

Silhouette

Installation and Wiring Instructions



Stock Ref. N°

45 40 55B (100B)
44 51 61 (125B)
45 40 59B (150X)
45 40 56B (100T)
44 51 62 (125T)
45 40 60B (150XT)
45 40 57B (100HT)
44 51 63 (125HT)
45 40 61B (150XHT)
45 40 58B (100TM)

220-240V~50Hz

Vent-Axia[®]

PLEASE READ INSTRUCTIONS IN CONJUNCTION WITH ILLUSTRATIONS. PLEASE SAVE THESE INSTRUCTIONS.

IPX4

UK
CA
CE

Installation and Wiring Instructions for the Silhouette Range of Extractor Fans.



IMPORTANT: READ THESE INSTRUCTIONS BEFORE COMMENCING THE INSTALLATION

DO NOT install this product in areas where the following may be present or occur:

- Excessive oil or a grease laden atmosphere.
- Corrosive or flammable gases, liquids or vapours.
- Ambient temperatures higher than 40°C or less than -5°C.
- Possible obstructions which would hinder the access or removal of the Fan.

SAFETY AND GUIDANCE NOTES

- A.** All wiring to be in accordance with the current I.E.E. Regulations, or the appropriate standards of your country and **MUST** be installed by a suitably qualified person.
- B.** The Fan should be provided with a local isolator switch capable of disconnecting all poles, having a contact separation of at least 3mm.
- C.** Ensure that the mains supply (Voltage, Frequency, and Phase) complies with the rating label.
- D.** The Fan should only be used in conjunction with the appropriate Vent-Axia products.
- E.** The fan should only be used in conjunction with fixed wiring.
- F.** When the Fan is used to remove air from a room containing a fuel-burning appliance, ensure that the air replacement is adequate for both the fan and the fuel-burning appliance.
- G.** The Fan should not be used where it is liable to be subject to direct water spray for prolonged periods of time.
- H.** Where ducted Fans are used to handle moisture-laden air, a condensation trap should be fitted. Horizontal ducts should be arranged to slope slightly downwards away from the Fan.
- I.** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety.
- J.** Children should be supervised to ensure that they do not play with the appliance.

K. Stationary appliances not fitted with means for disconnection from the supply mains having a contact separation in all poles that provide full disconnection under over voltage category III, the instructions state that means for disconnection must be incorporated in the fixed wiring in accordance with the wiring rules.

DESCRIPTION

The Silhouette 100mm & 125mm axial extract fans are suitable for domestic bathrooms and W.C's. The Silhouette 125mm & 150mm axial extract fans are suitable for domestic kitchens and utility rooms. They are available as wall or panel/ceiling mounted models with shutter, timer, humidity and PIR combinations (100mm model only).

ACCESSORIES (not supplied)

WALL FITTING KIT

A range of 100mm, 125mm and 150mm wall kits are available for installing into most walls using telescopic liners supplied.

Fan Size	Stock Reference	
	White	Brown
100mm	254102	254100
125mm	455226	N/A
150mm	140902A	140903A

A. INSTALLATION

IMPORTANT: The fan should only be used in conjunction with fixed wiring.

PANEL/CEILING MOUNTING

1. For panel/ceiling mounting the fan should be installed into a closed duct protected by an exterior air grille that must comply with the standard requirements of your country to prevent access to the fans impeller.
2. Cut a 105mm diameter hole for 100mm fans, a 130mm hole for 125mm fans or a 155mm diameter hole for 150mm fans.
3. Loosen the screw at the bottom of the grille and remove the front grille. Mark the screw centres through the holes in the fan back plate. Drill, plug and screw into position.
4. After installation, ensure impeller rotates freely and the shutters can open.
5. Replace the grille and tighten the retaining screw.

WALL MOUNTING

1. For wall mounting either cut a 115mm diameter hole for 100mm fans, a 140mm hole for 125mm fans or a 170mm diameter hole for 150mm fans, through the wall and insert the wall sleeve. Slope the sleeve slightly downwards away from the fan. Cut to length and cement both ends into position flush with the wall faces.
2. Loosen the screw in the bottom of the grille and remove the front grille. Mark the screw centres through the holes in the fan back plate. Drill, plug and screw into position. Fix exterior grille into position with the louvres positioned downwards. (Note:- The grille must comply with the standard requirements of your country to prevent access to the fans impeller. The wall kit used in this installation should provide a minimum ducting length of 100mm from the fans back plate to the inside of the external grille).
3. After installation, ensure impeller rotates freely and the shutters can open.
4. Replace the grille and tighten the retaining screw.

B. WIRING.



WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.

IMPORTANT

- The fan should only be used in conjunction with fixed wiring.
- The cross - sectional area of supply cord used should be ranged from 1 -1.5mm².
- Cable entry can only be made from the rear of the fan.
- The extraction fan is suitable for connection to 220-240V 50Hz supply.
- The fan is a class II double insulated product and **MUST NOT** be earthed.

1. Select and follow the appropriate wiring diagram. (Fig. 2,3 or 4)
2. Check all connections have been made correctly and ensure all terminal connections and cable clamps are securely fastened.
3. Ensure the impeller rotates and is free from obstructions.

C. SETUP



WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING THE INSTALLATION / OR MAINTENANCE.

NOTE

On all 150mm fans the shutter may take up to one minute to activate on start-up, and the same amount of time to close when the fan is switched off.

SILHOUETTE 100B/125B/150X

Single speed fan. Controlled by remote switch (e.g. light switch or auto sensor) Fig.2.

SILHOUETTE 100T/125T/150XT

Single speed with overrun timer. The fan can be wired to a lighting circuit switch. Fig.4. or wired for a basic on/off operation wire as Fig 3.

When switched 'ON', the fan will operate at full speed and will continue to run for a pre-set time after the switch is turned 'OFF'.

TIMER ADJUSTMENT

BEFORE ADJUSTING THE TIMER, SWITCH OFF THE MAINS SUPPLY. TIMER SHOULD ONLY BE ADJUSTED BEFORE OR DURING INSTALLATION.

1. Remove the fan grille. The controller is factory set at 15 minutes approx. The overrun time period can be adjusted from 5-25 minutes by altering the adjuster on the control PCB.
2. To REDUCE the operating time, use a small screwdriver to turn the adjuster Fig.5. ANTI-CLOCKWISE.
3. To INCREASE the operating time, use a small screwdriver to turn the adjuster Fig.5. CLOCKWISE.
4. Replace the fan grille.

SILHOUETTE 100HT/125HT/150XHT

The fan contains an integral humidity controller. In automatic mode the controller switches the fan on at full speed when the room Relative Humidity (RH) reaches the set-point. The fan will continue to run until the room RH falls below the set-point.

These fans also include a built in timer function. The timer can be activated by removing the Jumper JP1, this will give the fan a fixed over run time of approx. 15 mins.

HUMIDITY SET-POINT ADJUSTMENT

BEFORE ADJUSTING THE CONTROLLER, SWITCH OFF THE MAINS SUPPLY. HUMIDISTAT SHOULD ONLY BE ADJUSTED BEFORE OR DURING INSTALLATION.

1. Remove the fan grille. The controller is factory set to switch on at about 70% RH. The humidity set point can be adjusted from 65-95%RH by altering the adjuster on the control PCB.
2. To LOWER the set-point use a small screwdriver to turn the adjuster Fig.6. ANTI-CLOCKWISE. This makes the controller MORE sensitive.
3. To RAISE the set-point use a small screwdriver to turn the adjuster Fig.6. CLOCKWISE. This makes the controller LESS sensitive.
4. Replace the fan grille.

NOTE! DO NOT TOUCH HUMIDITY SENSOR.

SILHOUETTE 100TM

Single speed with PIR (passive infra-red) detector and overrun timer. The fan starts automatically when a movement is detected and will continue to operate for the set overrun time period.

(See 'Timer Adjustment' section above) Fig. 2 and 5.

D. SERVICING AND MAINTENANCE.



WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING MAINTENANCE.

1. At intervals appropriate to the installation, the fan should be inspected and cleaned to ensure there is no build up of dirt or other deposits.
2. Wipe the inlets and front face with a damp cloth until clean.

The fan has sealed for life bearings, which do not require lubrication.

Fig.1.

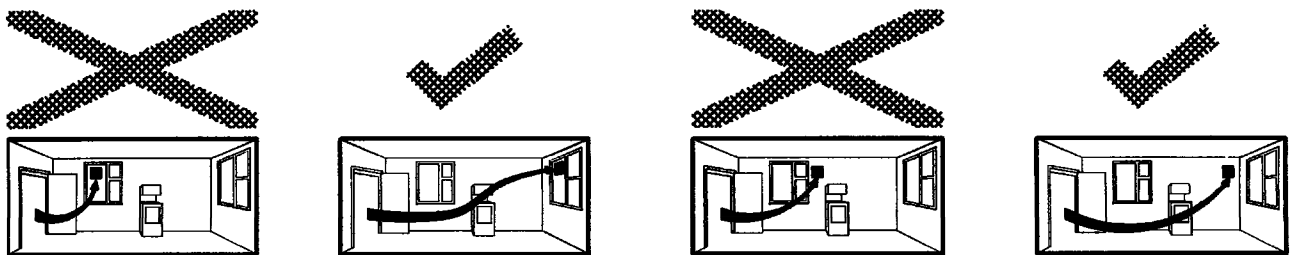


Fig.2

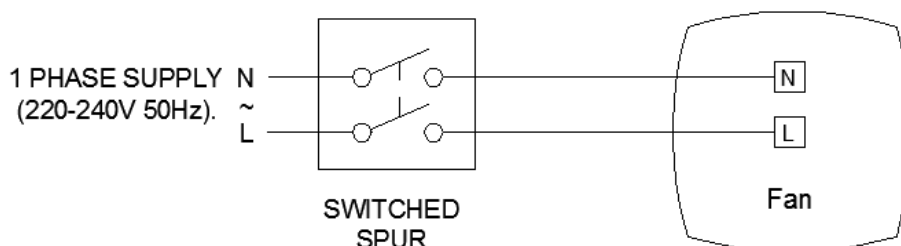
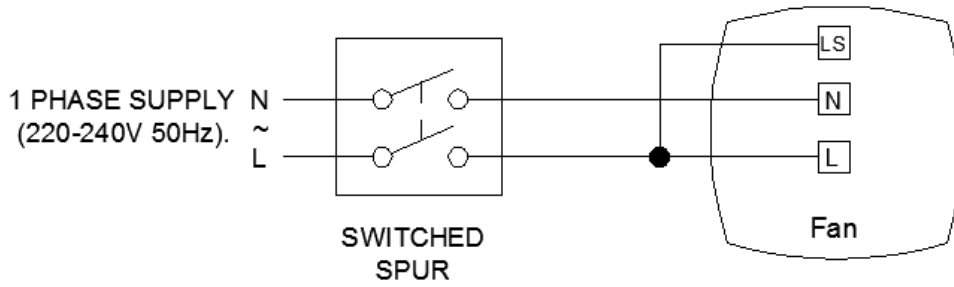


Fig.3



Timer model wired as a Basic version (link between L & LS enables fan to switch on or off when power is put onto the fan).

Fig.4

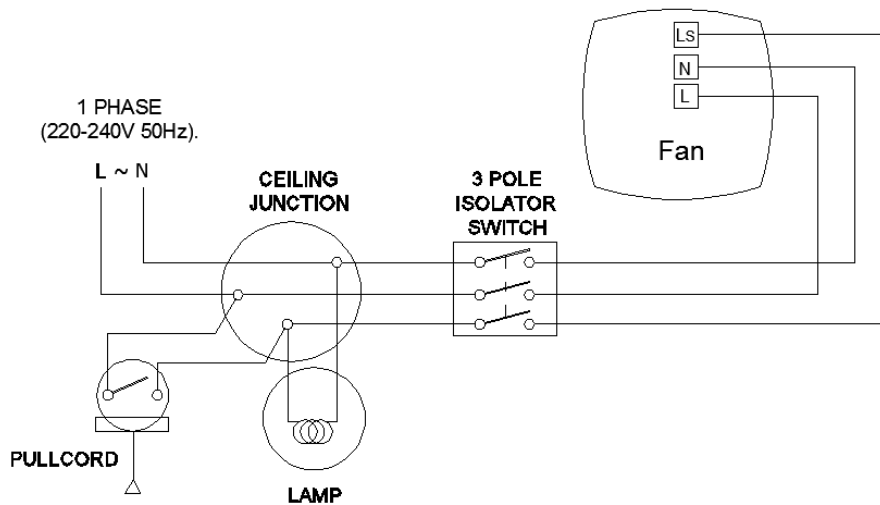
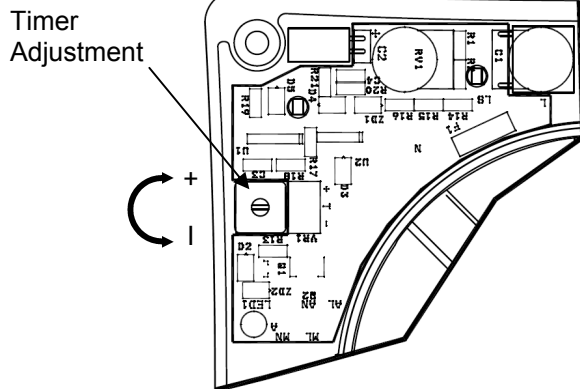


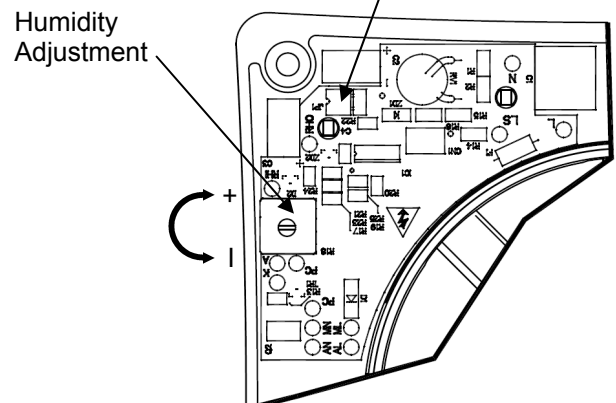
Fig.5.



To **REDUCE** the operating time, use a small screwdriver to turn the adjuster **ANTI-CLOCKWISE**.
To **INCREASE** the operating time, use a small screwdriver to turn the adjuster **CLOCKWISE**.

Fig.6.

To activate the timer function remove jumper JP1.
Once removed the fan will run on for a fixed time period of approx. 15 mins.



To **LOWER** the set-point use a small screwdriver to turn the adjuster **ANTI-CLOCKWISE**. This makes the controller **MORE** sensitive.
To **RAISE** the set-point use a small screwdriver to turn the adjuster **CLOCKWISE**. This makes the controller **LESS** sensitive.

PRODUCT FICHE

For Residential Ventilation Units (Complying Commission Delegated Regulation (EU) No 1254/2014)

Name: Vent-Axia/Manrose	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	Silhouette 100B - 454055	Silhouette 100T - 454056	Silhouette 100HT - 454057	Silhouette 100TM - 454058
SEC Class	F	F	D	D
SEC Value ('Average')	13.97	15.72	26.23	26.23
SEC Value ('Warm')	6.32	7.11	11.86	11.86
SEC Value ('Cold')	27.32	30.75	51.31	51.31
Label Required? (Yes/No=Out of scope)	No	No	No	No
Declared as: RVU or NRVU/UVU or BVU	RVU-UVU	RVU-UVU	RVU-UVU	RVU-UVU
Speed Drive	Multi-Speed	Multi-Speed	Multi-Speed	Multi-Speed
Type HRS (Recuperative, Regenerative, None)	None	None	None	None
Thermal Eff: [(%), NA(if none)]	N/A	N/A	N/A	N/A
Max. Flow Rate (m3/h)	75.60	75.60	75.60	75.60
Max. Power Input (W): (@Max.Flow Rate)	15.00	15.00	15.00	15.00
LWA: Sound Power Level (dB)	50.53	50.53	50.53	50.53
Ref. Flow Rate (m3/s)	52.92	52.92	52.92	52.92
Ref. Pressure Diff. (Pa)	TBC	TBC	TBC	TBC
SPI [W/(m3/h)]	0.28	0.28	0.28	0.28
Control Factor & Control Typology: (CTRL/ Typology)				
Control Factor; CTRL	1.00	0.95	0.65	0.65
Control Typology	Manual Control	Clock Control	Local Demand Control	Local Demand Control
Declared: -Max Internal & External Leakage Rates(%) for BVUs or carry over (for regenerative heat exchangers only), -&Ext. Leakage Rates (%) for Ducted UVUs;	TBC	TBC	TBC	TBC
Mixing Rate of Non-Ducted BVUs not intended to be equipped with one duct connection on either supply or extract air side;	N/A	N/A	N/A	N/A
Filter Warning (RVU)	No	No	No	No
For UVUs (Instructions Install Regulated Supply/Extract Grilles Façade)	In F&W	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com
Sensitivity p. Variation@+20/-20 Pa: (for Non-Ducted Vus)	TBC	TBC	TBC	TBC
Air Tightness-ID/OD-(m3/h) (for Non-Ducted Vus)	TBC	TBC	TBC	TBC
Annual Electricity Consumption: AEC (kWh/a)	9.76	9.04	5.12	5.12
Annual Heating Saved: AHS (kWh/a)				
AHS: Average	13.97	15.72	26.23	26.23
AHS: Warm	6.32	7.11	11.86	11.86
AHS: Cold	27.32	30.75	51.31	51.31

PRODUCT FICHE

For Residential Ventilation Units (Complying Commission Delegated Regulation (EU) No 1254/2014)

Name:	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	Silhouette 125 B - 445161	Silhouette 125 T - 445162	Silhouette 125 H - 445163
SEC Class	F	E	C
SEC Value ('Average')	13.97	15.72	26.23
SEC Value ('Warm')	6.32	7.11	11.86
SEC Value ('Cold')	27.32	30.75	51.31
Label Required? (Yes/No=Out of scope)	No	No	No
Declared as: RVU or NRVU/UVU or BVU	RVU-UVU	RVU-UVU	RVU-UVU
Speed Drive	Multi-Speed	Multi-Speed	Multi-Speed
Type HRS (Recuperative, Regenerative, None)	None	None	None
Thermal Eff: [(%), NA(if none)]	N/A	N/A	N/A
Max. Flow Rate (m3/h)	162.00	162.00	162.00
Max. Power Input (W): (@Max.Flow Rate)	20.00	20.00	20.00
LWA: Sound Power Level (dB)	57.52	57.52	57.52
Ref. Flow Rate (m3/s)	0.03	0.03	0.03
Ref. Pressure Diff. (Pa)	N/A	N/A	N/A
SPI [W/(m3/h)]	0.18	0.18	0.18
Control Factor & Control Typology: (CTRL/ Typology)			
Control Factor; CTRL	1.00	0.95	0.65
Control Typology	Manual Control	Clock Control	Local Demand Control
Declared: -Max Internal & External Leakage Rates(%) for BVUs or carry over (for regenerative heat exchangers only), -&Ext. Leakage Rates (%) for Ducted UVUs;	N/A	N/A	N/A
Mixing Rate of Non-Ducted BVUs not intended to be equipped with one duct connection on either supply or extract air side;	N/A	N/A	N/A
Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	N/A	N/A	N/A
For UVUs (Instructions Install Regulated Supply/Extract Grilles Façade)	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com
Sensitivity p. Variation@+20/-20 Pa: (for Non-Ducted Vus)	N/A	N/A	N/A
Air Tightness-ID/OD-(m3/h) (for Non-Ducted Vus)	N/A	N/A	N/A
Annual Electricity Consumption: AEC (kWh/a)	2.43	2.25	1.27
Annual Heating Saved: AHS (kWh/a)			
AHS: Average	13.97	15.72	26.23
AHS: Warm	6.32	7.11	11.86
AHS: Cold	27.32	30.75	51.31

PRODUCT FICHE

For Residential Ventilation Units (Complying Commission Delegated Regulation (EU) No 1254/2014)

Name:	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	Silhouette 150 X - 454059	Silhouette 150 XT - 454060	Silhouette 150 XH - 454061
SEC Class	F	E	C
SEC Value ('Average')	13.97	15.72	26.23
SEC Value ('Warm')	6.32	7.11	11.86
SEC Value ('Cold')	27.32	30.75	51.31
Label Required? (Yes/No=Out of scope)	No	No	No
Declared as: RVU or NRVU/UVU or BVU	RVU-UVU	RVU-UVU	RVU-UVU
Speed Drive	Multi-Speed	Multi-Speed	Multi-Speed
Type HRS (Recuperative, Regenerative, None)	None	None	None
Thermal Eff: [(%), NA(if none)]	N/A	N/A	N/A
Max. Flow Rate (m3/h)	241.20	241.20	241.20
Max. Power Input (W): (@Max.Flow Rate)	20.00	20.00	20.00
LWA: Sound Power Level (dB)	60.52	60.52	60.52
Ref. Flow Rate (m3/s)	0.05	0.05	0.05
Ref. Pressure Diff. (Pa)	N/A	N/A	N/A
SPI [W/(m3/h)]	0.12	0.12	0.12
Control Factor & Control Typology: (CTRL/ Typology)			
Control Factor; CTRL	1.00	0.95	0.65
Control Typology	Manual Control	Clock Control	Local Demand Control
Declared: -Max Internal & External Leakage Rates(%) for BVUs or carry over (for regenerative heat exchangers only), -&Ext. Leakage Rates (%) for Ducted UVUs;	N/A	N/A	N/A
Mixing Rate of Non-Ducted BVUs not intended to be equipped with one duct connection on either supply or extract air side;	N/A	N/A	N/A
Position and description of visual filter warning for RVUs intended for use with filters, including text pointing out the importance of regular filter changes for performance and energy efficiency of the unit	N/A	N/A	N/A
For UVUs (Instructions Install Regulated Supply/Extract Grilles Façade)	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	www.vent-axia.com	www.vent-axia.com	www.vent-axia.com
Sensitivity p. Variation@+20/-20 Pa: (for Non-Ducted Vus)	N/A	N/A	N/A
Air Tightness-ID/OD-(m3/h) (for Non-Ducted Vus)	N/A	N/A	N/A
Annual Electricity Consumption: AEC (kWh/a)	1.63	1.51	0.86
Annual Heating Saved: AHS (kWh/a)			
AHS: Average	13.97	15.72	26.23
AHS: Warm	6.32	7.11	11.86
AHS: Cold	27.32	30.75	51.31

The **Vent-Axia** Guarantee

Applicable only to products installed and used in the United Kingdom. For details of guarantee outside the United Kingdom contact your local supplier.

Vent-Axia guarantees its products for two years from date of purchase against faulty material or workmanship. In the event of any part being found to be defective, the product will be repaired, or at the Company's option replaced, without charge, provided that the product:-

- Has been installed and used in accordance with the instructions given with each unit.
- Has not been connected to an unsuitable electricity supply. (The correct electricity supply voltage is shown on the product rating label attached to the unit).
- Has not been subjected to misuse, neglect or damage.
- Has not been modified or repaired by any person not authorised by the company.

IF CLAIMING UNDER TERMS OF GUARANTEE

Please return the complete product, carriage paid to your original supplier or nearest Vent-Axia Centre, by post or personal visit. Please ensure that it is adequately packed and accompanied by a letter clearly marked "Guarantee Claim" stating the nature of the fault and providing evidence of date and source of purchase.

The guarantee is offered to you as an extra benefit, and does not affect your legal rights

Vent-Axia

Head Office: Fleming Way, Crawley, West Sussex, RH10 9YX.

EU Authorised Representative: Vent-Axia Bedrijvenweg 17 7442 CX Nijverdal Nederland authorisedrep@vent-axia.nl

UK NATIONAL CALL CENTRE, Newton Road, Crawley, West Sussex, RH10 9JA

SALES ENQUIRIES: Tel: 0344 8560590 Fax: 01293 565169

TECHNICAL SUPPORT: Tel: 03344 8560594 Fax: 01293 532814

As part of the policy of continuous product improvement Vent-Axia reserves the right to alter specifications without notice.