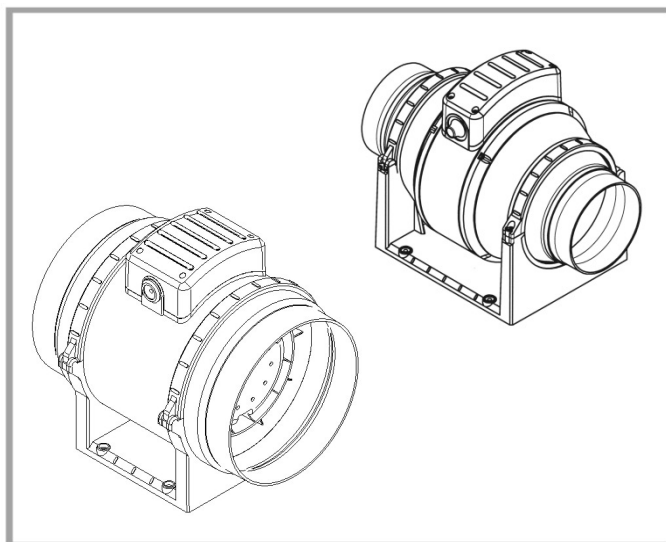


# ACM In-Line MIXED FLOW FANS

Installation and Wiring Instructions



## Stock Ref. N°

ACM100 B	17104010D
ACM100 T	17104020F
ACM125 B	17105010D
ACM125 T	17105020C
ACM150 B	17106010C
ACM150 T	17106020D
ACM160 B	17107010B
ACM160 T	17107020B
ACM200 B	17108010C
ACM200 T	17108020B

220-240V~50Hz

**Vent-Axia®**

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

IP44





## Installation and Wiring Instructions for the ACM IN-LINE MIXED FLOW FAN range.

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.
- Sudden ductwork bends or transformations close to 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 double pole isolator switch 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.** It is recommended that the connection to the fan connector terminals is made with flexible cable.
- F.** When the Fan is used to remove air from a room containing a fuel-burning appliance, precautions must be taken to avoid back-flow of gases into the room from the open flue of gas or other 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.

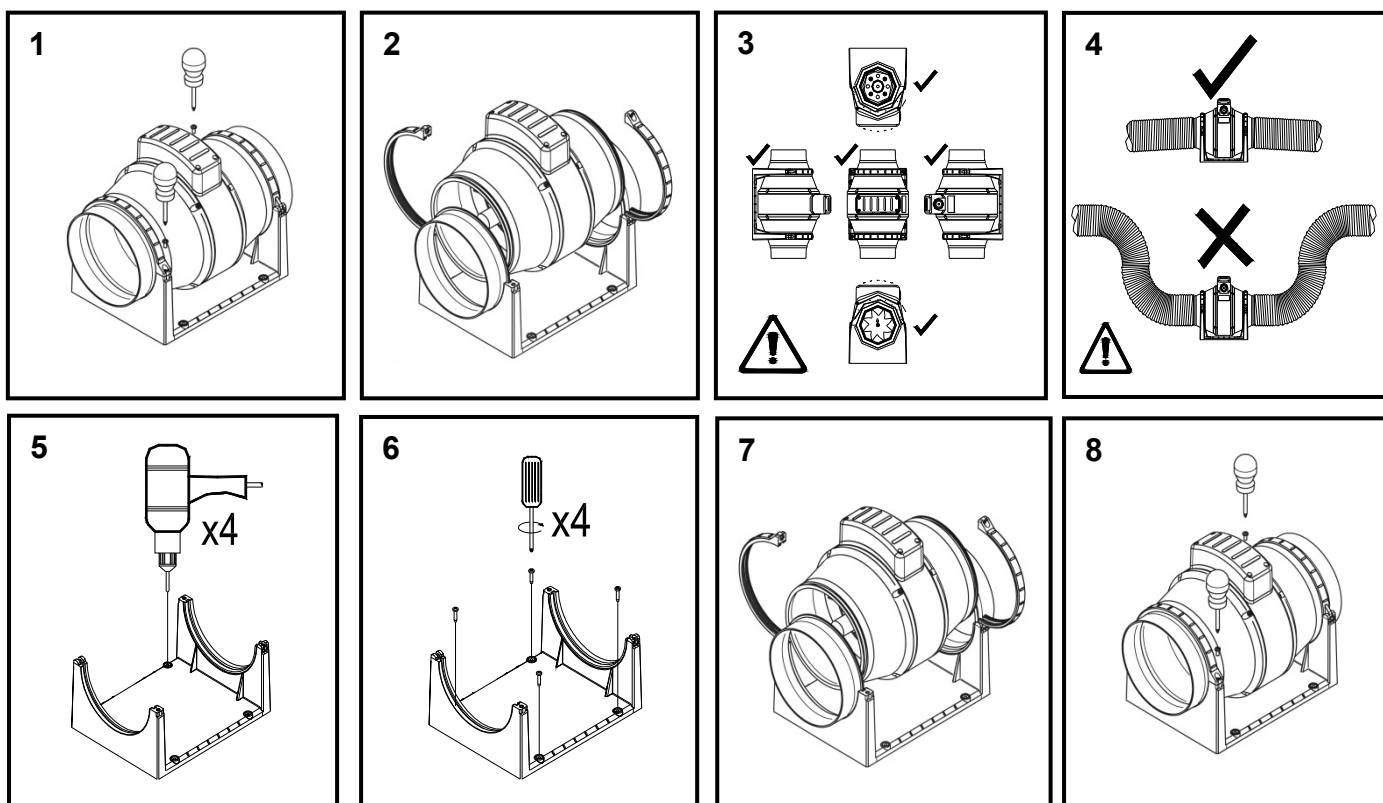
- H.** Where ducted Fans are used to handle moisture-laden air, a condensation trap should be fitted. Horizontal ducts should be arranged to slope slightly downwards away from the Fan.
- I.** This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental 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.** Young children should be supervised to ensure that they do not play with the appliance.

**A. INSTALLATION.**

The unit is designed as an in-line duct fan to be positioned between lengths of ducting. Short duct runs terminating close to the fan (i.e. within 1.5m) must incorporate suitable guards unless the fan is mounted higher than 2.1m above the floor. If flexible ducting is used it should be fully extended to obtain the best results. Position the fan at the highest point on the system with both ducting runs sloping downwards from this point. The airflow direction is indicated on the rating label with an arrow pointing in the direction of the airflow. In circumstances where an excessive amount of moisture is present in the air then a condensation trap should be installed. (Refer to Fig 15 for overall fan dimensions and fixing hole positions). When siting the appliance ensure that there is sufficient space to allow access for any servicing and maintenance.

To gain access to the mounting holes, proceed as follows: -

- A. Using a cross-headed screwdriver, release the two blue plastic clips by undoing the two bolts as shown in Fig 1. Slide out motor impeller assembly, see Fig 2.
- B. The fan can now be mounted at any angle, using the holes provided Fig 3,4,5,6 & 15
- C. Once the base is securely fixed, slide the motor impeller assembly back, as shown in Fig 7. Replace the screw and tighten to lock the assembly together Fig 8.



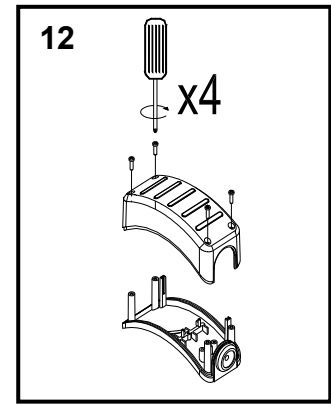
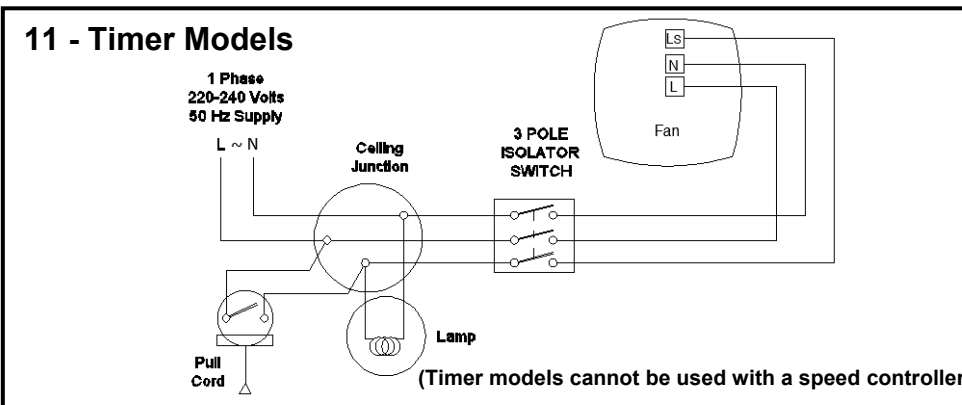
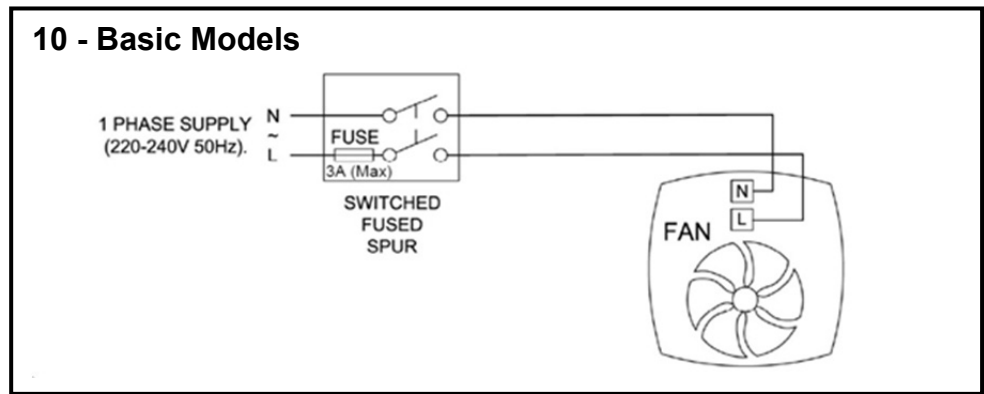
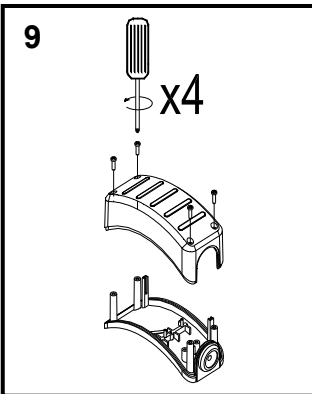
## B. WIRING.



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

**THE ACM FANS ARE DOUBLE INSULATED AND CARRY A  MARK. THERE ARE NO EARTH TERMINALS AND THESE FANS MUST NOT BE EARTHED.**

1. Remove terminal box cover & screws and put to one side Fig. 9
2. Select and follow the appropriate wiring diagram (Fig. 10-11).
3. Check all connections have been made correctly and ensure all terminal connections and cable clamps are securely fastened.
4. The cable entry must be made using the cable grommet provided
5. Replace terminal box cover & screws Fig.12
6. Ensure the impeller rotates and is free from obstructions

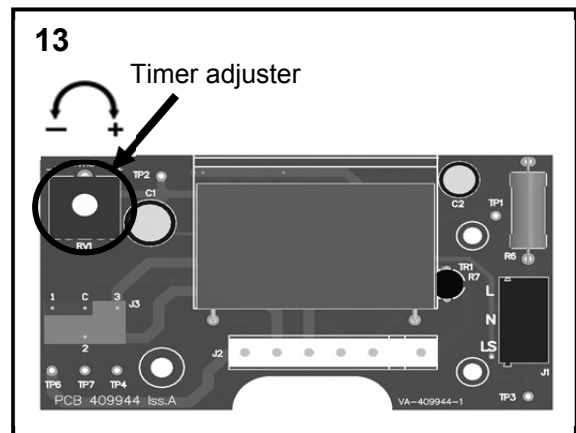


### Timer Adjustment.

The fan must be wired to a remote switch (e.g. light switch). When switched 'ON', the fan will operate at the selected speed, and will continue to run for a preset time after the fan is switched 'OFF'. The timer is factory set at 15 minutes approx. The overrun time period can be adjusted from 3-25 minutes by altering the adjuster on the control PCB with the use of a small flat bladed screwdriver. Fig 13

**Before adjusting the timer, switch off the Mains Supply.**

Remove the fan terminal box cover and retain screws  
 To INCREASE the operating time, turn the adjuster **CLOCKWISE**.  
 To REDUCE the operating time, turn the adjuster **ANTI-CLOCKWISE**.  
 Replace the fan terminal box cover.



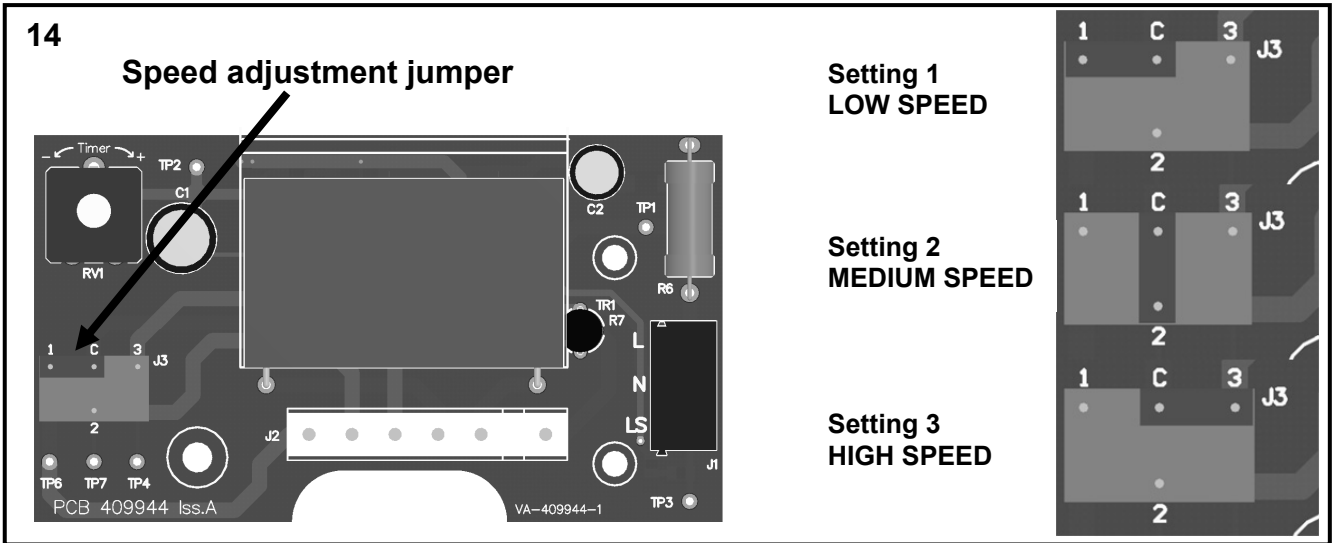
**Speed Adjustment**

The fan has three speeds which are selectable by changing the position of the jumper. The fan is factory set to Setting 3 - High speed. To change the speed setting, pull the jumper off the header pins and place back onto the desired position, see Fig14.

Setting 1 is **LOW SPEED**

Setting 2 is **MEDIUM SPEED**

Setting 3 is **HIGH SPEED**



**Variable Speed Controller**

Speed adjustment for the basic version can also be achieved with the use of a speed controller (stock reference W300310). If a speed controller is used then the speed setting on the fan unit should be setting 3 – High Speed. Follow the Installation and wiring instructions for the speed controller unit to install the controller correctly. A variable speed controller should **NOT** be used with the timer version.

**C. OVER-HEATING PROTECTION.**

The fan motor is fitted with Thermal Overload Protection. This is a one-shot thermal fuse. In the event of a fault condition the fan will be automatically switched off. If this occurs isolate the fan, and call your service engineer.

**D. SERVICING AND MAINTENANCE.**

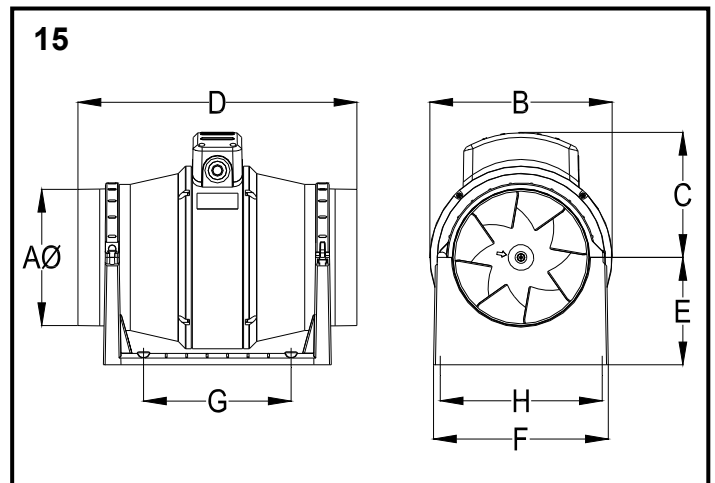


**WARNING: THE FAN AND ANCILLARY CONTROL EQUIPMENT MUST BE ISOLATED FROM THE POWER SUPPLY DURING MAINTENANCE.**

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.

The ACM In-Line Mixed Flow fan has sealed for life bearings, which do not require lubrication.

Dimensions(mm)	100	125	150	160	200
AØ	98	122	147	159	198
BØ	178	178	200	200	220
C	124	124	138	138	138
D	298	259	307	352	300
E	96	96	118	118	130
F	168	168	192	192	145
G FIXING CTRS	120	120	162	162	100
H FIXING CTRS	153.5	153.5	178	178	180



## PRODUCT FICHE

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

### Basic Models:

Name:	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	ACM 100 - 17104010D	ACM 125 - 17105010D	ACM150 - 17106010C	ACM160 - 17107010B	ACM200 - 17108010C
Declared as: RVU or NRVU/UVU or BVU	NRVU/UVU	NRVU/UVU	NRVU/UVU	NRVU/UVU	NRVU/UVU
Speed Drive	Multi Speed	Multi Speed	Multi Speed	Multi Speed	Multi Speed
Type HRS (Recuperative, Regenerative, None)	None	None	None	None	None
Thermal Eff: [ (%), NA(if none)]	N/A	N/A	N/A	N/A	N/A
Nominal Flow Rate (m3/s)	0.06	0.07	0.11	0.11	0.18
Effective Elec. Power Input (kW): (@Nom.Flow Rate&Ext. Pressure)	0.02	0.03	0.05	0.05	0.10
SFPint [W/(m3/s)]	N/A	N/A	N/A	N/A	N/A
Face Velocity (m/s) @ Design Flow Rate	N/A	N/A	N/A	N/A	N/A
Nominal External Pressure: ( $\Delta p_{s,ext}$ ) in Pa	71	74	92	92	167
Internal Pressure Drop of Ventilation Components ( $\Delta p_{s,int}$ ) in Pa;	N/A	N/A	N/A	N/A	N/A
Additional Internal Press. Drop of Non-Ventilation Comp.: $\Delta p_{s,add}$ (Pa)	N/A	N/A	N/A	N/A	N/A
Static Eff. of fans used in accordance with Regulation (EU) No 327/2011;	TBC	TBC	TBC	TBC	TBC
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	N/A	N/A
Energy Performance, preferably energy classification, of the Filters (declared information about the calculated AEC)	N/A	N/A	N/A	N/A	N/A
Filter Warning (RVU)	No	No	No	No	No
For UVUs (Instructions Install Grilles Façade)	In F&W	In F&W	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>

## PRODUCT FICHE

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

### Timer Models:

Name:	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia	Vent-Axia
Model ID (Stock Ref.) :	ACM 100T - 17104020F	ACM 125T - 17105020C	ACM150T - 17106020D	ACM160T - 17107020B	ACM200T - 17108020B
Declared as: RVU or NRVU/UVU or BVU	NRVU/UVU	NRVU/UVU	NRVU/UVU	NRVU/UVU	NRVU/UVU
Speed Drive	Multi Speed	Multi Speed	Multi Speed	Multi Speed	Multi Speed
Type HRS (Recuperative, Regenerative, None)	None	None	None	None	None
Thermal Eff: [ (%), NA(if none)]	N/A	N/A	N/A	N/A	N/A
Nominal Flow Rate (m3/s)	0.06	0.07	0.11	0.11	0.18
Effective Elec. Power Input (kW): (@Nom.Flow Rate&Ext. Pressure)	0.02	0.03	0.05	0.05	0.10
SFPint [W/(m3/s)]	N/A	N/A	N/A	N/A	N/A
Face Velocity (m/s) @ Design Flow Rate	N/A	N/A	N/A	N/A	N/A
Nominal External Pressure: ( $\Delta p_{s,ext}$ ) in Pa	71	74	92	92	167
Internal Pressure Drop of Ventilation Components ( $\Delta p_{s,int}$ ) in Pa;	N/A	N/A	N/A	N/A	N/A
Additional Internal Press. Drop of Non-Ventilation Comp.: $\Delta p_{s,add}$ (Pa)	N/A	N/A	N/A	N/A	N/A
Static Eff. of fans used in accordance with Regulation (EU) No 327/2011;	TBC	TBC	TBC	TBC	TBC
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	N/A	N/A
Energy Performance, preferably energy classification, of the Filters (declared information about the calculated AEC)	N/A	N/A	N/A	N/A	N/A
Filter Warning (RVU)	No	No	No	No	No
For UVUs (Instructions Install Grilles Façade)	In F&W	In F&W	In F&W	In F&W	In F&W
Internet Address (for Disassembly Instructions)	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>	<a href="http://www.vent-axia.com">www.vent-axia.com</a>

## 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 effect your legal rights

# **Vent-Axia**<sup>®</sup>

Head Office: Fleming Way, Crawley, West Sussex, RH10 9YX. Tel: 01293 526062 Fax: 01293 551188

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

SALES ENQUIRIES: Tel: 0344 8560590 Fax: 01293 565169

TECHNICAL SUPPORT: Tel: 0344 8560594 Fax: 01293 532814

For details of the warranty and returns procedure please refer to [www.vent-axia.com](http://www.vent-axia.com) or write to Vent-Axia Ltd, Fleming Way, Crawley, RH10 9YX