Lo-Carbon Kinetic® E

MVHR Unit

Features & Benefits

- Compact size
- Lightweight for easy installation
- Easy access filters
- External condensate connection
- Compatible with a range of controls: PIR, Humidistat
- Horizontal duct option for space-saving installations
- Energy saving EC/DC motors
- Quiet operation
- Manufactured in the UK
- Switched live inputs (Light switch control)

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 Approved Document F and L for wholehouse system ventilation.

The Lo-Carbon Kinetic E model has two adjustable speeds: normal and boost. On the front of the unit is the controller that can be used to preset the speeds to any required performance, up to 38l/s (135m³/hr) 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 right handed with duct spigots to outside on the right hand side. These can be reversed on site by simply removing the control panel, rotating the unit 180 degrees and re-attaching the control panel.

Spigot Options

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.

Filter Check

An LED on the control panel illuminates at six month intervals to remind users to check and clean the filters.

Frost Protection

The Kinetic E range benefits from an automatic frost protection system which manages the airflows to prevent the heat recovery cell freezing in very cold weather, while at the same time maintaining ventilation down to -20°C.

Control options

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

Model

Model	Stock Ref
Kinetic E	443303

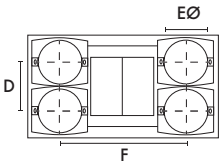
Accessories

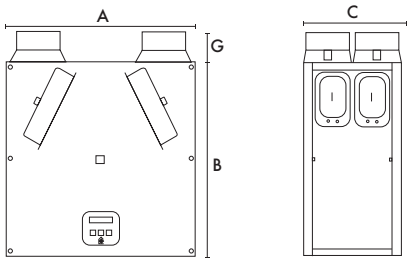
Model	Stock Ref
Kinetic Spare Filters 2 Pack	442356
Optional M5 Pollen Filter	444199

SAP PCDB Test Results

Exhaust Terminal Configuration	Thermal Efficiency %	SFP (W/l/s)
K + 1	91%	0.51
K + 2	90%	0.58
K + 3	89%	0.71

Dimensions (mm)





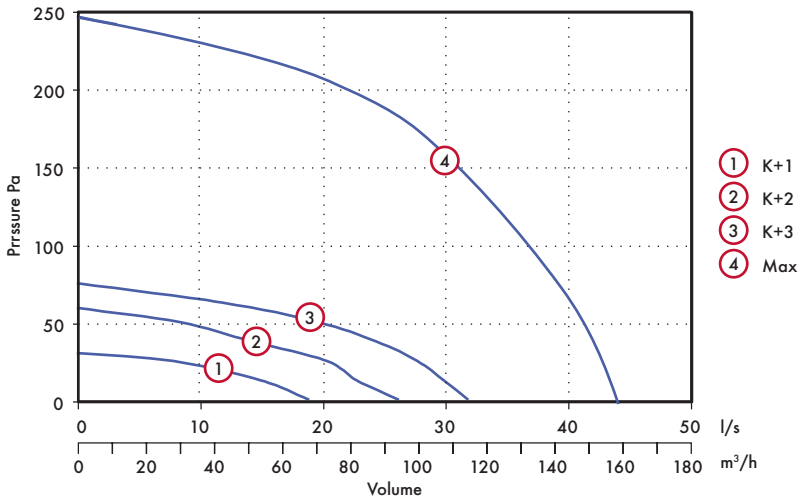
A	B	C	D	EØ	F	G
550	550	285	140	125	360	90

Weight: 15kg

T: 0844 856 0590

Performance

Fan speeds are fully adjustable within the performance range.



Sound Data

		Octave band, Hz, dB SWL								SPL
Flow l/s	Test mode	63	125	250	500	1k	2k	4k	8k	dB(A) at 3m
15	Supply	43.5	44.7	40.4	38.9	35.7	27.1	24.8	29.5	28.3
	Extract	45.0	42.1	34.5	32.4	32.7	24.1	24.5	30.7	22.2
	Breakout	53.6	52.6	47.7	47.2	43.1	35.3	24.1	30.0	28.3
21	Supply	43.4	49.2	45.9	42.8	42.1	35.2	27.7	30.6	32.2
	Extract	45.4	42.6	37.1	33.8	35.5	28.2	23.8	30.3	23.5
	Breakout	48.9	42.9	49.4	47.9	44.2	39.8	26.4	30.6	29.2
27	Supply	47.0	52.1	49.3	46.3	46.1	39.6	31.3	31.2	35.4
	Extract	45.7	43.9	37.6	37.8	40.3	31.5	25.6	31.0	26.3
	Breakout	48.0	45.6	48.0	48.2	47.4	39.1	28.8	29.8	30.3
31	Supply	46.8	57.7	53.8	51.2	50.0	44.2	37.5	33.2	40.1
	Extract	47.1	45.2	40.6	40.8	44.2	35.1	28.7	31.3	29.3
	Breakout	50.2	46.9	48.2	50.0	47.7	41.7	31.4	30.3	31.3
MAX	Supply	48.0	58.9	57.8	54.4	53.2	49.0	42.1	36.0	42.6
	Extract	46.1	45.4	41.2	42.1	43.4	35.8	29.6	31.0	29.1
	Breakout	51.9	48.0	51.1	52.0	47.0	44.5	34.1	31.7	32.5

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

Consultants Specification

Operation

The supply and extract ventilation unit shall be as Kinetic E 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 composite plastic counterflow heat recovery cell. The Kinetic E 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 vary their speed 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 independent, infinitely variable speed control.

Unit specification

The unit shall be manufactured with an ABS outer case construction, and incorporate a reversible core to allow for left or right hand mounting. The unit shall have a high efficiency composite plastic counterflow heat exchanger, supply and extract filters, integral minimum and maximum infinitely variable speed controls with facia 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 forward curved centrifugal type. The unit shall have a heat exchanger cell with a thermal efficiency of up to 91% when tested to EN 308. This shall be protected by G3 grade synthetic filters on supply and extract. Complete with a condensate drip tray and drain connection.

The unit shall be constructed with a removable Core allowing full maintenance access. The removable Core shall provide access to the following:

- ✓ Supply and extract filter
- ✓ Heat exchanger
- ✓ Access to the electrical connections

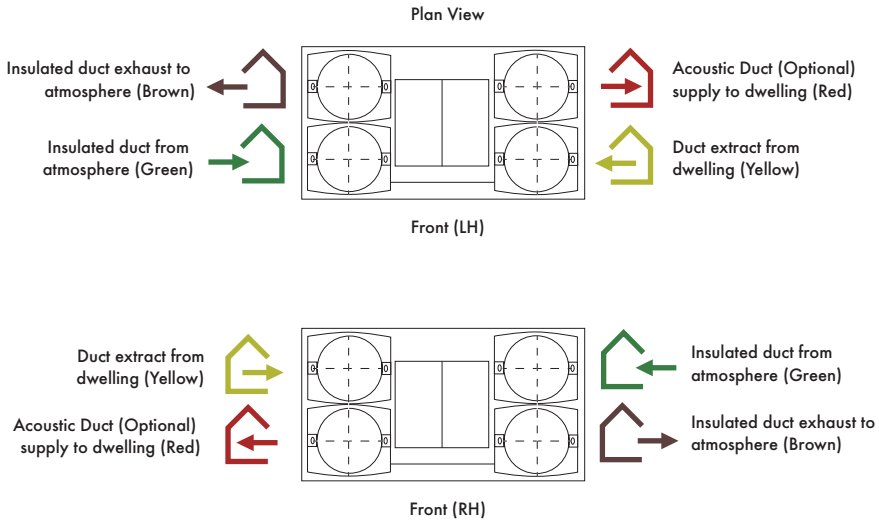
Access shall be provided for wiring termination and setup/commissioning.

Standard controls

All Kinetic E 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 on/off or trickle boost function from remote switch, e.g. PIR occupancy detector
- ✓ Switched Live input with adjustable 'Delay-On' feature
- ✓ Tool free filter access
- ✓ Frost protection down to -20°C
- ✓ LED 'filter check' indicator

Airflow Direction



Electrical Connection

The unit can be switched to boost by applying 230 V to the LS1 or LS2 inputs. Alternatively, the boost button on the control unit may be used.

Mains Cable Connections

Terminal No.	Name	Description
L	Mains Live	220-240 V AC, 50 Hz input
N	Mains Neutral	220-240 V AC, 50 Hz input
EARTH	Mains Earth	Earthing connector
LS1	Switched Live 1	220-240 V AC, 50 Hz input
LS2	Switched Live 2	220-240 V AC, 50 Hz input

Trickle to Boost by Two Light Switches using Relay