

Plate Axial Fans



Plate Axial Fans
DUTIES UP TO
7.5 m³/s

HIGH EFFICIENCY PLATE AXIAL FANS

Latest AC and EC fan technology

Long life

Low SFPs to achieve L2
Building Regulations

Low energy / high efficiency

Variety of control options to suit
unit requirements

Suitable for demand ventilation with
VES BlueSense controls package



Plate Axial Fans

*part of a complete range of innovative,
flexible products from the HVAC experts*

Plate Axial Fans

Plate Axial Fans

The VES Plate Axial fan range offers an unobtrusive, low profile design with a number of control and housing options.

ErP compliant AC and EC energy efficient fans are a versatile solution for a variety of applications and can be mounted in any orientation.

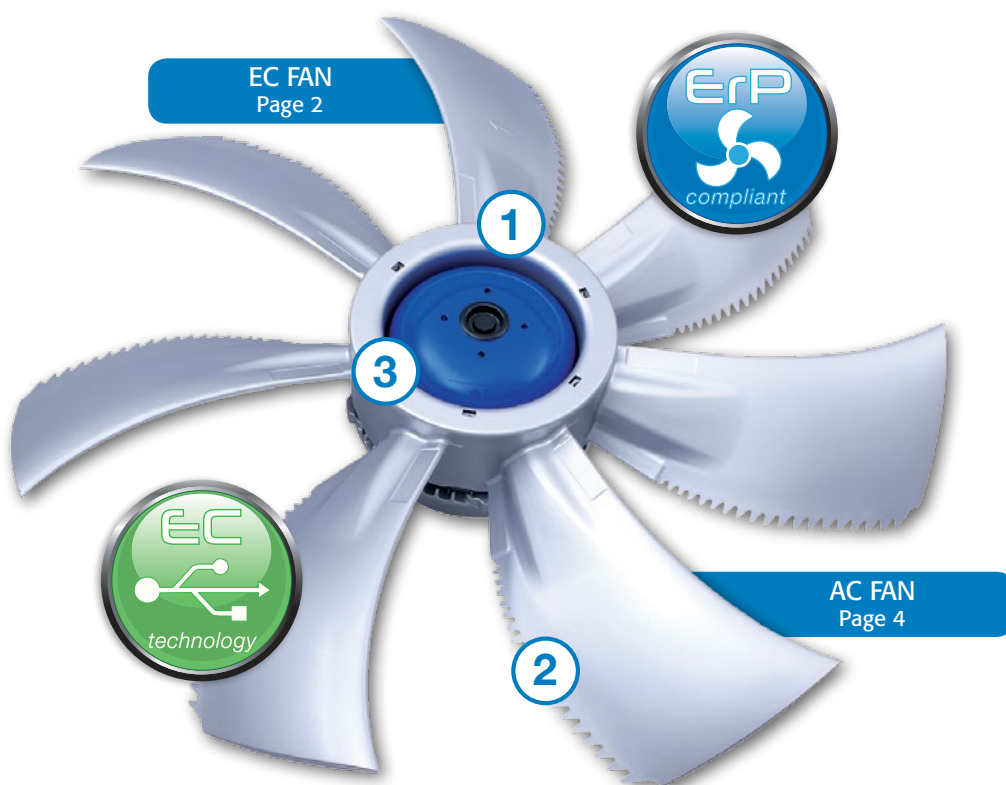


Plate Axial Fans Features and Benefits

Energy Saving

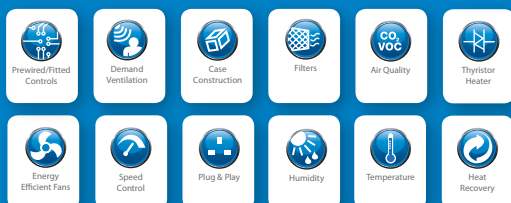
Meet regulations, minimise noise and maximise performance

Robust Construction

Excellent build quality ensures minimal noise breakout, low SFPs and airtight performance

Applications

Typical Axial fan applications



Energy Saving

Intelligent controls enhance performance while saving energy and money



Energy Efficient

Energy efficient units with low SFPs to help achieve L2 Building Regulations. Units are fully tested to BS EN ISO 5801:2008 (airside performance) and DIN 45635-38 (acoustic performance).



High Performance Fans

Latest EC and AC Fan Technology with low energy and low noise sickle blade profile impellers for optimised performance.



Complete Ventilation Package

VES offer the expertise, products and services to provide a complete ventilation package including integrated controls and site assistance, providing peace of mind through reliable products and expert knowledge.



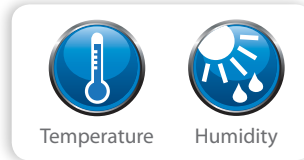
Energy Efficient Profile

High efficacy profile, sickle shaped blades based on bionic findings.



Maintenance Free

Maintenance free ball bearings sealed on both sides with long-term lubrication.



Harsh Conditions

With operating temperatures available up to 70 °C and 100% relative humidity.



Factories and Warehouses



Leisure and Sports Facilities



Industrial Applications



Heat Transfer -
Cooling and Refrigeration



General Ventilation and Extract



Agriculture

BlueSense Energy Saving EC Package



Plate Axial Fan with
Integral Controls



Sensor options



The sign of energy saving
products, services and
expertise

For more information see page 7

Plate Axial Fans

Selection Data

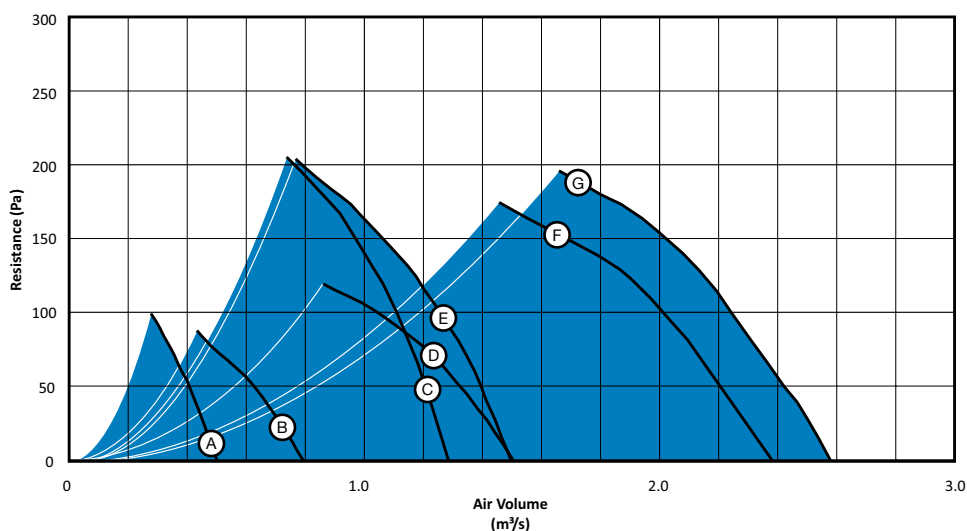
EC Plate Axial Fans

The EC Plate Axial fans are designed around a single platform with EC fan technology.

Performance



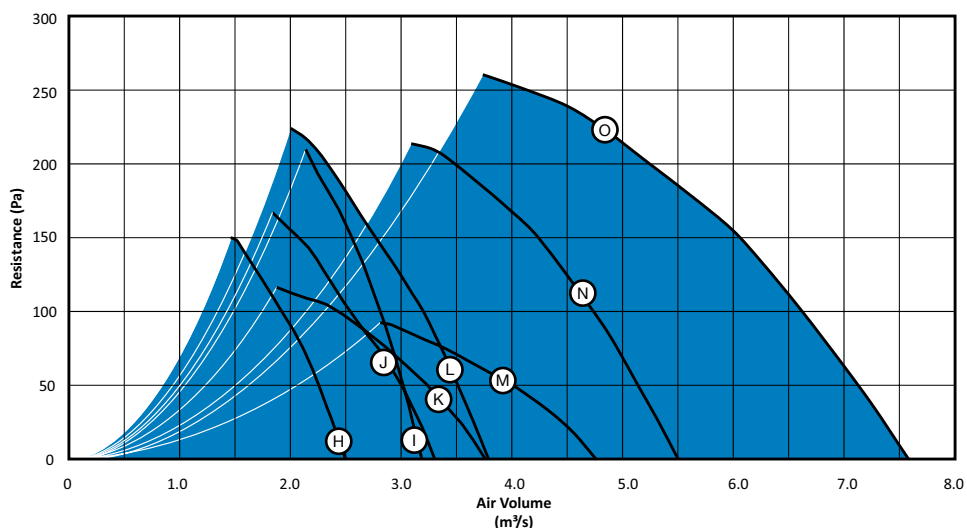
Duty Performance Curves



Key

- Ⓐ AXP250-1/1/EC/GL
- Ⓑ AXP300-1/1/EC/GL
- Ⓒ AXP350-1/1/EC/GL
- Ⓓ AXP450-1/1/EC/GL
- Ⓔ AXP400-1/1/EC/GL
- Ⓕ AXP500-1/1/EC/GL
- Ⓖ AXP500-3/1/EC/GL

Duty Performance Curves

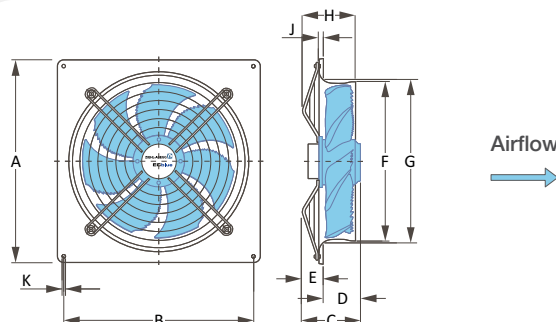


Key

- Ⓗ AXP560-1/1/EC/GL
- Ⓘ AXP560-3/1/EC/GL
- Ⓙ AXP630-1/1/EC/GL
- Ⓚ AXP710-1/1/EC/GL
- Ⓛ AXP630-3/1/EC/GL
- Ⓜ AXP800-3/1/EC/GL
- Ⓝ AXP710-3/1/EC/GL
- Ⓞ AXP800-3/2/EC/GL

Note: For details regarding specific fan power data at your duty point, please visit www.vesdirect.co.uk.

Dimensions



Note: Data for design guidance only. For full details, outline drawings are available upon request.

Technical Data

Unit Type	Voltage (VAC)	Motor Size (kW)	Motor Full Load Current (A)	Fan Speed (rpm)	Maximum Operating Temperature (°C)
AXP250-1/1/EC/GL	230 1 Phase	0.11	0.90	2580	60
AXP300-1/1/EC/GL	230 1 Phase	0.15	1.15	1900	60
AXP350-1/1/EC/GL	230 1 Phase	0.45	2.40	1950	60
AXP400-1/1/EC/GL	230 1 Phase	0.52	2.70	1800	60
AXP450-1/1/EC/GL	230 1 Phase	0.31	1.65	1300	60
AXP500-1/1/EC/GL	230 1 Phase	0.84	4.40	1440	60
AXP500-3/1/EC/GL	400 3 Phase	1.00	1.70	1550	60
AXP560-1/1/EC/GL	230 1 Phase	0.58	3.20	1110	60
AXP560-3/1/EC/GL	400 3 Phase	1.25	2.10	1450	60
AXP630-1/1/EC/GL	230 1 Phase	0.85	4.30	1050	60
AXP630-3/1/EC/GL	400 3 Phase	1.25	2.00	1200	60
AXP710-1/1/EC/GL	230 1 Phase	0.66	3.40	890	60
AXP710-3/1/EC/GL	400 3 Phase	1.95	3.20	1150	65
AXP800-3/1/EC/GL	400 3 Phase	0.83	1.45	700	60
AXP800-3/2/EC/GL	400 3 Phase	3.10	4.80	1100	55

Sound Data

Unit Type	Sound Spectrum dB re 10 ⁻¹² W PWL Centre Frequency (Hz)								SPL dBA	
	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
AXP250-1/1/EC/GL	37	49	60	67	68	69	65	56	62	53
AXP300-1/1/EC/GL	36	48	55	62	64	66	62	52	58	49
AXP350-1/1/EC/GL	43	53	64	67	73	74	69	63	66	57
AXP400-1/1/EC/GL	46	53	61	69	76	74	72	64	66	58
AXP450-1/1/EC/GL	40	53	56	59	62	62	58	51	54	46
AXP500-1/1/EC/GL	48	62	66	72	77	74	69	61	67	59
AXP500-3/1/EC/GL	47	58	68	75	78	77	71	64	69	61
AXP560-1/1/EC/GL	49	59	61	65	65	62	58	51	55	48
AXP560-3/1/EC/GL	44	62	67	73	77	78	70	63	68	61
AXP630-1/1/EC/GL	44	57	63	66	70	67	62	55	59	52
AXP630-3/1/EC/GL	48	58	65	69	74	71	66	58	63	56
AXP710-1/1/EC/GL	47	58	63	69	70	65	60	53	59	51
AXP710-3/1/EC/GL	49	64	69	76	79	77	71	66	69	61
AXP800-3/1/EC/GL	49	55	62	65	70	64	59	50	58	50
AXP800-3/2/EC/GL	54	67	70	75	81	79	72	66	70	63

Dimension Data

Unit Type	Dimensions (mm)										Weight (kg)
	A	B	C	D	E	FØ	GØ	H	J	KØ	
AXP250-1/1/EC/GL	370	320	92	50	11	257	260	84	6	7	5
AXP300-1/1/EC/GL	430	380	107	69	35	306	326	104	11	9	6
AXP350-1/1/EC/GL	485	435	147	68	41	358	388	116	12	9	7
AXP400-1/1/EC/GL	540	490	153	88	41	412	420	130	12	9	9
AXP450-1/1/EC/GL	575	535	165	96	45	463	480	166	14	11	10
AXP500-1/1/EC/GL	655	615	183	101	61	517	528	183	16	11	19
AXP500-3/1/EC/GL	655	615	183	101	61	517	528	183	16	11	19
AXP560-1/1/EC/GL	725	675	195	130	55	591	636	183	16	11	21
AXP560-3/1/EC/GL	725	675	195	130	55	568	589	183	16	11	21
AXP630-1/1/EC/GL	805	750	196	136	63	643	664	166	20	11	26
AXP630-3/1/EC/GL	805	750	196	133	63	643	664	166	20	11	26
AXP710-1/1/EC/GL	850	810	225	162	63	720	763	199	20	14.5	26
AXP710-3/1/EC/GL	850	810	239	169	70	720	763	199	20	14.5	26
AXP800-3/1/EC/GL	970	910	244	157	87	804	869	200	17	14.5	36
AXP800-3/2/EC/GL	970	910	304	237	67	804	869	203	17	14.5	36

Note: Data for design guidance only. For full details, outline drawings are available upon request.

Plate Axial Fans

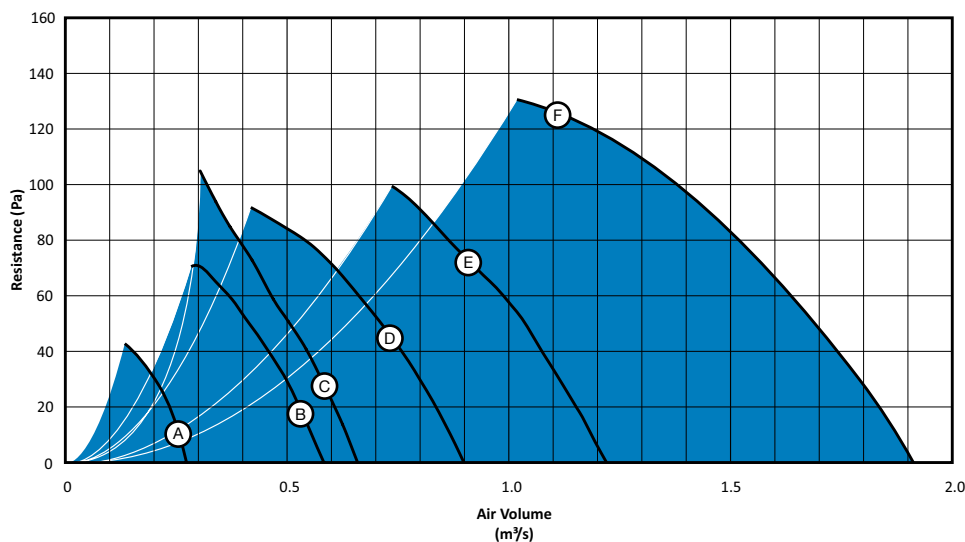
Selection Data

AC Plate Axial Fans

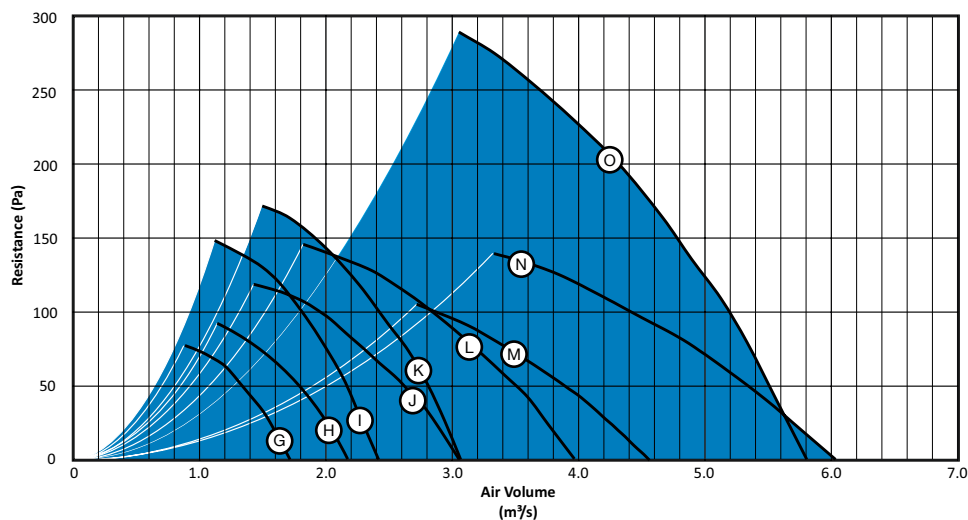
The AC Plate Axial fans are designed around a single platform with AC fan technology.

Performance

Duty Performance Curves

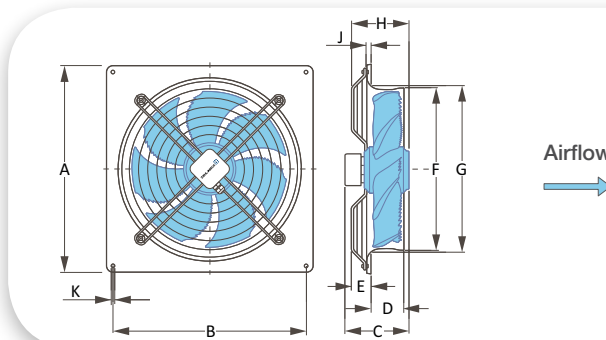


Duty Performance Curves



Note: For details regarding specific fan power data at your duty point, please visit www.vesdirect.co.uk.

Dimensions



Note: Data for design guidance only. For full details, outline drawings are available upon request.

Technical Data

Unit Type	Voltage (VAC)	Motor Size (kW)	Motor Full Load Current (A)	Fan Speed (rpm)	Maximum Operating Temperature (°C)
AXP250/4-1/1/AC/GL	230 1 Phase	0.05	0.24	1370	55
AXP300/4-1/1/AC/GL	230 1 Phase	0.10	0.42	1330	60
AXP310/4-1/1/AC/GL	230 1 Phase	0.14	0.62	1360	50
AXP350/4-1/1/AC/GL	230 1 Phase	0.18	0.77	1230	60
AXP400/4-1/1/AC/GL	230 1 Phase	0.26	1.15	1320	55
AXP450/4-1/1/AC/GL	230 1 Phase	0.56	2.50	1320	70
AXP500/6-1/1/AC/GL	230 1 Phase	0.30	1.30	910	70
AXP500/4-1/1/AC/GL	230 1 Phase	0.76	3.30	1230	70
AXP560/6-1/1/AC/GL	230 1 Phase	0.46	2.20	930	70
AXP560/4-3/1/AC/GL	400 3 Phase	1.05	2.20	1280	70
AXP630/6-1/1/AC/GL	230 1 Phase	0.74	3.40	910	70
AXP630/4-3/1/AC/GL	400 3 Phase	2.40	4.60	1320	65
AXP710/6-1/1/AC/GL	230 1 Phase	0.95	4.40	850	65
AXP710/6-3/1/AC/GL	400 3 Phase	0.94	1.70	900	70
AXP800/6-3/1/AC/GL	400 3 Phase	1.60	3.60	920	70

Sound Data

Unit Type	Sound Spectrum dB re 10 ⁻¹² W PWL Centre Frequency (Hz)								SPL dBA	
	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
AXP250/4-1/1/AC/GL	27	45	45	49	53	54	49	40	46	38
AXP300/4-1/1/AC/GL	30	48	49	52	55	59	52	41	50	41
AXP310/4-1/1/AC/GL	34	51	56	58	60	60	57	47	53	44
AXP350/4-1/1/AC/GL	39	54	57	61	58	61	54	43	52	44
AXP400/4-1/1/AC/GL	35	51	55	61	66	68	65	57	60	51
AXP450/4-1/1/AC/GL	41	55	60	62	64	64	59	51	56	48
AXP500/6-1/1/AC/GL	36	55	58	54	60	58	52	44	50	42
AXP500/4-1/1/AC/GL	41	57	59	63	67	68	63	53	59	51
AXP560/6-1/1/AC/GL	36	52	62	63	67	66	60	51	57	50
AXP560/4-3/1/AC/GL	45	61	67	70	76	74	70	62	66	58
AXP630/6-1/1/AC/GL	41	54	65	68	70	65	60	53	59	51
AXP630/4-3/1/AC/GL	45	68	71	71	75	76	74	67	67	60
AXP710/6-1/1/AC/GL	50	58	62	66	69	68	62	57	59	52
AXP710/6-3/1/AC/GL	40	52	58	62	65	63	58	51	55	47
AXP800/6-3/1/AC/GL	46	62	68	70	71	68	62	58	61	53

Dimension Data

Unit Type	Dimensions (mm)										Weight (kg)
	A	B	C	D	E	FØ	GØ	H	J	KØ	
AXP250/4-1/1/AC/GL	370	320	146	50	30	257	260	94	6	7	4
AXP300/4-1/1/AC/GL	430	380	164	69	28	306	326	103	11	9	5
AXP310/4-1/1/AC/GL	430	380	173	63	48	317	344	131	11	9	5
AXP350/4-1/1/AC/GL	485	435	173	68	49	358	388	131	12	9	6
AXP400/4-1/1/AC/GL	540	490	181	88	54	412	420	145	12	9	8
AXP450/4-1/1/AC/GL	575	535	226	96	47	463	480	190	14	11	11
AXP500/6-1/1/AC/GL	655	615	206	104	62	517	528	184	16	11	19
AXP500/4-1/1/AC/GL	655	615	226	104	62	517	528	204	16	11	20
AXP560/6-1/1/AC/GL	725	675	225	119	64	568	589	223	16	11	21
AXP560/4-3/1/AC/GL	725	675	245	119	64	568	589	226	16	11	24
AXP630/6-1/1/AC/GL	805	750	245	130	52	643	664	227	20	11	27
AXP630/4-3/1/AC/GL	805	750	271	130	108	643	664	267	20	11	37
AXP710/6-1/1/AC/GL	850	810	245	150	70	720	763	271	20	14.5	35
AXP710/6-3/1/AC/GL	850	810	226	150	70	720	763	251	20	14.5	35
AXP800/6-3/1/AC/GL	970	910	284	210	50	804	869	320	17	14.5	46

Note: Data for design guidance only. For full details, outline drawings are available upon request.

Plate Axial Fans

Ancillaries

Wall Shutters, Wall Louvre and Louvre Box

Outlet options include wall shutters with cowl, wall louvre and louvre box with inbuilt backdraught shutters. The louvre and cowl are powder coat paint finished in light grey to RAL 7004 as standard, other colours are readily available.



Wall Shutters with Cowl



Wall Louvre



Louvre Box

Speed Control Option

Fan Speed control is the most significant variable that enables building users to reduce energy consumption. When integrated into the ventilation system, speed control allows for a number of energy saving options; this includes constant airflow or constant pressure applications, occupancy and air quality demand control.

EC Plate Axial fans are 100% speed controllable, with 0-10 VDC or PWM input control signals. EC fan technology can offer significant energy saving at lower speeds.

AC Plate Axial fans can be matched to a number of speed control options, including inverter or manual control.

EC Control

CFSC1

- Suitable for direct connection to EC fans
- Manual controller for remote speed adjustment



CFSC1

Air Quality Sensor

- Sensor combining CO₂ and VOC measurements
- Suitable for demand control ventilation or indoor air quality control
- Optional room or duct mounting variants



AQ/R Sensor

AC Control

Inverter with comprehensive range of functions

- IP54 or IP21 options available
- Complete with operational keypad
- Features include BMS control, remote pot, CFSC1, temperature, constant pressure, humidity and CO₂/VOC control
- IP54 version includes main isolating switch with locking handle plus panel live indicator



IP54



IP21

Manual speed controllers

1 & 3 phase

- Tapped transformer type in five steps and off
- or
- Electronic variable speed type with optional 0-10 Volt input for BMS control



Single phase variable



Single phase stepped



Three phase stepped



MS 10

BlueSense Energy Saving AC Package



Plate Axial Fan



Control Options



Sensor Options



The sign of energy saving products, services and expertise

Controls packages for performance and efficiency



Save energy and costs with BlueSense Controls

Demand ventilation solutions

BlueSense philosophy combines intelligent control technologies with energy saving products, services and engineering expertise. BlueSense helps meet energy reduction commitments by optimising the equipment performance, improving energy efficiency, saving money and increasing equipment life expectancy.

BlueSense can be applied to a variety of projects and applications, providing efficient solutions whilst supporting design for best practice and sustainability.

BlueSense Features

- ▶ Inbuilt intelligent controls technology
- ▶ Optimises performance and efficiency
- ▶ Demand ventilation control improves air quality, reducing energy consumption and lowering operating costs
- ▶ Combined CO₂ and VOC sensing technology with energy efficient speed control
- ▶ Extending equipment life expectancy and reducing maintenance
- ▶ Short term payback on capital expenditure
- ▶ Extended warranty

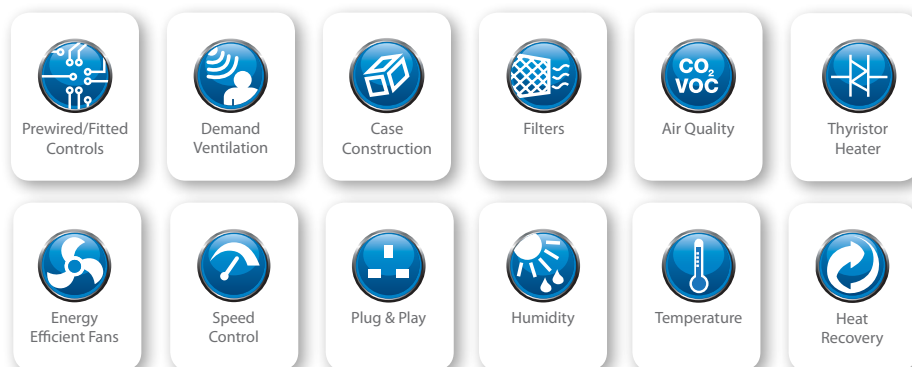


Plate Axial Fans BlueSense

All products in the Plate Axial fan range can form part of a BlueSense energy saving package. Specify BlueSense to ensure Plate Axial fans are optimised with controls, energy efficient speed controller and air quality sensor.

All of these work in unison, reducing energy consumption and saving money.



BlueSense includes an Extended Warranty

- ▶ 3 years with BlueSense packages
- ▶ 5 years with BlueSense package and Post Installation Commissioning

Please quote BlueSense with your order or contact our specialist sales team for further information. Call +44 (0)8448 15 60 60 or Email info@ves.co.uk

Plate Axial Fans

Bespoke Ventilation Solutions

As well as offering a wide range of standard ventilation products, VES are able to build bespoke solutions for special applications and requirements.

Our experience with controls also enables high level of integration with Building Management Systems or existing solutions, as well as matching to niche applications.

With VES you really get the full package without needing to mix and match suppliers

Bespoke Options

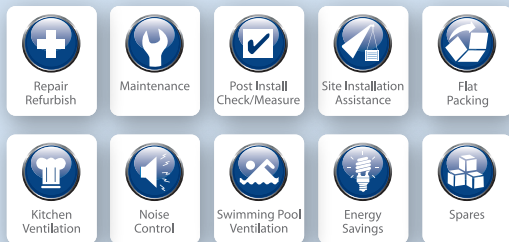
- Controls Integration
- Aesthetic requirements and paint colour finishes
- Further cooling/heating options
- Specific filtration applications i.e. Carbon, Grease, HEPA
- Flat packing and site assistance

Specialist Site Services

VES operates a Specialist Site Services division, which is a market leader in the repair and refurbishment of any make or model of air handling equipment.

For buildings with faulty and deteriorating ventilation plant, the obvious choice may appear to be replacement. However there are many reasons, not least economic ones, why the repair or refurbish alternatives should also be explored.

Features of Specialist Site Services



In addition to being a First Class ISO Certified Manufacturer, the VES Specialist Site Services Division is the largest on-site solutions provider in the country.

Assistance in all Market Sectors



For all enquires about Specialist Site Services please contact us on +44 (0)8448 15 60 60 or sssales@ves.co.uk



■ Hundreds of ventilation Products



Sales Freephone
0800 31 66 000
vesdirect.co.uk

Product Specification

Plate Axial Fans

1.1. General

- A. Provide a Plate Axial fan to meet the performance and configuration as indicated in the schedule and detail drawings.
The unit shall be tested to BS EN ISO 5801:2008 and shall be of the Plate Axial fan type as supplied by VES Andover Ltd, a company accredited with BS EN ISO 9001:2008.

1.2. Unit Construction

- A. The fan shall be provided pre-assembled, comprising high performance composite material or aluminium bladed impeller, external rotor motor, steel wire guard and steel mounting plate.
B. The fan shall be supplied on a pre-drilled mounting plate.
C. The plate and guard shall be supplied finished black to RAL9005.

1.3. Fan Impeller

- A. The fan shall be provided pre-assembled comprising high performance composite material or aluminium bladed impeller, balanced in class G 6.3 according to DIN ISO 1940.
B. The fan shall be mated with an aerodynamic steel bell mouth mounting plate.

1.4. Motor

- A. The fan is provided with an external rotor motor to insulation class F, IP44 and IP54 environmental protection rating and comes complete with thermal protection as standard. Motors are pre-wired to a die cast aluminium terminal box for AC models and terminated at the fan on EC models.

1.5. Operating Environment

- A. The fan is designed to operate in ambient temperatures from -25 °C to at least +55 °C, depending on the model. The fan is designed to run continuously up to 100% relative humidity .

1.6. Controls

- A. The fan shall be compatible with speed control systems and shall be suitable for use with electronic and transformer speed controllers for single-phase units and fully electronic three-phase speed controllers.

Download specification from www.ves.co.uk/information-centre

Product Code Guide

Plate Axial Fans		Options					Ancillaries Examples	
Product	Fan Size	Pole	Phase	Variant	Motor	Grille	Name	Part No.
AXP	250	[EC = null]	-1	/1	/AC	/GL	AC	
	300	/4	-3	/2	/EC		Inverter IP54	IN03/3434-0055/GN/IP54
	310	/6					Speed Regulator, Remote	CFSC1
	350							
	400							
	450							
	500							
	560							
	630						EC	
	710						Speed Regulator, Remote	CFSC1
	800						Air Quality Sensor	AQ/D, AQ/R

Product

AXP=Plate Axial Fan

Pole

[EC=null]
/4= 4 pole
/6= 6 pole

Motor

/AC=Alternating
Current
/EC=Electronically
Commutated

Grille

/GL=Fitted Grille

Example Coding

EC AXP 250-1/1/EC/GL

AC AXP 400/4-1/1/AC/GL

Other products and services from the complete range of VES HVAC solutions

Air Handling Units

- Supply and extract, combined or separate
- Heat recovery including crossflow plate heat exchangers, thermal wheel, run-around coils
- Plantroom or weatherproof, flat or stacked
- Fitted silencers, fitted inverters and controls
- Matching DX condensing units
- Various case constructions including EN 1886 certified units

Duct Fans

- In-line centrifugal, with forward or backward curved impellers
- Round fans, axial and mixed flow fans
- Fitted silencers available all units
- Manual and automatic speed controllers available

Twin Fans

- For ceiling void, plantroom, and weatherproof
- Many models and configurations
- Fitted auto-changeover system

Roof Extract Units

- Three ranges for volume and pressure
- Curb and soaker sheet bases

Wall and Ceiling Fans

- All types for commercial, industrial and domestic premises

Kitchen Hood Extract Fans

- Heavy duty high temperature fans for hot greasy air
- Motors out of airstream
- Single inlet fans, in-line and vertical jet roof units

Control Panels

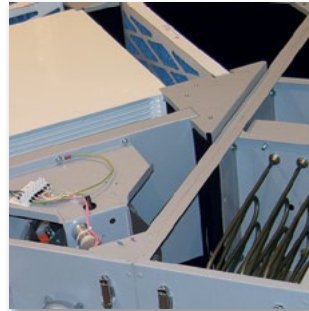
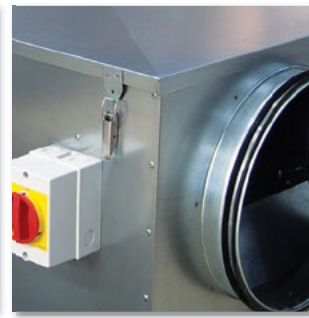
- Off the shelf and built to order panels
- Air quality sensors and energy savers
- Intelligent control software
- A range of remotes including touch screen

Noise Control

- Matching silencers available for all ventilation products
- Silencers designed to meet noise criteria
- Cleanable silencers
- Weatherproof silencers

Specialist Site Services

- Plant refurbishment
- Energy saving upgrades
- Noise reduction
- Site surveys
- Kitchen ventilation
- AHU flat pack installation
- Maintenance
- Spares



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VES reserves the right to amend product specifications and details without notice



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