

AKS 317 - AKS 377

GB Instructions for use



VON MARCKEN
LABORATORY & MEDICAL EQUIPMENT

Warning

As the appliance contains a flammable refrigerant, it is essential to ensure that the refrigerant pipes are not damaged.

The quantity and type of the refrigerant used in your appliance is indicated on the rating plate.

Standard EN378 specifies that the room in which you install your appliance must have a volume of 1m³ per 8 g of hydro-carbon refrigerant used in the appliances. This is to avoid the formation of flammable gas/air mixtures in the room where the appliance is located in the event of a leak in the refrigerant circuit.

WARNING:

Keep ventilation openings in the appliance's cabinet or in the built-in structure clear of obstruction

WARNING:

Do not use other **mechanical devices** or other means to accelerate the defrosting process than those recommended by the manufacturer

WARNING:

Do not damage the refrigerant system

WARNING:

Do not use **electrical appliances** inside the refrigerated storage compartment, unless they are of a type recommended by the manufacturer

WARNING:

Do not expose the appliance to rain, and secure not splashing water when cleaning the floor

WARNING:

This appliance is not intended for use by children or infirm persons unless they have been adequately supervised by a responsible person to ensure that they can use the appliance safely. Children should be supervised to ensure that they do not play with the appliance

WARNING:

Do not store explosives, such as aerosol cans with flammable propellants in the unit.

WARNING:

Danger risk of fire or explosion if flammable refrigerant are used.
To be repaired only by trained personnel.

**WARNING:**

Sharp edges on cabinet, compressor compartment, evaporator, ventilation cover and on internal equipment can occur. Please be aware to avoid injury.

WARNING:

The condenser on the back of the appliance will in some cases have a hot surface. Please be aware to avoid injury.

WARNING:

The appliance must be connected minimum 12 hours before using it for storage of medicine.

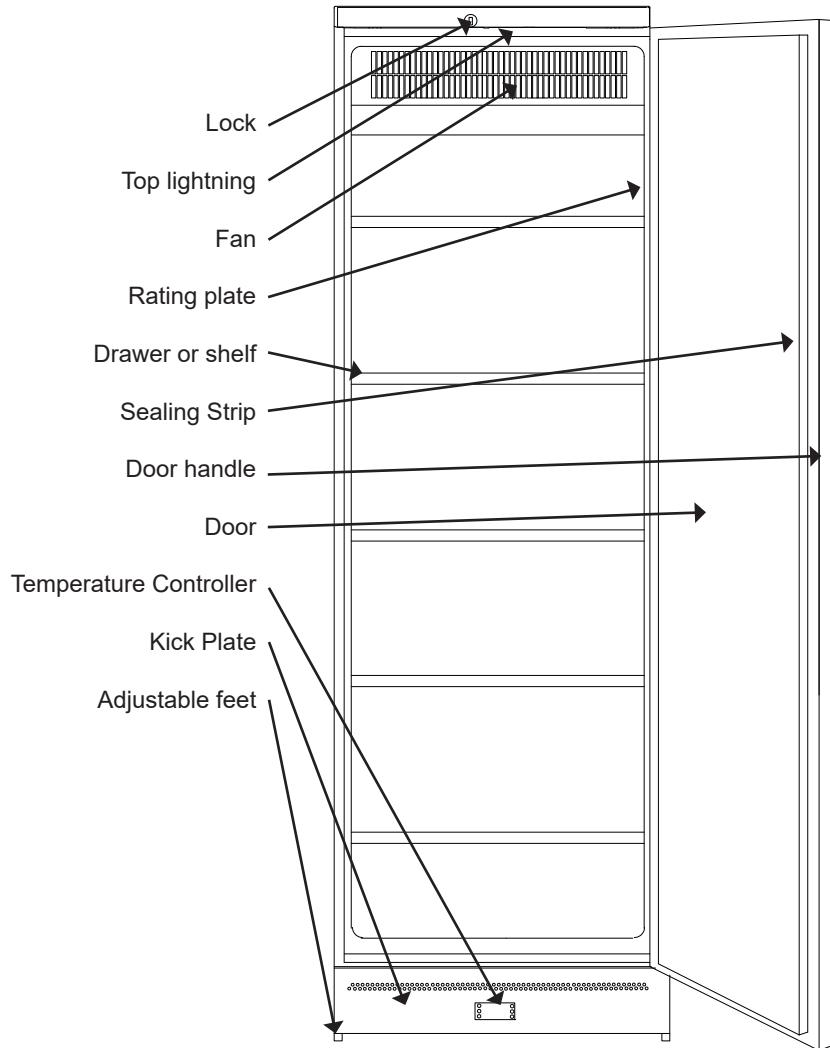
- Always keep the keys in a separate place and out of reach of children
- Before servicing or cleaning the appliance, unplug the appliance from the mains or disconnect the electrical power supply
- If the supply cord is damaged, it must be replaced by the manufacturer, its service agent, or similarly qualified persons in order to avoid a hazard
- **Relevant for Australia:** Supply cord fitted with a plug complies with AS/NZS 3112.
- Frost formation on the interior evaporator wall and upper parts is a natural phenomenon. Therefore, the appliance should be defrosted during normal cleaning or maintenance.
- Please note that changes to the appliance construction will cancel all warranty and product liability
- This device is intended to be used exclusively for medical products.

Contents

- If medicine is spilled in the appliance or the defrost water canal it has to be cleaned immediately to avoid the medicine to evaporate to the surroundings.
- If the instructions is lost please contact your supplier of the appliance to have a new instruction for use.
- If service needed to this device, please be aware of only using service personnel with education in handling medical devices.

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Get to know your medicine refrigerator:



Before starting the appliance

Before operating your new appliance, please read the following instructions carefully as they contain important information on safety, installation, operation and maintenance. Keep the instructions for future reference.

On receipt, check to ensure that the appliance has not been damaged during transport. Transport damage should be reported to the local distributor before the appliance is taken into use.

Remove the packaging. Clean the inside of the cabinet according to the cleaning instructions.

If during transport the appliance has been laid down, or if it has been stored in cold surroundings (colder than +5°C), it must be allowed to stabilise in an upright position for at least an hour before being switched on.
Note: If the appliance is to be laid down, the door must face upwards and the appliance must be enclosed in the original packaging.

Note: If you put the unit down the door should be facing up and be in the original packaging.

Electrical connection

Wiring and connections in power supply systems must be all applicable (local and national) electrical codes. Consult these codes lengths and sizes prior to cabinet installation.

This device complies with relevant EU directives including Low Voltage Directive 2014/35/EU and Electromagnetic Compatibility Directive 2014/30/EU

The socket should be freely accessible.

Connect the appliance only to 220/240 V / 50Hz alternating current via a correctly installed earthed socket.

The socket must be fused with a 10A - 13A fuse.

If the appliance is to be operated in a non-European country, check on the rating plate whether the indicated voltage and current type correspond to the values of your mains supply.

Information regarding voltage, current or power are given on the rating plate

The power cord may be replaced by a technician only.

The rating plate provides various technical information as well as type and serial number.

Class 1, LED light

Installation and start-up

Ventilation (fig 2-3-4)

It is important that the appliance be well ventilated and that air can circulate unhindered above, below and behind it.

Note that there must be a clearance of 150 mm above the appliance

The appliance can be installed as a free-standing unit against a wall or side-by-side with other appliances

The surface on which the appliance is to be placed must be level. Do not use a frame or similar.

If the appliance is to be placed beside a wall, there must be at least 1180 mm clearance on the hinge side to allow the shelves to be removed. To ensure that the door can be opened, the appliance must be pushed no further in than max. 548 mm.

Side by side

(fig 4) In side-by-side arrangements, there must be a clearance of at least 25 mm between the appliances to allow their doors to be opened freely.

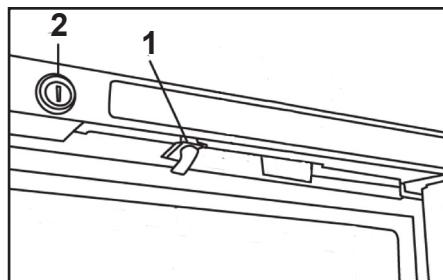


Fig.1

Starting up

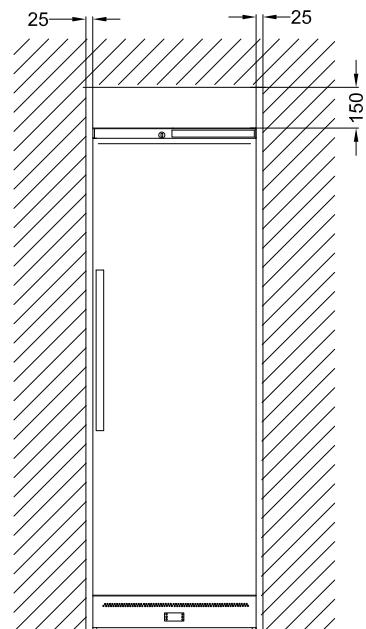
Connect the appliance to the socket outlet. The temperature Controller will light up and the appliance will start cooling.

See **Temperatur control** page 11.

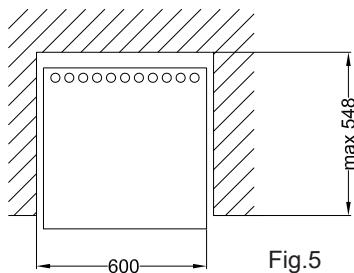
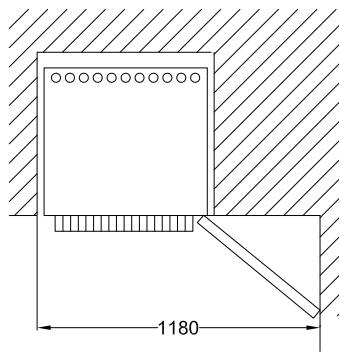
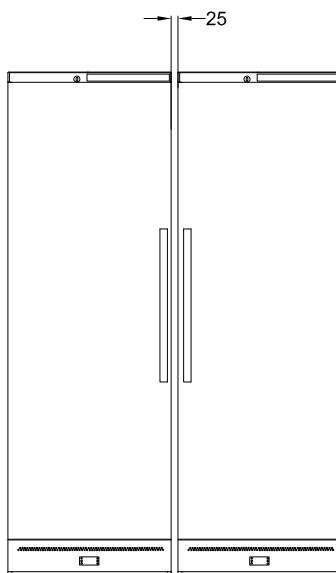
1 Door switch for light and internal fan

The door switch (1) turns the light on and stops the internal fan when the door is open in order to minimise the amount of warm air entering the cabinet.

2 Lock



	height	width	depth
AKG 317	1530	600	595
AKG 377	1850	600	595



Placement

For safety and operational reasons, the appliance must not be installed outdoors.

The appliance should be placed on a level surface in a dry, well ventilated room (max. 70% relative air humidity). Never place the appliance close to sources of heat and avoid placing it in direct sunlight.

Use

The appliance has been specially designed to maintain a temperature of between 2°C and 8°C inside the cabinet.

The ambient temperature must be kept between 20°C and 25°C. Important: Note that the door opening frequency will influence the temperature inside the cabinet. Avoid keeping the door open for long periods unnecessarily.

The appliance is not designed to be used for cooling warm products. Placing such items in the cabinet may cause the temperature of products already in the cabinet to rise.

Medicine may not be placed higher than the red and white stacking mark in the top of the appliance. Further more medicine at the bottom shelf may not touch the sides of the interior. Both things will prevent an even temperature in the appliance.

Frost protection

If the fan inside the cabinet fails, the thermostat will ensure that the temperature of the products stored in the bottom half of the cabinet does not fall below 0°C. The temperature in the top half of the cabinet will, however, rise to ambient temperature.

Levelling the appliance

It is important that the appliance be absolutely level.

It can be levelled in the following way:

1. Level the appliance sideways by screwing the adjustable feet up or down using the accompanying spanner. (fig.6)

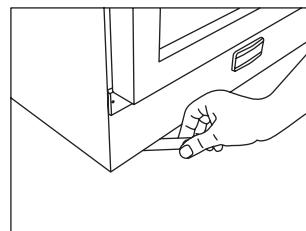
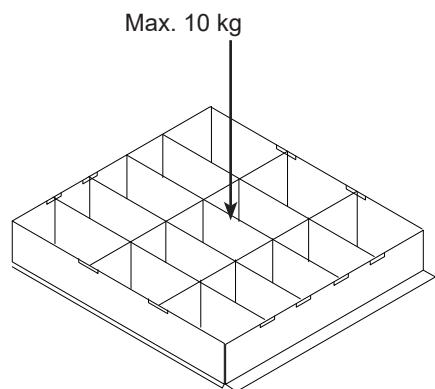
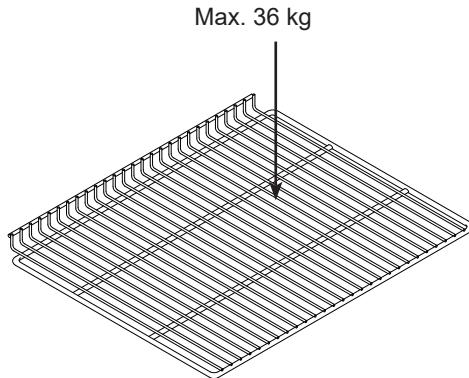


Fig.6

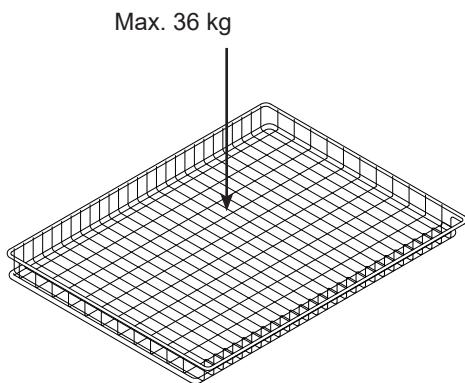
2. Check that the appliance is absolutely level.

If the appliance is to be placed on a soft surface, e.g. floorboards or a carpet, it is best to recheck whether the appliance is still level after a period of time as the underlying surface may give under the weight of the appliance.

Shelves



OBS: Max. 7 drawers in a cabinet.



Temperature controller

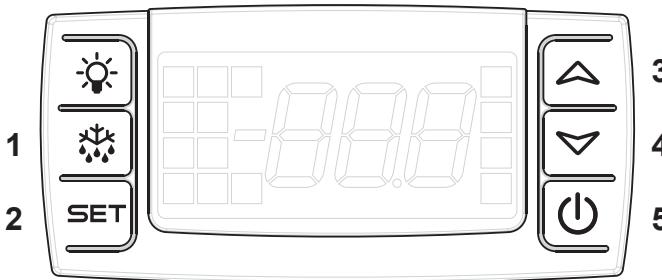


Fig.7

- 1: Actual temperature at the top of the cabinet
- 2: Selection of temperature. Press for 2 seconds
- 3+4: Temperature +/-
- 5: Unit on/off

Adjustment of temperature:

Press first button "SET" (2) for about two seconds (until the ° C begins to flash). You can then adjust the temperature using buttons (3) and (4).

There are 3 steps of adjustment. (1,2 and 3) 1 is the coldest setpoint.

The temperature at the bottom of the cabinet appears on the display. If you want the temperature at the top of the cabinet to be shown, press button (1) for a short while.

The temperature is then shown for about 5 seconds, then the display returns to showing the temperature at the bottom of the cabinet.

Low temperature alarm:

If the temperature is below 1°C for more than 4 minutes, an alarm appears on the screen. The audible alarm is reset when the temperature is restored above +1°C or when a button is pressed. The visual alarm alternates between LA (= low) and the current temperature of the cabinet. This alarm is switched off when the temperature is back above 1°C.

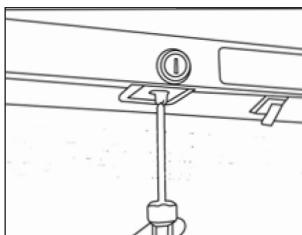
High temperature alarm:

If the temperature rises above 9°C for more than 4 minutes, an alarm appears on the screen. The audible alarm is reset when the temperature is restored below +9°C or when a button is pressed. The visual alarm alternates between HA (= high) and the current temperature of the cabinet. This alarm is switched off when the temperature is back below 9°C.

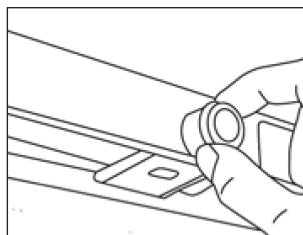
Reversing the door

Remember to unplug the unit.

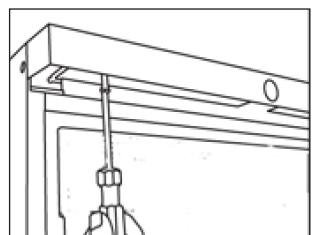
OBS: The left-side top hinge is available as optional (see section 12)



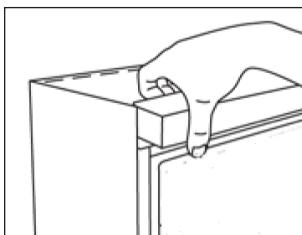
1. Remove the lock pin using a flat-headed screwdriver.



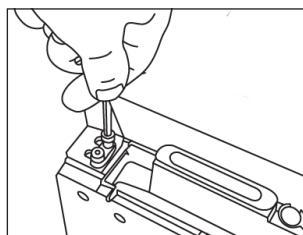
2. Remove the lock housing.



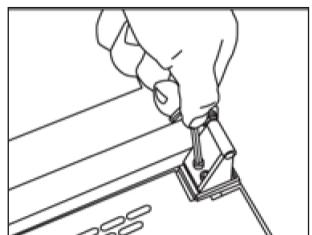
3. Loosen the top panel. Do not remove the screws, just loosen them.



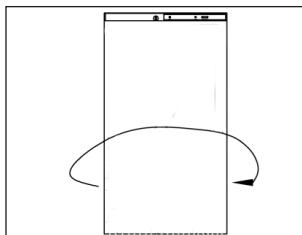
4. Tilt the top panel forwards to remove it (it is secured in three places)



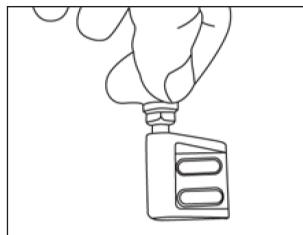
5. Lay the appliance on its back and remove the upper hinge, using the hex key.



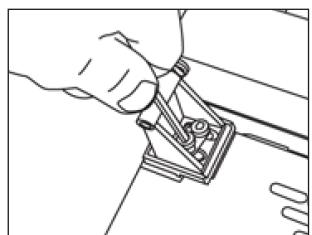
6. Remove the bottom hinge using the hex key.



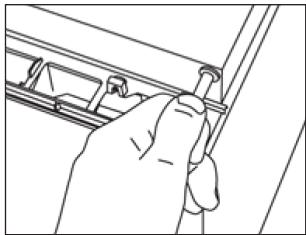
7. Move the door handle to the opposite side.



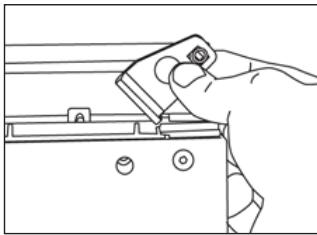
8. Move the hinge pin to the opposite side of the bottom hinge.



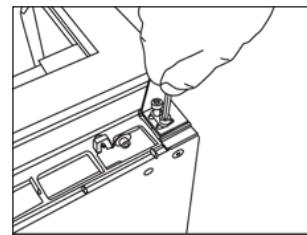
9. Refit the bottom hinge on the opposite side.



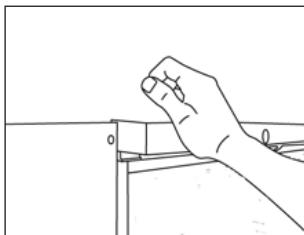
10. Insert the hinge pin into the top of the door on the opposite side.



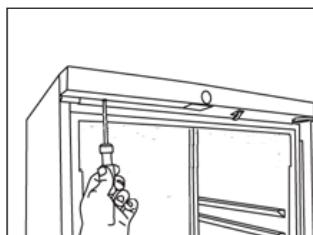
11. Fit the left-side top hinge.
(Optional accessories. Must be ordered.)



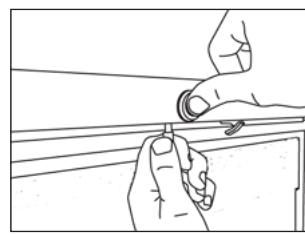
12. Secure the top hinge in position.



13. Raise the appliance into upright position. Click the top panel into place (it is secured in three places.)



14. Retighten the top panel screws using a screwdriver.



15. Refit the lock housing and lock pin.

16. After reversing the door, it is important to check that the sealing strip provides a tight seal all the way round. If it does not, carefully heat the strip all the way round using a hair dryer. Then ease the strip outwards slightly so that it forms a tight seal against the cabinet. Be careful not to heat the strip so much that it melts!

The appliance must be allowed to stabilise in an upright position for at least an hour before being switched on again..

Defrosting, cleaning and maintenance

Automatic defrosting.

The cooler is defrosted automatically. Defrost water runs through a pipe and is collected in a tray above the compressor where the heat generated by the compressor causes it to evaporate. The defrost water tray should be cleaned when needed or at least once a year.

Cleaning.

Before cleaning the appliance, unplug it from the main supply. The cabinet is best cleaned using warm water (max. 65°C) with a little mild detergent. Never use cleaning agents that scour. Use a soft cloth. Rinse with clean water and dry thoroughly. The defrost water canal, in which condensation from the evaporator runs, is located at the bottom of the rear inside wall of the cabinet and must be kept clean.

Add a few drops of disinfectant to the defrost water drain a couple of times a year, and clean the drain using a pipe cleaner or similar. Never use sharp or pointed implements.

When disinfecting the appliance always consult professional persons to ensure that the disinfectant used is approved in your country, and to ensure right method is used.

For use in this appliance, we recommend the following base of disinfectant: alcohols and aldehydes. Chlorine and peracids can also be used, but please be aware that chlorine and peracids based products can inflict on the surface of materials, therefore a careful washing off with clear water and wiping off, after disinfecting, is very important.

The sealing strip around the door must be cleaned regularly, at least twice a year, to prevent discolouration and prolong service life. Use clean water. After cleaning the sealing strip, check that it continues to provide a tight seal.

Dust collecting on the condenser on the rear of the cabinet, the compressor and in the compressor compartment is best removed using a vacuum cleaner. This must be done regularly, at least four times a year.

WARNING: Secure not splashing water when cleaning the floor.

Fault finding

Fault	Possible cause	Remedy
No light in display.	The appliance is switched off. Power failure; the fuse is blown; the appliance is not plugged on correctly.	Press the on/off switch. Check that power has been connected, both on the wall socket and control panel. Reset the fuse.
Vibration or noise.	The appliance is not level. The appliance is resting against other elements.	Level the appliance. Move the appliance away from other elements or appliance it is in contact with.
Compressor runs continuously.	High room temperature.	Ensure correct ventilation around the appliance.
The temperature is too high at the top of the cabinet	The internal fan is not working.	Close the door. If the fan fails to start, call for service.
Excessive ice forms on evaporator *.	The internal fan is not working.	Close the door. If the fan fails to start, call for service.
Display showing P1/P2.	Sensor error.	If P1 - remove products in the appliance - call for service. If P2 - only display does not work - call for service.

* It is quite natural for a thin layer of ice to form on the evaporator when the compressor is running. Such ice disappears when the compressor stops running.

Warranty, spare parts and service

Warranty disclaimer

Faults and damage caused directly or indirectly by incorrect operation, misuse, insufficient maintenance, incorrect building, installation or mains connection. Fire, accident, lightening, voltage variation or other electrical interference, including defective fuses or faults in mains installations.

Repairs performed by others than approved service centres and any other faults and damage that the manufacturer can substantiate are caused by reasons other than manufacturing or material faults are not covered by the warranty.

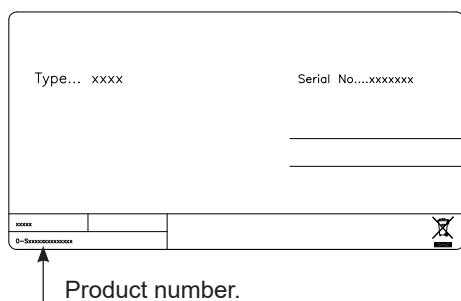
Please note that changes to the construction of the appliance or changes to the component equipment of the appliance will invalidate warranty and product liability, and the appliance cannot be used lawfully. The approval stated on rating plate will also be invalidated.

Transport damage discovered by the buyer is primarily a matter to be settled between the buyer and the distributor, i.e. the distributor must ensure that such complaints are resolved to the buyer's satisfaction.

Before calling for technical assistance, please check whether you are able to rectify the fault yourself. If your request for assistance is unwarranted, e.g. if the appliance has failed as a result of a blown fuse or incorrect operation, you will be charged the costs incurred by your call for technical assistance.

Spare parts

When ordering spare parts, please state the type, serial and product numbers of your appliance. This information is given on the rating plate. The rating plate contains various technical information, including type and serial numbers.



Disposal

Information for Users on Collection and Disposal of Old Equipment and used Batteries



These symbols on the products, packaging, and/or accompanying documents mean that used electrical and electronic products and batteries should not be mixed with general household waste. For proper treatment, recovery and recycling of old products and used batteries, please take them to applicable collection points, in accordance with your national legislation and the Directives 2002/96/EC and 2006/66/EC.

By disposing of these products and batteries correctly, you will help to save valuable resources and prevent any potential negative effects on human health and the environment which could otherwise arise from inappropriate waste handling.

For more information about collection and recycling of old products and batteries, please contact your local municipality, your waste disposal service or the point of sale where you purchased the items.

Penalties may be applicable for incorrect disposal of this waste, in accordance with national legislation.



For business users in the European Union.

If you wish to discard electrical and electronic equipment, please contact your dealer or supplier for further information.

Information on Disposal in other Countries outside the European Union

These symbols are only valid in the European Union. If you wish to discard this product, please contact your local authorities or dealer and ask for the correct method of disposal.



Note for the battery symbol:

This symbol might be used in combination with a chemical symbol. In this case it complies with the requirement set by the Directive for the chemical involved.

VESTFROST



SOLUTIONS

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GB Reserving the right to alter specifications without prior notice.

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