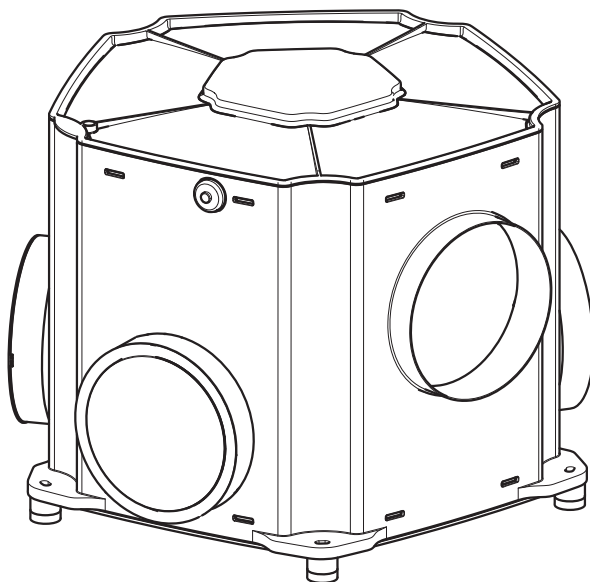

INVA  VENT™ MAXI

CE



Read the instructions contained in this booklet carefully before using the appliance.

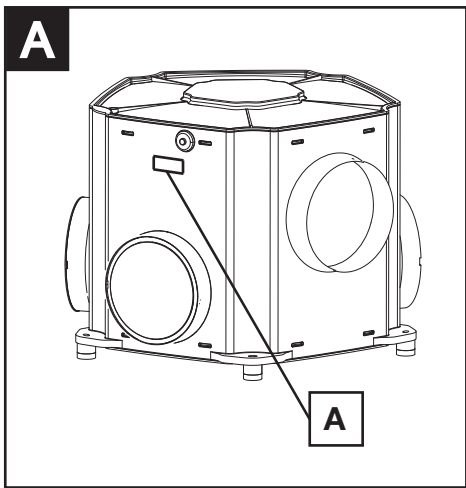
Joukle cannot assume any responsibility for damage to property or personal injury resulting from failure to abide by the instructions given in this booklet.

Following these instructions will ensure a long service life and overall electrical and mechanical reliability.

Keep this instruction booklet in a safe place.

Table of Contents **EN**

Compliance with Building Codes	3
Description	3
Safety	4
Operating Principles	5
Instructions for Use	5
Maintenance/Cleaning	5
Information for the Installer	5
Important information on eco-compatible disposal	9



Check that the power supply specifications comply with the electrical data on data plate A

Compliance with Building Codes

The 2006 Edition of the U.K Building Regulations Approved Document F1: Means of Ventilation (applicable in England and Wales) details 4 clearly defined systems of ventilation to dwellings. System 3 - Continuous mechanical extract (MEV) is complied with by the INVAVENT MAXI ultra-high efficiency whole house extract ventilation system.

System 3- Continuous mechanical extract requires a "minimum high rate" in each wet room to be achieved (Kitchens 13 l/s and both utilities and bathrooms 8 l/s - sanitary only 6 l/s).

The "minimum low rate" is calculated by taking the number of bedrooms in the dwelling and applying the l/s value from Table 1.1b (pag.7). In addition the rate should be no less than 0.3 l/s per m^2 of internal floor area (all storey's) plus for each additional occupant over and above the anticipated two for the first bedroom and one for each of the others a further 4 l/s must be added to the extract rate. The system provides quiet, uninterrupted extract ventilation from the dwelling via all the wet rooms, creating a permanent air path through the property from the "dry" habitable rooms to the "wet" rooms.

The current Building (Scotland) Regulations refers to continuously operating mechanical extract ventilation in accordance with the guidance in BRE (Building Research Establishment) Digest 398, a paper based on the former government department's (and now private company) own tests and recommendations , specifically 0.5 air changes per hour throughout the property.

The INVAVENT MAXI complies fully with the recommendations contained within this document.

In Ireland, Technical Guidance Document (TGD) 2008 Part F: Ventilation is applicable and the INVAVENT MAXI complies fully with the recommendations contained within this document.

With the Governments actively encouraging energy saving and a target for all new homes to be 'carbon zero' by 2016, the INVAVENT MAXI has been designed 'future proof'.

The 'Code for Sustainable Homes' which came into force in March 2007, details six levels of CO₂ emission improvement over 2006 Building Regulations requirements.

To achieve the three highest levels of reduction of carbon emissions, the air leakage of the dwelling must be improved so significantly that continuous ventilation becomes the only appropriate method. In addition, it must be demonstrated that the ventilation system itself must be energy efficient. The INVAVENT MAXI has been independently tested by the Building Research Establishment (BRE) to the appropriate SAP (1) Appendix Q test methodology and is therefore Appendix Q eligible.

(1) The Governments Standard Assessment Procedure

(SAP) is a method assessing the energy performance of dwellings and SAP Appendix Q provides an allowance for the benefits of energy-saving appliances; products may be independently assessed and the results uploaded to the SAP website.

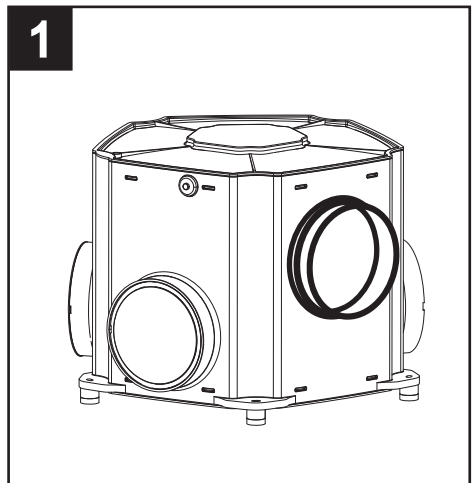
Description

Comfort and energy efficiency are becoming increasingly important factors in buildings. With this in mind, appliances are being developed to control the micro-climate within homes and to provide a high degree of comfort along with energy efficiency. These appliances silently and continuously ventilate homes removing humidity from service areas (bathrooms, kitchens, etc.) and creating a flow of "dry" air in "lived-in" areas (dining areas, studies, bedrooms, etc.). The INVAVENT MAXI centralised ventilation systems has been specifically designed for continuous ventilation in domestic applications and may also be used in some commercial applications.

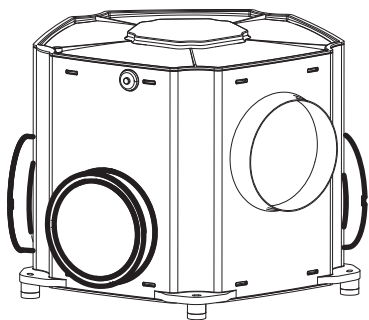
The INVAVENT MAXI is fitted with brushless three-phase motors with electronically controlled three-speed operation.

The INVAVENT MAXI is a modular appliance that means maintaining and replacing parts is both quick and easy.

The appliance can be wall or ceiling mounted. The unit has 5 vents: the one positioned at the top right (fig 1) is for expelling stale air; the other 4 (fig. 2) extract humidity and stale air.



2



When the characteristics of an installation dictate that one or more of the extraction vents will not be used, these vents should be sealed using the special blanking caps provided. This will stop any leaks and ensure that air from the areas involved is properly extracted.

Safety



Warning:
this symbol indicates that care must be taken to avoid injury to the user

- Do not use this appliance for functions other than those described in this booklet
- After removing the appliance from its packaging, ensure that it is complete and undamaged. If in doubt contact a professionally qualified electrician or Joule. Do not leave packaging within the reach of children or infirm persons
- Certain fundamental rules must be observed when using any electrical appliance, including:
 - never touch electrical appliances with wet or damp hands;
 - never touch appliances while barefoot;
 - never allow children or infirm persons to operate appliances unattended
- This appliance can be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge if they have been given

supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.

- These appliances are designed for use in residential and commercial properties.
- Store the appliance out of the reach of children and infirm persons after deciding to disconnect it from the power supply and use it no more.
- Do not use the appliance where flammable vapours are present (spirit, insecticides, petrol, etc.).
- The appliance houses electrical components; in the event of malfunction, call a qualified technician.
- The appliance houses moving parts that can still be in motion several seconds after the unit has been disconnected from the mains. For this reason you are advised to disconnect the appliance from the mains then wait at least 10 seconds before opening it.
- Never touch the electronics as some of the components may still be electrically charged.



Caution:
this symbol indicates that care must be taken to avoid damaging the appliance

- The air inlets positioned in differing areas need to be periodically cleaned and care must be taken not to change the degree to which they are open.
- Do not make modifications of any kind to this appliance.
- The maintenance instructions must be followed to avoid damage and/or excessive wear and tear to the appliance
- The motors fitted to appliances only work with a 230V~ 50Hz AC power supply.
- Do not expose this appliance to the weather (rain, sun, etc.).
- Do not leave objects standing on the appliance.
- Regularly inspect the appliance for visible defects. If the appliance does not function correctly, do not use it and contact Joule immediately.
- If the appliance does not function correctly or develops a fault, contact Joule immediately and ensure that only genuine original Joule spares are used for any repairs.
- The appliance must be installed by a professionally qualified electrician.
- The electrical system to which the product is connected must be in compliance with applicable regulations.
- An omnipolar switch with a

contact opening distance of 3 mm or higher should be provided for installation, enabling complete disconnection under overvoltage category III conditions.

- Switch off the appliance at the installation's main switch: a) if the appliance does not function correctly; b) before cleaning the outside of the appliance, c) if the appliance is not to be used for any length of time.
- The appliance cannot be used to control activation of water heaters, room heaters, etc. and it must not exhaust into the hot air flues of such appliances.
- Ensure that the appliance discharges into a single duct (dedicated to this product) or directly to the outside.
- The air to be extracted from the room must be clean (i.e. free of grease, soot, chemical and corrosive agents, and explosive or flammable mixtures).
- Do not cover or block appliance intake or outlet vents grilles as this may prevent optimum air flow.
- **Products equipped with three-phase wiring (T) engines ALWAYS require connection to 380-415V (or only 400V where required) three-phase lines, or also 220-240V (or only 230V where required). Any kind of modification shall be considered as product tampering and shall nullify the relative warranty. Products equipped with single-phase wiring (M) engines ALWAYS require connection to 220-240V (or only 230V where required) single-phase lines. Any kind of modification shall be considered as product tampering and shall nullify the relative warranty.**

Operating Principles

Air is extracted from the areas involved by connecting the INVAVENT MAXI to ducting vents placed in "damp" areas of the home. The volume of air to be extracted is set by moving adjustable vents in line with unit requirements and current legislation. Incoming air, on the other hand, enters via intakes (e.g. grilles) positioned on the walls or windows of "lived-in" areas. Appliances from the INVAVENT MAXI are designed to ensure comfort in the home with the least possible use of electricity.

Instructions for use

INVAVENT MAXI has an external switch for selecting from the 3 operating speeds available.

Maintenance/Cleaning

Appliances in the INVAVENT MAXI do not need scheduled maintenance work. Depending upon the degree of pollution in the areas served by the units, you are recommended to have the inside of the appliances cleaned every 3/4 years (to be carried out by a qualified technician) (see Information for installer)

Information for the Installer

INSTALLATION

Appliances in the INVAVENT are compatible with installation in differing types of buildings whether new or existing. They can be mounted vertically, horizontally or inclined, in false ceilings, on mezzanines, on ceilings, etc. The appliance can be fixed in position by using the slots on the base.

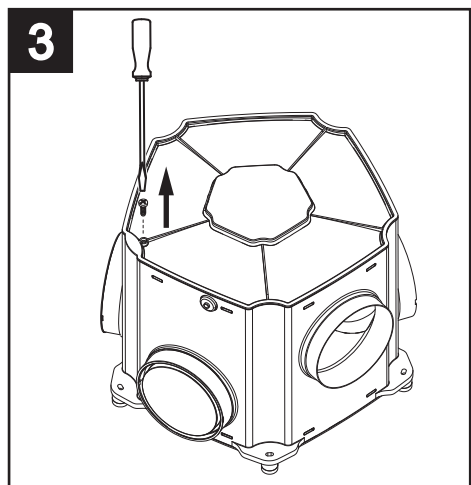
During the installation procedure, the instructions in this booklet must be followed carefully and all current legislation complied with:

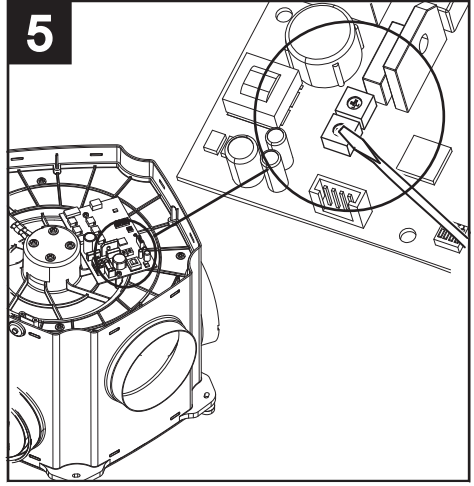
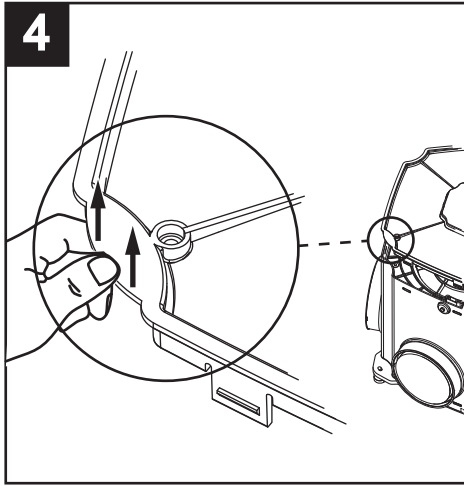
- power supply - 230V~50 Hz;
- use a suitably sized multi-polar switch with a minimum contact gap of 3 mm to install the appliance;
- connecting pipes must be the right size (125 mm diameter and 204 x 60 mm if rectangular);
- ducting that leads to or crosses unheated areas should be insulated to prevent the formation of condensation.

INITIAL SETTING OF SPEED

Removing the upper cover

Undo the fixing screw (fig.3) and use the lever to remove the cover. (fig 4)





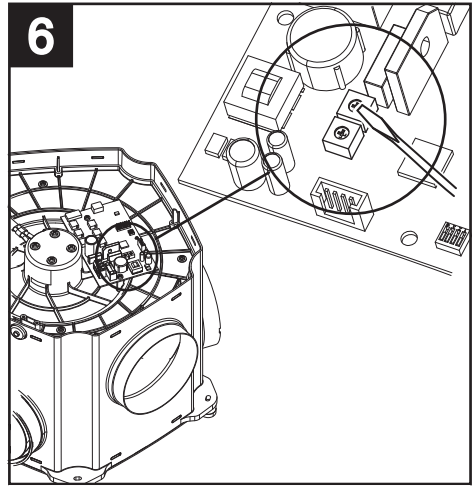
Adjusting potentiometers

The electronics board fitted to appliances in the INVAVENT MAXI has two potentiometers for setting the minimum and maximum speed parameters (medium speed is the average of previously set min and max configurations). The setting of parameters must be carried out within one hour of connecting the appliance to the mains. To make adjustments after this period, the appliance will have to be disconnected then reconnected to the mains. On re-start, the appliance keeps the previous settings and over-rides the positions of the potentiometers that need to be re-set by being turned fully anti-clockwise to start making new settings.

Before starting to adjust the settings, the two potentiometers must be set to "0". Under these conditions, the default settings are $V_{\max}=600$ and $V_{\min} = 400$.

Setting procedure:

- with the speed selector circuit breaker closed;
- change V_{\max} from 600 to 2500 rpm - (fig.5);
- open the speed selector circuit breaker;
- change V_{\min} from 400 to V_{\max} - (fig.6);
- wait 5 minutes for the appliance to memorise the new settings;
- turn the power supply to the appliance OFF;
- turn the appliance back ON and check that the new settings have been successfully stored.



If the minimum air-flow required for a specific installation cannot be satisfied at the minimum speed, the appliance will have to be set so that the minimum air-flow is obtained at medium speed.

N.B.

The setting should be made first to the V_{\max} then the V_{\min} potentiometer.

N.B.

Obtaining the necessary air-flow in each area served by the installation involves both the speed setting and the degree to which intake vents in the area are opened.

N.B.

Increasing the speed of the motor leads to an increase in power consumption and noise emission.

MAINTENANCE/CLEANING

Proceed as follows to check if the appliance needs cleaning:

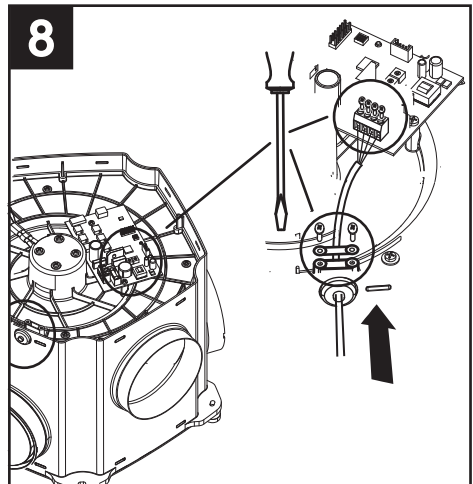
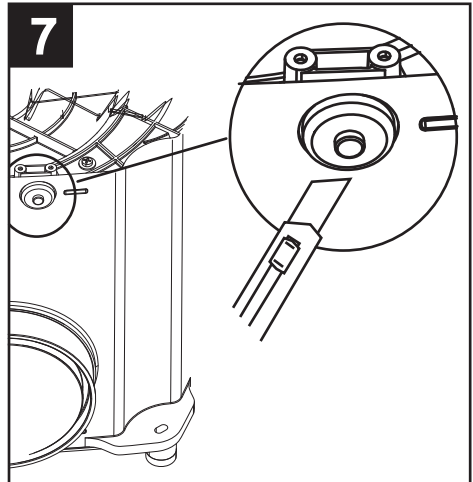
- disconnect the appliance from the mains;
- remove any blanking caps from vents that are not connected to intake ducts so that you can see inside the appliance and see the blades;
- check the blades for dust: A thin layer of dust will not affect performance but, if the layer is more than 1 mm deep, the blades should be cleaned;
- check the motor bearings by spinning the blades: bearings in good condition make no noise; Rotating the blades manually a few times, their movement is jerky and they come to a stop. This behaviour is known as “clogging” and is typical of units powered by motors with permanent magnets like those fitted to the INVAVENT MAXI;
- Make sure that the blades rotate smoothly on the driveshaft;
- on completion of the cleaning, reposition the blanking caps where they were beforehand;
- reconnect the appliance to the mains;

Vents should be cleaned regularly to ensure that the unit is working at its best and that the areas involved are being well ventilated. Make sure that system settings are not interfered with. Each vent should be repositioned exactly as it was beforehand. Vents with no filter can be removed from the mouth of the duct. Any insulation foam (if present), should be removed before cleaning the vent with warm water and liquid detergent. Replace the vents after cleaning.

**Building Regulations Document
F1 2006 (Extract)**

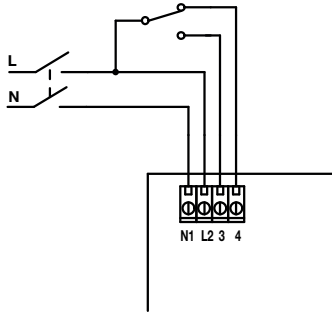
Table 1.1 B	Number of bedrooms in dwelling				
	1	2	3	4	5
Whole building ventilation rate (l/s)	13	17	21	25	29
	Minimum value in any dwelling of 0,3 l/s per m ² floor area				

ELECTRICAL CONNECTIONS



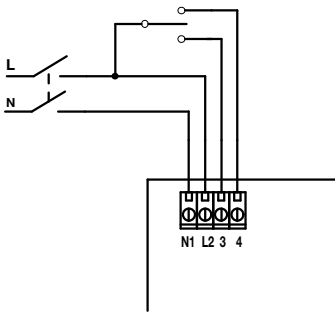
9

MINIMUM SPEED



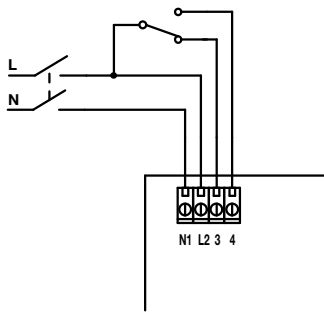
10

MEDIUM SPEED



11

MAXIMUM SPEED



Important information concerning the environmentally compatible disposal

IN CERTAIN EUROPEAN UNION COUNTRIES THIS PRODUCT DOES NOT FALL WITHIN THE REQUIREMENTS OF THE NATIONAL LAWS IMPLEMENTING DIRECTIVE WEEE, AND IN THESE COUNTRIES THE PRODUCT IS NOT SUBJECT TO SEPARATE DISPOSAL OPERATIONS AT THE END OF ITS WORKING LIFE.

This product conforms to EU Directive 2012/19/EC.

This appliance bears the symbol of the barred waste bin. This indicates that, at the end of its useful life, it must not be disposed of as domestic waste, but must be taken to a collection centre for waste electrical and electronic equipment, or returned to a retailer on purchase of a replacement.

It is the user's responsibility to dispose of this appliance through the appropriate channels at the end of its useful life. Failure to do so may incur the penalties established by laws governing waste disposal.



Proper differential collection, and the subsequent recycling, processing and environmentally compatible disposal of waste equipment avoids unnecessary damage to the environment and possible related health risks, and also promotes recycling of the materials used in the appliance.

For further information on waste collection and disposal, contact your local waste disposal service, or the shop from which you purchased the appliance.

JOULE IE

mail Kylemore Park West, Ballyfermont, Dublin 10
tel +353 (1) 623 7080
fax +353 (1) 626 9337
eml info@joule.ie
web www.joule.ie

JOULE UK

mail Unit 17C&D Power Road, Plantation Bus. Pk.
Bromborough, Wirral, CH62 3RN
tel +44 (0) 1513 551 094
fax +44 (0) 1513 568 336
eml info@jouleuk.co.uk
web www.jouleuk.co.uk

JOULE PL

mai 23-200 Kraśnik, ul. Towarowa 34
tel +48 (0) 128811171
fax +48 (0) 814709046
eml biuro@joule-pl.pl
web www.joule-pl.pl



A

CERTIFICATE OF WORK PERFORMED UNDER GUARANTEE

DATE OF WORK

STAMP OF TECHNICAL ASSISTANCE CENTRE

B

CERTIFICATE OF WORK PERFORMED UNDER GUARANTEE

DATE OF WORK

STAMP OF TECHNICAL ASSISTANCE CENTRE

C

CERTIFICATE OF WORK PERFORMED UNDER GUARANTEE

DATE OF WORK

STAMP OF TECHNICAL ASSISTANCE CENTRE

D

CERTIFICATE OF WORK PERFORMED UNDER GUARANTEE

DATE OF WORK

STAMP OF TECHNICAL ASSISTANCE CENTRE

UK AND IRELAND

CONDITION OF WARRANTY

This guarantee is offered as an extra benefit and does not affect your legal rights. All electrical appliances produced by Joule are guaranteed by the Company for **2 years** against faulty material or workmanship.

If any part is found to be defective in this way within the first twentyfour months from the date of purchase or hire purchase agreement, we, or our authorised service agents, will replace or at our option repair that part without any charge for materials or labour or transportation, provided that the appliance has been used only in accordance with the instructions provided with each appliance and has been not connected to an unsuitable electricity supply, or subjected to misuse, neglect or damage or modified or repaired by any person not authorised by us.

The correct electricity supply voltage is shown on the rating plate attached to the appliance.

This guarantee is normally available only to the original purchaser of the appliance, but the Company will consider written applications for transfer. Should any defect arise in any Joule product and a claim under guarantee become necessary, the appliance should be carefully packed and returned to your approved Joule stockist.

This portion of the guarantee should be attached to the appliance.



UK-IRELAND

Send the guarantee in sealed envelope to:
Joule
Kylemore Park West,
Ballyfermot,
Dublin 10

I authorize **Joule** to include my personal details within their database, which they use, via a third party for the despatch of advertising material, at any time, in accordance with the regulations in force within my country. I can have access to my details and can request changes, or prohibit the usage of my details. This will be done by addressing my request directly to:

Joule
Kylemore Park West,
Ballyfermot,
Dublin 10

I do not authorize (please tick if required)

OTHER COUNTRIES

Please send the guarantee to the retailer's address in the country where the appliance has been purchased.

I authorize **Joule** and its local distributors to include my personal details within their database and they can use it through a third party for the despatch of advertising material. At any time, in accordance with the regulations in force within my country, I can have access to details and can ask to make changes, or prohibit the usage of my details. This will be done by addressing my request directly to the headquarters of the local distributor where the appliance has been bought.

I do not authorize (please tick if required)

1 **GUARANTEE
TO BE RETAINED**



Purchase date

This warranty must be attached to the appliance should it need to be returned for servicing.

N.B. Guarantee is only valid if all details are completed correctly.

Stamp of supplier

CONF.

COLL.

Mailing date



2 **GUARANTEE
TO SEND**
(within 8 days from the date of purchase)



Purchase date

CUSTOMER DATA

name _____
surname _____
street _____
post code _____
town _____

I have read and understood the terms and conditions of this guarantee and I authorize the processing of my personal details (see overleaf).

Signature _____

Stamp of supplier

Mailing date