	355	1200	52.5	18
10537315	315	450	1200	67.5	21
10537400	400	630	1200	115	27

Resistance Graph



Duct Attenuator Insertion Losses

Stock Ref.	Length	Duct Ø	63	125	250	500	1k	2k	4k	8k
10534100	300	100	3	4	10	18	23	25	25	12
10534125	300	125	3	4	8	17	21	23	21	11
10534150	300	150	3	3	6	14	20	23	21	11
10535100	600	100	5	8	16	33	39	40	36	17
10535125	600	125	4	8	13	30	34	35	31	15
10535150	600	150	4	7	13	23	29	36	31	15
10535200	600	200	4	5	11	21	26	32	20	9
10535250	600	250	3	6	10	19	24	29	19	8
10535315	600	315	3	5	8	16	21	22	16	15
10535400	600	400	3	4	7	14	18	19	14	13
10536100	900	100	10	13	20	39	45	38	35	18
10536125	900	125	9	12	18	37	41	37	32	16
10536150	900	150	8	9	15	30	37	37	33	17
10536200	900	200	7	9	14	27	31	36	25	12
10536250	900	250	5	8	13	24	30	31	22	11
10536315	900	315	4	7	11	20	31	27	17	12
10536400	900	400	4	6	9	18	26	24	16	11
10537200	1200	200	10	12	17	35	40	43	27	13
10537250	1200	250	7	9	15	31	36	38	26	12
10537315	1200	315	6	8	13	23	32	30	18	11
10537400	1200	400	5	8	12	20	29	27	17	9



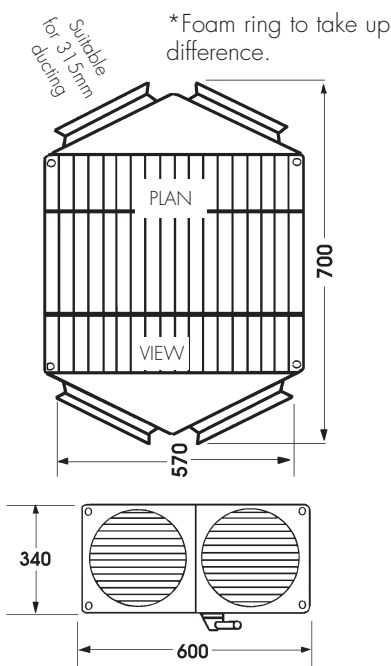
Heat Exchange Unit

Heat Exchange Unit

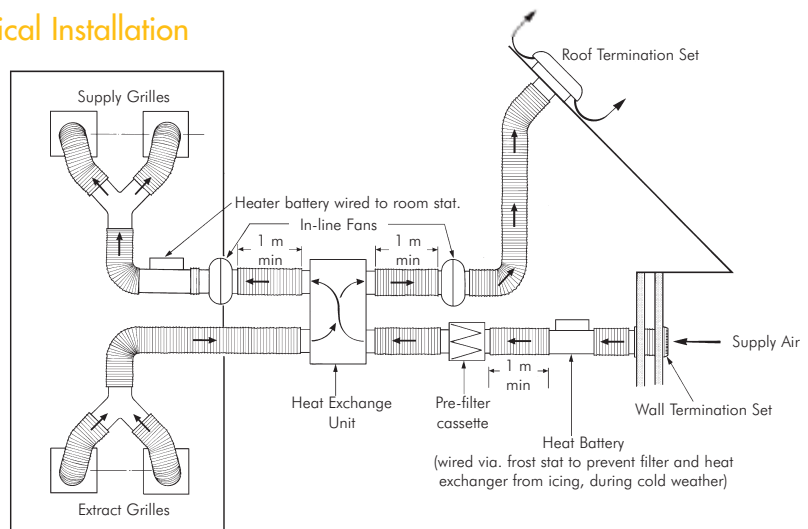
A 'stand alone' heat exchange module which will transfer up to 70% of the outgoing heat to incoming air. Polymeric construction with spigots to suit 200, 250 and 315mm flexible ductwork. Module accessible for routine cleaning. Condensate outlet provided. Ideal for use in air conditioned environments. The Heat Exchanger works at the same high efficiency, automatically keeping a cool room cool.

By transferring heat from the extracted stale air, fresh pre-heated air is supplied to the room from outside, maintaining oxygen levels and preventing stuffiness. Maximum operating temperature 0°C to 70°C. (Weight 9kg)

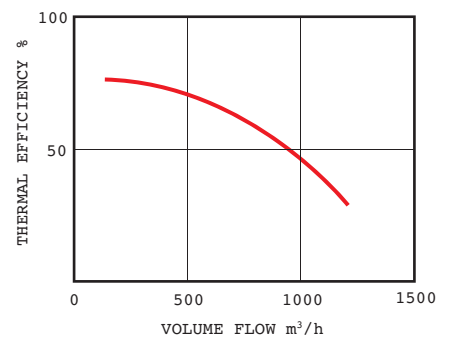
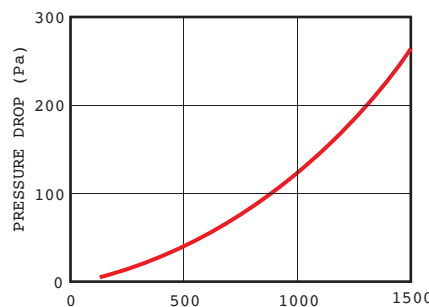
Dimensions



Typical Installation

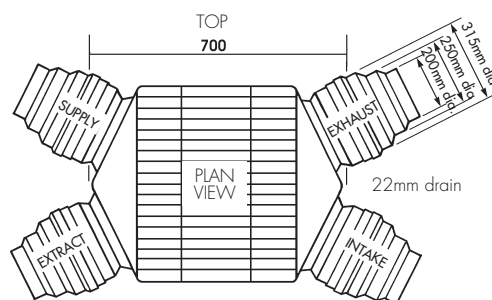


Heat Exchange Resistance Graph Thermal Efficiency Graph



WARNING

Both airflows to be subjected to the same conditions (ie. negative or positive pressure)
Maximum differential pressure must not exceed 150Pa.



Vent-Axia heat exchange unit

Dia.	Stock Ref.	Weight
315mm	10538290 + 10577315	9 kg

Vent-Axia heat exchange unit

Dia.	Stock Ref.
200mm	10538290 + 10577315 + 10578315
250mm	10538290 + 10577315 + 10578315

Accessories & Dimensions



Aluminium Flexible Ducting

Lightweight, easy to install ducting made of 5 layer aluminium foil/polyester on a steel wire helix. The strength of the helix resists distortion and damage due to rough handling. The ducting conforms to **Class 1 of BS 476 Part 7**. Available in 100, 125, 150, 200, 250, 315 and 400mm diameter sizes to fit spigot sizes on all modular components in the Airtrak range. Maximum operating temperature 200°C. Standard length: 10 metres.

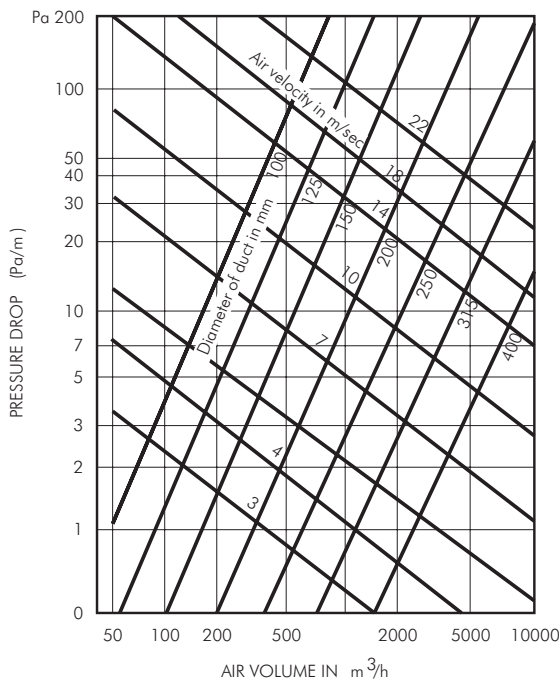
Dia	Vent-Axia flexible ducting Stock Ref. No.
100mm	10539100
125mm	10539125
150mm	10539150
200mm	10539200
250mm	10539250
315mm	10539315

Joining Pieces

Used to join lengths of flexible ducting to give a long-lasting airtight connection. Manufactured from galvanised steel. Available in 100, 125, 150, 200, 315 and 400mm diameter sizes.

Dia	Vent-Axia joining pieces Stock Ref. No.
100mm	561804
125mm	561805
150mm	561806
200mm	561808
250mm	561810
315mm	561813
400mm	561816

Pressure loss diagram per one metre of fully extended duct



N.B. For maximum fan performance it is important that flexible ductwork is fully extended, and is adequately supported to eliminate unnecessary bends. Intended bends should be of largest possible radius.



Worm Drive clips

Stainless steel bands used for securing flexible ducting. Available to fit 100, 125, 150, 200, 250, 315, 355, 400, 450, 500, 560 and 630mm diameter sizes.

Dia	Vent-Axia Worm drive clips Stock Ref. No.
100mm	561704
125mm	561707
150mm	561707
200mm	561710
250mm	561710
315mm	561715
355mm	561715
400mm	561720
450mm	561720
500mm	561720
560mm	561726
630mm	561726

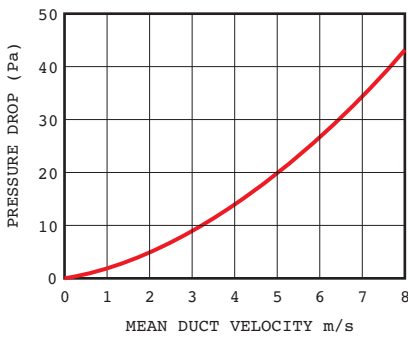
Accessories & Dimensions



Louvred Shutters

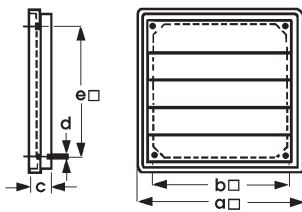
A range of twelve sizes of shutter with gravity return flaps to protect against backdraughts. The frame is manufactured from high impact polystyrene and the louvres from P.V.C. All components are UV stabilised.

Resistance Graph



Dimensions

Typical Installation



Stock Ref.	Dia.	a	*b	c	Ød	e	Fixing hole
10501100	100mm	139	100	15	4	95	
10501125	125mm	160	135	15	5	110	
10501150	150mm	180	155	20	5	130	
10501200	200mm	242	205	20	5	182	
10501250	250mm	294	265	25	5	230	
10501315	315mm	360	310	27	5	295	
10501355	355mm	411	349	27	5	329	
10501400	400mm	456	409	27	5	382	
10501450	450mm	505	458	27	5	432	
10501500	500mm	560	508	27	5	477	
10501560	560mm	605	565	31	5	533	
10501630	630mm	696	657	31	5	626	

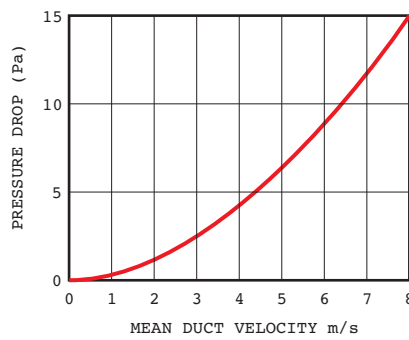
* Fixing hole



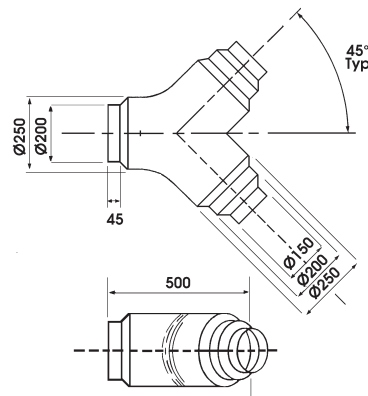
3-Way Splitter

For dividing a ventilation system, providing ducting to multiple supply or extract grilles using only a single fan source. Manufactured from high impact polymeric material which is flame retardant with a maximum operating temperature of +50°C.

Resistance Graph



Dimensions



Stock Ref. No. 105 51 250

Vent-Axia 3 - way splitters

Dia	Stock Ref. No.
200mm	10551250
250mm	10551250
315mm	10553400
400mm	10553400

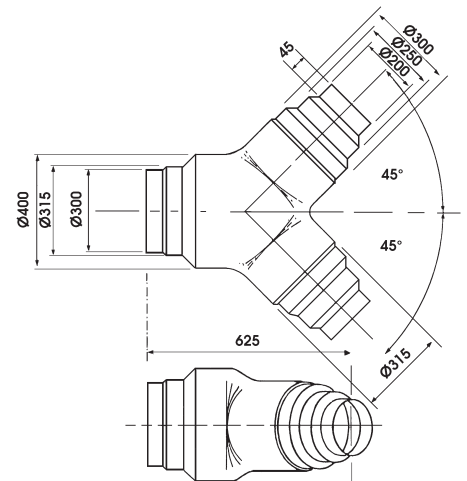


Duct 'Y' Piece

For dividing a ventilation system, providing ducting to multiple supply or extract grilles using only a single fan source. Available in fire retardant ABS.

Vent-Axia Duct Y Piece

2 x	Into 1 x	Stock Ref. No.
100	100	452081
100	150	452082
125	125	455211
125	150	455212
150	150	452083
150	200	452084
200	200	452085
200	250	452078
200	300	452080
250	250	452076
250	300	452079
300	300	452077



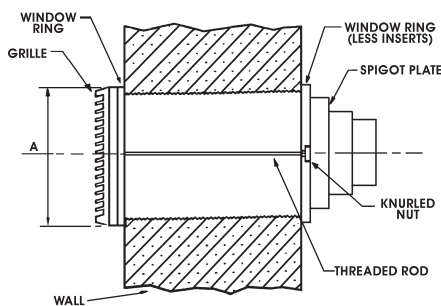
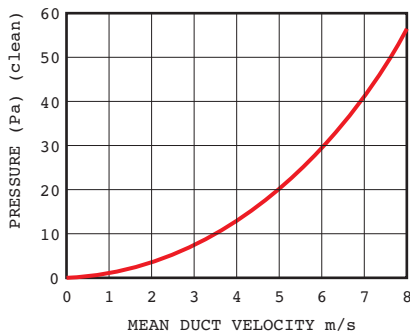
Stock Ref. No. 105 53 400



Wall or Window Termination Sets

Used to terminate flexible ducting at walls utilising worm drive clips. Flexible wall sleeve and fixing rods can be cut to suit varying wall thicknesses up to 360mm.

Consists of: Direct mount spigot, grille, flexible wall sleeve and all fixings.



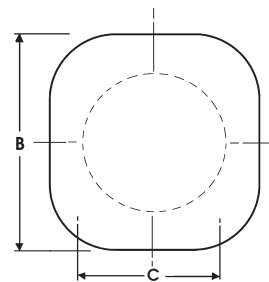
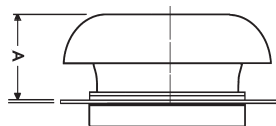
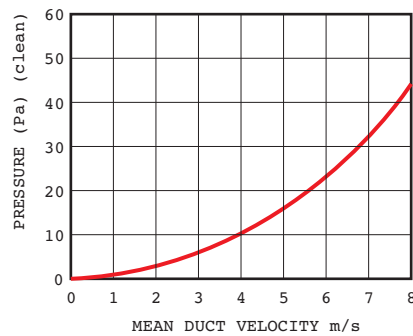
Spigot	Grille Size 'A'	Hole required in		Stock Ref.
		wall	window	
Dia.	H x W	Ø	Ø	Ref.
100mm	220 x 226	210	184	W10554150
125mm	220 x 226	210	184	W10554150
150mm	220 x 226	210	184	W10554150
200mm	258 x 265	240	222	W10554200
250mm	302 x 304	290	260	W10554250
315mm	378 x 381	370	337	W10554315



Roof Termination Sets

Used to terminate flexible ducting at roofs utilising worm drive clips.

Consists of: Direct mount spigot, adaptor kit, roof cowl, deflector and all screws.



Vent-Axia roof termination				
Dia.	a	b	cØ	Stock Ref.
100mm	100	285	184	10555150
125mm	100	285	184	10555150
150mm	100	285	184	10555150
200mm	136	400	222	10555200
250mm	136	400	260	10555250
315mm	171	500	337	10555315

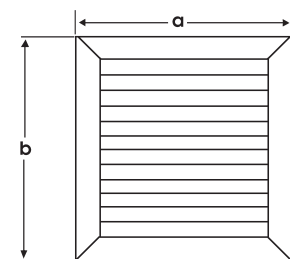
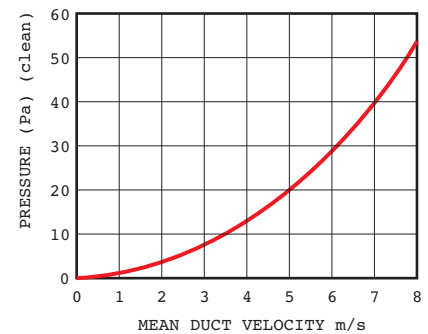
Roof plate assembly	
Termination Set	Roof Plate Assembly
10555150	560136
10555200	560137
10555250	560139
10555315	560142



Louvred Grilles

Louvred grilles can be used for air replacement for extract purposes and as an external louvre. Available in four sizes, the assembly fits over, rather than into, the aperture making it especially useful where there are space restrictions within the duct.

Manufactured in thermoplastic. Choice of three colours: Ivory, Brown or Grey.



Vent-Axia louvred grilles				
Stock Ref.	Colour	hole size	a	b
561431	Grey	230mm	310	303
561421	Ivory	230mm	310	303
561411	Brown	230mm	310	303
561432	Grey	270mm	351	344
561422	Ivory	270mm	351	344
561412	Brown	270mm	351	344
561433	Grey	300mm	391	388
561423	Ivory	300mm	391	388
561413	Brown	300mm	391	388
561434	Grey	380mm	470	467
561424	Ivory	380mm	470	467
561414	Brown	380mm	470	467

Accessories & Dimensions

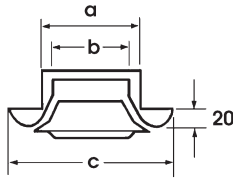


Circular Supply & Exhaust Diffusers

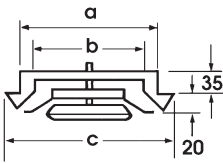
Manufactured from polypropylene plastic. Suitable for supplying or exhausting air and can be fitted directly to the duct or in the ceiling. Available in 100, 125, 150, and 200mm diameter sizes.

Dimensions

100, 125 dia



150, 200 dia

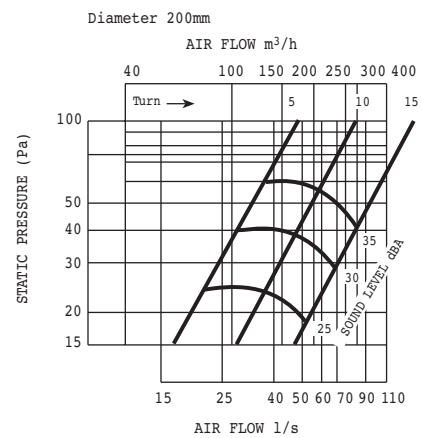
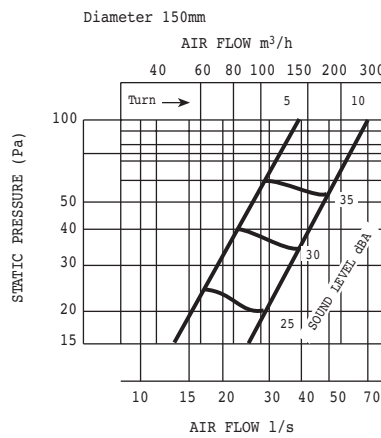
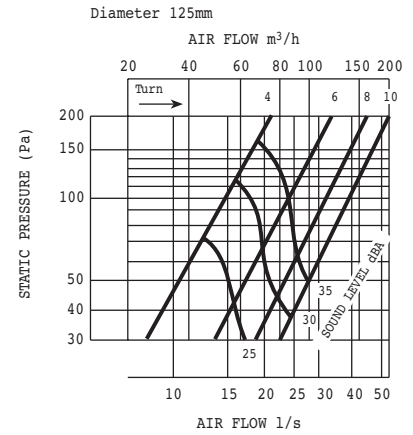
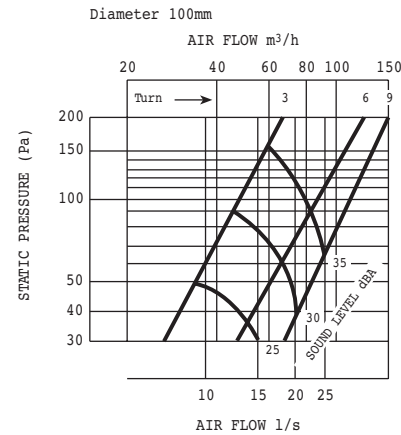


Dia.	Stock Ref.	a	b	c	Weight	Weight
					valve	frame
100mm	10543100	100	80	150	150	90
125mm	10543125	125	96	158	160	130
150mm	10543150	150	115	195	230	150
200mm	10544200	200	163	210	340	180

Circular Exhaust Diffusers

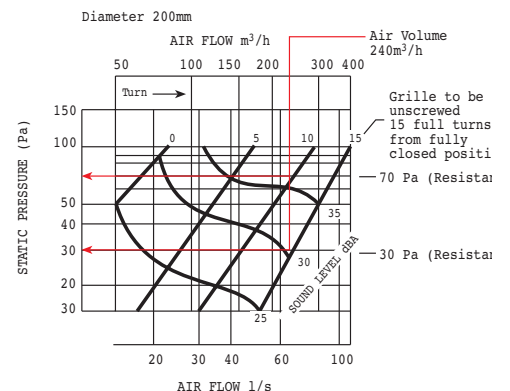
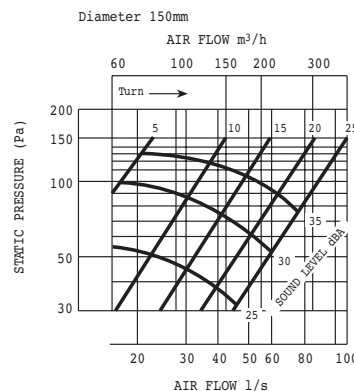
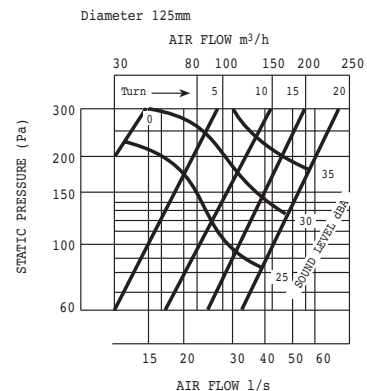
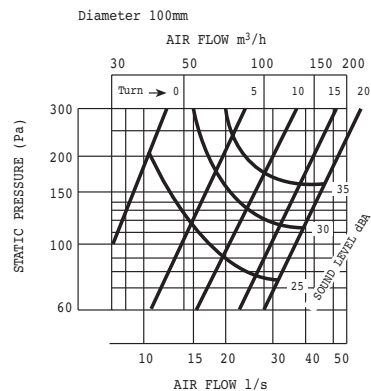
Dia.	Stock Ref.	a	b	c	Weight	Weight
					valve	frame
100mm	10544100	100	70	143	115	90
125mm	10544125	125	96	158	150	130
150mm	10544150	150	115	195	200	150
200mm	10544200	200	163	210	340	180

Supply Diffusers Curves



eg. 100mm diameter supply diffuser. Design 15l/s flow
3 turns ~ 30-35 dBA ~ 130Pa
6 turns ~ 25-30 dBA ~ 40Pa

Exhaust Diffusers Curves

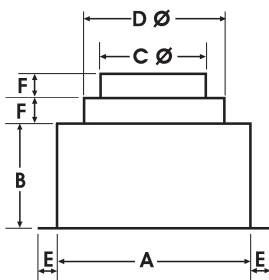




Plenum Boxes

The Plenum box allows square grilles and diffusers to connect to circular duct. Each box size has a two diameter circular spigot for maximum versatility. The box is deep enough to accommodate both a double deflection grille and opposed blade damper.

Manufactured in flame retardant high impact recyclable thermoplastic.



Stock Ref.	A	B	C Ø	D Ø	E	F
560601	200	130	125	150	25	25
560602	250	130	150	175	25	25
560603	300	130	200	225	25	25
560604	300	130	250	300	25	25
560605	450	130	315	400	25	25



Single Deflection Grilles

Suitable for either sidewall or exposed duct applications. A single row of blades permits up to 45° deflection of the air in one plane. Satin silver finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Unit size	Module size	Stock Ref. No.
Size 6/7	300 mm □	561372
Size 9/12	450 mm □	561373
Also available in the following sizes:-		
	200mm □	561370
	250mm □	561371



Double Deflection Grilles

Suitable for supply air for either sidewall or exposed duct applications. Two rows of blades are set at 90° apart which permit up to 45° deflection of the air in two planes. Satin silver finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Unit size	Module size	Stock Ref. No.
Size 6/7	300 mm □	561382
Size 9/12	450 mm □	561383
Also available in the following sizes:-		
	200mm □	561380
	250mm □	561381



Eggcrate Grilles - Satin silver and white finish

Eggcrate grilles can be used for air replacement or air extract purposes.

Used underneath Roof plate assemblies with Roof models, underneath Single spigots in ceilings, underneath Mounting boxes and on the inside faces of walls that have units in Fixed and Removable wall plates on the outside of the wall.

Comprising a 13mm square by 13mm deep mesh eggcrate core housed in a frame which has a satin silver or white finish.

Size 6/7 fits 300mm square modular size and size 9/12 fits 450mm square modular size.

Size 6/7 - 785cm² free area
Size 9/12 - 1810cm² free area

Vent-Axia eggcrate grilles satin silver finish

Unit size	Module size	Stock Ref. No.
Size 6/7	300 mm □	561301
Size 9/12	450 mm □	561302
Also available in the following sizes:-		
	200mm □	561303
	250mm □	561305

Vent-Axia eggcrate grilles white finish

Unit size	Module size	Stock Ref. No.
Size 6/7	300 mm □	560849
Size 9/12	450 mm □	560850
Also available in the following sizes:-		
	125mm □	560846
	200mm □	560847
	250mm □	560848

Accessories & Dimensions



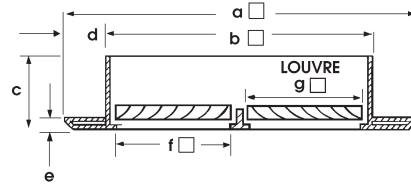
4-Way Diffusers

Manufactured in light polypropylene plastic. With four diffuser cassettes which can be set for downward or 45 degree discharge in any of sixteen directional combinations.

Neck Size	Colour	Stock Ref. No.
225mm	Ivory	10546230
300mm	Ivory	10546300
350mm	Ivory	10546350
400mm	Ivory	10546400
450mm	Ivory	10546450
500mm*	Ivory	10546500

* Fits ceiling grid size 595mm

Dimensions



Stock Ref.	a	b	c	d	e	f	g
10546230	267	229	64	19	6	102	140
10546300	343	298	64	19	6	140	146
10546350	400	349	64	19	6	165	171
10546400	451	400	79	19	6	191	197
10546450	502	451	76	19	6	210	216
10546 500	595	502	76	46.5	13	235	241

Diffuser	Neck Adaptor		
Stock Ref.	Stock Ref.	Stock Ref.	Duct Ø
10546230	OR	10547150	150
10546230	OR	10547200	200
10546300		10547250	250
10546350		10547300	300
10546400		10547400	400
10546450		10548400	400
10546500		10548000	315/400



Neck Adaptors

Used to connect flexible ducting directly to 4-way diffusers for intake/extract applications.

4 - way		
diffuser size	Duct Ø	Stock Ref. No.
225mm	150mm	10547150
225mm	200mm	10547200
300mm	250mm	10547250
350mm	315mm	10547300
400mm	400mm	10547400
450mm	400mm	10548400
500mm	315/400	10548000

Sound power levels (dB) re 10⁻¹²W

225mm Square Louvre Face Ceiling Diffuser

Flow	Static Pressure	Octave band centre frequency (Hz)							1- way		2- way		4- way		
		125	250	500	1000	2000	4000	dBA	Throw	Angle	Throw	Angle	Throw	Angle	
m ³ /h	Pa														
170	3	46	38	34	30		28	2.7	160°	2.1	160°	1.8	160°		
340	8	49	42	39	39	22	34	3.9	160°	3.3	160°	2.7	160°		
510	18	54	47	45	45	35	40	4.8	160°	4.2	160°	3.3	160°		
680	33	55	52	50	50	44	44	5.8	160°	4.8	160°	3.6	160°		
850	50	59	57	54	54	50	50	6.1	160°	5.1	160°	3.9	160°		

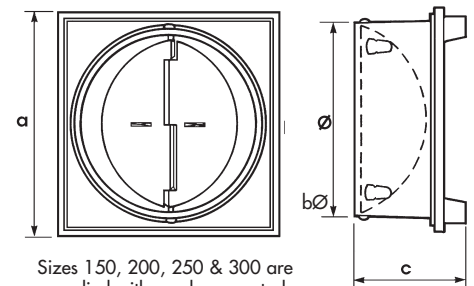
300mm Square Louvre Face Ceiling Diffuser

Flow	Static Pressure	Octave band centre frequency (Hz)							1- way		2- way		4- way		
		125	250	500	1000	2000	4000	dBA	Throw	Angle	Throw	Angle	Throw	Angle	
m ³ /h	Pa														
340	3	44	34	27	16		23	3.3	160°	2.7	160°	2.1	160°		
510	8	48	40	34	29		29	4.2	160°	3.6	160°	2.7	160°		
680	13	51	44	41	41	23	36	5.1	160°	4.2	160°	3	160°		
850	20	54	49	47	47	37	42	5.4	160°	4.5	160°	3.3	160°		
1020	30	58	54	52	53	46	48	5.8	160°	4.8	160°	3.6	160°		
1190	40	61	58	56	56	52	52	6.1	160°	5.1	160°	3.6	160°		
1360	53	64	61	59	59	56	55	6.4	160°	5.1	160°	3.6	160°		

350mm Square Louvre Face Ceiling Diffuser

Flow	Static Pressure	Octave band centre frequency (Hz)							1- way		2- way		4- way		
		125	250	500	1000	2000	4000	dBA	Throw	Angle	Throw	Angle	Throw	Angle	
m ³ /h	Pa														
510	5	44	28	26	20		22	4.2	160°	3.6	155°	2.7	155°		
680	10	49	38	37	28	20	30	4.8	160°	4.2	155°	3	155°		
850	18	52	44	42	37	28	35	5.1	160°	4.5	155°	3.3	155°		
1020	25	54	49	48	44	35	41	5.4	160°	4.5	155°	3.3	155°		
1190	33	56	52	51	50	41	45	5.8	160°	4.8	155°	3.6	155°		
1360	43	58	55	53	55	45	49	6.1	160°	4.8	155°	3.6	155°		
1530	55	61	58	56	58	49	52	6.1	160°	5.1	155°	3.6	155°		

Dimensions



Sizes 150, 200, 250 & 300 are supplied with a volume control flap.

Stock Ref. No.	Duct Dia.	a	Øb	c
10547150	150	235	145	115
10547200	200	235	195	115
10547250	250	305	245	115
10547300	300/315	355	295	110
10547400	400	407	400	90
10548400	400	459	400	92
10548000	315/400	500	315/400	168 max

Sound power levels (dB) re 10⁻¹²W

400mm Square Louvre Face Ceiling Diffuser

Flow m³/h	Static Pressure Pa	Octave band centre frequency (Hz)						dBA	1- way		2- way		4- way	
		125	250	500	1000	2000	4000		Throw	Angle	Throw	Angle	Throw	Angle
850	10	49	38	38	27			30	4.5	160°	3.9	155°	2.7	150°
1020	15	50	43	43	36	25	19	35	4.8	160°	4.2	155°	3	150°
1190	20	52	47	46	44	30	23	39	5.1	160°	4.2	155°	3	150°
1360	25	53	49	47	51	35	26	44	5.4	160°	4.5	155°	3.3	150°
1530	33	55	52	49	55	39	30	48	5.4	160°	4.5	155°	3.3	150°
1700	40	56	54	51	56	43	34	49	5.8	160°	4.8	155°	3.3	150°
1870	48	57	56	53	57	47	38	51	5.8	160°	4.8	155°	3.3	150°
2040	58	59	58	55	59	51	42	53	5.8	160°	4.8	155°	3.6	150°

450mm Square Louvre Face Ceiling Diffuser

Flow m³/h	Static Pressure Pa	Octave band centre frequency (Hz)						dBA	1- way		2- way		4- way	
		125	250	500	1000	2000	4000		Throw	Angle	Throw	Angle	Throw	Angle
1360	5	55	48	46	42	33	25	39	4.8	160°	3.9	150°	2.7	150°
1530	8	57	51	48	47	36	28	42	4.8	160°	4.2	150°	3	150°
1700	8	58	53	49	50	39	32	45	5.1	160°	4.2	150°	3	150°
1870	10	59	55	51	53	42	35	47	5.1	160°	4.2	150°	3	150°
2040	10	61	56	53	55	44	38	49	5.1	160°	4.5	150°	3	150°
2210	13	63	58	54	56	47	41	51	5.4	160°	4.5	150°	3.3	150°
2380	15	64	60	56	58	49	44	53	5.4	160°	4.5	150°	3.3	150°
2550	18	65	62	58	59	52	46	54	5.8	160°	4.5	150°	3.3	150°
2720	20	67	63	59	60	56	48	56	5.8	160°	4.8	150°	3.3	150°
2890	23	68	65	61	62	59	50	58	5.8	160°	4.8	150°	3.6	150°
3060	25	69	66	62	63	61	51	59	6.1	160°	4.8	150°	3.6	150°
3230	28	71	67	64	63	63	53	61	6.1	160°	4.8	150°	3.6	150°

500mm Square Louvre Face Ceiling Diffuser

Flow m³/h	Static Pressure Pa	Octave band centre frequency (Hz)						dBA	1- way		2- way		4- way	
		125	250	500	1000	2000	4000		Throw	Angle	Throw	Angle	Throw	Angle
340	0								0.9	160°	0.9	150°	0.6	150°
510	0								1.8	160°	1.5	150°	1.2	150°
680	0								3	160°	2.4	150°	1.8	150°
850	3			35	32	31	22	29	3.3	160°	3	150°	2.1	150°
1020	3		36	37	34	33	25	31	3.9	160°	3	150°	2.4	150°
1190	3		39	39	36	35	26	33	3.9	160°	3.3	150°	2.4	150°
1360	5		39	41	40	37	36	35	4.2	160°	3.6	150°	2.4	150°
1530	5		41	43	42	39	38	30	4.2	160°	3.6	150°	2.7	150°
1700	8		42	45	44	41	40	32	4.4	160°	3.6	150°	2.7	150°
1870	10		44	46	46	43	42	33	4.5	160°	3.9	150°	2.7	150°
2040	10		46	48	47	44	43	35	4.8	160°	3.9	150°	2.7	150°
2210	13		48	50	49	46	45	37	4.8	160°	3.9	150°	2.7	150°
2380	15		49	51	51	48	47	38	4.8	160°	3.9	150°	3	150°
2550	18		51	53	52	49	48	40	4.8	160°	4.2	150°	3	150°
2720	20		53	55	54	51	50	42	5.1	160°	4.2	150°	3	150°
2890	23		55	56	55	52	51	43	5.1	160°	4.2	150°	3	150°
3060	25		56	58	57	54	53	45	5.1	160°	4.2	150°	3	150°
3230	28		58	60	59	56	55	47	5.1	160°	4.2	150°	3	150°
3400	30		59	61	60	57	56	48	5.4	160°	5.1	150°	3.3	150°
3570	33		60	62	61	58	57	49	5.4	160°	5.1	150°	3.3	150°
3740	38		61	63	63	59	59	50	5.4	160°	5.1	150°	3.3	150°
3910	40		62	64	64	60	60	51	5.4	160°	5.1	150°	3.3	150°
4080	45		63	65	65	61	61	53	5.4	160°	5.1	150°	3.3	150°
4250	48		63	66	66	62	62	54	5.4	160°	5.1	150°	3.3	150°

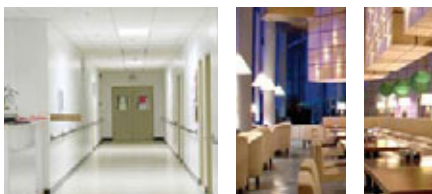
Air Handling

Purpose designed for ease of installation, longevity and powerful performance, Vent-Axia's Air Handling units feature rugged construction, compact size, fully insulated air casing seals and efficient direct drive or belt drive fans. With the choice of mounting on the roof, in a plant room, on a wall or from the ceiling, it all adds up to a quiet, unobtrusive and dependable contribution to better air quality.

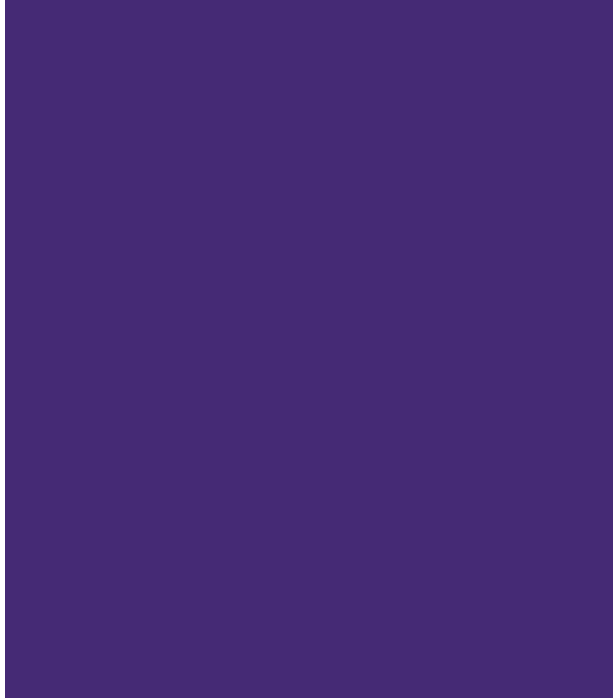
Vent-Axia has a long established history in the Air Handling market and the introduction of the New High Efficiency eViking Range reinforces our commitment to energy efficient ventilation solutions.

The popular range of belt / direct drive Mini-Direct, Mini-Belt, MiniSlim, Slimline and Mini-Viking is now strengthened with the inclusion of the XP Viking and FP modular systems.

The extended Air Handling range now consists of standard fan / filter / heater functionality from 0.05 m³/s through to 3.5 m³/s; with mix/match modules for cooling, heating, filtration, heat recovery and humidification from 0.2 m³/s to 16.0 m³/s available in the Viking Modular range.



Units



Vent-Axia®

AHU Range Overview

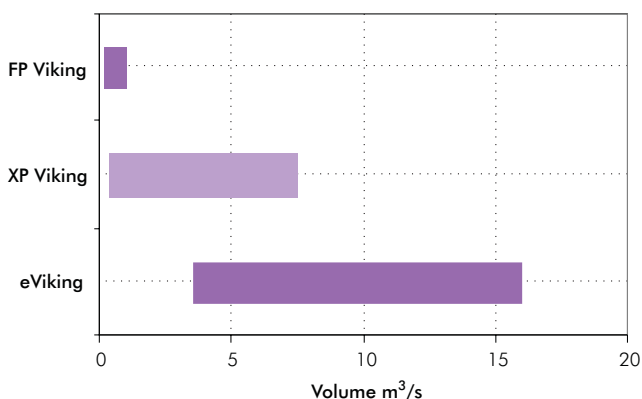
Viking Modular Range Overview

Specification

	eViking	XP Viking	FP Viking
Airflow Range m ³ /s	3.5 - 16.0	0.4 - 7.5	0.2 - 1.0
Construction	Double Skin	Double Skin	Double Skin
Drive	Direct/Belt	Direct/Belt	Belt
Impellers	Backward/Forward curved centrifugal		Forward curved centrifugal
Access	Left or right	Left or right	Top or Bottom
External	✓	✓	-
Internal	Wall	-	✓
	Floor	✓	✓
	Suspended	-	✓
Heating	LPHW	✓	✓
	Electric	✓	✓
	Gas	✓	-
	DX	✓	✓
	DX	✓	✓
Cooler	Chilled Water	✓	✓
	Plate	✓	✓
Heat Recovery	Wheel	✓	-
	RAC	✓	✓
	Steam	✓	✓
Humidification	Adiabatic	✓	-
	Mixing Sections	✓	✓
Dampers	Panel	G3	G4
	Bag	G3/4 - F5-9	G3/4 - F5-9
	Grease	G3	G3
	Compact	F6-9	-
	Attenuators	✓	✓
Controls	Optional	Optional	Optional

Airflow Range

Model	Airflow Range m ³ /s	
FP Viking	0.2	1.0
XP Viking	0.4	7.5
eViking	3.5	16.0



Standard Range Overview

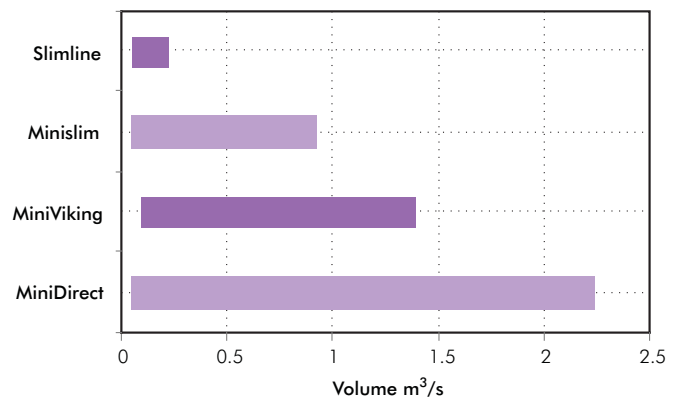
Specification

	Minislim	Slimline	MiniDirect	MiniViking
Airflow Range m ³ /s	0.05 - 0.92	0.05 - 0.22	0.05 - 2.25	0.1 - 1.4
Construction	Double Skin	Double Skin	Double Skin	Double Skin
Drive	Direct	Direct	Direct	Direct/Belt
Impellers	Forward curved centrifugal			
Access	Top or Bottom	Top or Bottom	Left or right	Left or right
External	-	-	✓	✓
Internal	Floor	✓	✓	✓
	Suspended	✓	✓	✓
Heating	LPHW	✓	✓	Sp
	Electric	✓	✓	✓
Dampers	✓	✓	✓	-
Filtration	Panel	-	-	G4
	Bag	F5	F5	-
Attenuators	Y	Y	✓	✓
Controls	Optional	Optional	Optional	In-Built

Sp = Special order, Y = dependent on model

Airflow Range

Model	Airflow Range m ³ /s	
Slimline	0.05	0.22
Minislim	0.05	0.92
MiniViking	0.1	1.4
MiniDirect	0.05	2.25



AeroCad Selection Software

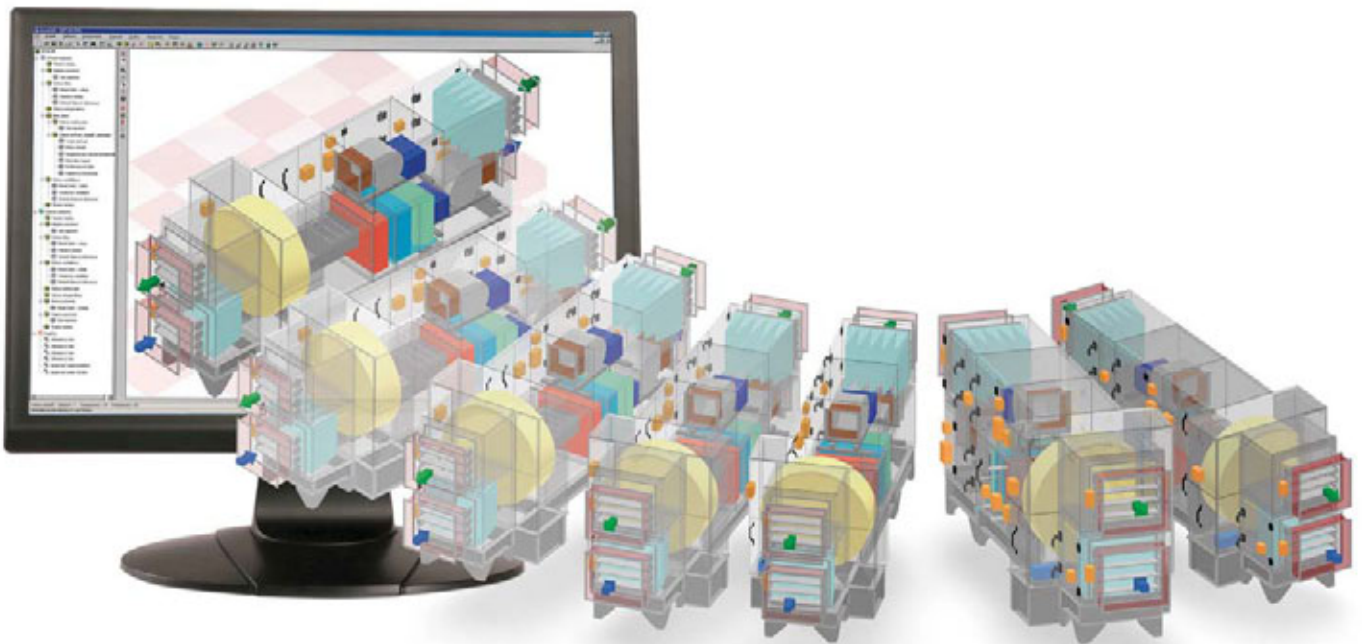
Selecting the correct modular Air Handling Units (Viking Modular Range)

The drawback of modularity and choice can be complexity – that's where Vent-Axia employs AeroCad selection software to help specify the correct Viking Air Handling Solution for the application.

The AeroCad software helps Vent-Axia support specifiers in the selection, scaling and calculation of Air Handling Units.

The key outputs from the software include:

- Full visualisation of design incl. casing transparency to allow internal components to be seen
- Simulation in 'real' space and display from any visual angle
- Unit display in application
- Accurate calculations of components
- Automated selection and scaling of components
- Calculations of mixing, heat recovery and their combinations
- Calculations and results for summer and winter seasons
- Summation (weights, power inputs, outputs)
- File export to DXF, BMP, XLS or PDF



NEW RANGE

eViking Air Handling Unit Range

Features and Benefits

- A+ energy class design
- Highly efficient heat recovery even above 80%
- IE2 efficiency Motors, Optional EC Motors
- Minimized pressure drop of built-in assemblies
- Excellent casing tightness L2
- Optimized Footprint

- energy consumption production
- The new eViking air-handling units offer enhanced levels of quality and set a new, higher standard
- Excellent Mechanical and Physical Properties



Module Dimensions (mm)



Module size	Width	Height	85mm baseframe
6x4	1998	1332	1417
7x4	2304	1332	1417
8x4	2610	1332	1417
9x4	2916	1332	1417
4x6	1386	1944	2029
5x6	1692	1944	2029
6x6	1998	1944	2029
7x6	2304	1944	2029

Creative Casing Design

This new range of eViking Air Handling units have been designed to meet the latest European Regulations.

eViking features not only offers significantly better performance and technical parameters but also greater reliability and a reduced footprint

The new eViking air-handling units offer enhanced levels of quality and set a new, higher standard.

Self-contained Panel

- High mechanical strength and tightness of the casing contributes to energy savings
- Very good thermal insulation
- Excellent casing attenuation

Casing Mechanical Performance in accordance with EN 1886-2008

Mechanical strength of casing	D2
Casing air leakage	L2
Filter bypass leakage	< 0.5% (F9)
Thermal insulation	T3
Thermal bridging	TB3
Operating temperature	-40 to +50°C

Acoustic insulation of casing (dB / octave band)
9/63Hz, 13/125Hz, 20/250Hz, 25/500Hz, 32/1kHz, 32/2kHz, 34/4kHz, 37/8kHz

eViking air-handling units are also suitable for coastal and Swimming Pool Applications.

Tailored to Your Needs

Different locations - different customers – different needs.

The laminated eViking concept allows you to select the unit height and width for air-handling units in the vertical or horizontal according to your actual space requirements.

Unique Panel Construction

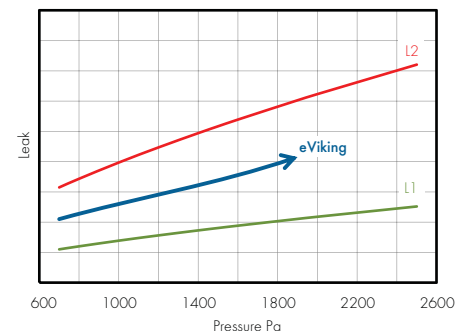


Laminated Wall

- High strength and Air tightness
- Incorporating low density insulation offering excellent performance without using aluminium frames
- Construction offering wasteless and low

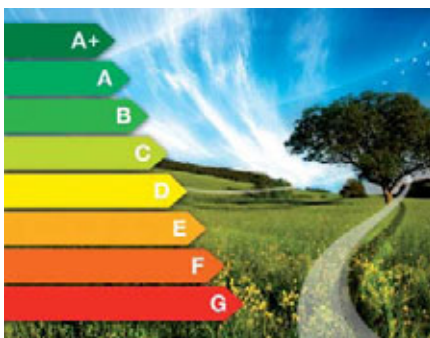
Excellent casing tightness L2

- Without the need for additional adaptation
- Across wide pressure range





Energy rating is just the beginning



Casing

- Casing tightness L2
- Thermal bridging TB3
- Thermal insulation standard T3

Fans

- Highly efficient fans
- Motor efficiencies IE2 (EFF1)
- Optional EC motors

Heat Recovery

- Heat recovery as needed even above 80%
- Designed for maximum efficiency with minimum pressure loss

Result: **A+ Class Efficiency**

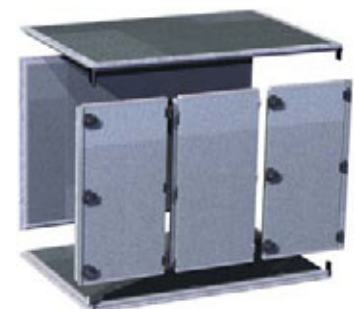
Furthermore.....

Excellent Access - Service and Cleaning

We have also focussed on providing excellent access to the internal space when designing the service side of these new air-handling units.

We have considered both service access to individual internal components as well as easy cleaning of the unit internal space for hygienic applications.

- Double door
- Easy-to-remove panels
- Possibility to deliver disassembled units
- Easy connection to associated services.



Important Standards and Directives for the Design of Air-handling Systems

When developing eViking air-handling units, we have closely adhered to the requirements of technical standards and directives to give you the right product with maximum energy efficiency whilst complying with demanding hygiene and environmental requirements.

Requirements for buildings	Requirements for air-handling systems	Requirements for air-handling units
Directive 2010/31/EU on the energy performance of buildings	EN 13779 Ventilation-performance requirements for ventilation and room-conditioning systems	EN 1886 Ventilation for buildings - Air handling units - Mechanical performance
Law No. 406/2000 Sb. on energy economy, Order No. 148/2007 on the energy performance of buildings	EN 15242 Ventilation for buildings-Calculation methods for the determination of air flow rates in buildings including infiltration	EN 13053 Ventilation for buildings. Air handling units. Ratings and performance for units, components and sections
EN 15251 Indoor environmental input parameters for design and assessment of energy performance of buildings addressing indoor air quality, thermal environment, lighting and acoustics	EN 15243 Ventilation for buildings - Calculation of room temperatures and of load and energy for buildings with room-conditioning systems	VDI 6022 Hygiene requirements for ventilation and air-conditioning systems and devices
EN 15240 Ventilation for buildings - Energy performance of buildings - Guidelines for inspection of air-conditioning systems	EN 12599 Ventilation for buildings -Tests procedures and measuring methods for handing over installed ventilation and air conditioning systems	VDI 3803 Air-conditioning - Central Air-conditioning Systems - Structural And Technical Principles
EN 15239 Ventilation for buildings - Energy performance of buildings - Guidelines for inspection of ventilation systems	EN 15423 Ventilation for buildings - Fire precautions for air distribution systems in buildings	DIN 1946-4 Ventilation in buildings and health care rooms

eViking Air Handling Unit Range

Cross-section Variability

Cross-section variability is achieved by the arrangement of four and six modules (laminas) in basic heights.

Minimized Length Dimensions

The unique casing design allowed us to abandon the traditional air handling unit sections and relationship between air handling unit casing and internal components.

The eViking concept is able to "wrap" internal components with minimum spacing using a casing of optimal length.

The length dimensions of each functional part (built-in assembly) of the air-handling unit are designed in modular grid lengths equalling multiples of 102 mm.

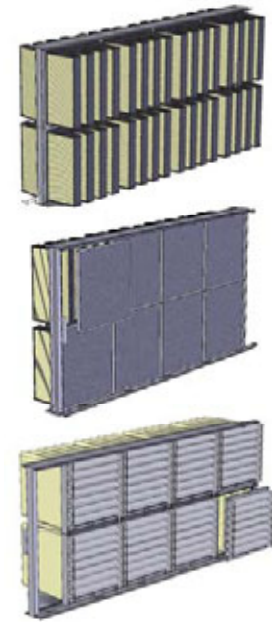
These functional parts are then integrated into assembly blocks in lengths equalling multiples of 306 mm (modular width of the lamina). This combination enables the air-handling unit to be designed to specific length requirements.

Optimized Components

The design of some built-in assemblies itself contributes to the length of units.

Combined filtration walls are a good example of this.

For example, fitting two filters into a common frame will result in maximum reduction of the length.



Optimized Output According to Energy Classes

Performance Range

The newly-launched eViking air-handling unit range covers a wide performance range, see table below.

Example: At the commonly used velocity of 3 m/s, an air-handling unit with a section area of 7x6 will presently provide you with an output of 12.11 m³/s.

Energy Performance matrix comparing unit dimensions & airflow (m³/s)

Unit Dimensions	A+		A		B	
	1,5 m/s	2 m/s	2,5 m/s	3 m/s	3,5 m/s	4 m/s
7x6	6.06	8.08	10.08	12.11	14.11	16.13
6x6	5.19	6.95	8.67	10.42	12.13	13.89
5x6	4.36	5.89	7.28	8.72	10.19	11.64
4x6	3.53	4.69	5.86	7.03	8.22	9.39
9x4	5.16	6.89	8.61	10.33	12.05	13.77
8x4	4.61	6.13	7.66	9.19	10.75	12.27
7x4	4.33	5.38	6.72	8.08	9.41	10.77
6x4	3.47	4.64	5.77	6.94	8.11	9.27

Lower outputs units can be selected from our XP Viking air-handling unit range.

Surface Finishes for any Application

eViking air-handling units are characterized by their long service life and trouble-free operation. Thanks to a wide range of surface finishing combinations (galvanized, powder coating, and stainless steel) which comply with the grade of atmosphere corrosivity in accordance with EN 12500 and corrosion resistance in accordance with EN ISO 14713, the eViking concept enables air-handling units to fulfil the requirements of the highest applicable standards.

Frame	Internal casing	External casing	Corrosivity	Application
galvanized	galvanized	galvanized	C2/C2	air-handling units for indoor environment - low corrosivity (air-handling units for outdoor environment - low corrosivity)
galvanized + powder coating RAL	galvanized	galvanized + powder coating RAL	C2/C4	air-handling units for indoor environment - low corrosivity (air-handling units for outdoor environment - low corrosivity)
galvanized	galvanized + powder coating RAL	galvanized	C4/C2	air-handling units for indoor environment - high corrosivity
galvanized + powder coating RAL	galvanized + powder coating RAL	galvanized + powder coating RAL	C4/C4	air-handling units for indoor environment - extra high corrosivity (air-handling units for outdoor environment - extra high corrosivity)
galvanized	galvanized + powder coating RAL epoxy coating	galvanized + powder coating RAL	(C4/C4)	version for pools
galvanized + powder coating RAL	galvanized + powder coating RAL stainless steel	galvanized + powder coating RAL	(C4/C4)	hygienic version
galvanized + powder coating RAL	galvanized + powder coating RAL stainless steel	galvanized + powder coating RAL	C5 economy 1/C4	air-handling units for indoor environment - extra high corrosivity (air-handling units for outdoor environment - extra high corrosivity)
galvanized + powder coating RAL	stainless steel	galvanized + powder coating RAL	C5 economy 2/C4	air-handling units for indoor environment - extra high corrosivity (air-handling units for outdoor environment - extra high corrosivity)
galvanized + powder coating RAL	stainless steel	stainless steel	C5/C5	air-handling units for indoor environment - extra high corrosivity (air-handling units for outdoor environment - extra high corrosivity)

Functions

Impellers	Backward/Forward curved centrifugal	
Heating	LPHW	✓
	Electric	✓
	Gas	✓
	DX	✓
Cooler	DX	✓
	Chilled Water	✓
Heat Recovery	Plate	✓
	Wheel	✓
	RAC	✓

Humidification	Steam	✓
	Adiabatic	✓
Filtration	Panel	G3
	Bag	G3/4 - F5-9
	Grease	G3
	Compact	F6-9
Attenuators	✓	
Controls	Optional	

Technical Support

For a detailed selection and performance specification, please contact our Technical Support Team on 0844 856 0594.

XP Viking Modular Range

Features and Benefits

- Construction Parameters according to EN1886.
- Mechanical strength Class D2(M)
- Casing air leakage Class L3(M)
- Filter bypass leakage $k < 1\%$ / $k < 0,5\%$
- 50mm Acoustic insulated casing
- Thermal transmittance Class T3(M)
- Thermal bridging Class TB2(M)
- Operation temperature: -40 to + 40 °C

Model Range

Spanning a duty envelope up to 7.5m³/s (Heating only), XP Viking Air Handling units are available in 7 model sizes.

Construction

XP Viking Air handling units have a unique modular frameless construction with smooth internal casing. Modular construction simplifies access/installation with units being delivered in sections for site assembly.

Sandwich construction 1mm panels with 50mm rockwool insulation (110kg/m³) providing high air soundproofing of casing and thermal casing insulation with reduced heat losses.

Connection of sections is simple providing fast and easy installation, and the clean inside surface to the unit, allows easy cleaning.

All internal electrical devices are terminated on the external casing with terminal boxes, simplifying installation and reducing installation costs

Units are suitable for internal or external application with options on internal and external material finishes.

Easy accessibility to maintenance sections is provided with inspection doors and panels. Variability of connections enables specifiers to combine the side of pipework connections & service access enabling optimisation of the plant room space & ensure easy access for maintenance.

Components

- Fans - Direct or Belt Drive
- Dampers, Mixing Boxes
- Panel Filters, Bag Filters
- Heating Coils (LPHW, Electric, Gas & DX)
- Cooling Coils (CHW & DX)
- Humidification - Steam or Adiabatic
- Heat Recovery (Plate, Rotary & RAC)
- Attenuators
- Indirect Gas-Fired Burners

Configurations

XP Viking Air Handling units are available in either series, parallel or vertical configurations suitable for both internal and external applications. External units offer RAL9002 finish, with optional roof, external louvers, special bonding, dampers located within the unit, and protection of base frames.



A smooth connection between panels and strengtheners allows for easy cleaning to ensure clean surfaces in the unit.



The units have a casing insulated by rockwool with a density of 110 kg/m³, which provides thermal casing insulation (Class T3(M) according to EN1886) and reduced heat losses.

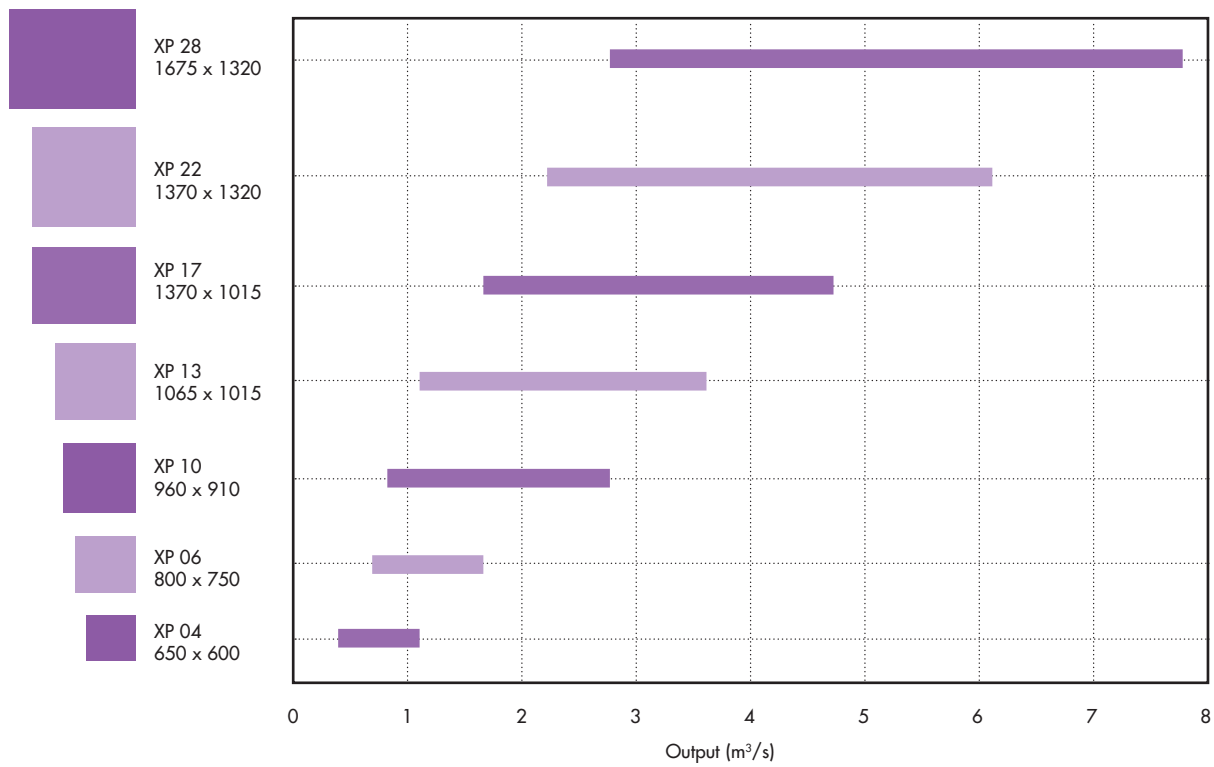


Easy accessibility of all service places is provided by inspection doors and inspection panels. The closing system enables very easy closing of the inspection door.



Parameters

Cross-section (mm)



Functions

Impellers	LPHW	✓
	Electric	✓
Heating	Gas	✓
	DX	✓
	DX	✓
Cooler	Chilled Water	✓
	Plate	✓
Heat Recovery	Wheel	✓
	RAC	✓

Humidification	Steam	✓
	Adiabatic	✓
Filtration	Panel	G3-4
	Bag	G3/4 - F5-9
	Grease	G3
	Compact	F6-9
Attenuators		✓
Controls		Optional

FP Viking Modular Range

Features and Benefits

- The FP Viking units with their frameless structure achieve parameters according to the European standard EN 1886.
- Mechanical strength Class D1(M)
- Casing air leakage Class L3(M)
- Filter bypass leakage $k < 1\%$
- Thermal bridging Class TB2(M)
- Thermal transmittance Class T3(M)
- 40/25mm Acoustic insulated casing
- Operation Temperature: -40 to +40°C

Model Range

Spanning a duty envelope from 0.2 to 1.0m³/s FP Viking Air Handling units are available in 2 model sizes.

Construction

FP Viking Air handling units have a unique modular frameless construction. Modular construction simplifies access/installation with units being delivered in sections for site assembly.

Sandwich construction with 40/25mm rockwool insulation providing high air soundproofing of casing and thermal casing insulation with reduced heat losses.

Connection of sections is simple providing fast and easy installation, and the clean inside surface to the unit, allows easy cleaning.

Units are suitable for internal mounting only, either suspended, floor or wall mounted

Finish: External Zinc coated, internal Zinc coated. Optional External RAL9002, internal Zinc Coated.

Easy accessibility to maintenance sections is provided with inspection doors/panels.

Variability of connections enables specifiers to combine the side of connections & service access enabling optimisation of space & ensure easy access for maintenance.

Components

- Fans - Belt Drive
- Dampers, Mixing Boxes
- Panel Filters, Bag Filters
- Heating Coils (LPHW, Electric & DX)
- Humidification - Steam
- Cooling Coils (CHW & DX)
- Heat Recovery (Plate & RAC)
- Attenuators

Configurations

FP Viking Air Handling units are available in either series, parallel configurations and suitable for internal applications



Modern, frameless construction



Side hangings for easy installation



Heat exchangers with integrated bypass



Belt-driven fans



Parameters

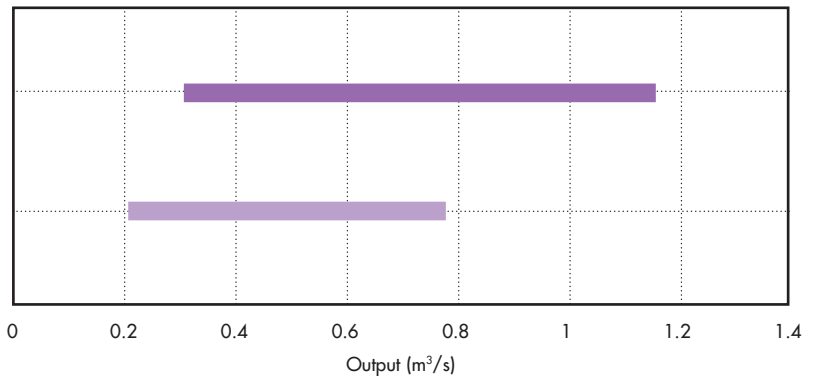
Cross-section (mm)



FP 4.0
Full cross-section 995 x 360
Inside cross-section 915 x 310



FP 2.7
Full cross-section 690 x 360
Inside cross-section 610 x 310



Pressure difference of fans: up to 1000 Pa
Inlet air temperature: -40 °C to +40 °C

Functions

Impellers	Forward curved centrifugal	
	LPHW	✓
Heating	Electric	✓
	Gas	-
	DX	✓
Cooler	DX	✓
	Chilled Water	✓
Heat Recovery	Plate	✓
	Wheel	-
	RAC	✓

Humidification	Steam	✓
	Adiabatic	-
Filtration	Panel	G4
	Bag	G3/4 - F5-9
	Grease	G3
	Compact	-
Attenuators	✓	
Controls	Optional	

Viking Modular Range Control Systems

WebClima Control System



WebClima control present a unique solution to Vent Axia's Viking modular air-handling units control, which features the use of modern technology, simple design, very easy and intuitive control with remote access via Internet and a number of user friendly functions. The WebClima server integrates with the local network and Internet.

If you can use an internet browser you can operate WebClima, its that simple



Function

WebClima control system is intended for any configuration of air-handling devices from simple to complex.

Optimised for the Viking range of modular air-handling units and can be applied for all common applications. It enables error-free and complex regulation of temperature, humidity and fans output control by controllers (frequency inverters) or two speed motors.

Operating mode of the device can be permanent (manual) or controlled by program. The mode can be changed by one click only.



Regulation

Control unit ensures cascade regulation of room temperature; it is also possible by means of up to four basic controllable sequences of heating + cooling + heat recovery + mixing. It is possible to use the function of frost coil (pre-heater) or re-heating of air. Temperature can be

controlled in three steps (temperature modes), which can be reset anytime.

In the service and administrator settings there is all necessary regulation characteristics and parameters for regulation optimising to suit the particular application. For example, except for common limiters of maximum and minimum temperature of supply air it is also possible configure the temperature monitoring of reverse water from water heater.



Control and operation

Web interface provides modern and intuitiveness interface.



Hand held regulation

If required or in places where AHU cannot be connected to PC, local control can be achieved by using HMI control device.



Easy configuration

The control unit is individually pre-configured in production for each air-handling unit. The configuration can be optimised thanks to the structured control menu with control of access privileges. It is easy and intuitive and runs in the Internet browser environment which follows usual standards.



Remote control

Remote control by means of network or Internet connection allows unlimited access to the unit anytime and its full monitoring, control and setting. WebClima advises you about all modes and status changes and archives the records. It automatically alerts you about errors by sending e-mail messages. Remote control from wherever there is internet access allows you to optimise the operating modes to suit you, including the ability to control operating costs.



Protection and signalling

WebClima ensures all protection of connected components and devices (e.g. electric motors, electric heaters, water

heaters, frost coils, heat-recovery, etc.). Safe operation of main water heater is increased because of active anti-freeze protection and controlled tempering of water heater when starting up the device.

Signalling: For maintenance & service it is important that operation modes and errors are visualised directly in the web control interface. Failure alert via e-mail is an excellent function along with SMS notification to a mobile phone. It is also possible to signal remotely the operation modes by means of LED on optional controller QRe1 or HMI control device.



Programs and time-scales

WebClima control system uses of three time-schedules, which control the program operation of the air-handling unit. The everyday plan is the base. The weekly plan is of higher priority, the highest priority is set for the annual plan. It is possible to set time-scales in the control interface. Indication of the presently valid control mode ensures easy orientation within the menu.

Multiple possibilities of program operation enable:

- Eight intervals in the daily plan
- Seven intervals in the weekly plan
- Six intervals in the annual plan

In each interval (point of alteration) it is possible to set operation and temperature parameters, and also output for fans with output controllers or two speed fans.



Automatic selection

When the air-handling unit configuration is created within AeroCAD selection programme, then the exact selection of the required control takes only a few minutes. This process is fully automatic and error-free.



VCB Control system



VCB control units are ideal for control of small and medium sized air handling units where there is no interface with centralised building management system

Other components with autonomous control can be connected as well. VCB control units are designed for dust free dry environment without chemicals. The units are always manufactured exactly according to the configuration of air handling unit.

This ensures optimal control of the air handling unit.

Functions

VCB control units are compact control and power switchboards for control of air handling units. Sophisticated control algorithms ensure system stability, comfortable control and energy saving. The units have been developed especially for control of Vent Axia Viking modular air handling units.



Control

Main control process – temperature control of supply air based on room temperature. (heating, cooling, heat recovery).

Optional output control (speed) of fans (with corresponding configuration of AHU) – 2 or 5 output levels.



Operating

The unit can either be controlled by internal controller using the menu on the display or by remote controller. Control specification is determined by the user by selecting the control parameters (internal/external) in settings of VCB unit.



Day and week programs

The unit provides setting of eight points where the user can set required modes and values. Within each point you can set required temperature, operation and air flow rate.



Protection

The VCB units have anti-freeze protection of water heater, protection of electric heater and protection of motors of fans.



Status

The VCB unit provides notifications for the user about operation states of the AHU. Various modes and state are displayed on two LCDs and on the HMI display. Status is also displayed by indicating light, the red diode indicates failure.

VCB-A option



Control

Main control of temperature is based on room temperature – therefore it provides cascade temperature control by three air temperature sensors (VCB control is based on supply air temperature only).

Three temperature modes Comfort, Economy, Ventilation (VCB only has two 2).



Programs and time-scales

WebClima control system uses of three time-schedules, which control

the program operation of the air-handling unit. The everyday plan is the base. The weekly plan is of higher priority, the highest priority is set for the annual plan. It is possible to set time-scales in the control interface. Indication of the presently valid control mode ensures easy orientation within the menu.

Multiple possibilities of program operation enable:

- Eight intervals in the daily plan
- Seven intervals in the weekly plan
- Six intervals in the annual plan

In each interval (point of alteration) it is possible to set operation and temperature parameters, and also output for fans with output controllers or two speed fans.



Protection

Water heater pump control based on outdoor temperature including stop mode in summer. (VCB has manual breaker).

Frost protection function of water heater mixing set (SUMX) based on outdoor temperature. (VCB has control return water temperature only).

Cooling stop mode based on outdoor temperature. (VCB has it according to supply air temp. only).

Hard connected controller HMI is supplied with every control unit VCB-A.

Compensation of room temperature based on outdoor air temperature.

Remote controller Ore2, Ore1 or Ore5 is also available.

VMD Range

Features and Benefits

- Performance range up to 1.4m³/s
- Motor Insulation Class F
- Anodised aluminium pentapost frame
- Double skinned panels
- Compact direct drive units
- Electric heater battery
- Built-in fan and heating controls
- Minimal site installation time
- 1 Year Guarantee

Features

The Mini Viking packaged small air handling units have been developed using feedback from installers through to the end user and benefit from tried and tested components; e.g. double skinned construction with plastisol outer panel, mineral wool insulation and galvanised steel inner panel.

This construction offers weather resistance and long life with a good thermal and acoustic performance. The materials can also be recycled.

Specification

Energy Considerations

Mini Viking Air Handling Units are designed with savings on potential energy consumption being a prime consideration. Low air resistance components are incorporated as standard, with high efficiency motors also available.

Model Range

Spanning a duty envelope of 0.1m³/s to 1.4m³/s, Mini Viking air handling units are available in eight direct drive.

Standard units comprise of direct drive fan, filter, electric heater battery and built-in pre-wired controls.

Construction

Framework is anodised aluminium with airtight door seals and manual door catches which can be tool locked in position.

Double inlet, forward curved centrifugal fans provide the lowest noise levels with sufficient performance for ducted systems. Impellers and motor impeller assemblies are dynamically balanced to minimise vibration. Motors are further resiliently mounted.

The motors in VMD1L, VMD1M, VMD2L, VMD2M & VMD3L are conventionally mounted permanent capacitor type with sealed for life ball bearings. Protection is IP44 with Class F insulation (50° ambient max.). VMD1H, VMD2H and VMD3H units have smooth and powerful outer rotor type motors. Note: all these direct driven fan/motor assemblies respond best to step transformer type speed control. This type of controller will maximise the service life of the motor.

Filters – Standard filters are EU4 pleated paper type 100mm deep. These have an efficiency equivalent to a standard grade bag filter and a better dust holding capacity than a fibre or foam filter. Special high grade bag filters can be supplied but they require an additional housing.

Electric Coils

Electric heaters are sheathed tube type with low surface loading for long life. They include a manual reset high temperature cut-out and are mounted at the fan discharge to protect filters and motors from excess heat. Fan and heating controls are built in and wired internally, reducing site installation time to a minimum. A standard customer interface terminal box is common to all units and provides for various external remote items such as supply fan speed control, time clock, set point adjustment, PIR sensor and room or duct sensor. A power isolator is also provided. Outputs for extract fan (starter built-in), shut off damper and signal input from a fire alarm are also provided. N.B. An additional relay PCB will be required for use with an air quality sensor.

Electric heater temperature control is by thyristor. This method enables the sensor to be mounted down stream of the heater in the supply airflow and can hold +/-1°C of the chosen setpoint. A 0-10v cooling output signal is also available which can be used as above.

Inlet damper and motor come complete with weatherproof motor cover, needing only wiring into main terminal box.



KEY	ELECTRICAL ARRANGEMENT FOR FAN & HEATER
	(240V) 1 Phase Fan / (240V) 1 Phase Heater
	(240V) 1 Phase Fan / (415V) 3 Phase Heater
	(415V) 3 Phase Fan / (415V) 3 Phase Heater

Direct Drive Supply Air Handling Units Quick Selection Chart

	External Duct Resistance ~ Pa									
	75	100	125	150	175	200	250	300	400	500
0.1	VMD1L	VMD1L	VMD1L	VMD1L	VMD1L	VMD1M	VMD1M			
0.15	VMD1L	VMD1L	VMD1L	VMD1L	VMD1M	VMD1M	VMD1M	VMD1H		
0.2	VMD1L	VMD1L	VMD1L	VMD1M	VMD1M	VMD1M	VMD1H			
0.25	VMD1L	VMD1M	VMD1M	VMD1M	VMD1M	VMD1M	VMD1H			
0.3	VMD1M	VMD1M	VMD1M	VMD1M	VMD1M	VMD1H	VMD2M			
0.35	VMD1M	VMD1M	VMD1M	VMD1H	VMD1H	VMD1H	VMD2M			
	VMD1H	VMD1H	VMD1H	VMD2L	VMD2L	VMD2L				
0.4	VMD1H	VMD1H	VMD1H	VMD1H	VMD1H	VMD2M	VMD2M	VMD2H		
	VMD2L	VMD2L	VMD2L	VMD2L						
0.45	VMD2L	VMD2L	VMD2L	VMD2M	VMD2M	VMD2M	VMD2M	VMD2H		
	VMD2M	VMD2M	VMD2M							
0.5	VMD2L	VMD2L	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2H		
	VMD2M	VMD2M								
0.55	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2H		
0.6	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2H	VMD3H		
0.65	VMD2M	VMD2M	VMD2M	VMD2M	VMD2M	VMD2H	VMD3L	VMD3H	VMD3H	VMD3H
							VMD3H			
0.7	VMD2M	VMD2M	VMD2M	VMD2H	VMD2H	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
						VMD3H	VMD3H			
0.75	VMD2H	VMD2H	VMD2H	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
				VMD3H	VMD3H	VMD3H	VMD3H			
0.8	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H			
0.85	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H			
0.9	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H			
1.0	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H
	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H			
1.1	VMD3L	VMD3L	VMD3L	VMD3L	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H
	VMD3H	VMD3H	VMD3H	VMD3H						
1.2	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	
1.3	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H		
1.4	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H	VMD3H		

Model	Heater Duty (Kw)	Heater Phase (ph)	Built in Controller	Max. Amps (Total)
VMD1L	3 or 4.5	1	TC5t Thyristor	(3kW) 14A, (4.5kW) 20A
VMD1M	6 or 9	1	TC9 Thyristor	(6kW) 27A, (9kW) 40A
VMD1H	9 or 13.5	3	TC13 Thyristor	(9kW) 15A/ph, (13.5kW) 21A/ph
VMD2L	3, 6 or 9	1	TC9 Thyristor	(3kW) 15A, (6kW) 27A, (9kW) 40A
VMD2M	9 or 13.5	3	TC13 Thyristor	(9kW) 15A/ph, (13.5kW) 21A/ph
VMD2H	15, 18, or 22.5	3	TC13 Thyristor + Solid State Relay	(15kW) 25A/ph, (18kW) 29A/ph, (22.5kW) 35A/ph
VMD3L	18 or 27	3	TH28 Thyristor	(18kW) 28A/ph, (27kW) 40A/ph
VMD3H	27 or 36	3	TH36 Thyristor	(27kW) 42A/ph, (36kW) 55A/ph

VMD Mini Viking Range

Sound power levels dBW re 10–12W (at full speed)

The dBA quoted is the mean A weighted sound pressure level measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the mean sound level experienced will depend on the area being served.

Fan Data												
Model	Speed (rpm)	FLC (A)	Output (Watts)	Octave band mid frequency Hz								dBA @ 3m
				63 Hz	125	250	500	1 K	2 K	4 K	8 K	
VMD1L	860	1.0	75	53	51	44	42	39	35	27	20	40
VMD1M	1300	1.5	150	78	77	69	68	64	59	53	44	46
VMD1H	1380	2.0	300	79	80	72	70	66	63	56	47	48
VMD2L	900	2.0	250	75	72	69	66	64	58	52	42	54
VMD2M	1300	3.5	370	78	75	72	69	67	61	55	45	56
VMD2H	1380	3.6	550	79	80	74	72	69	64	57	48	57
VMD3L	900	6.5	750	77	80	78	77	75	71	67	56	66
VMD3H3*	1140	4.2/ph	1000	77	80	78	77	75	71	67	56	66
VMD3H5*	1400	4.2/ph	1500	80	83	81	80	78	74	70	59	68

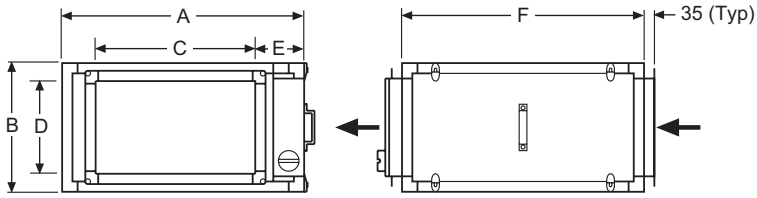
Silencer insertion loss (subtract from sound power levels)

Code	To Suit	Duct Dims. (mm)			63 Hz	125	250	500	1 K	2 K	4 K	8 K
		W	H	L								
VMA53	VMD1	500	300	600	4	6	10	20	28	28	19	20
VMA54	VMD2	500	400	900	5	9	16	30	39	39	31	26
VMA75	VMD3	750	500	1200	6	12	23	40	51	51	41	29

Sound breakout from unit

Model	63 Hz	125	250	500	1 K	2 K	4 K	8 K
VMD1M	69	61	49	43	44	29	15	2
VMD2M	75	67	54	48	48	35	21	8
VMD3L	76	68	56	50	51	36	22	9

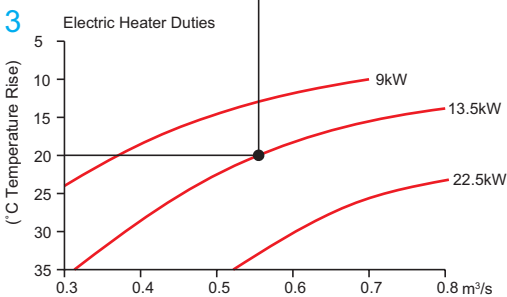
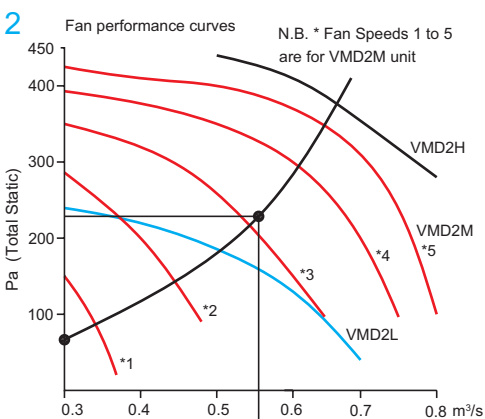
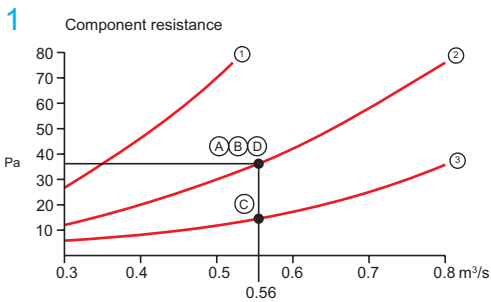
Standard fan, filter electric heater unit



Model	VMD1	VMD2	VMD3
A	750	750	965
B	400	500	700
C	500	500	700
D	300	400	500
E	150	135	133
F	750	1000	1200
Weight (kg)	44	75	170

VMD Mini Viking Range

VMD2 Supply Air Handling Unit - Selection Example



- 1**
- ① Deep cooling coil.
High density electric heater.
 - ② EU4 filter (1/2 dirty).
Standard electric heater.
Weather louvre.
 - ③ Clean filter.
Silencer.
Frost heater.

2 EXAMPLE
An office area of 80m² by 2.5m high requires ventilating at 10 air changes per hour.
80 X 2.5 X 10 = 0.56m³/s
60 X 60

The input airflow requires filtering to a good standard (EU4) and electricity is the favoured winter heat source, controlled to minimise wasted energy.

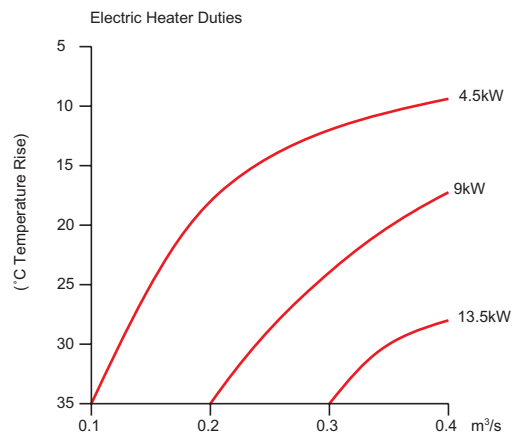
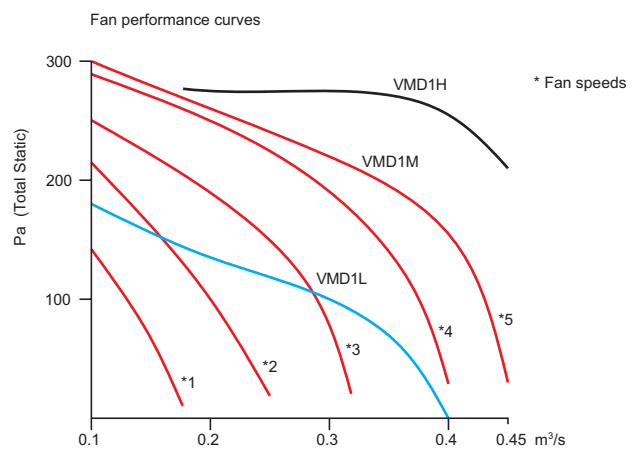
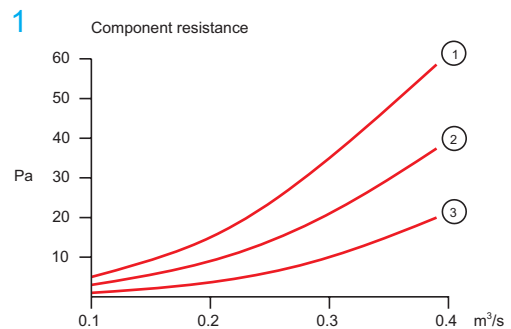
Using the top graph add the filter resistance (A) to the electric heater (B), silencer (C), weather louvre (D) and the external duct resistance (calculated from the duct layout)

Pa	
A	35
B	35
C	35
D	13
EXT.	100
	218 Pa Total Static Pressure

3 Plot this on fan chart and plot another point half the air volume and 25% of the static to draw in system resistance curve. You can now see that this system will give 0.51m³/s airflow using the quiet VMD2L unit or 0.68m³/s with the VMD2M at full speed (5). The ideal duty would be achieved using the VMD2M with speed controller (Speed 3).

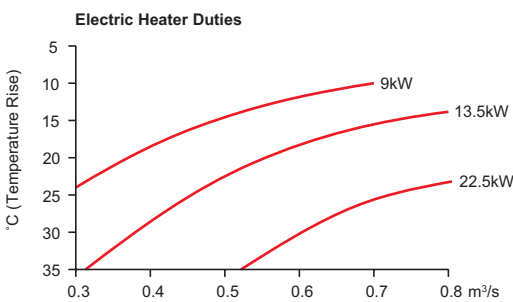
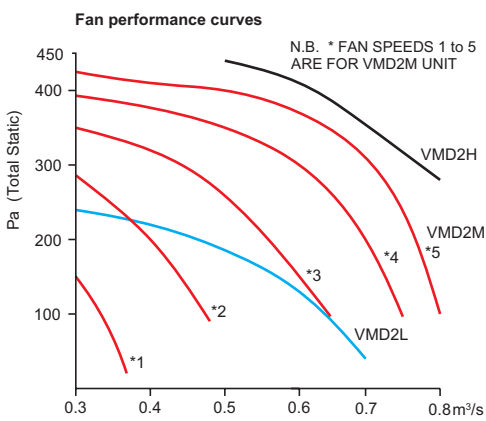
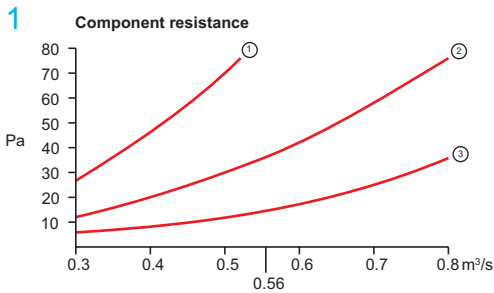
Continue the fan airflow line to read off the ideal heater size. In this case a 13.5kW 3 phase heater will give a 20°C rise, which is sufficient to temper input air from -1°C to 19°C.

VMD1 Supply Air Handling Unit - Selection Graphs



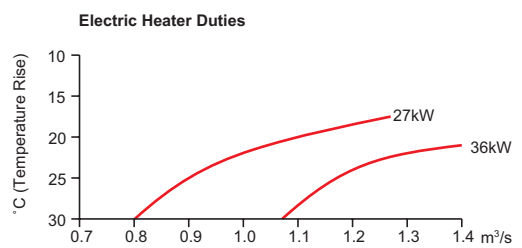
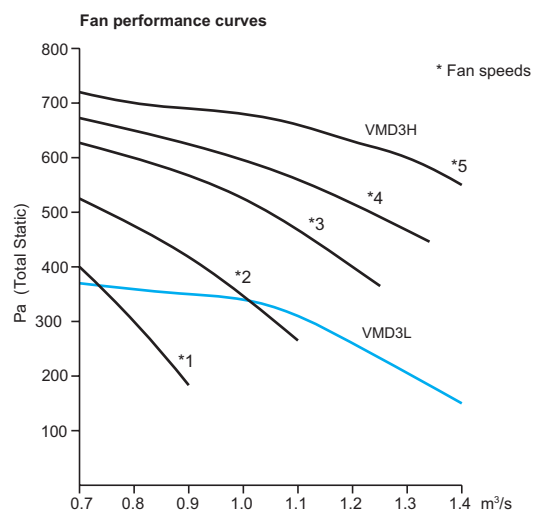
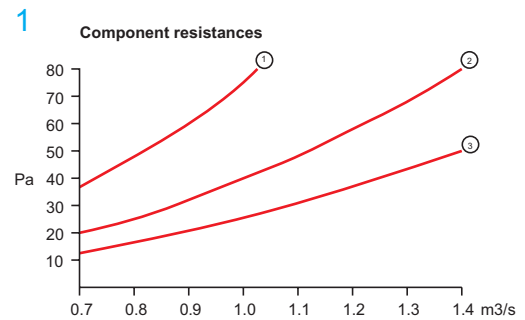
- 1**
- ① Deep cooling coil.
High density electric heater.
 - ② EU4 filter (1/2 dirty).
Standard electric heater.
Weather louvre.
 - ③ Clean filter.
Silencer.
Frost heater.

VMD2 Supply Air Handling Unit - Selection Graphs



- 1**
- ① Deep cooling coil.
High density electric heater.
 - ② EU4 filter (1/2 dirty).
Standard electric heater.
Weather louvre.
 - ③ Clean filter.
Silencer.
Frost heater.

VMD3 Supply Air Handling Unit - Selection Graphs



- 1**
- ① Deep cooling coil.
High density electric heater.
 - ② EU4 filter (1/2 dirty).
Standard electric heater.
Weather louvre.
 - ③ Clean filter.
Silencer.
Frost heater.

MSA, MSB & SL Minislim & Slimline Unit

Features and Benefits

- Performance range up to 0.9m³/s
- Motor Insulation Class B minimum
- Standard Thermal Overload Protection (S.T.O.P.)
- Anodised aluminium pentapost frame
- Double skinned panels
- Low profile direct drive units
- 1 Year Guarantee

Low profile direct drive Air Handling Unit - Duties from 0.05m³/s to 0.92m³/s

Designed specifically for applications with limited available height such as ceiling voids. Access (to be specified at time of ordering) can be from above or below with heater and motor connections on the left or right hand side.

The casing comprises of an AA25 anodised aluminium frame with high density glass reinforced nylon corners and double skinned panels of 0.7mm galvanised steel enclosing 25mm of 60kg/m³ mineral fibre insulation. All panels are retained by proprietary fasteners. All panels are sealed by a purpose designed leak seal gasket fully retained into the aluminium framework.

Minislim Unit - Duties from 0.05m³/s to 0.26m³/s

Similar to the Slimline unit but even more compact for smaller duties with a choice of 2 fan sizes within one unit size. The standard

unit comprises; - inlet flexible connector, EU5 bag filter, l.p.h.w. or electric heater, direct drive fan and outlet flexible connector. Access is top or bottom. The unit is suitable for internal mounting only.

Slimline Unit - Duties from 0.05m³/sec to 0.92m³/sec

Low profile direct drive units with forward curved centrifugal fans designed for applications where restricted height is a problem and top or bottom access is required. There are two sizes of unit each with four different fan options. All units are single phase with the exception of the SL081-4. They are all speed controllable and have Standard Thermal Overload Protection (S.T.O.P.). The standard unit comprises; -inlet flexible connector, EU5 bag filter, l.p.h.w. or electric heater, direct drive fan and outlet flexible connector. The unit is suitable for internal mounting only.

Specification

Direct Drive Fans have forward curved centrifugal impellers factory matched to an external rotor motor and statically and dynamically balanced to ISO 1940 as a complete assembly. The external rotor motors have sealed for life ball bearings. They incorporate Standard Thermal Overload Protection and are fully speed controllable. Insulation is Class B and the enclosure IP44 to DIN 40050 with the electrical design corresponding to DIN IEC 38. The motors are suitable for ambient temperatures of up to 40°C and atmospheres up to 95% R.H.

Flexible Connectors

The Flexible Connectors are manufactured from Revertex JPT 20 with ductmate flanges to DW142.

Bag Filters

Bag Filters are manufactured from fire retardant synthetic material with galvanised steel frames. The filter grade is EU5 to Eurovent 4/5.

L.P.H.W. Heater Batteries

L.P.H.W. Heater Batteries are constructed from copper tube, mechanically bonded to aluminium fins with the complete assembly housed in a galvanised steel casing. The coil headers and return bends are totally enclosed within the air handling unit casing. Flow and return connections are located on the same side of the unit and have male B.S.P. thread. L.P.H.W. Heater Batteries are pressure tested under water to 250p.s.i.

Electric Heater Batteries

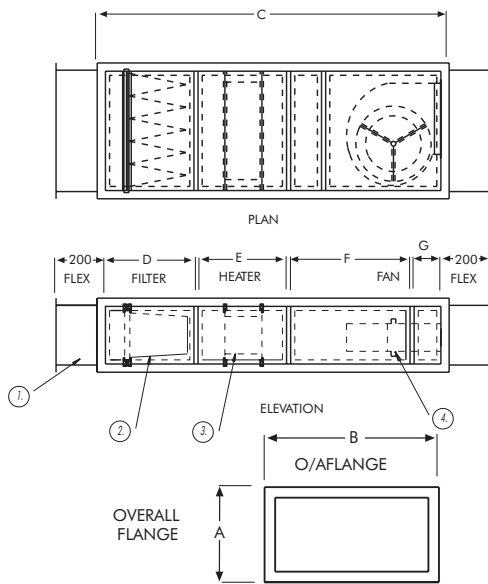
Electric Heater Battery elements are constructed from Nichrome 5 spiral resistance wire surrounded by magnesium oxide powder and sheathed in stainless steel. The elements are carried on a galvanised steel frame. All electric heaters incorporate a thermal cut out device. Electrical connections are via a flush mounted terminal box on the outside of the air handling unit casing.



Insertion loss for standard silencers

	Octave band mid frequency Hz								Length mm
	63	125	250	500	1k	2k	4k	8k	
Minislim	-4	-6	-12	-20	-27	-27	-20	-16	900
Minislim	-5	-9	-17	-28	-37	-37	-29	-24	1200
SL066	-5	-9	-17	-28	-37	-37	-29	-24	1200
SL066	-7	-12	-25	-35	-50	-50	-38	-30	1500
SL066	-8	-15	-28	-42	-50	-50	-46	-34	1800
SL081	-5	-9	-17	-28	-37	-37	-29	-24	1200
SL081	-7	-12	-25	-35	-50	-50	-38	-30	1500
SL081	-8	-15	-28	-42	-50	-50	-46	-34	1800

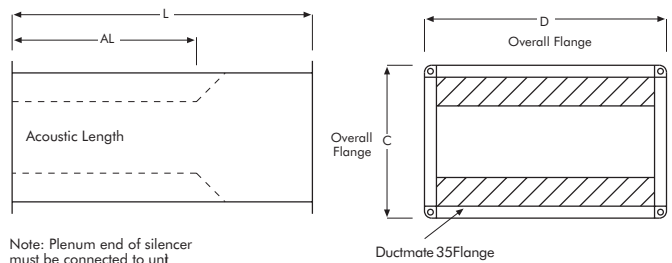
Unit Dimensions (mm)



Unit	SPIGOT						
	A	B	C	D	E	F	G
Minislim	360	660	1560	580	430	280	130
SL066	360	660	1860	580	430	580	130
SL081	360	810	1860	580	430	580	130

No.	Description
1	200mm Flexible Conn.
2	305mm Bag Filter
3	LPHW Heater (1, 2 or 3 row) or Electric Heater Battery
4	Fan

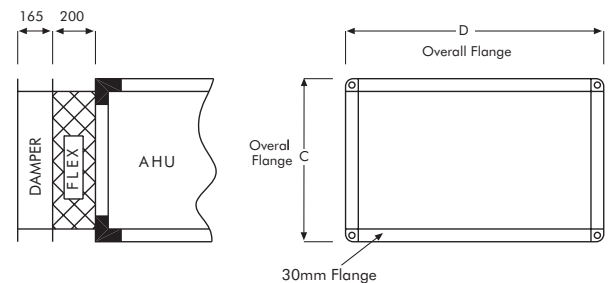
Accessories Dimensions (mm)



Note: Plenum end of silencer must be connected to unit

Ref. No.	Dimensions in mm				Approx Wgt kg
	L	AL	C	D	
Minislim	900	600	360	660	20
Minislim	1200	900	360	660	29
Minislim	1200	900	360	660	29
SL066	1500	1200	360	660	33
SL066	1800	1500	360	660	39
SL066	1200	900	360	810	37
SL081	1500	1200	360	810	42
SL081	1800	1500	360	810	48

Inlet Damper



Dampers are supplied with extended spindles - suitable for motorisation as standard.

Unit	Inlet Damper Stock Ref. No	Dim in mm		Approx Wgt kg
		C	D	
Minislim	57CD-66	360	660	6
SL066	57CD-66	360	660	6
SL081	57CD-81	360	810	7

MSA, MSB & SL Minislim & Slimline Units

Typical performance for standard unit with bag filter, heater and fan section

Stock Ref.	m ³ /s at Pa															
	0	25	50	75	100	125	150	200	250	300	350	400	450	500	550	600
MS-A	0.21	0.203	0.194	0.183	0.173	0.162	0.152	0.127	0.103	0.077	-	-	-	-	-	-
MS-B	0.269	0.266	0.262	0.258	0.253	0.246	0.242	0.227	0.21	0.181	0.141	0.076	-	-	-	-
SL066-1	0.305	0.294	0.283	0.270	0.253	0.230	0.200	0.124	-	-	-	-	-	-	-	-
SL066-2	0.395	0.385	0.371	0.357	0.340	0.323	0.303	0.254	0.155	-	-	-	-	-	-	-
SL066-3	0.480	0.466	0.450	0.433	0.416	0.399	0.378	0.330	0.270	0.15	-	-	-	-	-	-
SL066-4	0.497	0.488	0.476	0.465	0.451	0.441	0.426	0.399	0.364	0.32	0.259	-	-	-	-	-
SL081-1	0.525	0.512	0.500	0.485	0.475	0.460	0.445	0.415	0.376	0.328	0.227	-	-	-	-	-
SL081-2	-	-	-	-	-	-	-	0.560	0.532	0.500	0.452	0.390	0.292	0.170	-	-
SL081-3	-	-	-	-	-	-	0.782	0.764	0.748	0.726	0.704	0.677	0.645	0.602	0.548	0.463
SL081-4	0.923	0.912	0.899	0.888	0.870	0.862	0.845	0.819	0.793	0.768	0.736	0.705	0.668	0.628	0.582	0.522

Resistance Details

Speed Ref.	Motor r.p.m	FL.C kW	S.C. Amps	Supply Amps	Speed V/Hz/Ph	Controller
MS-A	1700	0.175	0.77	4.4	230/50/1	SPM 5020 / RTRE 20
MS-B	2050	0.30	1.31	6.0	230/50/1	SPM 5020 / RTRE 20
SL-066-1	1180	0.36	1.90	8.0	230/50/1	SPM 5035 / RTRE 35
SL-066-2	1230	0.49	2.30	10.0	230/50/1	SPM 5035 / RTRE 35
SL-066-3	1230	0.78	3.70	14.0	230/50/1	SPM 5060 / RTRE 60
SL-066-4	1130	0.89	4.20	17.0	230/50/1	SPM 5060 / RTRE 60
SL-081-1	1130	0.89	4.20	17.0	230/50/1	SPM 5060 / RTRE 60
SL-081-2	1180	0.97	4.60	18.0	230/50/1	SPM 5060 / RTRE 60
SL-081-3	1160	1.75	8.30	32.0	230/50/1	SPM 5090
SL-081-4	1300	2.40	4.30	18.0	400/50/3	RDTK 7

Note: Other types of speed controllers are available as are D.O.L. starters and electric heater controllers.

Sound power levels dBW re 10-12W (at full speed)

The dBA quoted is the mean A weighted sound pressure level measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the mean sound level experienced will depend on the area being served.

Ref. No.		Octave band mid frequency Hz								dBA@ 3m
		63	125	250	500	1k	2k	4k	8k	
MS-A	Outlet	79	77	69	63	64	63	59	55	51
MS-A	Surroundings	71	69	53	33	30	30	26	22	34
MS-B	Outlet	89	87	79	73	74	73	69	65	61
MS-B	Surroundings	81	79	63	43	40	40	36	32	44
SL066-1	Outlet	80	78	77	75	73	71	63	57	58
SL066-1	Surroundings	72	70	61	45	39	38	30	24	37
SL066-2	Outlet	83	80	79	77	75	70	67	59	59
SL066-2	Surroundings	75	72	63	47	41	37	34	26	39
SL066-3	Outlet	90	87	86	81	82	78	73	63	65
SL066-3	Surroundings	82	79	70	51	48	45	40	30	36
SL066-4	Outlet	86	84	84	80	73	71	68	59	61
	Surroundings	78	76	68	50	39	38	35	26	43
SL081-1	Outlet	86	84	84	80	73	71	68	59	61
	Surroundings	78	76	68	50	39	38	35	26	43
SL081-2	Outlet	81	78	77	77	70	70	68	65	58
	Surroundings	73	70	61	47	36	37	35	32	37
SL081-3	Outlet	89	88	84	82	78	73	70	62	64
	Surroundings	81	80	68	52	44	40	37	29	46
SL081-4	Outlet	92	89	89	86	82	79	75	64	68
	Surroundings	84	81	73	56	48	46	42	41	48

The dBA quoted is the mean A weighted sound pressure level measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the mean sound level experienced will depend on the area being served.

Silencer resistance (Pa) standard length silencer

Size	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.8	0.9	1.0
MS	2	4	7	11	16	-	-	-	-	-	-	-	-	-	-	-
SL066	2	4	7	11	16	22	29	37	-	-	-	-	-	-	-	-
SL081	1.5	3	5	8	11	15	19	24	30	36	43	51	59	77	97	120

Performance data for standard 1 and 2 row LPHW heaters at 82°C flow 71°C return

Air on		Leaving Air Temp °C @ m³/sec															
Ref. No.	Temp	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.75	0.8	0.9
Minislim	-5°C	21.5	19.5	17.5	16	14.5	-	-	-	-	-	-	-	-	-	-	-
1 - Row	0°C	25	22.5	21	19.5	18	-	-	-	-	-	-	-	-	-	-	-
Minislim	-5°C	33.5	31	28.5	26.5	24	-	-	-	-	-	-	-	-	-	-	-
2 - Row	0°C	36	33.5	31.5	29.5	27	-	-	-	-	-	-	-	-	-	-	-
SL-066	-5°C	24	22	20.5	19	17.5	16.5	15	14	12.5	-	-	-	-	-	-	-
1 - Row	0°C	27	25	23.5	22.5	21	20	18.5	17.5	16.5	-	-	-	-	-	-	-
SL-066	-5°C	40	37	35	33	31.5	29.5	28	26	24.5	-	-	-	-	-	-	-
2 - Row	0°C	-	-	37.5	35.5	34	32.5	30.5	29	27.5	-	-	-	-	-	-	-
SL-081	-5°C	26.5	24.5	23	22	20.5	19.5	18.5	17.5	16.5	16	15	14	13	12	11	9
1 - Row	0°C	29.5	27.5	26	25	24	23	22	21	20	19.5	18.5	17.5	17	16	15	13
SL-081	-5°C	-	38	36.5	34.5	33	32	30.5	29.5	28	26.5	25.5	24	23	21.5	20	17.5
2 - Row	0°C	-	-	38.5	37	35.5	34.5	33	32	31	29.5	28.5	27	26	25	23.5	21

Single Phase - Electric Heater

kW	1 Step	2 Step	3 Step	4 Step
	Heater	Heater	Heater	Heater
0.5	Yes	-	-	-
0.75	Yes	-	-	-
1.0	Yes	Yes	-	-
1.5	Yes	Yes	Yes	-
2.0	Yes	Yes	-	Yes
2.5	Yes	-	-	-
3.0	Yes	Yes	Yes	Yes
4.0	Yes	Yes	-	Yes
4.5	Yes	-	Yes	-
5.0	Yes	Yes	-	-
6.0	Yes	Yes	Yes	Yes
7.5	Yes	-	Yes	-
8.0	Yes	Yes	-	Yes
9.0	Yes	-	Yes	-
10.0	Yes	Yes	-	Yes
12.0	Yes	Yes	Yes	Yes

Three Phase - Electric Heater

kW	1 Step	2 Step	3 Step	4 Step
	Heater	Heater	Heater	Heater
3.0	Yes	Yes	-	-
4.5	Yes	Yes	Yes	-
6.0	Yes	Yes	-	Yes
7.5	Yes	-	-	-
9.0	Yes	Yes	Yes	Yes
12.0	Yes	Yes	-	Yes
13.5	Yes	-	Yes	-
15.0	Yes	Yes	-	-
18.0	Yes	Yes	Yes	Yes
22.5	Yes	-	Yes	-
24.0	Yes	Yes	-	Yes

Damper resistance (Pa)

Size	Air Volume m³/sec															
	0.1	0.15	0.2	0.25	0.3	0.35	0.4	0.45	0.5	0.55	0.6	0.65	0.7	0.8	0.9	1.0
MS	1	1.5	2.5	4	6	-	-	-	-	-	-	-	-	-	-	-
SL066	1	1.5	2.5	4	6	8	10	13	16	-	-	-	-	-	-	-
SL081	1	1.5	2	2.5	3.5	5	6.5	8	10	12	14.5	17	20	26	32	40

D1 to D6 Mini Direct Range

Features and Benefits

- Performance range up to 2.25m³/s
- Motor Insulation Class B minimum
- Standard Thermal Overload Protection (S.T.O.P.)
- Anodised Aluminium pentapost frame
- Double skinned panels
- Compact direct drive units
- Internal standard
- Optional external unit
- 1 Year Guarantee

Mini Direct Drive Units

Direct Drive Air Handling Units with neat and compact design. Access can be on the left or right hand side (to be specified at time of ordering).

Mini Direct Drive Unit - Duties from 0.05m³/s to 2.25m³/s

A compact and economical range of units with directly driven centrifugal fans. There are six standard unit sizes. All the fans are speed controllable for added flexibility and incorporate

Standard Thermal Overload Protection (S.T.O.P.). The standard unit consists of a rigid inlet connector, 100mm EU4 panel filter, l.p.h.w. or electric heater, direct drive centrifugal fan and rigid outlet connector.

Suitable for internal mounting as standard, models suitable for external mounting with optional roof canopy, inlet weather cowl and plastic coated panels (colour BS10A05) is available to order.

Specification

Direct Drive Fans have forward curved centrifugal impellers factory matched to an external rotor motor and statically and dynamically balanced to ISO 1940 as a complete assembly. The external rotor motors have sealed for life ball bearings. They incorporate Standard Thermal Overload Protection (S.T.O.P.) and are fully speed controllable. Insulation is class B and the enclosure IP44 to DIN 40050 with the electrical design corresponding to DIN IEC 38. Motors are suitable for ambient temperatures of up to 40°C and atmospheres up to 95% R.H.

Flexible Connectors

The Flexible Connectors are manufactured from Revertex JPT 20 with ductmate flanges to DW142.

Panel Filters

Panel Filters are manufactured from fire retardant synthetic material with galvanised steel frames. The filter grade is EU4 to Eurovent 4/5.

L.P.H.W. Heater Batteries

L.P.H.W. Heater Batteries are constructed from copper tube, mechanically bonded to aluminium fins with the complete assembly housed in a galvanised steel casing. The coil headers and return bends are totally enclosed within the air handling unit casing. Flow and return connections are located on the same side of the unit and have male B.S.P. thread. L.P.H.W. Heater Batteries are pressure tested under water to 250 p.s.i.

Electric Heater Batteries

Electric Heater Battery elements are constructed from Nichrome 5 spiral resistance wire surrounded by magnesium oxide powder and sheathed in stainless steel. The elements are carried on a galvanised steel frame. All electric heaters incorporate a thermal cut out device. Electrical connections are via a flush mounted terminal box on the outside of the air handling unit casing.



Typical performance for standard unit with panel filter, heater and fan section

Stock Ref.	0	25	50	75	100	125	150	200	250	300	350	400
D-1A	0.2	0.19	0.18	0.17	0.159	0.148	0.137	0.113	0.088	0.059	-	-
D-1B	0.262	0.258	0.254	0.249	0.244	0.238	0.231	0.215	0.19	0.158	0.116	-
D-2B	0.486	0.478	0.466	0.455	0.442	0.426	0.41	0.37	0.322	0.264	0.188	-
D-3C	0.5	0.48	0.46	0.437	0.412	0.383	0.351	0.279	0.184	-	-	-
D-3D	0.635	0.617	0.597	0.578	0.554	0.526	0.494	0.411	0.286	0.1	-	-
D-4D	0.686	0.671	0.653	0.633	0.612	0.587	0.56	0.481	0.351	0.106	-	-
D-4E	0.873	0.848	0.822	0.79	0.76	0.73	0.695	0.622	0.526	0.405	0.2	-
D-5E	0.965	0.938	0.91	0.88	0.848	0.816	0.78	0.7	0.6	0.468	-	-
D-5G	-	-	-	-	1.21	1.181	1.15	1.088	1.01	0.923	0.797	0.582
D-5H	1.392	1.366	1.34	1.311	1.285	1.257	1.23	1.17	1.1	1.02	0.925	0.755
D-6G	-	-	-	-	-	-	1.21	1.155	1.08	0.99	0.88	0.675
D-6H	1.484	1.45	1.425	1.4	1.395	1.335	1.3	1.245	1.175	1.1	1	0.88
D-6J	2.25	2.2	2.16	2.13	2.08	2	1.98	1.86	1.75	1.61	1.4	0.94

Fan & Motor Data

Stock Ref. No.	Speed RPM	Motor kW	FLC Amps	SC Amps	Supply V/Hz/Ph	Speed Controller
D-1A	1700	0.175	0.77	4.4	230/50/1	SPM 5020 / RTRE 20
D-1B	2050	0.3	1.31	6	230/50/1	SPM 5020 / RTRE 20
D-2B	2150	0.35 x 2	1.45 x 2	6 x 2	230/50/1	SPM 5035 / RTRE 35
D-3C	1150	0.44	1.85	7.5	230/50/1	SPM 5035 / RTRE 35
D-3D	1100	0.7	3.05	13	230/50/1	SPM 5035
D-4D	1100	0.7	3.05	13	230/50/1	SPM 5035
D-4E	1100	1.02	4.8	24	230/50/1	SPM 5060 / RTRE 60
D-5E	1100	1.02	4.8	24	230/50/1	SPM 5060 / RTRE 60
D-5G	1120	1.52	7.1	28	230/50/1	SPM 5090 / RTRE 9
D-5H	1185	2	3.7	20	400/50/3	RDTK 7
D-6G	1120	1.52	7.1	28	230/50/1	SPM 5090 / RTRE 9
D-6H	1185	2	3.7	20	400/50/3	RDTK7
D-6J	1185	2.0 x 2	3.7 x 2	20 x 2	400/50/3	RD14

Note: Other types of speed controllers are available as are D.O.L. starters and electric heater controllers.

D1 to D6 Mini Direct Drive Range

Performance data for standard 1 and 2 row LPHW heaters at 82°C flow 71°C return

Stock Ref.	Air on Temp	Leaving Air temp °C @ m ³ /sec @Pa															
		0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.2	1.4	1.6	1.8	2	2.4
D1-1 Row	-5°C	21.5	17.5	14.5	-	-	-	-	-	-	-	-	-	-	-	-	-
D1-1 Row	0°C	25	21	18	-	-	-	-	-	-	-	-	-	-	-	-	-
D1-2 Row	-5°C	33.5	28.5	24	-	-	-	-	-	-	-	-	-	-	-	-	-
D1-2 Row	0°C	36	31.5	27	-	-	-	-	-	-	-	-	-	-	-	-	-
D2-1 Row	-5°C	24	20.5	17.5	15	12.5	-	-	-	-	-	-	-	-	-	-	-
D2-1 Row	0°C	27	23.5	21	18.5	16.5	-	-	-	-	-	-	-	-	-	-	-
D2-2 Row	-5°C	N/A	35	31.5	28	N/A	-	-	-	-	-	-	-	-	-	-	-
D2-2 Row	0°C	N/A	37.5	34	30.5	27.5	-	-	-	-	-	-	-	-	-	-	-
D3-1 Row	-5°C	27.5	23.5	21.5	19.5	17.5	16	-	-	-	-	-	-	-	-	-	-
D3-1 Row	0°C	30	26.5	24.5	22.5	21	19.5	-	-	-	-	-	-	-	-	-	-
D3-2 Row	-5°C	N/A	37	34	31.5	29	27	-	-	-	-	-	-	-	-	-	-
D3-2 Row	0°C	N/A	39.5	36.5	34	32	29.5	-	-	-	-	-	-	-	-	-	-
D4-1 Row	-5°C	27.5	24	22	20	19	17.5	16	15	13.5	12.5	-	-	-	-	-	-
D4-1 Row	0°C	30.5	27	25	23.5	22	21	19.5	18.5	17.5	16	-	-	-	-	-	-
D4-2 Row	-5°C	N/A	39.5	37	35	33	31	29.5	27.5	25.5	24	-	-	-	-	-	-
D4-2 Row	0°C	N/A	N/A	39.5	37.5	35.5	34	32	30.5	28.5	27	-	-	-	-	-	-
D5-1 Row	-5°C	-	-	-	-	23	22	21	20.5	19.5	18.5	17	15.5	-	-	-	-
D5-1 Row	0°C	-	-	-	-	26.5	25.5	24.5	23.5	23	22	20.5	19	-	-	-	-
D5-2 Row	-5°C	-	-	-	-	36.5	35	34	33	31.5	30.5	28.5	26.5	-	-	-	-
D5-2 Row	0°C	-	-	-	-	39	37.5	36.5	35.5	34.5	33.5	31.5	29.5	-	-	-	-
D6-1 Row	-5°C	-	-	-	-	24	23	22.5	21.5	21	20	19	18	16.5	15.5	14.5	12.5
D6-1 Row	0°C	-	-	-	-	27	26.5	25.5	25	24	23.5	22.5	21.5	20	19	18	16
D6-2 Row	-5°C	-	-	-	-	39.5	38.5	37.5	36.5	35.5	34.5	33	31.5	30	28.5	27	25.5
D6-2 Row	0°C	-	-	-	-	-	-	39.5	39	38	37	35.5	34	32.5	31	29.5	27

Single Phase - Electric Heater

kW	1 Step	2 Step	3 Step	4 Step	5 Step	6 Step
	Heater	Heater	Heater	Heater	Heater	Heater
0.5	Yes	-	-	-	-	-
0.75	Yes	-	-	-	-	-
1	Yes	Yes	-	-	-	-
1.5	Yes	Yes	Yes	-	-	-
2	Yes	Yes	-	Yes	-	-
2.5	Yes	-	-	-	-	-
3	Yes	Yes	Yes	Yes	-	-
4	Yes	Yes	-	Yes	-	-
4.5	Yes	-	Yes	-	-	-
5	Yes	Yes	-	-	Yes	-
6	Yes	Yes	Yes	Yes	-	Yes
7.5	Yes	-	Yes	-	Yes	-
8	Yes	Yes	-	Yes	-	-
9	Yes	-	Yes	-	-	Yes
10	Yes	Yes	-	Yes	Yes	-
12	Yes	Yes	Yes	Yes	-	Yes

Three Phase - Electric Heater

kW	1 Step	2 Step	3 Step	4 Step	5 Step	6 Step
	Heater	Heater	Heater	Heater	Heater	Heater
3	Yes	Yes	-	-	-	-
4.5	Yes	Yes	Yes	-	-	-
6	Yes	Yes	-	Yes	-	-
7.5	Yes	-	-	-	-	-
9	Yes	Yes	Yes	Yes	-	-
12	Yes	Yes	-	Yes	-	-
13.5	Yes	-	Yes	-	-	Yes
15	Yes	Yes	-	-	Yes	-
18	Yes	Yes	Yes	Yes	-	Yes
22.5	Yes	-	Yes	-	Yes	-
24	Yes	Yes	-	Yes	-	-
27	Yes	Yes	Yes	-	-	Yes
30	Yes	-	-	Yes	Yes	-

Sound power levels dBW re 10–12W (at full speed)

The dBA quoted is the mean A weighted sound pressure level measured at a distance of 3m with spherical sound level propagation. It is included for comparative purposes only and the mean sound level experienced will depend on the area being served.

Stock Ref. No.		Octave band mid frequency Hz								dBA @ 3m
		63	125	250	500	1k	2k	4k	8k	
D-1A	Outlet	79	77	69	63	64	63	59	55	51
D-1A	Breakout	71	69	53	33	30	30	26	22	34
D-1B	Outlet	89	87	79	73	74	73	69	65	61
D-1B	Breakout	81	79	63	43	44	40	36	32	44
D-2B	Outlet	92	89	82	76	77	76	72	68	63
D-2B	Breakout	84	82	66	46	47	43	39	35	47
D-3C	Outlet	85	82	73	71	70	67	64	64	55
D-3C	Breakout	77	74	57	41	40	34	31	31	38
D-3D	Outlet	87	85	77	75	73	70	67	66	57
D-3D	Breakout	79	77	61	45	43	37	34	33	40
D-4D	Outlet	87	85	77	75	73	70	67	66	57
D-4D	Breakout	79	77	61	45	43	37	34	33	40
D-4E	Outlet	83	81	78	78	75	70	68	60	60
D-4E	Breakout	77	75	62	48	45	37	35	29	41
D-5E	Outlet	83	81	78	78	75	70	68	60	60
D-5E	Breakout	77	75	62	48	45	37	35	29	41
D-5G	Outlet	90	86	82	79	75	71	69	62	61
D-5G	Breakout	84	80	66	49	45	38	36	31	45
D-5H	Outlet	88	86	84	82	78	74	72	64	64
D-5H	Breakout	82	80	68	52	48	41	39	33	50
D-6G	Outlet	90	86	82	79	75	71	69	62	61
D-6G	Breakout	84	80	66	49	45	38	36	31	45
D-6H	Outlet	88	86	84	82	78	74	72	64	64
D-6H	Breakout	82	80	68	52	48	41	39	33	50
D-6J	Outlet	91	89	87	85	81	77	75	67	67
D-6J	Breakout	85	83	71	53	51	44	42	36	53

Insertion loss for standard silencers

Unit Size	Octave band mid frequency Hz								Length mm
	63	125	250	500	1k	2k	4k	8k	
D-1	-4	-6	-12	-20	-27	-27	-20	-16	600
D-2	-5	-9	-17	-28	-37	-37	-29	-24	900
D-3	-5	-9	-17	-28	-37	-37	-29	-24	900
D-4	-5	-9	-17	-28	-37	-37	-29	-24	900
D-5	-5	-9	-17	-28	-37	-37	-29	-24	900
D-6	-5	-9	-17	-28	-37	-37	-29	-24	900

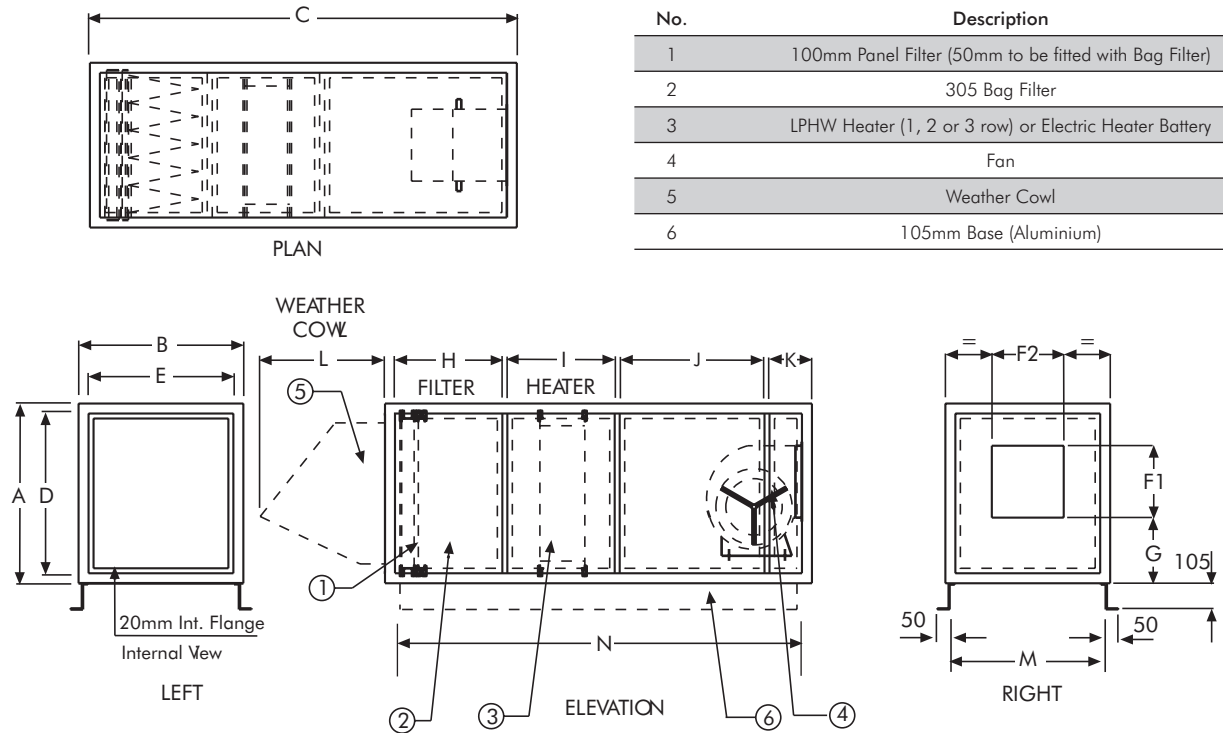
N.B. For data on other silencer lengths please enquire

Direct Drive Units

Stock Ref. No.	Maximum Electric Heater Size
D1	10.0kW
D2	15.0kW
D3	24.0kW
D4 TO D6	30.0kW

D1 to D6 Mini Direct Drive Range

Fan Dimensions (mm)



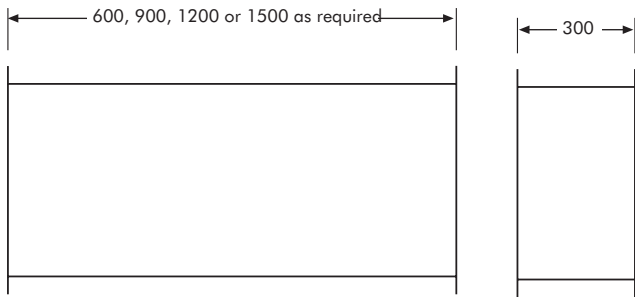
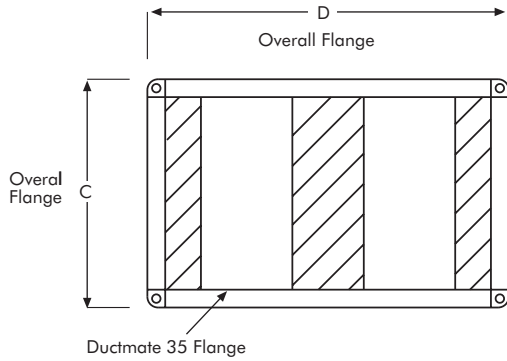
No.	Description
1	100mm Panel Filter (50mm to be fitted with Bag Filter)
2	305 Bag Filter
3	LPHW Heater (1, 2 or 3 row) or Electric Heater Battery
4	Fan
5	Weather Cowl
6	105mm Base (Aluminium)

Unit	A	B	C	D	E	F1	F2	G	H	I	J	K	L*	M*	N*
D1A	360	660	1560	280	580	102	168	172	580	430	280	130	200	625	1440
D1B	360	660	1560	280	580	102	232	172	580	430	280	130	200	625	1440
D2B	420	660	1560	340	580	232	204	93	580	430	280	130	250	625	1440
D3C	520	660	1560	440	580	146	287	281	580	430	280	130	300	625	1440
D3D	520	660	1560	440	580	146	287	281	580	430	280	130	300	625	1440
D4D	720	660	1560	640	580	146	287	432	580	430	280	130	500	625	1440
D4E	720	660	1710	640	580	160	365	456	580	430	430	130	500	625	1590
D5E	720	960	1710	640	880	160	365	456	580	430	430	130	500	925	1590
D5G	720	960	1710	640	880	188	365	435	580	430	430	130	500	925	1590
D5H	720	960	1710	640	880	188	365	435	580	430	430	130	500	925	1590
D6G	720	1260	1710	640	1180	188	365	435	580	430	430	130	500	1225	1590
D6H	720	1260	1710	640	1180	188	365	435	580	430	430	130	500	1225	1590
D6J	720	1260	1710	640	1180	188	730	435	580	430	430	130	500	1225	1590

*Dimension relates to weather proof unit

Accessories Dimensions (mm)

Standard silencer (single skinned)

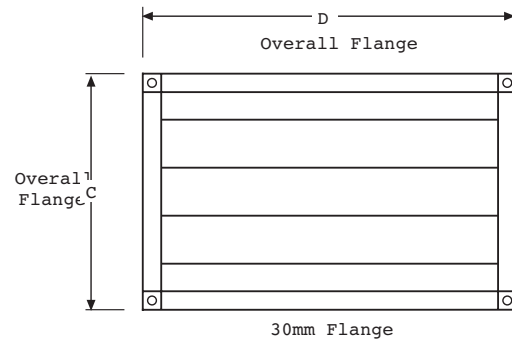
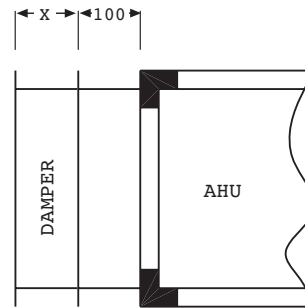


Outlet Diffusers for Connection to Silencer

This item is essential when connecting a silencer directly to the discharge side of a fan section. The flanges at either end match the AHU and silencer dimension.

Unit	Diffuser Stock Ref. No.	Dimensions in mm		Approx Wgt kg
		C	D	
D1	54BC1	360	660	18
D2	54BC2	420	660	21
D3	54BC3	520	660	32
D4	54BC4	720	660	40
D5	54BC5	720	960	46
D6	54BC6	720	1260	50

Inlet Damper



Dampers are supplied with extended spindles suitable for motorisation as standard. When using a damper, a rigid connector will be required.

Unit	Inlet Damper Stock Ref.	Rigid Connector Stock Ref.	Flexible Connector Stock Ref.	Dimensions (mm)			Approx Wgt kg
				C	D	X	
D1	57CD-66	54MC1	68FC-1	360	660	165	6
D2	57CD-2	54MC2	68FC-2	420	660	165	6.5
D3	57CD-3	54MC3	68FC-3	520	660	165	7
D4	57CD-4	54MC4	68FC-4	720	660	165	9
D5	57CD-5	54MC5	68FC-5	720	960	165	12
D6	57CD-6	54MC6	68FC-6	720	1260	165	25

Standard length silencer resistance (Pa)

Stock Ref.	Pressure Drop (Pa) Air Volume m³/sec															
	0.1	0.2	0.3	0.4	0.5	0.6	0.7	0.8	0.9	1	1.2	1.4	1.6	1.8	2	2.4
D-1	2	8	18	-	-	-	-	-	-	-	-	-	-	-	-	-
D-2	1.5	5	12	20	31	-	-	-	-	-	-	-	-	-	-	-
D-3	1	4	8	14	21	31	41	54	-	-	-	-	-	-	-	-
D-4	1	2	4	7	10	15	20	26	32	40	58	-	-	-	-	-
D-5	1	1	2	4	5	7	10	13	16	20	29	39	51	65	80	-
D-6	1	1	2	2	3	5	6	8	10	12	18	24	31	29	48	70

Standard Range Control Systems



Single Phase SPM (Auto Transformer)

- Single Phase, 5 step auto-transformer speed controller
- Low motor noise - no magnetic hum.
- ON/OFF Switch
- IP54 enclosure

Stock Ref. No.	Max Peak Load Current	Dimensions H x W x D (mm)	Weight kg
SPM5020	2.0 amps	230 x 166 x 118	2.2
SPM5035	3.5 amps	230 x 166 x 118	3.5
SPM5060	6.0 amps	230 x 166 x 118	5
SPM5075	7.5 amps	284 x 240 x 132	6
SPM5090	9.0 amps	316 x 270 x 168	10.5
SPM5140	14.0 amps	316 x 270 x 168	16.5

Single Phase RTRE - (enhanced Auto Transformer)

- Single Phase 5 step auto-transformer speed controller.
- Separate starter not required when used with Standard Thermal Overload Protected fans.
- Low motor noise - no magnetic hum.
- Additional terminals to allow connection of remote switching device.
- Additional terminals to allow connection of remote anti-freezing thermostat.
- IP54 enclosure.

Stock Ref. No.	Max Peak Load Current	Dimensions H x W x D (mm)	Weight kg
RTRE 20	2.0 amps	230 x 166 x 118	2.3
RTRE 35	3.5 amps	230 x 166 x 118	3.6
RTRE 60	6.0 amps	230 x 166 x 118	5.1
RTRE 75	7.5 amps	284 x 240 x 132	6.1

Notes

- 1) Fans incorporating Standard Thermal Overload Protection connections will automatically re-start following a break in supply or operation of Standard Thermal Overload Protection. It is the responsibility of the installer to ensure adequate protection as required by statutory regulations.
- 2) For fans with Standard Thermal Overload Protection leads brought out it is recommended to use a separate Vent-Axia STE starter. For fans without Standard Thermal Overload Protection use a separate D.O.L. starter such as our RDO range.
- 3) With electronic speed controllers there is a possibility of some additional motor noise.

Refer to eDemand controller pages for additional control options



Three Phase RDTK (Auto Transformer)

- Three phase 5 step auto - transformer speed controller.
- Separate starter* not required when used with Standard Thermal Overload Protected fans.
- Low motor noise - no magnetic hum.
- Compact fire retardant surface mounting enclosure.
- Additional terminals to allow connection of remote switching device.
- Additional terminals to allow connection of remote anti-freezing thermostat.
- IP54 enclosure apart from RDTK4, RDTK7 and RD14 which are IP21.

Stock Ref. No.	Max Peak Load Current	Dimensions H x W x D (mm)	Weight kg
RDTK10	1.0 amps	284 x 240 x 132	4.7
RDTK20	2.0 amps	284 x 240 x 132	7.4
RDTK4	4.0 amps	316 x 270 x 168	12.9
RDTK 7	7.0 amps	316 x 270 x 168	18.7

* Other form of motor protection must be provided for units without Standard Thermal Overload Protection (S.T.O.P.).

** This controller does not incorporate overload protection. Other form of motor protection must be provided.

Electric Heater Controllers

Vent-Axia range of matching electric heater control packages are designed to meet your every requirement.

CMS RANGE - 'Control made simple'

- Compact fire retardant polycarbonate surface mounting enclosure.
- Supply fan connections.
- Fan interlock.
- Integral fan run on timer for heat dissipation.
- High temperature cut-out connections.
- Fascia indication for FAN 'RUN' / HEAT 'ON' / POWER 'ON'.
- Connections for thermostats.
- Connections for remote clock operation.

HEATING LOAD from 3kW to 9kW - in 1, 2 or 3 steps

SUPPLY - 230V / 1Ph / 50Hz

Options:

- (1) Surface mounting time clock
- (2) Duct or room thermostat.
- (3) Air proving switch
- (4) Differential switch

Dimensions: 332mm H x 316mm W x 147mm D

VHC RANGE - Customised specification both stepped and thyristor control options are available. Please enquire.

Air Handling Design Request Form



To request an AHU design, download the online design request form from the Vent-Axia range, please go to our website www.vent-axia.com

Ventilation Design Guidelines

Recommended Air Changes Per Hour

This table provides suggested air changes per hour (ACH) under normal conditions based on Vent-Axia's extensive experience.

Assembly rooms	4 - 8	Engine rooms	15 - 30	Recording control rooms	15 - 25
Bakeries	20 - 30	Entrance halls, corridors	3 - 5	Recording studios	10 - 12
Banks / building societies	4 - 8	Factories and workshops	8 - 10	Restaurants	8 - 12
*Billiard rooms	6 - 8	Foundries	15 - 30	Schoolrooms	5 - 7
Boiler rooms	15 - 30	Garages	6 - 8	Shops and supermarkets	8 - 15
Cafes and coffee bars	10 - 12	Glasshouses	25 - 60	Shower baths	15 - 20
Canteens	8 - 12	Gymnasiums	6 minimum	Stores and warehouses	3 - 6
Cellars	3 - 10	Hairdressing salons	10 - 15	Squash courts	4 minimum
Churches	1 - 3	Hospitals - sterilising	15 - 25	Swimming baths	10 - 15
*Cinemas and theatres	10 - 15	- wards	6 - 8	Toilets	6 - 10
Club rooms	12 minimum	Laboratories	6 - 15	Utility rooms	15 - 20
Compressor rooms	10 - 12	Laundrettes	10 - 15	Welding shops	15 - 30
Conference rooms	8 - 12	Laundries	10 - 30		
Dairies	8 - 12	Lavatories	6 - 15		
Dance halls	12 minimum	Lecture theatres	5 - 8		
Dye works	20 - 30	Libraries	3 - 5		
Electroplating shops	10 - 12	Mushroom houses	6 - 10		
		Offices	6 - 10		
		Paint shops (not cellulose)	10 - 20		
		Photo and X-ray darkrooms	10 - 15		
		Public house bars	12 minimum		

*Increase by 50% where heavy smoking occurs or if the room is underground.

Basic Formulae and Duct Areas

$$\text{Area (m}^2\text{)} = \frac{\pi \text{ dia}^2(\text{m})}{4} \text{ for circular ducts}$$

$$\text{Velocity m/s} = \frac{\text{Volume m}^3/\text{s}}{\text{area m}^2}$$

$$\text{Velocity Pressure (Pa)} = \text{Velocity}^2 \times 0.6$$

Duct diameter (mm)	area (m ²)
100	0.00785
125	0.01227
150	0.01767
200	0.03142
250	0.04909
315	0.07793
355	0.09898
400	0.12566
450	0.15904
500	0.19635
560	0.24630

'K' Factor - Local pressure loss calculation

$$\Delta p_s = K (p V^2/2)$$

- Δp_s = local pressure loss in Pa
- p = density of the fluid in kg/m³
- V = rate of flow in m/s
- K = coefficient depend on the nature of local resistance

Conversion Data

	METRIC TO IMPERIAL	IMPERIAL TO METRIC		METRIC TO IMPERIAL	IMPERIAL TO METRIC
LENGTH	mm x 0.0394 = ins. m x 3.281 = feet m x 1.094 = yards	ins. x 25.4 = mm feet x 0.3048 = m yds. x 0.9144 = m	VELOCITY	m/s x 196.85 = ft / min.	ft / min. x 0.00508 = m/s
AREA	cm ² x 0.155 = sq. ins. m ² x 10.76 = sq. ft. m ² x 1.196 = sq. yds.	sq. ins. x 6.452 = cm ² sq. ft. x 0.0929 = m ² sq. yds. x 0.8361 = m ²	PRESSURE	N/m ² x 0.004 = ins. wg. Pa x 0.004 = ins. wg. mbar x 0.401 = ins. wg.	ins. wg. x 249.1 = N/m ² ins. wg. x 249.1 = Pa ins. wg. x 2.491 = mbar
VOLUME	m ³ x 35.32 = cu. ft. m ³ x 1.308 = cu. yds.	cu. ft. x 0.0283 = m ³ cu. yds. x 0.7645 = m ³	WEIGHT	grammes x 0.0353 = ozs. kg. x 2.205 = lbs. kg. x 0.00098 = tonnes	ozs. x 28.35 = grammes lbs. x 0.4536 = kg. tonnes x 1016 = kg.
FLOW	m ³ /s x 2119 = cfm m ³ /hr x 0.589 = cfm	cfm x 0.000472 = m ³ /s cfm x 1.699 = m ³ /h	HEAT	kW x 3412 = Btu/hr.	Btu/hr. x 0.000293 = kW
			VARIOUS	kW x 1.34 = hp N/m ² m x 0.122 = in. wg/100ft. °C x 9/5 + 32 = °F	hp x 0.746 = kW in. wg/100ft. x 8.18 = N/m ² m °F - 32 x 5/9 = °C

General Information

Technical Advice

Free technical, installation and sales advice is available from the Vent-Axia Technical Support Centre.

Distribution

Vent-Axia products are available from all leading industrial fan stockists. For further information, or in case of difficulty, please contact the Vent-Axia Centre in Crawley.

Sound Levels

Published dB(A) figures are free field sound pressure levels at 3m with spherical propagation at a reference level of 2×10^{-5} Pa (20 micro-Pascal). The sound power level spectra figures are dB with a reference level of 10^{-12} Watts (1 pico-Watt).

Performance

Tested in Vent-Axia test laboratories. Performance testing is carried out in a balanced chamber test duct to BS 848: Part 1. This has a booster fan to overcome the system resistance.

The volume flow is measured by a pressure drop across a calibrated orifice plate at the entry to the system.

An adjustable damper provides a variable resistance to the test fan enabling its performance characteristics to be measured. The rated figures given are at free air performance.

BSEN ISO 9001

Vent-Axia limited is certified by the British Standards Institution to BS EN ISO 9001 Cert. No. FM1792 QAS No. 3284/37.

Intellectual Property

Products shown in this catalogue include aspects which are protected under patent, copyright, design copyright, registered design and trademark laws. Vent-Axia will take all necessary legal action in any part of the world against any party found to be manufacturing, distributing, selling or otherwise dealing with any article which infringes the Company's rights in its products.

Guarantee

Applicable to units installed and used in the United Kingdom.

For details of guarantee outside the United Kingdom, contact your local supplier.

Unless otherwise stated, Vent-Axia guarantees its industrial fans for the period indicated on individual pages from the date of purchase, against faulty material or workmanship in normal use.

In the event of any part being found to be defective, the appliance will be repaired, or at the Company's option, replaced, without charge, provided that the product:

1. has been installed and used in accordance with the instructions given with each unit.
2. has not been connected to an unsuitable electrical supply; (the correct electricity supply voltage is shown on the appliance rating label attached to the unit).
3. has not been subjected to misuse, neglect or damage.
4. has not been modified or repaired by any person not authorised by the Company.
5. the application is within the specification of the unit.
6. connected to Vent-Axia switch gear.
7. thermal overload protection has been correctly connected.
8. the unit has been subject to regular maintenance appropriate to the installation.
9. when returning the product under guarantee, evidence of purchase will be required.

Conditions of sale

All sales by Vent-Axia are made only upon the terms of the Company's Conditions of Sale (www.vent-axia.com/help/conditions-sale), a copy of which may be obtained upon request.

All details are correct at time of going to print. As part of the policy of continuous product improvement, Vent-Axia reserves the right to alter specifications without notice.



By Appointment to H.M. The Queen
Suppliers of Unit Ventilation Equipment
Vent-Axia, Crawley, West Sussex

Vent-Axia®

VENT-AXIA CONTACT NUMBERS

Free technical, installation and sales advice is available

Sales Centre:

Domestic & Commercial

Sales Tel: 0844 856 0590
Sales Fax: 01293 565169
Tech Support Tel: 0844 856 0594
Tech Support Fax: 01293 539209

Industrial

Sales Tel: 0844 856 0591
Sales Fax: 01293 534898
Tech Support Tel: 0844 856 0595
Tech Support Fax: 01293 455197
Web: www.ventaxia.com
Email: sales@vent-axia.com

Supply & Service

All sales made by Vent-Axia Limited are made only upon the terms of the Company's Conditions of Sale, a copy of which may be obtained on request. As part of the policy of continuous product improvement Vent-Axia reserves the right to alter specifications without notice.

