



*Medisafe* **PLUS**

Powered by



# USER GUIDE

## **Acknowledgement**

Thank you for purchasing this Avem Quirks Medisafe Plus Refrigerator. This refrigerator is purpose-built, for the storage of medical vaccines. We recommend that you read this user guide before operating the Medisafe Plus refrigerator and retain it for future reference.

### **Contact Information**

Should you require assistance, guidance or technical support, please contact:

**Avem Quirks Australia Pty Ltd.** (Head Office) 9 Business park drive,  
Lynbrook VIC 3975

**Phone:** 1800 658 120

**Email:** [medisafe.alert@avemquirks.com.au](mailto:medisafe.alert@avemquirks.com.au)

### **Medisafe Plus Warranty**

Your new Medisafe Plus vaccine refrigerator is covered by a 24-month warranty on parts and labour. Avem Quirks Australia will repair or replace, at our discretion, any component found to be faulty in workmanship or operation for a period of 24 months from the time of installation.

**Avem Quirks Australia would like to stress the importance of reading all provided documentation and instructions PRIOR to the storage of any vaccine or product stock.**

Full instructions on the safe and appropriate operation of your unit, along with telephone support, are available in order to ensure that your new Medisafe Plus refrigerator operates efficiently and to its capacity.

Failure to follow instructions, especially involving setting of cabinets and start up, may result in the loss of or damage to valuable stock through incorrect operation of the unit.

**Avem Quirks Australia cannot be held responsible for the loss of or damage to stock.**

Please refer to the *National Vaccine Storage Guidelines: Strive for 5* (available from the Department of Health at <http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/provider-store>) for further information about vaccine storage management or contact your local State/Territory health authority (contacts provided on Page 16). **Avem Quirks National Service Support Line: 1800 658 120**

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## Getting Started



If the vaccine cabinet was shipped to you, please wait at least three hours prior to turning it on. This will allow the oil in the compressor time to settle after shipping.



Avem Quirks Medisafe Plus refrigerators are powered by electric current, which can cause serious injury. Any installation, cleaning, or troubleshooting must be conducted with the electrical power source disconnected from the unit.

- The following precautions should be taken while the unit is in operation:
- Ensure the appropriate power is supplied to the unit. Note: Avem Quirks Medisafe Plus units are designed to operate at 220-240V, 50Hz.
- Do not plug several appliances into the same multiple receptacle
- Electrical components should not come into contact with water
- Ensure the power cord is not damaged. If the cord becomes damaged, it must be replaced by the manufacturer, a certified service agent or qualified service professional.



It is strongly recommended that any servicing of the unit be performed by Avem Quirks Australia.

### Installation

- Place the Medisafe Plus refrigerator in a location with a flat surface that is approximately level, with reasonable clearance from any walls, and without exposure to direct sunlight.
- Allow clearance to the right, left, back and top. This will reduce power consumption and allow the internal cooling system to function correctly. The unit is not to be placed in confined areas where air flow and heat dissipation are restricted.
- Ensure that the appropriate power is supplied to the unit. Note: Avem Quirks Medisafe Plus refrigerators are designed to operate at 220-240V, 50Hz. National and local codes provide specific electrical and mechanical installation requirements and recommendations covering equipment and equipment wiring.
- Plug in and turn on the power to the Medisafe Plus refrigerator. Ensure the power point is secure, that the refrigerator cannot be accidentally unplugged or switched off.
- Plug in and turn on the power to the AQ Box Temperature Monitoring. This is to be plugged into the same PowerPoint as the Medisafe+ refrigerator. Ensure the plug is secure and cannot be accidentally unplugged



When the power is first turned on, the Min-Max temperature display will show an alert “PF” flashing on the display. This informs the operator there has been a loss of power and can be acknowledged by pressing the red “set” button on the Min-Max display.



### Basic Operation-First use

- The power failure alert “PF” should be acknowledged by pressing the red “set” button once on the Min-Max temperature display.
- It is recommended the Min/Max Thermometer is reset on first start up. To reset, follow as below  
*Press and hold the red set button for 8 seconds to ensure the Min-Max values have been reset.*  
*Note: The Min-Max display will first show  $rT--NNN--rE$  °C ( $rT$  is the number of hours since the last reset, before displaying the  $rE$  (reset) confirmation).*

The Medisafe Plus refrigerator is pre-set for operation between 2° and 8°

- AQ Box Cloud Monitoring Device will begin to log data as soon as it is powered.

## Stocking the Medisafe+ Refrigerator

The Medisafe Plus vaccine refrigerator is designed to maintain a uniform temperature inside the cabinet. To do so, sufficient air flow is required to prevent “cold spots” from forming. Thus, it is important that an appropriate level of care be taken in stocking the refrigerator.

- Cool the vaccine refrigerator before stocking with vaccine. Avem Quirks Australia recommends allowing the refrigerator to run for at least 6 hours prior to loading with vaccines.  
\*There will be a small amount of condensation produced inside the Medisafe plus refrigerator, this will dissipate over time.
- Distribute stock evenly throughout the refrigerator.
- Ensure vaccines with the shortest expiry are stored at the front of the refrigerator.
- **DO NOT** place stock directly against the supply air panel at the rear of the refrigerator. This could cause the stock to freeze.

- DO NOT place large cartons inside the refrigerator (i.e. at the bottom of the cabinet). Remove smaller boxes from the carton and place them evenly spaced on the shelves.
- Some vaccines are sensitive to ultraviolet (UV) light. Please check the specific vaccine storage guidelines before removing vaccines from their boxes.
- If trays are used, ensure they are made of plastic, with holes to allow for sufficient air flow, and spaced evenly on the shelves.
- DO NOT overstock the refrigerator.
- If very few vaccines are stocked, thermal mass (such as pre-cooled water bottles) should be added to the refrigerator in areas of open space.

### Silencing the alarm

- The cooling system of the Medisafe Plus refrigerator is controlled by an electronic controller, incorporating an audible and visual alarm, should the cabinet temperature fall or rise outside the specified range (+2 to +8°C). This is likely to occur during the first cooling cycle and may occur if the door is left open for an extended period of time.
- *To silence the alarm:* press the red SET button on the Top Left electronic Min/Max thermometer.



**When you first turn the cabinet on, if it does not reach a temperature below 8 degrees within 10 minutes, it will alarm. This is a normal function. All the operator is required to do is press the *set/mute* button to silence the alarm and restart the cooling process. Avem Quirks National Service Support Line: 1800 658 120**

### Temperature Control System:

- This highly accurate electronic control, located in the top right of the control panel (pictured below), incorporates a temperature probe and thermostat.
- A temperature probe measures the air temperature in the cabinet.
- The electronic controller is programmed to the required temperature parameters (+2°C to +8°C).
- The controller cycles the refrigeration system to maintain the air temperature inside the cabinet, within the required parameters.

Should the temperature of the cabinet fall or rise outside the set parameters, the controller will trigger both an audible and visual alarm (The digital display will flash “LO” for below set parameter or “HI” for above set parameter).

A suitable delay (5-10 min.) is programmed into the system to prevent unnecessary false alarms (such as door being open for extended periods).

If an alarm condition occurs, press the set button to silence the audible alarm.



The electronic controller is pre-programmed, during the manufacturing process.

The only button the operator is required to press is the **set/mute** button. If the cabinet alarms, you can press this to silence it. Any reprogramming of the controller must be done by a person approved by Avem Quirks Australia.

When the cabinet is first powered on, if it does not reach a temperature below +8 °C within 10 minutes, it will alarm. This is a normal function. All the operator is required to do is press the **set/mute** button to silence the alarm and restart the cooling process

If an alarm condition has occurred, please allow 10-15 minutes for recovery.

Should you experience any issues with the Medisafe Plus refrigerator maintaining temperature within the set parameters, please contact **Avem Quirks** National Service Support Line: **1800 658 120**

## Min-Max Temperature Display

- The top left display is the minimum and maximum temperature recorder. This displays the current air temperature inside the cabinet, and also provides the user with the minimum and maximum air temperatures reached inside the refrigerator since the last reset.
- **To display the minimum air temperature** the cabinet has reached, since the last reset, press the **MIN** button on the Min/Max display, identified with a “down” arrow. The temperature will flash for several seconds, then the display will return to the current air temperature inside the cabinet.
- Similarly, **to display the maximum air temperature** the cabinet has reached, since the last reset, press the **max** button on the Min-Max display, identified with an ‘up’ arrow. The temperature will flash for several seconds, then the display will return to the current air temperature inside the cabinet.
- **Please Note:** *The maximum temperature will rise if the door is left open for an extended period of time, resulting in a “Temperature Fault” Notification being sent.*
- **To reset the Min-Max display**, press and hold the red **set** button for approximately 8 seconds. The display will show the number of hours that have been logged since the last reset, then “**rE**” will be shown on the display to confirm all values have been reset.



**It is essential that the reset button is pressed before leaving the premises to ensure a true reading is viewed the following morning.**

- (Some regulations governing vaccine storage may require you to reset the display more frequently than once daily, please check with your State/Territory health authority for further information).



**The current temperature before pressing the re-set button should be between the required temperatures of +2°C to +8°C.**



# AQ Box –Cloud Based Temperature Monitoring Device

## LOGGING IN

- Open up Google Chrome, Microsoft Edge, Internet Explorer, Fire Fox or Safari



- In search area at the top of the page type – <http://aqbox.avemquirks.com.au/login>



- Type in your email address and the password your requested on your subscription form and press login

Please sign in to continue!

Login

[Forgot Password?](#)

Recover Account

From here you will go to the front page

On the left of the page are “TABS” to manoeuvre or by using the dropdown “Updated Now” area of each box to select the device

1. **DASHBOARD** – give an overview of the monitored devices
2. **DEVICES** – if you have multiple devices this is where you can choose which device to view.
3. **USER SETTINGS** - this is where you can add or delete notification responses and who receives them and how often. Also allows the user to manage passwords
4. **REPORTS** – this is where you view and download the monitored device temperature history and fault reports
5. **LOGOUT** – this is to logout as a user

DASHBOARD

DEVICES

USER SETTINGS ▲

CHANGE PASSWORD

NOTIFICATIONS

REPORTS ▼

LOGOUT

## USER SETTINGS

Under the USER SETTINGS tab here is how you can also manage passwords and notifications

- **Change Password** – modify/reset passwords
- **Notifications** – view modify / delete

Manage Notifications

Show **10** entries

User	Group	Device	Type	Template	Options	Modify	Remove
DEMO AQ BOX - aqdemobox@gmail.com	N/A	Avem Office Test Fridge	Email	Default Template	<ul style="list-style-type: none"> <li>• Inactivity timeouts</li> <li>• Power faults</li> <li>• Battery faults</li> <li>• Temperature exceeds max</li> <li>• Temperature exceeds min</li> <li>• Temperature probe faults</li> <li>• Remind me every 15m</li> </ul>	Modify	Remove
DEMO AQ BOX - aqdemobox@gmail.com	N/A	Avem Office Test Fridge	Email	Default Template	<ul style="list-style-type: none"> <li>• Inactivity timeouts</li> <li>• Power faults</li> <li>• Battery faults</li> <li>• Temperature exceeds max</li> <li>• Temperature exceeds min</li> <li>• Temperature probe faults</li> <li>• Remind me every 15m</li> </ul>	Modify	Remove

Showing 1 to 2 of 2 entries

# Running Temperature Reports

## Running a Temperature Report

- Under Report choose - "Device Temperature"
- Select the Device in the drop Down Box
- Choose the "From" date and time
- Choose the "To" date and time
- Choose the "Reading every (minutes)" – this can be from 1 – 99 minutes

Once all parameters are set click the "Generate" button and the report will generate in the background

REPORTS ▲

DEVICE TEMPERATURE

Pixel Temperature Monitoring  
Allow you to quickly and easily monitor your Assets

Search

Device: Please select device... ▼

From: 2017/12/17 00:00

To: 2017/12/19 00:00

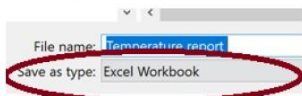
Reading every (minutes): 15

Generate

A video on how to generate a report can be found by following this link:  
[https://youtu.be/H\\_vxKJ4CVVk](https://youtu.be/H_vxKJ4CVVk)

### Printing the Report

- Once the report has been generated – go to the end of the report and click on the "blue" highlighted link - "Click here to print report"
- Choose the printer that you want to print to and click print.
- You can also export your file and save as excel. Click on the blue highlighted link "Click here to export csv" Once the file has downloaded save the file to your computer but change the file type to EXCEL not CSV.



Reports can be exported to csv and saved as excel files  
 OR  
 Printed directly from your computer



AQ Temperature Monitoring  
Allow you to quickly and easily monitor your Assets

Search

Faulty Temperature(s) Report

### Faulty Device Temperature Report

© Data between 2018/04/01 00:00 - 2018/04/10 00:00  
Generated at 2018-04-10 14:15:59

ELDERS ROCKHAMPTON

Device	Address	Number Low Temperature Fault(s)	Number High Temperature Fault(s)	Number Ideal Temperature(s)
ELDERS ROCKHAMPTON	127 Gladstone Rd. Port Curtis Rockhampton, QLD, Australia	0	0	26200

PIXEL TECHNOLOGIES BeE Avem Quirks

Click here to export csv

Click here to print report

# TROUBLESHOOTING

Service should be performed only by qualified  
maintenance or refrigeration mechanics.

For assistance, please contact Avem Quirks

Toll Free: 1800 658 120

Issue	Further Information / Action to be taken
Refrigerator will not run/start after delivery	<p>Please Check that appropriate power is supplied to the unit. Ensure the power plug is in the ON position. Before turning on check to see if it is safe! Check fuses from main power supply. If there is an Electrical supply issue, please contact your Electrician. If it is a Medisafe fridge issue, please contact AvemQuirks 1800 658 120</p>
Why is my Fridge alarming when I turned it on?	<p>When you turned on your fridge, it is not inside the pre-set temperature range of between +2°C &amp; +8°C. You can press the any button on the controller or the red button on the Min/Max display to silence the alarm. The fridge will continue to come down into range.</p>
Temperature is too low	<p>Check that there is sufficient air flow inside the refrigerator cabinet; that there are no large boxes or trays, stock is evenly distributed throughout the shelves, and there is space between stock and the evaporator plate at the rear of the cabinet.</p> <p>A <b>"Temperature Fault"</b> Notification will be sent</p>
Temperature is too high	<p>Ensure that the unit is not located in direct sunlight, or in an area where the ambient temperature is above 30°C. Check the condenser coil (located at the back of the unit) to ensure that air flow and heat dissipation are not restricted. Check that the door has not been left open. Check that the seal has not been damaged, allowing cold air to escape from the refrigerated cabinet. If a new seal is required, please contact Avem Quirks Australia.</p> <p>A <b>"Temperature Fault"</b> Notification will be sent</p>
In case of a power outage, how long will my Medisafe Plus fridge stay cold?	<p>There is no determinable time frame for this and will depend on variables such as, current stock levels in the fridge as body mass will hold temperature for longer periods, and the current room temperature. It will also vary We recommend that you are familiar with the Australian guidelines for Vaccine Storage, strive for 5, and that your cold chain management system accords with guidance it provides. For more information about correct storage of Vaccine, please contact one of our experienced support staff. Strive for 5 guidelines can be downloaded here - <a href="http://www.immunise.health.gov.au/">http://www.immunise.health.gov.au/</a>.</p>
My unit needs to be serviced  How do I arrange this?	<p>Your AQ Box will send a <b>"Service Notification"</b> at 11 Months from install date to remind you.</p> <p>Please call our National Service number of 1800 658 120 or email: <a href="mailto:medisafe.alert@avemquirks.com.au">medisafe.alert@avemquirks.com.au</a> and provide the Serial number of your Medisafe Plus fridge and one of our experienced service technicians to assess and repair your equipment.</p>

<p>What is the recommended temperature range for my Medisafe Plus Fridge?</p>	<p>The National Vaccine Storage Guidelines are outlined in the Strive for 5 initiatives. This recommends that vaccines be kept between +2°C and +8°C to reduce the chance of product spoilage. We recommend you read and familiarise yourself with these guidelines via the links below:</p> <p>Immunise Australia Program Website: <a href="http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/IMM77-cnt">http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/IMM77-cnt</a></p> <p>Strive for 5 PDF: <a href="http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/D7EDA378F0B97134CA257D4D0081E4BB/\$File/strive-for-5-guidelines.pdf">http://www.immunise.health.gov.au/internet/immunise/publishing.nsf/Content/D7EDA378F0B97134CA257D4D0081E4BB/\$File/strive-for-5-guidelines.pdf</a></p>
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How do I view the data from the new AQ Box –Cloud Based Temperature Monitoring Device?	<p>On arrival of your new Medisafe Plus fridge the AQ Box – Cloud Based Temperature Monitoring Device is already fitted but will need to be activated.</p> <p>Please complete the AQ Box Portal Registration Form that has come inside the fridge and resend the completed form to <a href="mailto:medisafe.alert@avemquirks.com.au">medisafe.alert@avemquirks.com.au</a>. Our Medisafe Plus team will set this up to allow you to view the data via the cloud. We will reply when this has been completed.</p>
AQ Box will not display data	Please call our National Service number of 1800 658 120 and we will troubleshoot the issue for you. If we cannot assist at this time, we will send one of our Technicians to assist on site to repair this issue.
Can the customer obtain their own sim card?	<p>The answer is NO.</p> <p>The Sim card that is placed inside the AQ Box – Cloud Based Temperature Monitoring Device has a serial number linked to an Avem Quirks software license. Replacing this with another is not registered, therefore will not be seen when viewing the graphs via the cloud.</p>
What happens if I have forgotten my password?	<p>It is recommended you keep records of all Passwords.</p> <p>In the event a Password has been lost/forgotten, please send an email to <a href="mailto:medisafe.alert@avemquirks.com.au">medisafe.alert@avemquirks.com.au</a> and request a new password for your email login.</p>
Why doesn't the Map display correctly where the <b>AQ Box Monitoring Device</b> is located?	This is because the <b>AQ Box –Cloud Monitoring Temperature Monitoring Device</b> Sim card “pings” a location from the nearest Optus receiver station
If power is lost in the fridge, will the AQ Box continue to send data to the cloud?	<p>Yes, this AQ Box Cloud Monitoring device has an 8hr battery backup to ensure this continues to send data to the cloud.</p> <p>You will still be able to view the data via a computer, smart phone, tablet etc providing you have internet connection.</p> <p>A “<b>Power Fault</b>” Notification will be sent</p>
If the Optus Sim signal is down will the AQ Box continue to record data?	<p>Yes, the data will “cache” store data and will send all lost data to the cloud when the signal is restored</p> <p>The sim has capabilities to store up to 14 days' worth of data.</p> <p>A “<b>No Connectivity</b>” Notification will be sent</p>
If the Optus Tower is down and the Power is out will the data still be able to be sent to the cloud?	<p>Yes, the Sim card store data up to 14 days so when the Optus tower is back online the data will be sent to the cloud.</p> <p>The AQ Device will continue sending data to the cloud until its own battery backup is fully exhausted.</p> <p>A “<b>No Connectivity</b>” Notification will be sent</p> <p>A battery pack or UPS is a best solution to run the fridge which will also recharge the AQ Device as well</p> <p>Once connectivity is re-established, a Notification will be sent</p>
Can additional features be added to the AQ Box?	We are continually looking at all options including adding additional probes to monitor compressor irregularities / door alarms / strobe lighting for the deaf, and many other features as needed.
Can 2 fridges be connected to the AQ Box –Cloud Based Temperature Monitoring Device?	<p>No, not currently</p> <p>Each Vaccine fridge will be required to have individual AQ Boxes fitted.</p>
Can the customer buy more GLYCEROL B.P in case of a mishap?	<p>Yes, the customer can acquire at most local pharmacies</p> <p>Please note they are best to call our service team as this means the “putty/Sealant compound” has come away from the Vial bottle and will be replaced (100mL bottles of Glycerol B.P is available at most Pharmacies \$5.00)</p> <p>It is recommended a approved technician attends to resolve any issue like this</p>
What is <b>DASHBOARD</b> when viewing the AQ Box Portal?	This screen provides an overview of the monitored device or devices assigned for you to view
What is <b>USER SETTINGS</b> when viewing the AQ Box Portal?	This is where you can add or delete notification responses and who receives them and how often. Also allows the user to manage passwords

What is <b>REPORTS</b> when viewing the AQ BOX Portal?	This is where you view and download the monitored device temperature history and fault reports
What is the <b>ADMIN TAB</b> when viewing the AQ BOX Portal?	<p>Add Device – Administrator user –adding device          Modify the device –This is only for approved users –it will enable added features or change settings          Add Users –Add a standard or Administrator user          Manage Users –Change/Delete user contact or select level of access          User Password –Change password by user –System administrator rights needed          Add Group –and a group to manage multiple devices          Manage Groups –this is where you manage the email notifications and who can have authority to view devices -if you have multiple devices          Add Notification –add what information is sent on the notification and how often          Manage Notifications –remove notification set up          Email Templates, Remove Note –Super User Only          Call History –Device information -Backend Data          Signal Strength, Service Status, System Info –Selected Device communication information –Backend Data</p>
<b>REPORTS</b>	<p>Device Temperature –Users can choose a device, day and time range –print report or Print to PDF, OneNote (if installed)          Twice Daily -This report will give 2 readings of any device–print report or Print to PDF, OneNote (if installed)          Faulty Temperatures –This can show all devices in a group or individual devices and show total readings as well as faults          Faulty Probe –This will show any device listed total Probe readings for each set output – Air Temp, Simulated Product temp, Ambient, etc          Asset History –Used for device diagnostics          Device Trip –Will show if the device has moved -Note this is based on the nearest signal tower in the area and will reflect that base location          Faulty Device Duration –Will show device probe temperatures outside of the set temperature and duration          Compressor Decay –If installed will allow the technician to diagnose Compressor fatigue  <b>A video on how to generate a report can be found by following this link:</b>  <a href="https://youtu.be/H_vxKJ4CVVk">https://youtu.be/H_vxKJ4CVVk</a></p>
How to Run a report on data?	<p>Under Report choose - “Device Temperature”          Select the Device in the drop-Down Box          Choose the “From” date and time          Choose the “To” date and time          Choose the “Reading every (minutes) –this can be from 1 –99 minutes          Once all parameters are set click the “Generate” button and the report will generate in the background  <b>A video on how to generate a report can be found by following this link:</b>  <a href="https://youtu.be/H_vxKJ4CVVk">https://youtu.be/H_vxKJ4CVVk</a></p>
Printing a Report	<p>Once the report has been generated –go to the end of the report and click on the “blue” highlighted link - “Click here to print report”          Choose the printer that you want to print to and click print.          To save the report to your PC you will need to install the following programs to execute the printing functions.          From the generated report, press Ctrl + P          Destination= Save as PDF (<a href="#">this will need to be changed from your default printer</a>)</p>
<b>WARRANTY</b>	<p>The Medisafe Plus fridges come with 24 months parts and Labour Warranty</p> <p>The AQ Box Monitoring Device is warranted for parts and labour during the Paid Subscription period.</p> <p><b>The AQ Box warranty is void if incorrect installation or unauthorised modifications are performed without prior approval from AvemQuirks.</b></p>

# Cloud Monitoring Product Registration Form

9 Business Park Drive, Lynbrook, Victoria, 3975

Telephone: 1800 658 120

Email: [medisafe.alert@avemquirks.com.au](mailto:medisafe.alert@avemquirks.com.au)

ACN 005 705 493



AGREEMENT DATE: \_\_\_\_\_

Please complete this form and email to [Medisafe.alert@avemquirks.com.au](mailto:Medisafe.alert@avemquirks.com.au) to activate your online temperature cloud monitoring portal access. Each Medisafe Plus unit comes with a full 12 months cloud monitoring access included.

## BUSINESS INFORMATION

BUSINESS NAME				
ADDRESS				
SUBURB		POST CODE		STATE
SITE CONTACT NAME		MOBILE		
BUSINESS MAIN EMAIL ADDRESS FOR UPDATES AND COMMUNICATION				

## EQUIPMENT DESCRIPTION

FRIDGE SERIAL #:		LOCATION IN BUILDING:	
TERM:	INITIAL 12 MONTHS ACCESS	ADDITIONAL NOTES:	
DATE FROM:		DATE TO:	

## ALERT NOTIFICATIONS (PLEASE PRINT CLEARLY)

EACH CONTACT YOU REGISTER WILL HAVE ACCESS TO THE CLOUD MONITORING PORTAL AND WILL RECEIVE ALERT NOTIFICATIONS VIA TEXT MESSAGE AND EMAIL IN THE EVENT OF A TEMPERATURE BREACH OR POWER FAILURE. YOU MUST NOMINATE AT LEAST ONE PERSON FOR ALERTS WITH THE OPTION OF UP TO THREE

PERSON ONE	NAME			
	EMAIL Each person must have a unique email			
	PASSWORD Please assign a password. You can change this later in the portal		MOBILE NUMBER	
	Tick how you would like to receive alert notifications	<input type="checkbox"/> EMAIL ONLY	<input type="checkbox"/> TEXT ONLY	<input type="checkbox"/> BOTH TEXT & EMAIL
PERSON TWO	NAME			
	EMAIL Each person must have a unique email			
	PASSWORD Please assign a password. You can change this later in the portal		MOBILE NUMBER	
	Tick how you would like to receive alert notifications	<input type="checkbox"/> EMAIL ONLY	<input type="checkbox"/> TEXT ONLY	<input type="checkbox"/> BOTH TEXT & EMAIL
PERSON THREE	NAME			
	EMAIL Each person must have a unique email			
	PASSWORD Please assign a password. You can change this later in the portal		MOBILE NUMBER	
	Tick how you would like to receive alert notifications	<input type="checkbox"/> EMAIL ONLY	<input type="checkbox"/> TEXT ONLY	<input type="checkbox"/> BOTH TEXT & EMAIL

Instruction and Maintenance Manual  
Vestfrost

STANDARDS AND GENERAL WARNINGS

DECLARATION OF CONFORMITY

CE DECLARATION OF CONFORMITY

THE COMPANY - NOUS - DIE FIRMA  
A/S VESTFROST by EVERmed s.r.l.  
A/S Vestfrost: Falkevej 12, DK-6700 Esbjerg Ø, Denmark  
EVERmed s.r.l.: Via G. Galilei, 2 - 46020 Motteggiana (Mantova) - Italy

Declares, under its own sole responsibility, that the product designated  
Déclarons sous notre responsabilité exclusive que le produit  
Erklärt unter der eigenen und ausschließlichen Verantwortung, daß das Produkt

Serial number Numéro de série Seriennummer

to which the present declaration refers, complies with the following european directives: auquel cette déclaration se rapporte,  
est conforme aux dispositions européennes suivantes: auf das sich diese Erklärung bezieht, den folgende europäische  
Richtlinien entsprechen:

“Machines” 2006/42/CE  
“Low voltage” 2006/95/EC and subsequent modifications  
“Electromagnetic Compatibility” 2004/108/EC and subsequent modifications “PED - Pressure Equipment Directive” 97/23/EC  
appliances in class 1 “Medical devices” 93/42/EEC class 1



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### Section 1: STANDARDS AND GENERAL WARNINGS

## 1.2 TESTING AND GUARANTEE

The appliance is tested in our works in compliance with established regulations and then shipped ready for use.

The guarantee is valid for a full 12 months from the date of delivery of the appliance and it covers the repair or replacement of any defective parts, with the exception of electrical and electronic components.

Manifest defects or differences with respect to the client's order must be communicated to the manufacturer within five days from the receipt of the goods or they will not be covered by the guarantee terms.

Any hidden or other defects must be communicated to the manufacturer within five days from the time that they are discovered and, in any event, within the maximum guarantee term of six months. The purchaser shall be entitled only to request repair or replacement of the goods. The purchaser is not entitled to claim compensation for direct or indirect damages of any whatsoever nature. In any event, the entitlement to repair or replacement of the materials must be exercised within the maximum term of the guarantee, which is contractually stipulated to cover a shorter period than the maximum term established by law.

Repairs or replacement of defective materials will be carried out at the manufacturer's works; material returned to the manufacturer must be shipped carriage paid and will be returned to the purchaser carriage forward.

## 1.3 INTRODUCTION

This manual has been prepared with the scope of supplying all the instructions required for the correct use of the appliance and to maintain it in optimal condition. It also contains important user safety information.

The following professional roles are explained in order to define the responsibilities of each:

**Installer:** a qualified technician who positions the appliance and places it in service in accordance with the instructions in this manual.

**User:** the person who, after reading this manual carefully, operates the appliance in accordance with the intended use specified in this manual.

**Users' responsibilities:**

- to ensure that the products are conserved at suitable temperatures and not exceeding the permitted period of time
- to be aware of the regulations governing the conservation of products and to observe any whatsoever hygiene indications that may be applicable.

The user is obliged to read the manual attentively and refer to the information in the manual at all times. Particular attention must be paid to the contents of heading 1.5 General Safety Warnings.

**Routine Maintenance Technician:** qualified technician able to perform routine maintenance of the appliance by following the instructions in this manual (see section 5).

**Special Maintenance Technician:** qualified technician, authorized by the manufacturer to perform extraordinary maintenance of the appliance (see section 6).

The symbol appears at certain points in the manual to draw the reader's attention to important safety information.

The manufacturer declines any whatsoever responsibility in the case of improper use of the appliance deviating from the reasonably construed intended use, and for all operations carried out that are not in compliance with the instructions laid down in the manual.

This manual must be conserved in a place that is accessible and known to all operators (installer, user, routine maintenance technician, special maintenance technician).

This manual must not be reproduced or divulged, in whole or in part, using any whatsoever means or in any whatsoever form.

## 1.4 PRODUCT DESCRIPTION

The appliance comprises a modular single body with panelling in various materials and insulation in expanded polyurethane foam, density 42 kg/cu.mt.

The appliance instruments are located on the front panel which in some models close the front of the motor unit, inside which the condenser unit and electrical wiring can be housed.

The appliance interior is fitted with suitable supports for wire shelves (grids) and/or other accessories (drawers and/or baskets)

The doors are fitted with an automatic return device and magnetic seal elements.

During the design and construction stage all measures have been adopted to implement total safety including radiused interior corners, funnel-shaped base panel to convey condensate to exterior, no rough surfaces, fixed guards protecting moving or potentially dangerous parts.

## 1.5 GENERAL SAFETY REGULATIONS

Read this manual carefully and follow the prescriptions contained herein.

The user assumes full responsibility in the case of operations carried out without observing the instructions in the manual.

Primary general safety regulations:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- make sure that the appliance is not used by children or unsuitably qualified persons
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug
- in the case of faults or malfunctions, switch off the appliance and do not attempt to repair it yourself. All service and repair operations must be performed exclusively by suitably qualified authorized technicians.

## 1.6 CLIENT'S RESPONSIBILITIES

The customer is required to:

- execute the electrical connection of the appliance
- prepare the place of installation
- provide consumable materials for cleaning
- perform routine maintenance

In the case of power failures or malfunctions do not open the doors and drawers in order to maintain uniform temperature inside the unit. If the problem persists for more than a few hours, move the stored material to a more suitable place.

## 1.7 CLIENT SERVICE REQUESTS

For all technical problems and any requests for technical service, refer exclusively to your local dealer.

## 1.8 ORDERING SPARE PARTS

Spare parts orders must be made by consulting the relative spare parts catalogue which gives the correct description of the part, the part reference code and the serial number of your appliance.

The manual is available, upon request, by the manufacturer.

## Section 2: SPECIFICATIONS

### 2.1 PRODUCT CONFIGURATION

The products must be stored in observance of the load limits allowed by the shelves, drawers or baskets in order to ensure efficient air circulation inside the appliance.

DESTINATION OF USE		
MPR	+2°C / +15°C	Biological refrigerators for medical-pharmaceutical use
MRR	+2°C / +15°C    +2°C / +15°C	
LR	0°C / +15°C	Biological refrigerators for laboratory use
LCRR	0°C / +15°C    0°C / +15°C	
BLFG	-5°C / -25° C	Laboratory freezers  Combinations of refrigerators / freezers for laboratory Cooled incubators Platelet incubators
LFG LF	-5°C / -20° C	
LDF	-5°C / -20 ~ -25°C	
PDF	-15°C / -30°C	
LCRF	-25°C / -40°C	
CI	0°C / +15°C -5°C / -20 ~ -25°C	
PI	+2°C / +50°C	
	+22°C	

## 2.2 POWER OUTPUT AND ABSORBED POWER

Technical data for power output and absorbed power are shown in the appliance's technical identification label. Bear in mind the operational limit characteristics as indicated in heading 4.4.

## 2.2 NOISE LEVEL

The noise level of the appliance is below 70 dB (A), change model-by-model and according to the ambient and usage working conditions.

## 2.3 MATERIALS AND REFRIGERANTS

Materials in contact or potentially in contact with the stored products are in compliance with the relevant directives. The appliance is designed and built so that the parts in contact with the stored material can be cleaned before each use. The refrigerants utilized comply with established regulations. For more information check the appliance's technical identification label.

## **Section 3: INSTALLATION**

### 3.1 TRANSPORT AND HANDLING

The appliance must be transported and handled exclusively in a vertical position, in observance of the instructions printed on the packing.

This precaution is necessary to avoid contamination of the refrigerant circuit with compressor lube oil with resulting valve and heat exchanger coil failure and problems starting the electric motor.

The manufacturer accepts no responsibility for problems due to transport executed in conditions other than those specified above.

The accessories supplied with the appliance (runners, wire shelves, basins, drawers, baskets) are supplied in separate packs shipped inside or separately from the unit.

The appliance is secured to a wooden base by means of a screw through each foot and wrapped in polyethylene or packed in a carton, cage or crate.

Refer to heading 3.6 for information on correct disposal of packing material.

The appliance must be handled using a fork lift truck or a pallet truck with suitable forks (fork length at least equal to 2/3 length of unit).

### 3.2 POSITIONING

Incorrect positioning can cause damage to the appliance and generate hazardous conditions for personnel. The installer must therefore observe the following general regulations:

- fix to the wall the device through the anti-earthquake/tilting chain located in the device backside, using the supplied plastic dowel Ø 8
- make sure you maintain a minimum of 3 cm from the walls
- the room must be well ventilated
- keep well away from sources of heat
- avoid direct sunlight

Specific positioning procedures

- remove packing material (polyethylene, cardboard box, crate, cage) Polyethylene is potentially dangerous to children
- remove accessories from inside the unit

Wood basement removal: lean the appliance sideways and unscrew the two self-tapping screws (fig.2); drag the appliance from the back side keeping the basement steady till the 4 feet come out from their suitable housings; lean the unit slightly backwards and remove the basement from the front side.

Use gloves when handling wooden packing materials and the wooden base to protect the hands from splinters

- position the appliance with the help of a spirit level. Adjust the levelling feet on the metal base of the unit if necessary (Fig.3)
- remove the protective PVC film from the external surfaces of the unit
- position the shelf (drawer or basket) runners in the holes in the uprights (Fig.4)
- insert the shelves (drawers or baskets) in the runners
- insert the condensate collection tray (in the models where necessary) in the relevant runners located beneath the unit

### 3.3 WIRING AND ELECTRICAL HOOK-UP

The electrical plant and electrical hook-up operations must be performed by a qualified electrician. For safety reasons adhere to the following indications:

- check that the electrical plant is suitably sized for the absorbed power of the unit
- if the electrical socket and the plug on the appliance power cord are incompatible, change the plug with a suitable component, ensuring the replacement part is of the approved type
- do not use reductions or multi-way adapters (Fig.7)
- check the impedance value of the power supply; the impedance value of the power supply should not exceed 0,075 ohm

It is important to connect the appliance correctly to an efficient earth system executed in compliance with the relevant legislation.

### 3.4 SET-UP OPERATIONS

To avoid errors and accidents, perform a series of checks for possible damage sustained during transport, installation and hook-up operations before starting up the unit.

Preliminary Checks

- check the condition of the power cord (no cuts or chaffing)
- check that the feet (or rollers), door hinges and shelf supports are stable
- check the condition of internal and external components (pipelines, heat exchanger elements, fans, electrical components, etc.), check also that all parts are firmly fixed into position
- check that the door seals, shelves and drawers are not damaged (broken or scratched) and that the doors close and are sealed properly

The user must also observe the following instructions to obtain the best operation from the appliance:

Indications for Optimal Duty

- do not block the motor compartment air vents
- do not store warm products
- arrange the products on suitable shelves, drawers or baskets. Do not place products directly on the base or against the walls, doors or fixed guards of the unit
- make sure doors are kept closed
- keep the defrost water drain outlet clear
- limit the frequency and duration of opening; each time the door is opened the internal temperature will alter
- load new material at ambient temperature gradually to allow correct refrigeration
- perform routine maintenance regularly (see section 5).

### 3.5 RE-INSTALLATION

Observe the following procedure:

- switch off the appliance from the main switch
- disconnect the power cord from the electrical outlet
- handle the appliance in accordance with the instructions in heading 3.1
- follow the instructions in headings 3.2 and 3.3 for positioning and hook-ups in the new location

### 3.6 SCRAPPING AND DISPOSAL

Scrapping and disposal of the appliance must be carried out in full observance of established legislation in your country.

## **Section 4: OPERATION**

### **4.1 APPLICATIONS AND INTENDED USE**

#### **4.1.1 Intended Use and Permitted Use**

The appliance is designed and built for preserving and storing medical products on medical/scientific premises.

The appliance is not suitable for the storage of blood or hemoderivates to be reinfused or transfused in the human body.

#### **4.1.2 Improper and Unauthorized Use**

1) treatment of products that require constant monitoring and may endure alteration of its characteristics in the case of temperature changes or interruption of refrigeration. For example:

- foodstuff in general
- blood or hemoderivates to be reinfused or transfused in the human body

2) use in places subject to explosive atmosphere

All uses except authorized uses of the appliance shall be construed as "improper use" for which the manufacturer declines all responsibility.

### **4.2 SAFETY AND ACCIDENT PREVENTION**

The appliance embodies various features designed to assure the safety and protect the health of the user. The following list describes the protections adopted against mechanical risks:

- stability: the appliance is designed and built so that even with the shelves, drawers or baskets fully extracted in the intended conditions of operation it will remain stable so that it can be used with no risk of tipping, falling or sudden movement
- surfaces, edges, corners: accessible parts of the appliance have no sharp corners, sharp edges or rough surfaces that could cause injury
- moving parts: moving parts of the unit are designed, built and configured to avoid risk. Moving parts are protected by fixed guards to prevent accidental contact that could result in injury
- electrical power: the appliance is designed, built and fitted out with the aim of preventing the risk of electric shock in compliance with established safety legislation
- noise: the appliance is designed and built to reduce risks related to the emission of airborne noise to a minimum

### **4.3 SAFETY DATAPLATES AND GUARDS**

It is strictly forbidden (Fig.8):

- to tamper with or remove the evaporator cover that protects the user from the risk of cutting on the heat exchanger fins
- to remove the data plate fixed to the inside edge of the motor housing showing technical specifications (1) and earth connection warning (2)
- to remove the data plates on the evaporator unit cover near the electrical wiring inside the motor housing which warn the user to disconnect electrical power before working on appliance (3)
- to remove the data plate fixed inside the motor compartment indicating earthing (4)
- to remove the data tag fixed to the power cord showing the type of power supply (5)

The manufacturer declines all responsibility for safety of the appliance if the above recommendations are not observed.

### **4.4 OPERATING LIMITS**

The appliance is designed and built to work under the following environmental conditions:

Internationally, the climatic classes recognized for refrigerators and freezers are:

- SN or extended temperate class (ambient temperature from +10°C to +32°C);
- N or temperate class (ambient temperature from +16°C to +32°C);
- ST or subtropical class (ambient temperature from +18°C to +38°C);
- T or tropical class (ambient temperature from +18°C to +43°C).

The standard power supply must be 230V +/- 10% 50Hz.

## **Section 5: ROUTINE AND PROGRAMMED MAINTENANCE**

The information in this section regards the user, or other non-specialized personnel, and the routine maintenance technician.

### **5.1 BASIC SAFETY REGULATIONS**

We summarize the safety regulations already shown in heading 1.5 to ensure that the user or maintenance technician can perform the work in conditions of total safety:

- do not touch the unit with wet hands and/or feet
- do not use the appliance with bare feet
- do not insert screwdrivers or other pointed objects between guards or moving parts of the appliance
- do not pull the power cord to disconnect the appliance from the electrical mains
- before performing any cleaning or maintenance on the appliance disconnect it from the electrical mains by switching of the main switch and extracting the plug.

#### **5.1.1 Prohibited: Removal of Guards and Safety Devices**

It is strictly forbidden to remove guards or safety devices when performing routine maintenance work. The manufacturer disclaims all liability that may arise if this regulation is not observed.

#### **5.1.2 Indications on Emergency Measures in Case of Fire**

- disconnect the appliance from the electrical power socket or switch off the master switch on the electrical mains line
- do not use water to douse fires
- use powder or foam extinguishers

### **5.2 CLEANING THE APPLIANCE**

In view of the usage destination of the appliance, it is important to keep it clean for reasons of hygiene and health. The appliance is thoroughly cleaned in our factory before delivery. We recommend, however, to clean the interior of the appliance before use. Before cleaning the appliance make sure the power cord is disconnected.

#### **5.2.1 Cleaning the Interior and Exterior of the Appliance**

- cleaning products: water and non-abrasive neutral detergent. **DO NOT USE SOLVENT OR THINNERS**
- cleaning method: use a cloth or sponge soaked in a suitable cleaning product to clean the interior and exterior parts of the cabinet
- sanitation: do not use substances that could alter the stored products
- rinsing: use a cloth or sponge soaked clean water. **DO NOT USE WATER JETS**
- Frequency: once a week or at different intervals in accordance with the type of product conserved.

#### **5.2.2 Cleaning the Condenser**

The condenser will work less efficiently if it is obstructed with foreign material so it must be cleaned once a month. Before cleaning the condenser switch off the appliance, disconnect the power cord and proceed as follows:

Motor at base - open the control panel by slackening the screw positioned in the top part and pull it up  
Motor at top - use a step ladder for direct access to the condenser located at the top of the appliance.

Use an air jet or dry brush and, working with up and down movements (Fig.9), remove any dust or fluff that has deposited on the heat exchanger fins. If there are greasy deposits on the fins use a brush soaked in benzene or alcohol. After cleaning, start the appliance (with bottom motor models, remember to close control panel).

During this operation use the following personal safety measures: safety glasses, respirator mask, chemical resistant gloves (benzene - alcohol).

### 5.3 PERIODIC CHECKS

The following areas of the appliance or component assemblies require periodic checking (anniversaries):

- condition and efficiency of the door sealing elements
- condition of shelves in contact with the products
- condition of hinges and correct fixing of the doors
- condition of electrical cables and electrical parts

### 5.4 PRECAUTIONARY MEASURES FOR PROLONGED DISUSE

If the appliance is to remain unused for more than 15 days proceed as follows:

- switch off the appliance and disconnect it from the electrical supply
- clean the interior of the cabinet, shelves, drawers, baskets, runners and supports, paying special attention to critical areas such as articulations and magnetic sealing strips in accordance with the indications in heading 5.2.
- leave doors slightly open to prevent accumulation of residual humidity

### 5.5 PREVENTIVE MAINTENANCE

#### 5.5.1 Start-up after Prolonged Disuse

Before starting the appliance after prolonged disuse perform preventive maintenance. Clean the unit thoroughly as described in heading 5.2.

#### 5.5.2 Checking Warning and Control Devices

Check the correct running of the controls according to what is reported in the "Instruction and Maintenance Manual" enclosed.

We recommend you to take out a service or maintenance contract with your dealer covering:

- cleaning of the condenser
- keeping a check on the refrigerant charge
- checking complete cycle operation
- electrical safety

## **Section 6: SPECIAL MAINTENANCE AND REPAIRS**

All maintenance work not described in the previous sections must be considered "Special Maintenance".

Special maintenance interventions and repairs are to be performed exclusively by specialized technicians authorized by the manufacturer.

The manufacturer declines all liability in the case of work performed by the user or unauthorized persons, or if non-original spare parts are fitted to the appliance.



## Section 7: DIAGNOSTICS

The following problems may occur as indicated in the table below:

FAULT	POSSIBLE CAUSE	ACTION
Appliance does not switch on	switch set to - O - (or OFF) power failure other	set switch to - I - (press the button ON/OFF) check plug, socket, fuses, electrical line contact service department
Refrigeration unit does not start	set temperature has been reached defrosting cycle in progress  control panel fault other	set new temperature  wait for cycle to end, switch off and then on again contact service department contact service department
Refrigeration unit runs constantly but does not reach set temperature	room temperature too high condenser dirty refrigerant needs recharging condenser -fan not running door seals are not efficient  evaporator is coated with ice	provide better ventilation of room clean condenser contact service department contact service department check seals / make sure appliance contents are not obstructing doors defrost manually
Refrigeration unit does not cut out at set temperature	control panel fault temperature sensor defective	contact service department contact service department
Build-up of ice on evaporator	improper use control panel fault defrost sensor defective	see headings 3.4 contact service department contact service department
Water or ice deposits in the drip tray	drain outlet is clogged appliance not level	clean drain and drain outlet see heading 3.2



The symbol  means that this product should not be treated as a household waste.

To prevent potential negative consequences for the environment and health, be sure this product is correctly disposed of and recycled.

Further information on the disposal and recycling of this product, please contact your Distributor, after Sales Service or the waste Treatment Service.

