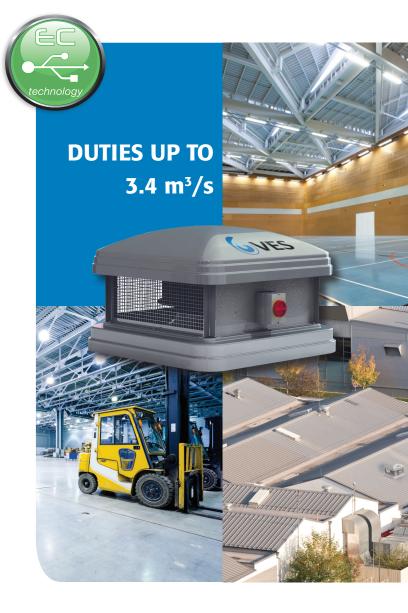
- Latest EC fan technology
- of Low SFPs to achieve L2 building regulations
- If Variety of control options to suit unit requirements
- If All units suitable for demand ventilation with VES BlueSense controls package



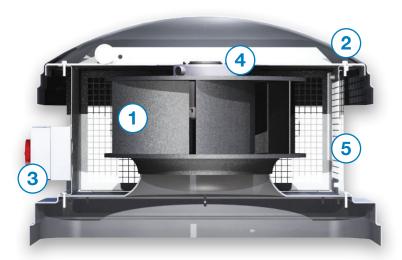
**Dome** Roof Extract part of a complete range of innovative, flexible products from the HVAC experts



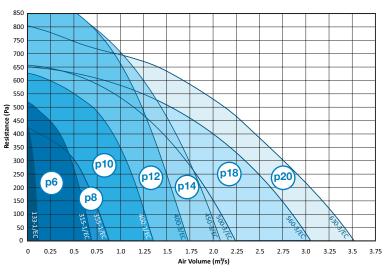
#### **Dome** Roof Extract

The VES Dome roof extract unit is designed around a single product platform, with unique and innovative benefits across the range. Installation and maintenance is simplified through quick change plug connectors and plug and play or pre-wired fitted controls.

Dome roof extract is the versatile solution for a range of applications. With EC energy efficient, ErP compliant fans and robust case construction, the low profile units are suitable for roofs and external locations.



#### **Dome** Roof Extract Performance



#### Dome

Roof Extract Features and benefits

#### **Energy saving**

Meet regulations, minimise noise and maximise performance.

#### Simple installation and maintenance

Simple connection and pre-installed features save on site costs and reduce lead times. Carefully designed maintenance features minimise downtime and total cost of ownership.

#### Versatile options

Versatile location, handing and access options meet the widest range of project requirements.

#### **Robust construction**

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





























#### **Energy Saving**

Intelligent controls enhance performance whilst 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 5801:2017 (airside performance) and DIN 45635-38 (acoustic performance).



#### High performance fans

Utilising EC fan technology with low energy backward curved, single inlet impellers for optimised performance.



#### Complete ventilation package

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



#### **Pre-wired isolator**

External isolator fitted as standard to reduce onsite-wiring requirements.



#### Plug and Play fans

the unit is in position.

Lifting lugs

Fan motor assembly is fitted with a quick-change plug connector for easy maintenance.

Supplied and fitted as standard.

These can be easily removed once



#### **Accessible**

Suitable access to the fan impeller for maintenance via removable



#### Congruent protection

Soaker sheets matching the roofs profile can be supplied to make a seamless guard against adverse weather conditions.



#### **Duct mounting silencer**

Fixed or removable for cleaning, to meet required noise criteria.



#### **Excellent construction**

Fabricated from glass reinforced plastic (GRP) and galvanised sheet steel for rigid, yet lightweight design.



#### **Harsh conditions**

With operating temperatures available up to 60°C and 95% relative humidity.



#### **Colour options**

External units are finished in signal grey to RAL7004 as standard, with many other colours available for metalwork and GRP.



#### **Unit protection**

Guard mesh / bird screen fitted as standard, to ensure unrestricted flow and performance.

#### BlueSense Energy Saving Package



Dome unit with integral controls



EC fan with full control



Sensor options



The sign of energy saving products, services and expertise

#### Selection data

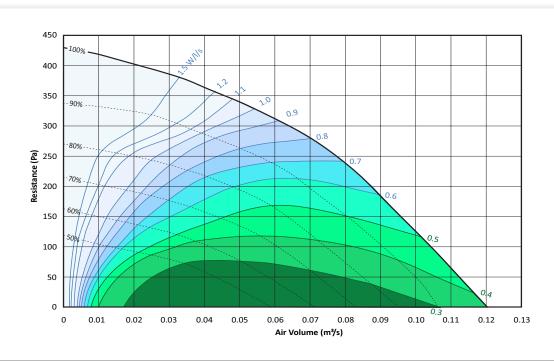
#### DME 133-1/EC





#### **Performance**

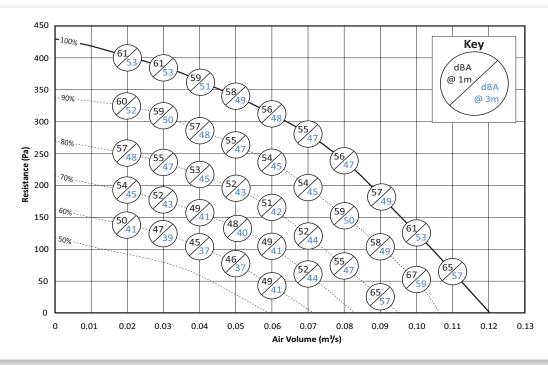
# ty performance curves



SFP
Watts/litres
/second Electrical input power (watts)
Air volume flow rate (litres/second)

Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# Noise performance curves



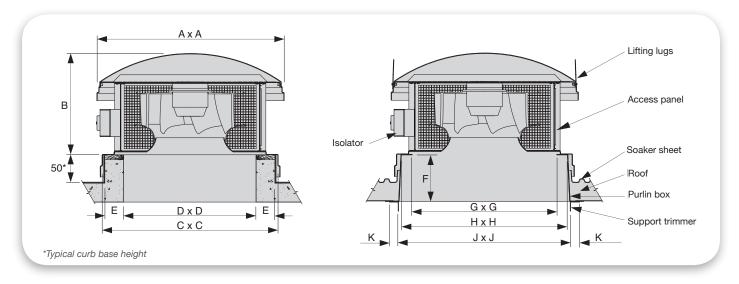
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11-9-1		Dimensions (mm)									
Unit type	Α	В	С	D	E	F	G	н	J	K	Weight (kg)
DME 133-1/EC	490	220	460	300	50	225	300	420	480	50	6

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature (°C)
DME 133-1/EC	230 1 Phase VAC	0.43 kW	0.32 A	4480 rpm	60°C

	Unit type		Casing noise (dBA)								
		63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 133-1/EC	62	58	62	68	64	62	71	59	61	53

#### Selection data

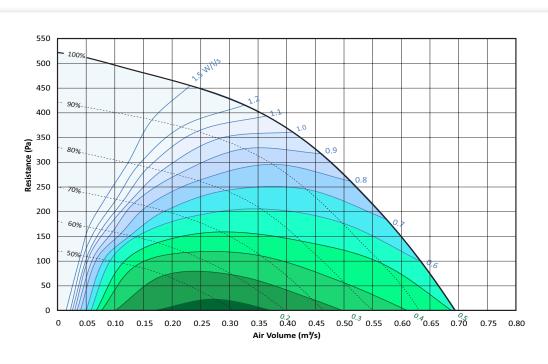
#### DME 315-1/EC





#### **Performance**

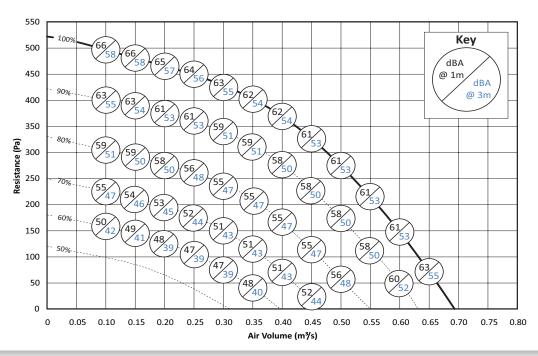
# ty performance curves





Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# ise performance curves



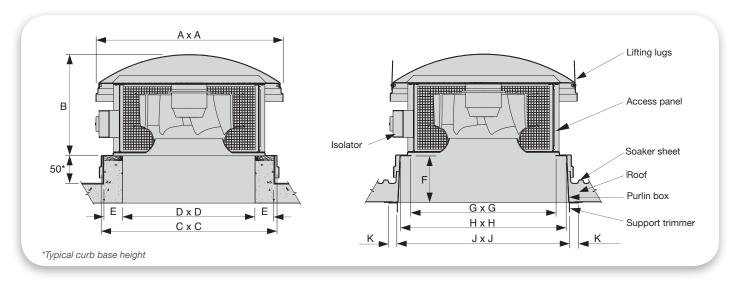
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11-20-1		Dimensions (mm)									
Unit type	Α	В	С	D	Е	F	G	н	J	K	Weight (kg)
DME 315-1/EC	556	310	530	400	50	220	350	440	510	50	17

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 315-1/EC	230 1 Phase VAC	0.40 kW	1.50 A	2010 rpm	60°C

	Unit type		Casing noise (dBA)								
		63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 315-1/EC	67	67	70	70	70	68	63	59	61	53

#### Selection data

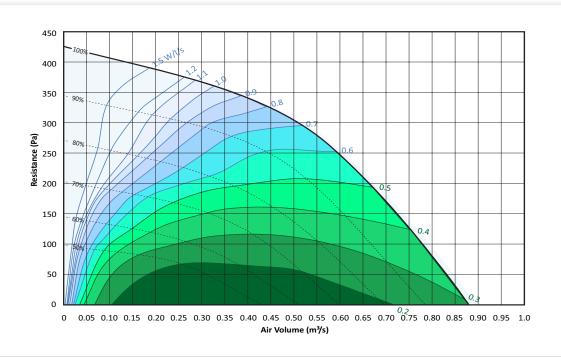
#### DME 355-1/EC

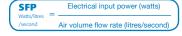




#### **Performance**

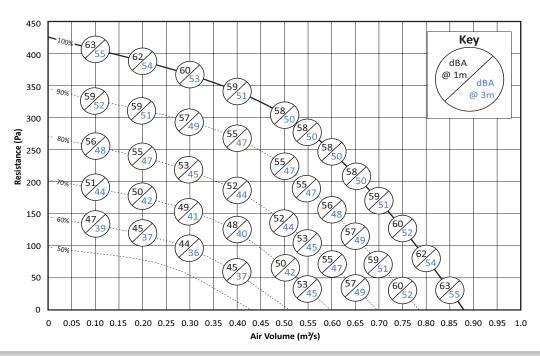
# y performance curves





Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# ise performance curves



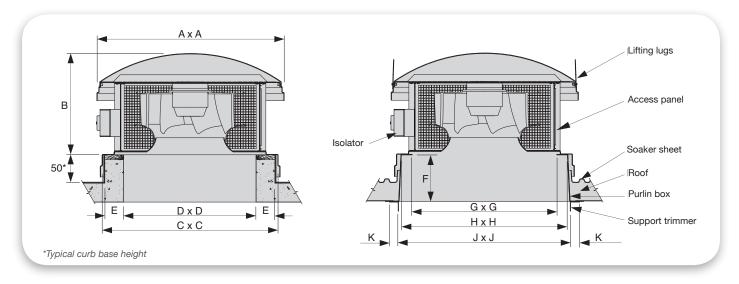
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: \*/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11-9-1		Dimensions (mm)									
Unit type	A	В	С	D	Е	F	G	н	J	K	Weight (kg)
DME 355-1/EC	676	345	662	450	75	240	400	620	680	50	27

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 355-1/EC	230 1 Phase VAC	0.35 kW	1.30 A	1590 rpm	60°C

	Unit type		Casing noise (dBA)								
		63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 355-1/EC	67	70	68	69	68	64	59	60	59	51

#### Selection data

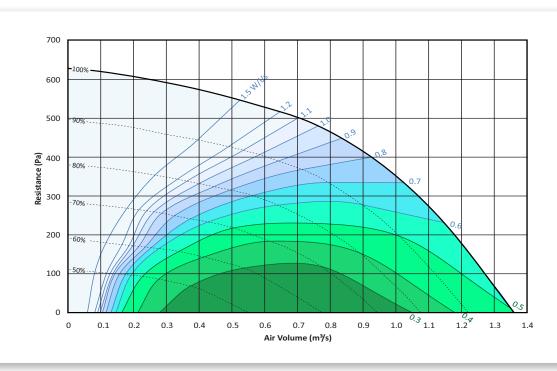
#### DME 400-1/EC





#### **Performance**

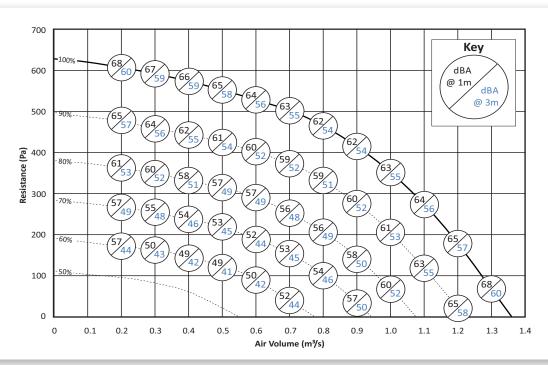




SFP
Watts/litres = Electrical input power (watts)
/second Air volume flow rate (litres/second)

Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# Noise performance curves



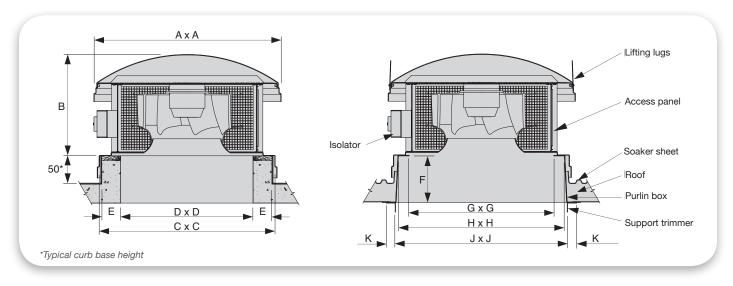
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11.51				Wet to deal							
Unit type	A	В	С	D	Е	F	G	Н	J	K	Weight (kg)
DME 400-1/EC	761	375	765	500	100	240	510	720	780	50	28

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 400-1/EC	230 1 Phase VAC	0.75 kW	2.80 A	1700 rpm	60°C

	Unit type		Casing noise (dBA)								
		63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 400-1/EC	73	75	80	79	77	73	68	62	68	60

#### Selection data

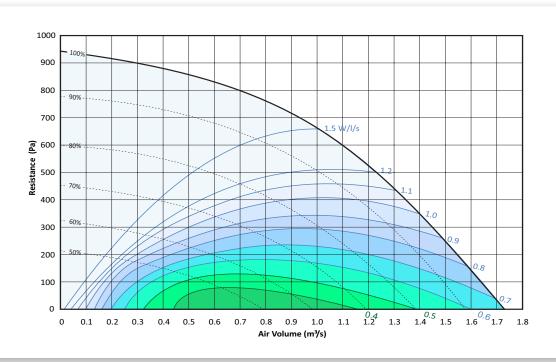
#### DME 400- 3/EC





#### **Performance**

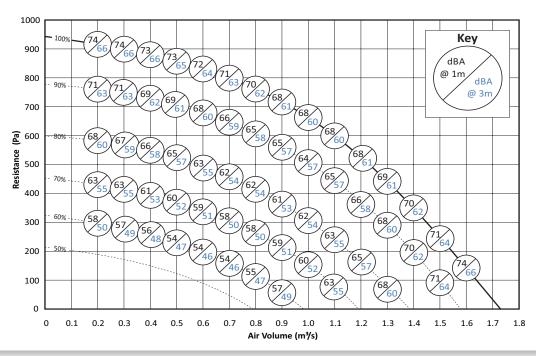
# y performance curves



SFP
Watts/litres = Electrical input power (watts)
/second Air volume flow rate (litres/second)

Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# ise performance curves



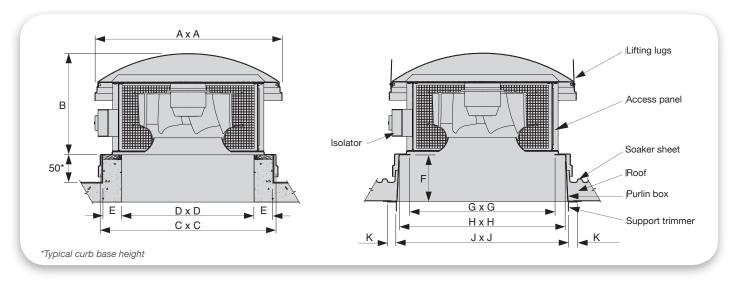
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



	Dimensions (mm)										
Unit type	A	В	С	D	Е	F	G	Н	J	K	Weight (kg)
DME 400-3/EC	761	375	765	500	100	240	510	720	780	50	28

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 400-3/EC	400 3 Phase VAC	1.35 kW	1.90 A	2100 rpm	60°C

Unit type		Casing noise (dBA)									
	Unit type	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 400-3/EC	68	76	73	73	70	64	59	60	61	53

#### Selection data

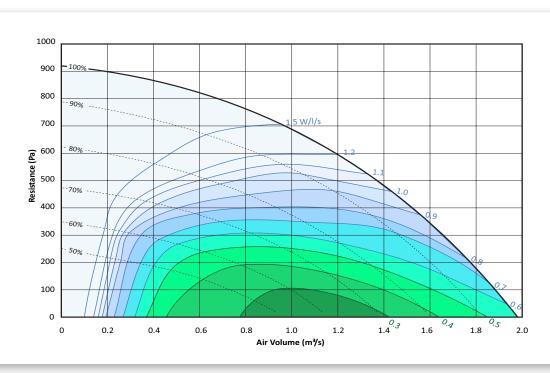
#### DME 450-3/EC





#### **Performance**

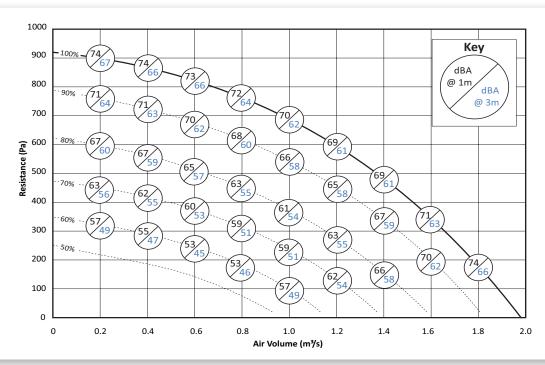




SFP
Watts/litres = Electrical input power (watts)
/second Air volume flow rate (litres/second)

Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# Noise performance curves



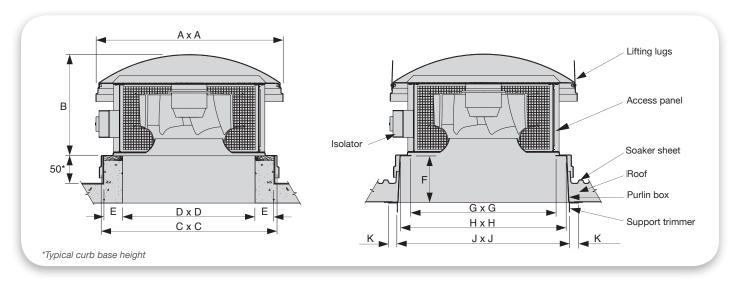
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11-9-1					Dime	nsions (m	m)				Woight (kg)	
Unit type	Α	В	С	D	Е	F	G	н	J	K	Weight (kg)	
DME 450-3/EC	761	400	765	550	75	250	510	720	780	50	33	

#### Technical data

Unit type	Voltage (VAC)	Motor size (kW)	Motor full load current (A)	Fan speed (rpm)	Maximum operating temperature (°C)
DME 450-3/EC	400 3 Phase VAC	1.45 kW	2.00 A	1800 rpm	60°C

Unit type		Casing noise (dBA)									
	Unit type	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
	DME 450-3/EC	75	79	84	84	83	75	59	63	72	65

#### Selection data

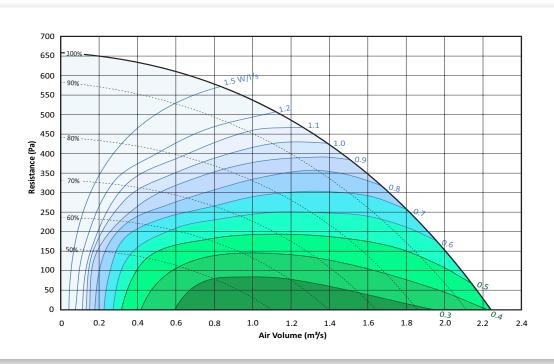
#### DME 500-3/EC





#### **Performance**

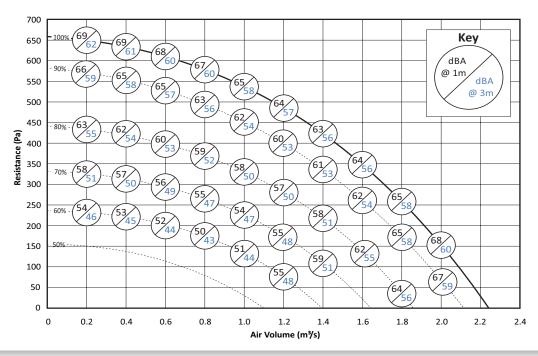






Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# Noise performance curves



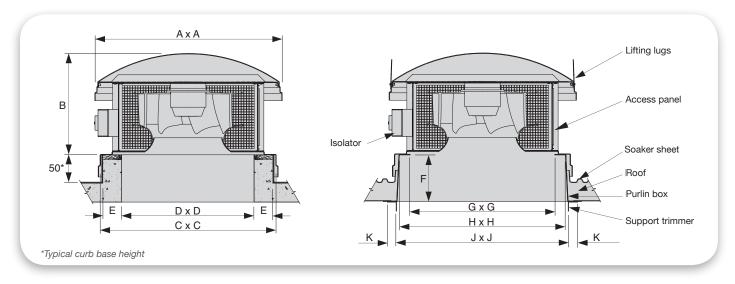
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11.51	Dimensions (mm)										Woight (kg)	
Unit type	Α	В	С	D	Е	F	G	Н	J	K	Weight (kg)	
DME 500-3/EC	991	470	926	700	100	250	620	860	900	70	52	

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 500-3/EC	400 3 Phase VAC	1.25 kW	1.65 A	1400 rpm	60°C

11-91		Casing noise (dBA)								
Unit type	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
DME 500-3/EC	63 12			78	75	68	64	63	65	58

#### Selection data

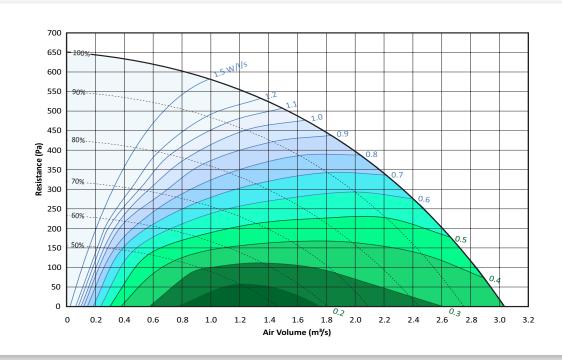
#### DME 560-3/EC





#### **Performance**

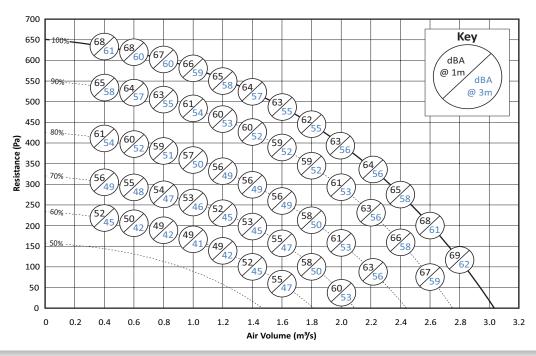
# performance curves



SFP
Watts/litres
/second Electrical input power (watts)
Air volume flow rate (litres/second)

Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# oise performance curves



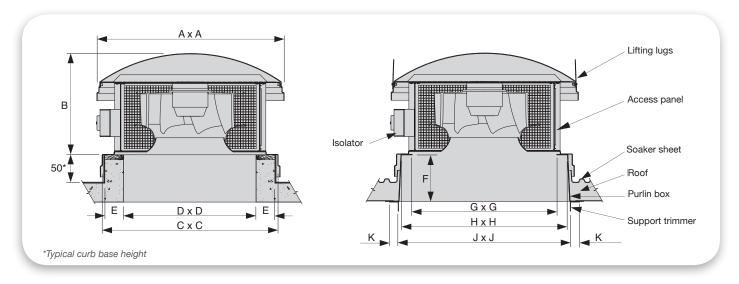
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



11-9-1		Dimensions (mm)									AMerical disease
Unit type	Α	В	С	D	Е	F	G	н	J	K	Weight (kg)
DME 560-3/EC	991	522	926	700	100	250	620	860	900	70	60

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature
DME 560-3/EC	400 3 Phase VAC	1.50 kW	2.10 A	1230 rpm	40°C

11-91		Casing noise (dBA)								
Unit type	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m
DME 560-3/EC	63 125			80	77	70	67	66	67	60

#### Selection data

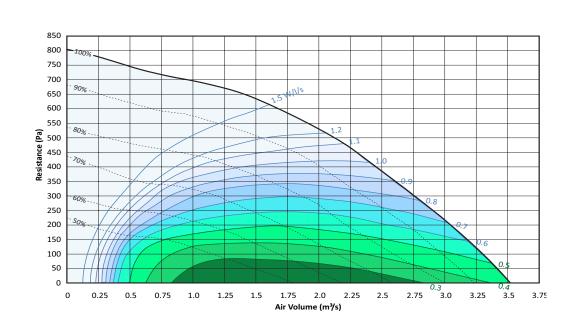
#### DME 630-3/EC

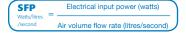




#### **Performance**

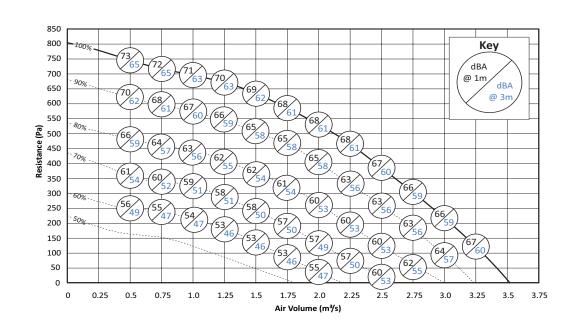
# performance curve





Note: SFP figures quoted at voltages tested in accordance with BS EN ISO 5801:2017.

# ise performance curves



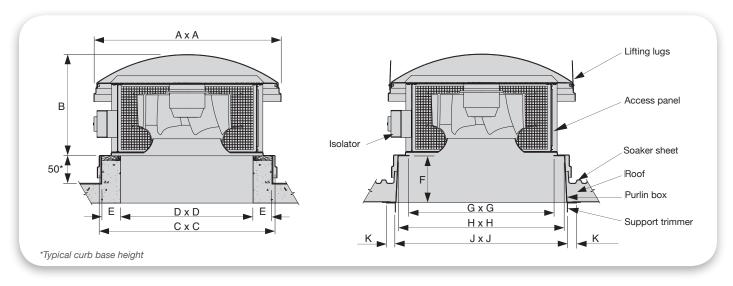
Note: NR levels are depend upon environmental conditions

Tolerances:

On flow rates: +/\_ 5%

On acoustic power and pressure: Levels \*/\_ 3dB

#### **Dimensions**



	11.51					Dime	nsions (m	m)				Wet to deal
Unit type	A	В	С	D	Е	F	G	Н	J	K	Weight (kg)	
	DME 630-3/EC	1120	571	1010	825	100	260	780	900	950	65	70

#### Technical data

Unit type	Voltage	Motor size	Motor full load current	Fan speed	Maximum operating temperature	
DME 630-3/EC	400 3 Phase VAC	2.80 kW	3.50 A	1230 rpm	60°C	

	Sound spectrum dB re 10 <sup>-12</sup> W PWL centre frequency (Hz)									Casing noise (dBA)	
Unit type	63	125	250	500	1k	2k	4k	8k	@ 1m	@ 3m	
DME 630-3/EC	74	84	82	80	75	70	67	65	66	59	

#### **Ancillaries**

#### Soaker sheet bases

- The soaker sheet is to be the same profile as the roof and is to be sealed onto the roof. It has an upstand to prevent water ingress.
- The soaker sheet base length is 1800mm, which provides rain water drainage and a full overlapping corrugation each side of the upstand. Maximum angle for roof installation 30°.
- The dome unit is to be supported by the purlin box, which is to be securely fixed to the roof purline. The soaker sheet fits over the purlin box.
- It is possible that the roof profile cannot be identified. VES are able to assist with this to ensure correct selection. Ask the sales office for a roof soaker identification form.





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

#### EC control:

#### CFSC1

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



CFSC1

#### Air quality sensor

Sensor combining CO<sub>2</sub> and VOC measurements



- Suitable for demand control ventilation or indoor air quality control
- Optional room or duct mounting variants

AQ/R Sensor

# Control 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 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**

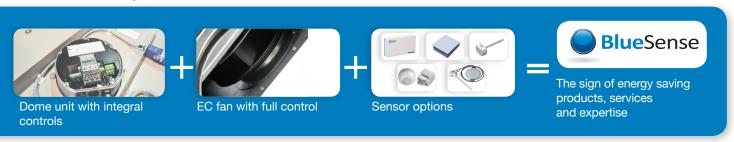
- Inbuilt intelligent controls technology
- Optimises performance and efficiency
- Demand ventilation control improves air quality, reducing energy consumption and lowering operating costs
- Combined CO₂ and VOC sensing technology with energy efficient speed control
- Extending equipment life expectancy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



#### Dome Roof Extract BlueSense

All products in the Ecovent range can form part of a BlueSense energy saving package. Specify BlueSense to ensure units are optimised with pre-wired controls, energy efficient speed controller and air quality sensor. All of these work in unison, reducing energy consumption and saving money.

#### A BlueSense Example



#### **Bespoke solutions**

As well as offering a wide range of standard Ecovent units VES are able to build bespoke versions for special applications and requirements.

Units can be adapted for higher specifications to address challenging locations and applications. Our experience with controls also enables high levels 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

- Acoustic options for noise sensitive applications
- EC Plug fans for duties above 1.3 m<sup>3</sup>/s
- Ontrols integration into new and existing building management systems
- Aesthetic requirements and paint colour finishes
- Saline environment protection
- Cooling coils
- Specialist filtration applications i.e carbon, grease, HEPA
- Flatpack 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.



#### **Flatpacking**

- To suit difficult access locations
- Saves craneage costs
- No need for road closures
- Reduced manual handling risks



#### Post Installation Commissioning

VES technical engineers can ensure the unit has been installed and set up correctly. Also, VES can check all control wiring, set the unit running and measure air volumes (if suitable traverse point is available).



#### **Spares and Maintenance**

VES holds stock, or can source parts for all VES and other manufacturers products. A reminder service and regular user discount are available. VES offers varied maintenance agreements to suit location and budget.

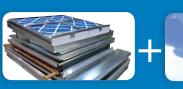


#### Energy Saving Solutions for Kitchens

VES can manufacture special Ecovent-K's, complete with grease filters, designed specifically for kitchens











#### Site Assistance By Specialist Site Services

VES has an accomplished Site Services division. Ecovent units can be delivered in flat pack form and re-assembled "in situ" in restricted and difficult locations.

### **Product specification**

#### **Dome** Roof Extract

#### 1.1. General

A. Provide a roof mounted extract fan unit to meet the performance and configuration as indicated in the schedule and detail drawings. The unit shall be tested to BS EN ISO 5801:2017 and shall be of the Dome high performance fan type as manufactured by VES Andover Ltd a company accredited with BS EN ISO 9001:2008.

#### 1.2. Unit Construction

- A. The cowl and base shall be manufactured using GRP and shall conform to BS 3532:1990 (type C) but if specific can be supplied to BS 3532:1990 (type E) having class II fire retardant characteristics in accordance with BS 476-7:1997.
- B. The roof unit fan shall be supplied with a 4-sided fan guard. Fan guards shall comply with safety guidelines established in BS EN ISO12499:2008.
- C. The supplied fan guards shall be manufactured from galvanised sheet steel to BS EN 10143:2006 and powder coasted to match GRP.
- D. The unit colour will be in accordance with specification.
- E. The weatherproof unit is fitted with motor weather guard to prevent water ingress as manufactured by VES Andover Ltd.
- F. The base shall have an integrated raised inlet eye for the fan.
- G. The unit shall be supplied with four lifting lugs for safe handling and shall conform to safety standard BS EN 60950-1:2006. The lifting lugs shall be removable to enable removal once unit is in situ.

#### 1.3. Impeller and motor

- A. The impeller and motor shall be selected to provide a low energy solution and conform to building regulations part L as well as being compliant with the ErP directives.
- B. The impellers shall be a high efficiency centrifugal backward curved design and shall be of a glass fibre reinforced plastic construction.
- C. The impeller shall be balanced in accordance with UNI ISO 1940-1:2003
- D. The motor shall have a die cast enclosure in aluminium alloy and shall be external rotor type with ball bearings.
- E. The motor shall be insulated to thermal class 155 (previously insulation class F).
- F. The motor shall have a protective finish.
- G. The motor shall be fitted with plug connection for ease of maintenance and shall be connected to a local isolator as standard.

#### 1.4. Ancillaries

A. The roof extract unit and ancillaries shall be of the Dome type as manufactured by VES Andover Ltd.

Download specification from www.ves.co.uk

#### **Product Code Guide**

Dome Roof Extract				Unit options		
Product	Fan size	Phase	Motor	Unit protection	Controls	Colour
DME	133	-1	/EC	/BM	Л	/R7004
	315	-3				
	350					
	400					
	450					
	500					
	560					
	630					
Product			Mot	tor Controls	Controls Controls	

/EC = electronically

commutated

/BM = bird mesh /I = isolator /R = RAL (colours)

Example codes

DME = Dome Extract

EC DME 315- 1/EC/BM/1

### 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 wheels and run-around coils
- ▶ Plantroom or weatherproof, flat or stacked
- Fitted silencers, 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, axial and mixed flow fans
- Fitted silencers available on all units
- Manual and automatic speed controllers available

#### **Twin Fans**

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

#### **Hybrid Units**

- Natural ventilation enhanced by a low power fan
- Utilises a combination of automatic mechanical ventilation and manually operated windows to achieve classroom comfort conditions
- Simple user interface with indication of operating mode
- Slimline, lightweight construction, saving space and easing installation
- Available in a range of sizes with the ability to add heating coils when required

#### **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

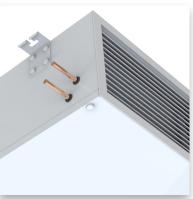
#### **Noise Control**

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

#### **Specialist Site Services**

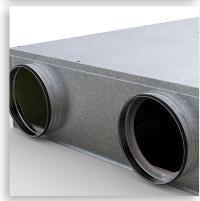
- Plant refurbishment
- Energy saving upgrades
- Noise reduction
- Site surveys
- Kitchen ventilation
- AHU flat pack installation
- Maintenance
- Spares

















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







