

CI/SfB

(57.7)

1st Edition

# ROOF UNITS

from Vent-Axia



Energysaver IVDC Fan

Non-Residential Sectors

**Vent-Axia**<sup>®</sup>

# Energysaver IVDC

## Vertical Discharge Roof Extract Fan

### Features & Benefits

- **Low Energy Consumption EC/DC Motors**
- **Up to 50% more efficient than conventional AC Motors**
- **Maintenance Free Motors**
- **Air Volume up to 0.91 m<sup>3</sup>/s**
- **Motor Insulation Class F, Hotspot Protection**
- **Operating Temperatures up to +40°C**
- **3 Year Warranty**
- **Quality Assurance to BS EN ISO 9001:1994**
- **Performance tested to BS848 Part 1 1980**

The range of Energysaver IVDC, Vertical Discharge Roof Extract Fan shall be as supplied from Roof Units, designed around a high performance centrifugal impeller and 48 volt EC/DC external rotor motor, offering a highly efficient roof extract ventilation unit. The Energysaver IVDC shall be manufactured from Plastisol coated prime quality galvanised sheet steel, ensuring a tough robust casing for coastal environmental conditions. In addition to the quiet EC/DC external rotor motor fan, the casing design shall ensure low sound levels.

Available in four sizes, with air volumes ranging from 0.09 m<sup>3</sup>/s to 0.97 m<sup>3</sup>/s (190 cfm to 2055 cfm) and pressure development of 500 Pa (1.6 w.g). All Energysaver IVDC units shall be developed using; the latest computer modelling technology, resulting in one of the most compact vertical discharge roof extract fans. Incorporated in to the design shall be all integral bellmouth, to streamline the airflow path into the eye of the impeller, optimising performance and minimising energy consumption.

### State Of The Art, EC/DC Energysaver Control

The Energysaver IVDC with integrated electronics has been designed to offer certain additional functions such as:

- Speed control
- Integrated soft start
- Closed loop speed
- Day / night setback facility control

- Pressure sensing facility
- Alarm functions
- RS485 Interface facility

The speed control functions offer continuously variable control by a linear 0-10V DC or PWM (pulse width modulation) input signal. This offers direct proportional speed control with true reductions in power consumption. The efficiency remains high as the speed decreases.

Optional closed loop control, with external parameter and open control can be selected via DIP-switch. Relay contacts, one off make for failure and one off break for failure, are supplied as standard. All units are supplied with wide voltage input connections for external controller enable and reset, and night/day set back facility. Pre-fitted with a pressure transmitter to provide constant pressure ventilation, motor speed adjusts relevant to duct pressure. All units incorporate starting limitation, reverse polarity protection, short circuit phase to phase and phase to earth protection. Together with HOT SPOT protection as standard.

Integrated soft start prevents the motor exceeding its peak current characteristics, there are no associated start up currents. Specialist software is available for connection to a PC for individual setting and monitoring of fans, automatic control of pressure, error message, error localisation and analysis.

### Impellers

The impellers shall be aerodynamically designed backward curved centrifugal type, utilising computer technology combining the impeller with the EC/DC external rotor motor. The motor and impeller shall be factory matched, statically and dynamically balanced on precision machines, to ISO 1940 G6.3, to give quiet, vibration free running. The aerodynamic blades and motor housing shall be manufactured from sheet steel or polyamid.

### Motors

All Energysaver IVDC fans shall be suitable for either a 230V / 1 phase / 50 Hz or 60 Hz supply to the built in Controller, motors protected to IP42 and complying with BS EN 60034-5. With

motor insulation Class F as a minimum, suitable for operating temperatures from -15°C to +40°C.

All motors shall be wound to suit 48 volt electrical supply from the main controller.

### Terminal Box

All models shall be supplied with an externally mounting Isolator protected to IP55, ensuring suitability for external mounting.

### 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

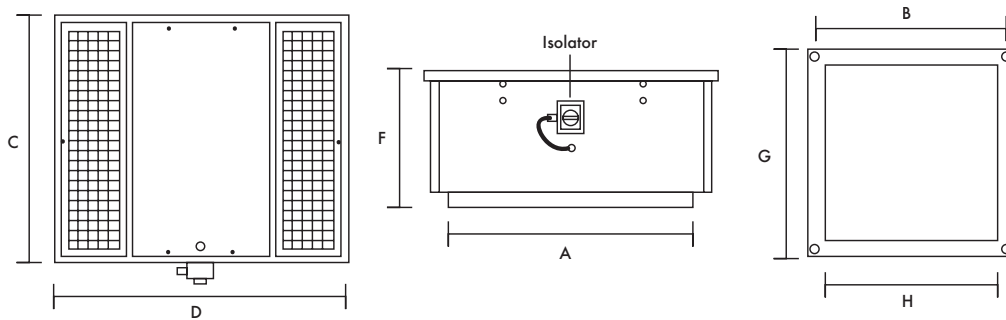
Design and manufacture shall be in accordance with the standard for quality management systems BS EN ISO 9001.



# ROOF UNITS

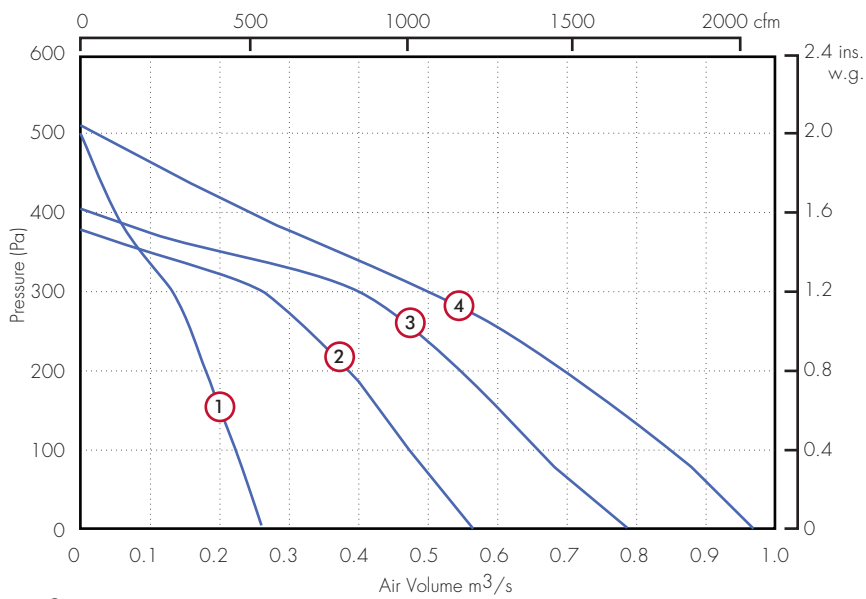
from Vent-Axia

### Dimensions (mm)



Stock Ref	A	B	C	D	E	F	G	H	Weight kg
IVDC5	380	292	450	550	40	251.5	342	242	12
IVDC10	460	330	495	730	40	300	380	280	15
IVDC20	580	450	615	775	40	375	500	400	17
IVDC30	665	535	700	820	40	375	585	485	20

### Performance Curve



Stock Ref.	Nom. RPM	Volt	Curve Ref.	Air Volume m <sup>3</sup> /s													Motor kW	Amps FLC	dBa @ 3m
				0	50	100	150	200	250	300	350	400	450						
IVDC5	3100	1ph	1	0.26	0.24	0.22	0.20	0.18	0.16	0.12	0.08	0.05	0.02	0.10	0.45	53			
IVDC10	1700	1ph	2	0.57	0.53	0.48	0.43	0.38	0.33	0.26	0.09			0.13	0.58	57			
IVDC20	1500	1ph	3	0.79	0.72	0.66	0.60	0.55	0.49	0.40	0.21			0.18	0.80	58			
IVDC30	1300	1ph	4	0.97	0.91	0.84	0.76	0.69	0.60	0.50	0.37	0.25	0.13	0.28	1.20	53			



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

### Industrial Sales Centre

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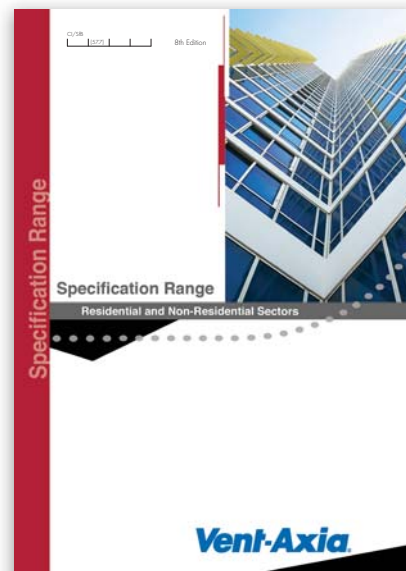
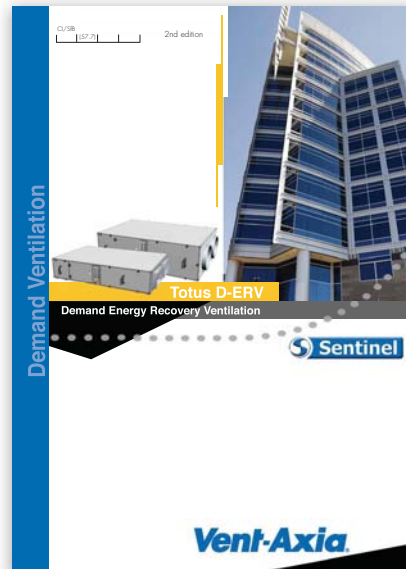
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### Supply & Service

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.



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**Vent-Axia Group Ltd** Right products, right price, right here!