USER MANUAL



Laboratory Fridge - Freezers



Please read and keep these instructions

Applicable models

LSFC119 LSFC263 LSFC324



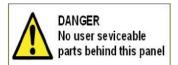
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Thank you for purchasing this Lec Medical product.

1 Safety information:



All installation work and adjustments to the unit, including the replacement of the supply cable, must be carried out by qualified personnel. Work performed by persons with insufficient technical

knowledge may adversely affect the performance of the unit, cause damage to the equipment, or cause physical injury to the user. Only a qualified engineer should remove any panels with the 'DANGER' label (above) attached, as there may be access to live electrical components. Only trained service technicians should remove these panels for service or repair purposes.

WARNING: Please make sure that the equipment is switched off from the mains supply before removing any protective panel.

Any operation on equipment under voltage must be carried out only by specialized personnel AND only if it is absolutely necessary. In this case, always take precautionary measures and use control instruments equipped with insulated probes.

WARNING: This appliance contains flammable materials. Please refer to section 21 of this Manual for appliance end of life disposal.

A means for disconnection from the mains must be readily available either by having the plug accessible or by incorporating a switch in the fixed wiring in accordance with the wiring rules.



WARNING SIGN MEANING: Flammable gases can burn when they come into contact with oxygen or a source of heat. In some conditions they can even explode!

2 Before first use:

Before you first use this refrigerator /freezer, please carry out the following actions:

- Check that the appliance has not been damaged in any way during transportation.
- If any damage is found it must be reported to our customer services department immediately on 0344-815-3742
- Ensure all packaging has been removed, including cardboard, polystyrene and any tape used to hold shelves in place for transportation and disposed of safely and in line with your company policy.
- The appliance has been cleaned prior to dispatch; however, once unpacked, we advise that it should be cleaned using lukewarm water containing a mild detergent and a soft cloth before plugging in.
- We recommend that the appliance is **left in an upright position for a minimum of 24 hours** before plugging and switching the appliance on. **Note**: This will allow the refrigerant to settle after transportation. Then **run the appliance whilst it is empty for a minimum of 24 hours before filling** to ensure it is working correctly.
- This appliance is intended for professional use in applications such as pharmacies, laboratories, medical facilities etc.
- This appliance is <u>not intended for use</u> by persons with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they are supervised or have been given clear instruction concerning use of the appliance by a person responsible for their safety.
- We would highly recommend that children are unable to access or play with the appliance. If children are present, they MUST be supervised at all times.

3 Positioning and safely using your Lec Medical appliance

- Make sure the appliance is placed in a dry, well-ventilated site, away from heat sources.
- The appliance must be placed on a level surface. If necessary, carefully adjust the feet on the product so the appliance remains level during operation.
- The appliance should have sufficient clearance around it to provide adequate ventilation 10cm at each side, 6cm at the rear and 2.5cm at the top.
- DO NOT place the appliance in a place of high humidity to avoid the accumulation of moisture as this may affect the performance and reliability of the appliance and invalidate your warranty.
- DO NOT allow the supply cord to become trapped during the positioning of the appliance.
- Before ANY maintenance activity, pull the plug out of the socket by gripping the plug, DO NOT pull on the plug cord.
- DO NOT locate multiple portable socket-outlets or portable power supplies at rear of the appliance.
- DO NOT use double-wire extension cords. If an extension cord is necessary, make sure it is a cord, which possess a protection safety certificate.
- If the mains power supply cord is damaged, it must be replaced by a qualified service engineer or a suitably qualified person.
- DO NOT attempt any repairs to the appliance yourself (apart from those highlighted in the Maintenance and Service Section). Repairs carried out by someone without the relevant training are putting their personal safety at risk and will invalidate your warranty.
- Do not store explosive substances such as aerosol cans with a flammable propellant in this appliance
- WARNING: to avoid any safety risks to appliance or its contents this appliance is only to be operated by authorized and trained personnel who have the correct knowledge on how the appliance operates.

4 Transporting and moving your Lec Medical appliance

It is recommended that the appliance is moved in the vertical position. The appliance must not be tilted any more than 40°. In the event that the appliance is tilted more than 40°, the power supply must not be connected until the appliance has stood upright for at least 24 hours.

5 Important Information

The appliance contains environment-friendly, non-ozone depleting refrigerant R600a.



As R600a is a flammable gas, it is important to avoid damage to the refrigeration circuit during transport and installation.

If the refrigeration circuit is damaged, avoid using a naked flame in the vicinity of the appliance and connecting power to the appliance.

Also, make sure there is good ventilation in the room.

FOR SAFETY REASONS PLEASE ADHERE TO THE FOLLOWING:

- WARNING: Keep ventilation openings, in the appliance

enclosure or in the built-in structure, clear

of obstruction.

- WARNING: Do not use mechanical devices or other

means to accelerate the defrosting process,

other than those recommended by the

manufacturer.

- WARNING: Do not damage the refrigeration circuit

- WARNING: Do not use electrical appliances inside the

food storage compartments of the appliance, unless they are of the type recommended by

the manufacturer.

If you are in doubt with any of the above, please contact your supplier.

6 Loading

In order to ensure even temperature distribution throughout your refrigerator it is important that:

- The fridge is not overloaded.
- The contents are not packed too closely together.
- The contents do no touch the wall or the bottom of the fridge and are stored away from the fan.
- When loading new stock into the fridge, ensure product with the earliest expiry date are at the front and used first.
- After restocking the fridge, check the temperature 10 minutes later to ensure that the fridge is cooling down, running satisfactorily and is not overstocked.

7 Min/Max Temperature Recording

After the appliance has been filled and is in use, follow the Medicine and Health Regulations Agency requirements for the recording of temperatures. Refer to Page 12 of this manual for setting temperatures.

8 Energy saving tips

This appliance is cooled by energy-efficient R600a refrigerant. To keep running costs as low as possible always:

Position the appliance away from heat sources.

Make sure the air can circulate freely around the appliance, do not block ventilation grid.

Ensure that products being stored in the appliance are below room temperature upon entry.

Make sure the door is opened as little as possible whilst in use and closed as quickly as possible to prevent unnecessary temperature fluctuations.

9 Product specification

These appliances have been designed and built with the intention of the products being used within either a Pharmacy, Laboratory, Natal unit or Ward and are designed to store contents between set limits:

<u>REFRIGERATORS</u> <u>FREEZERS</u>

Pharmacy - +2°C to +8°C N/A

Laboratory - +2°C to +10°C -18°C to -25°C or -12°C to -20°C (LSFC263)

Ward - +1°C to +5°C N/A

Please see below for specific product information:

Model	Height	Width	Depth	Weight	Refrigerant	Ambient/Room	No. of	Door
	(mm)	(mm)	(mm)	(Kg)	Туре	working	shelves	Type
						temperature		
LSFC119	860	540	600	34			2	Solid
					R600a	+10°C		
LSFC263	1680	540	600	58		to	3	Solid
						+32°C		
LSFC324	1870	600	600	70			3	Solid

10 Product details



- 1. Lock
- 2. Electronic Controller
- 3. Antimicrobial handle
- 4. Wire Shelf
- 5. Solid Basket
- 6. Adjustable foot (2 at front of appliance)
- 7. Door furniture

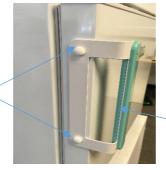
There are also 2 roller castors at the rear of the appliance to ease product movement (not on LSFC263)

Additional or replacement parts are available from our spare parts department. See back of booklet for contact details

11 Fitting the handle:

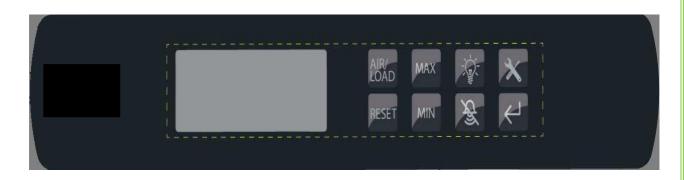
- 1. Take the handle, screws and plastic caps from inside the plastic bag inside the appliance.
- 2. Place the handle against the door and fit screws as shown below.

Fix handle to door with screws and plastic caps.



Place handle against door in orientation shown.

12 Controller overview and operation



ICON	Description	Action / Feature
AIR/ LOAD	Air/Load probe selection	 Sets the shown probe on display between Air and Load probe. The Air Probe = Fridge Temperature The Load Probe = Freezer Temperature
MAX	Max/Up	 Shows the maximum recorded temperature related to the showed running probe. Scrolling UP options.
MIN	Min/Down	 Shows the minimum recorded temperature related to the showed running probe. Scrolling DOWN options.
×	Service	 Press for 5 seconds to access Menu functions, or return to normal temperature display. Pressed with ENTER for 5 seconds, turns ON and OFF the controller. Pressed with MUTE alarm for 5 seconds, parameters class "C" (Configuration) are accessed.
RESET	Reset	 Pressed for 5 seconds performs a reset of both the Air and Load minimum and maximum temperatures.
Q	Light	 Press to turn ON the light. (if applicable i.e. light fitted) It will stay on for 30 seconds and will go off automatically after this time.
Z	Mute alarm	 Press to mute the buzzer Pressed for 5 seconds, parameters class "F" (frequent) are accessed. Pressed with SERVICE for 5 seconds, parameters class "C" (Configuration) are accessed Pressed with ENTER for 5 seconds, locks and unlocks the controller.
~	Set/Enter	 Confirms the selected value/function. Pressed with SERVICE for 5 seconds, turns ON and OFF the controller. Shows the second compartment probe in a Fridge/Freezer.

13 Controller display running temperature setting and indicators

Note: Refer to recommended settings for Pharmacy, Laboratory, Natal or Ward requirements on <u>Page 9</u> of this manual before proceeding with the following instruction:

13.1 To set the running temperature for either AIR / LOAD temperatures:

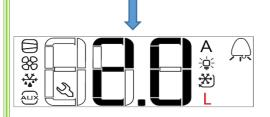
Press the button to switch between the two.

Examples of the display while performing this operation are shown below:

Press when Air running temperature was previously selected.



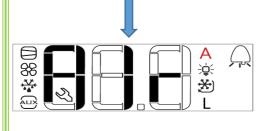
LOA displayed for 2 seconds. Symbol "L" switches ON.



After 2 seconds reverts to show Load temperature

In the same way for the Air running temperature

Press the button when Load running temperature was previously selected



Air (Alr) displayed for 2 seconds. Symbol "A" switches ON.



After 2 seconds reverts to show Air temperature

13.2 Viewing & resetting minimum and maximum temperatures

The recording of the MAX and AIR temperatures is for both air temperature and load temperature. This feature saves the maximum and minimum values read by the probes since last reset.





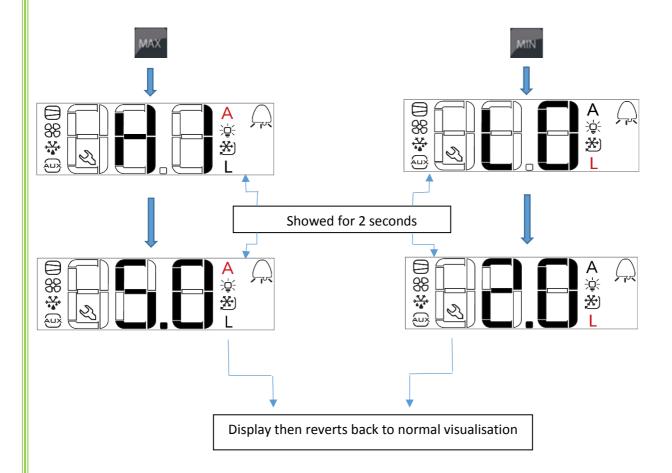
Pressing or buttons will show Max or Min temperature. The temperature will be relative to the showed running temperature AIR or LOAD.

Press Min/Max (mode denoted A/L symbol)

MAX: Display shows - "HI" for 2 seconds > Display shows Temperature for 2 seconds.

MIN: Display shows - "LO" for 2 seconds > Display shows Temperature for 2 seconds.

See example of display below:



To reset both AIR and LOAD minimum and maximum values at once simply press and

hold the button for 5 seconds until you hear a beep. This will reset all the minimum and maximum values for both AIR and LOAD at the same time.

The display will then revert back to the current pre-set running temperature.

13.3 Changing the temperature scale between Celsius (°C) and Fahrenheit (°F)

Function	Press	Display message
To change temperature scale	×	LOR
Followed by	MIN	SCL
To display current temperature scale (default is Celsius)	4	(current scale)
To change to Fahrenheit	MIN	FAH
To confirm change to Fahrenheit	4	SCL
To return to temperature on display Press for 1 second	×	50

13.4 Changing the remote alarm contacts

Follow this to change the alarm relay contact type.

There are two types – NC (normally closed) or NO (normally open)

Function	PRESS	Example screen
To change the alarm contact state	×	SEL
Scroll through to screen required. (press button twice)	MIN	
To display the current condition of remote alarms (default will be NO, normally open)	4	
To change to NC, normally closed	MIN	
To confirm change to NC	←1	
To return to temperature on display Press for 1 second	X	50

13.5 Lock / Unlock Controller

To lock the control panel press the button and buttons simultaneously on the controller for 5 seconds. (Display shows "LOC") Once completed the buttons can still be pressed but they will have no effect.

To unlock press the button and buttons simultaneously on the controller for 5 seconds. (Display shows "UNL") the buttons can now be operated as normal.

14 Warning Alarms

The appliances have been designed to provide both an audible and visual alarm should any of the following situations occur:

- Door is left open for a set period
- Internal air (Fridge) temperature goes outside the set parameters, either too high or too low
- Internal 'load' (Freezer) temperature goes outside the set parameters, either too high or too low

Should one of these alarms occur this can be muted by pressing



on the controller

15 Remote alarm contacts

All Lec Medical appliances in this manual include remote alarm contacts and these terminal contacts enable the user to connect to a remote control station; these contacts can be found on the rear of the cabinet. (Fig 1) inside the box marked "remote alarm or as figure 2.

WARNING: These contacts must only be accessed by a competent electrician.

Figure 1 - LSFC (119/324)



Insert remote access wires into terminal by depressing with small flat driver, into positions 1 & 3 as shown

Figure 2 - LSFC (263)



Insert remote access wires into red/black terminal by depressing lever, insert and release.

LSFC119 & LSFC324

To attach a remote alarm, depress the terminal and insert a 0.75mm cable (stripped to 6mm) into slot 1 & 3 see fig 1.

LSFC263

To attach a remote alarm, depress the terminal and insert a 0.75mm cable (stripped to 6mm) into the red and black slots see fig 2.

In the event of a door open alarm, high or low temperature alarm or power failure a remote relay will switch within the controller to make an electrical circuit.

Please note that the contacts supplied are voltage free. A voltage of between 12V DC and 230V AC can be connected at the contacts. The maximum load must not exceed 2A. The minimum power rating is 500mA / 12V AC.

In a normal condition (i.e. no alarm) the relay CLOSES the contact for the remote alarm facility. In an alarm condition, the relay OPENS the contact for the remote alarm facility.

Note: IN THE EVENT OF POWER FAILURE THE RELAY OPENS – regardless of the controller setting in 13.5 above.

16 Maintenance and Service of your Lec Medical Appliance

16.1 Defrosting

All LEC refrigerators feature automatic defrosting and, in normal conditions, means that no manual defrosting is required. However, in certain conditions (e.g. when the refrigerator is very full or when any new items are stored in the refrigerator) frost may form on the rear wall of the appliance, as the compressor must run for long periods of time. As automatic defrosting takes place while the compressor is not running, the refrigerator may not defrost completely before the compressor restarts. In these instances, some manual defrosting may be required.

Please note: All LEC freezers require manual defrosting.

Before manually defrosting the appliance, make sure the power lead is disconnected from the mains. Any loose frost found on the evaporator can be removed carefully using a wooden or plastic scrapper.

WARNING: Do not use any knives or sharp metallic objects to remove frost.

A manual or non-scheduled defrost of the appliance can be carried out as follows:

Function	Press	Display Message
To trigger a manual defrost	×	20 TU
To select dEF push button 3		
times.	MIN	
To select defrost	4	SES
To stop defrost	← 1	
To confirm defrost start	4	
To return to temperature on display (1 second)	*	50

16.2 Cleaning

- The appliance should be cleaned regularly.
- Before cleaning, you **MUST** switch off and disconnect your appliance from the power supply.
- The whole appliance except the door gasket can be cleaned with mild cleaning detergent.
- The door gasket should be cleaned with water only and wiped dry.
- The antimicrobial handle should be cleaned regularly with soap and water.
- Remove shelves/baskets and wipe with a soft cloth. **DO NOT** put them in a dishwasher.
- Detergents containing abrasives or acids are not suitable for the cleaning.
- When all cleaning has been completed and accessories replaced, reconnect the plug with dry hands

17 Reversing the door – "Solid doors only"

In order to reverse the door please follow the below instructions. This should be carried out by 2 people for safety purposes.

- a. Tilt the refrigerator backwards by 40° and lean on a vertical, hard surface such as a wall.
- b. Remove the feet from the bottom, right hand hinge (figures 1 and 2).
- c. Remove the screws from the hinge (figure 3) and remove hinge.







Figure 1

Figure 2

Figure 3

- d. Pull the door from the bottom to remove from the refrigerator.
- e. Remove the top, right hand hinge (figure 4).
- f. Install the hinge on the top, left hand side (figure 5).





Figure 4

Figure 5

g. Remove the bottom, left hand feet and base plate (figures 6 and 7).





Figure 6

Figure 7

h. Insert the door into the top, left hand hinge (figure 8).

i. Install the bottom, left hand hinge (figure 9) and screw in the feet.





Figure 8

Figure 9

- j. Add the feet and base plate to the bottom, right hand side.
- k. Remove the caps from the screws holding the handle in position.
- I. Remove the handle screws.
- m. Remove the caps on the opposite side of the door.
- n. Screw the handle into position and add the caps to cover the screws.

IMPORTANT: After reversing the door, leave the appliance stand for a minimum of 24 Hours before filling.

18 Storage

If the appliance is to remain unused for a period of time (e.g. during refurbishment work) switch the appliance off

by pressing buttons and and



simultaneously.

It is also advised that the appliance is unplugged from the power supply.

Empty, defrost and clean the appliance.

Make sure the door is left slightly ajar to prevent any bad odour forming within the appliance.

19 Flectrical Connection

The appliance is intended for connection to alternating current. The connection values for voltage (V) and frequency (Hz) are declared on the name plate in the cabinet. Power must be connected via a wall socket with a switch. It is strongly recommended that the wall socket is easily accessible. All earthing requirements stipulated by the local electricity authority. The cabinet plug and wall socket should give correct earthing. If in doubt, contact your local supplier or an authorised electrician.

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 such as fire or electric shock.

WARNING: THIS APPLIANCE MUST BE EARTHED

The flexible cord (mains lead) fitted to this appliance has three cores for use with a 3-pin 13 amp plug. If a BS 1363 (13-amp) fused plug is used it should be fitted with a 13-amp fuse.

The cores in the mains lead are coloured in accordance with the following code:

GREEN AND YELLOW: EARTH

BLUE: NEUTRAL **BROWN**: LIVE

These colours might not correspond with the colour markings identifying the terminals in your plug.

Note:

First Connection to the mains

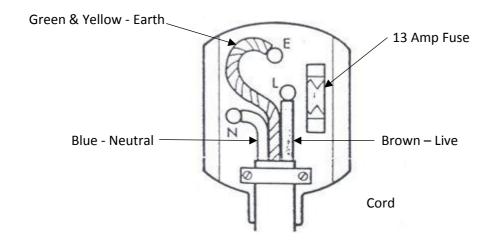
The appliance provides information about the higher temperature (Hi alarm) until the moment of cooling. The alarm will be signalled by a sound and "Hi" caption on the display.

To cancel the alarm, press



button.

Until the moment of cooling, the alarm is repeated every 15 minutes. Such an operating mode is normal until the required temperature settings are reached.



20 WEEE: Disposal of your appliance at end of life

WEEE: Disposal at end of life.

WARNING: This appliance contains insulation, gases and refrigerant and must be disposed of in the appropriate manner. Please ensure the appliance is disconnected, emptied and clearly labelled by an authorized person.

When the appliance is being disposed of in an EU Member State, it is subject to the Waste Electrical and Electronic Equipment Regulations (WEEE). It must be recycled and disposed of in accordance with EU Directive 2002/96/EC as applied in local laws of that State at the time of disposal.

As this item is designed for medical use, before presenting for collection and disposal it will be necessary for the user to provide documentary evidence of decontamination and/or that it is entirely safe to handle and dismantle outside of a controlled environment. Goods that cannot be so certified fall outside the scope of the Directive and remain the user's responsibility to dispose of.

A relevant label has been placed on the appliances packaging (see below). The product has been manufactured of recyclable materials.



If in doubt with any of the above information, contact the manufacturer or your local authority for advice on how best to dispose of this product.

21 Troubleshooting

PROBLEM	REASON	SOLUTION
The appliance does not work	A gap in the electric system circuit	 Make sure the plug is properly inserted into the socket Make sure the socket is not faulty Make sure the power supply cord is not damaged
	The compressor hardly ever activates	Check to see if the ambient temperature is below +10C
	The door doesn't shut tight or is opened too often	 Rearrange the products so they don't hamper the door Shorten the time the door is open for
The temperature inside the appliance is not low enough (the compressor operates continuously)	The ambient temperature is above that which has been outlined in the product specification (page 9)	Check that the appliance is operating at an ambient temperature that meets the product specification on page 9
	Air circulation at the back of the appliance is hampered	Move appliance further away from the wall
	The appliance is placed such that it is subject to constant sunlight, or another heat source e.g. Radiator	Move the appliance to a different place away from heat sources or direct sunlight
Water collects at the bottom part of the	The contents touch the back wall of the cabinet	Move the products so they aren't in contact with the back wall
refrigerator	The drain opening is clogged	Take the cleaning plug and unclog the condensate opening
The appliance makes too much noise	The appliance is not level	Place the appliance on an even surface or use adjustable feet
too much noise	The appliance is touching another object	Reposition the appliance so it is detached from any other objects

22 Frequently Asked Questions

a. Are there any restrictions as to where I can locate my Lec Medical appliance?

Yes, for optimum performance, it is important that you position your appliance on a hard flat surface in an area where the ambient temperature corresponds to that stated on the appliances' data plate. Ensure the appliance has sufficient clearance around it to provide adequate ventilation. We do not recommend positioning your appliance close to a heat source such as a radiator or in direct sunlight.

b. Can I plug my Lec Medical appliance in straight away after unpacking?

No, we recommend that you leave the appliance to stand for 24 hours before plugging in to allow the refrigerant to settle after transportation and delivery. You should then run the appliance whilst it is empty for 24 hours before filling to ensure it is working correctly. Also, remember to follow the cleaning instructions found in the instruction manual, as they outline important cleaning instructions prior to filling.

c. What should I do if my floor is uneven?

Your Lec Medical appliance will feature 2 front adjustable feet, so it is essential that these are adjusted by following the instructions found in the user manual supplied with the product.

d. How often should I clean my Lec Medical appliance and how?

You should regularly clean your appliance. We recommend that the appliance should be wiped with a soft cloth dampened with lukewarm water containing a <u>mild detergent</u>. Rinse with clean lukewarm water, and dry thoroughly. For full cleaning instructions, please refer to the instruction manual.

e. How often should I defrost my appliance?

You appliance generally defrosts automatically, which requires no special operations on the part of the user. The exception to this is freezers, which rely on manual defrost and should be done when the frost build up is more than 6mm. (see instructions within the manual)

f. What should I do if the lock or key is damaged?

Simply call our Spares department on 0344 815 3742 and we will arrange for a replacement lock to be fitted if the appliance is still within warranty. Additional keys can also be purchased from our Spares department.

g. Can I purchase replacement parts?

Yes, we have a number of replacement parts. To order, please call our Spares department on 0344 815 3742.

23 Contact Information

23.1 Sales Enquiries:

Email: sales@gdpa.co.uk
Tel: 0344 815 3742
Fax: 0844 815 3748

23.2 Marketing Enquiries:

Email: marketing@gdpa.co.uk

Tel: 0344 815 3742

23.3 Spares and After Sales Service:

Email: info@gdha.com Tel: 0344 815 3742 Fax: 0844 248 4123

23.4 Address:

Lec Medical Stoney Lane, Prescot, Merseyside, L35 2XW.

23.5 Warranty

For details on the warranty of this appliance and any other information please visit: - https://www.lec-medical.co.uk