

# Lo-Carbon Sentinel Kinetic FH

## Features & Benefits

- Ultra quiet
- Lightweight for easier installation
- Horizontal duct option for space-saving installations
- Integrated digital controller for simple and accurate commissioning
- Plug and play controls; Humidistat, Ventwise, 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 or in an appropriate cupboard within the dwelling. When mounted in an unheated area the ducting and unit must be insulated in accordance with the Domestic Ventilation Compliance Guide. Ducting can be attached to the unit horizontally, vertically or both.

Left (L) or right (R) hand installation. Left hand and right hand units are available.

## 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.

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

## 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. The night time relative humidity setback feature suppresses nuisance tripping as humidity gradually increases with falling temperature.

## Model

| Model   | Stock Ref |
|---|-----------|
| Kinetic FH Right<br>(right handed with summer bypass & humidity sensor) | 408167    |
| Kinetic FHL Left<br>(left handed with summer bypass & humidity sensor)  | 408169    |

## Accessories

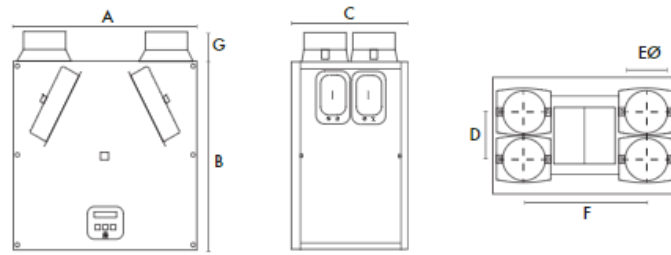
| Model                           | Stock Ref |
|---------------------------------|-----------|
| Wired Remote Controller         | 443283    |
| Wireless Enable Kit             | 441865    |
| Wireless Transmitter Controller | 437827    |
| Ventwise Controller             | 441780    |
| LED alarm with 15m cable        | 448356    |
| Kinetic Spare Filter 2pk        | 409158    |

## SAP PCDB performance

|     | Thermal Efficiency % | SFP (W/l/s) |
|-----|----------------------|-------------|
| K+1 | 90                   | 0.53        |
| K+2 | 89                   | 0.51        |
| K+3 | 88                   | 0.56        |
| K+4 | 87                   | 0.65        |
| K+5 | 85                   | 0.75        |

## SEC Rating

| Model          | SEC Class |
|----------------|-----------|
| Kinetic FH/FHL | A+        |

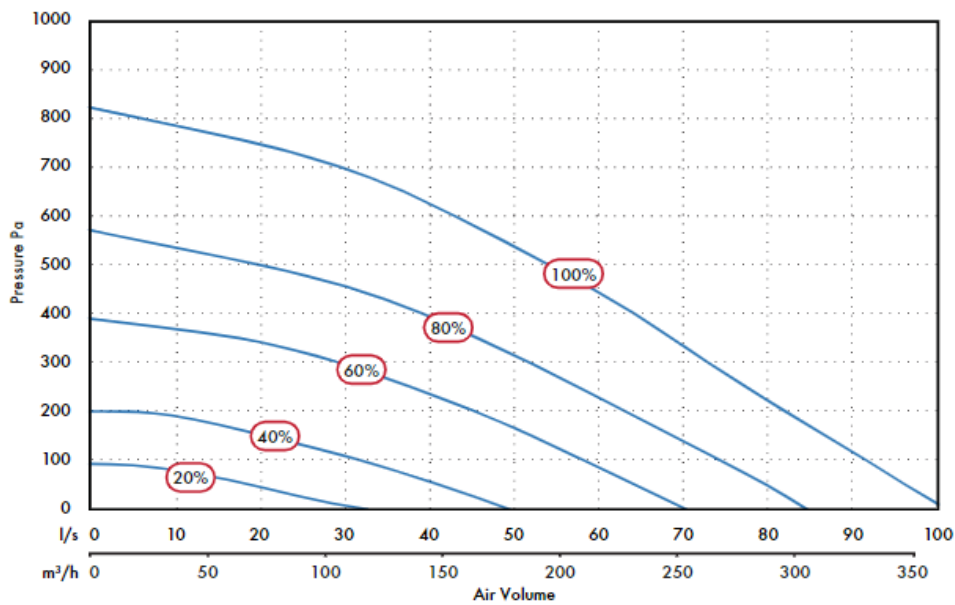


| A   | B   | C   | D   | EØ  | F   | G  |
|-----|-----|-----|-----|-----|-----|----|
| 555 | 550 | 350 | 140 | 125 | 360 | 90 |

Weight: 18kg

### Performance

Fan speeds are fully adjustable within the performance range.



### Sound Data

| Speed | Port     | Octave band, Hz, dB SWL |      |      |      |      |      |      |      | SPL dB(A)<br>@ 3m |
|-------|----------|-------------------------|------|------|------|------|------|------|------|-------------------|
|       |          | Test mode               | 63   | 125  | 250  | 500  | 1k   | 2k   | 4k   |                   |
| 100%  | Extract  | 83.3                    | 68.3 | 66.9 | 71.2 | 60.7 | 51.4 | 42.4 | 36.1 | 52.2              |
|       | Supply   | 95.5                    | 77.7 | 74   | 80.4 | 68.7 | 62.9 | 56.9 | 52.4 | 61.6              |
|       | Breakout | 62.1                    | 59.7 | 62.9 | 70   | 61   | 57.3 | 52.3 | 46.9 | 47.5              |
| 80%   | Extract  | 83.5                    | 65.2 | 65   | 65.5 | 57   | 47.7 | 37.9 | 31.3 | 48                |
|       | Supply   | 85                      | 75.3 | 72.5 | 77.9 | 65.3 | 58.8 | 52.1 | 47.4 | 58.5              |
|       | Breakout | 56.4                    | 56.4 | 60.4 | 69.8 | 56.7 | 53.2 | 47.8 | 42   | 46                |
| 60%   | Extract  | 67.3                    | 61.9 | 66.5 | 58.9 | 52.2 | 42.7 | 32.6 | 27.6 | 43.6              |
|       | Supply   | 72.8                    | 72.5 | 82.2 | 64.4 | 59.9 | 53.8 | 46.2 | 40.3 | 56.9              |
|       | Breakout | 53.9                    | 53.2 | 65.9 | 55.8 | 52.2 | 48.2 | 42.5 | 39.3 | 40.5              |
| 40%   | Extract  | 66.8                    | 56.1 | 56.9 | 52.1 | 44.7 | 34.6 | 23.8 | 25.8 | 35.7              |
|       | Supply   | 68.9                    | 66.4 | 68.8 | 57.8 | 52.1 | 44.9 | 35.3 | 28.8 | 44.9              |
|       | Breakout | 47.3                    | 47.5 | 56.4 | 48   | 44   | 39.6 | 32.8 | 29.1 | 30.5              |
| 20%   | Extract  | 57.7                    | 56.6 | 47.2 | 43.5 | 35.3 | 24.1 | 19.6 | 25.7 | 28.2              |
|       | Supply   | 66.2                    | 67.2 | 54.3 | 48   | 42.1 | 33.3 | 22.5 | 25.6 | 36.4              |
|       | Breakout | 41.2                    | 47   | 41.7 | 39.5 | 34.6 | 30.4 | 22.5 | 25.7 | 20.5              |

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

## Consultant's Specification

### Operation

The supply and extract ventilation unit shall be a Sentinel Kinetic 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 Sentinel Kinetic 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, or alternative wired remote control unit. 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, 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 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. The backlit LCD user interface therein shall be removable for remote mounting if required.

Units shall be as manufactured by Vent-Axia Ltd.

### Standard Controls

All Sentinel Kinetic 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
- ✓ Heating interlocks
- ✓ 0-10V proportional speed adjustment
- ✓ Volt free contacts
- ✓ 24V sensor supply
- ✓ Integral on/off or trickle boost function from remote switch e.g. PIR occupancy detector
- ✓ The unit shall be controlled by the 'Sentinel' control devices (enablers and sensors) as detailed in the schedule or on the drawings
- ✓ Fully automatic summer bypass
- ✓ Switched Live input with adjustable 'delay-on' feature

- ✓ Fan failure or component failure indicated via individual fault code display
- ✓ Running time counter
- ✓ Control panel PIN number lock
- ✓ Automatic frost protection effective to -20°C
- ✓ Tool free filter access
- ✓ The unit shall incorporate ('H' models) an integral humidity sensor with the following features:
  - Ambient Response; Raises the humidity trigger point as dwelling temperature reduces
  - Rapid Response; Monitors the rate of change in humidity and triggers increased airflow even if the humidity trigger threshold is not reached
  - Proportional Response; Incrementally increases the fan speed to reduce noise and reduce energy consumption

### Mounting Option

