

## User and maintenance Instruction manual

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### ECF220 MK2 – Vaccine Freezer (-40°C freezer)

Make a record of the model number and serial number here:

**MODEL NUMBER:**

**SERIAL NUMBER:**

Find these on the label on the back of the refrigerators.

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## Safety Instructions

When using electrical appliances, basic safety precautions should be followed including the following:

<ul style="list-style-type: none"><li><input type="checkbox"/> This appliance must be properly installed and located in accordance with the installation instructions provided before it is switched on.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Keep fingers out of the 'pinch-point' areas: clearance between door and cabinet.</li></ul>
<ul style="list-style-type: none"><li><input type="checkbox"/> Do not climb, stand or hang on the shelves of the refrigerator.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Always turn off the appliance and isolate it (remove the plug) before moving it.</li></ul>
<ul style="list-style-type: none"><li><input type="checkbox"/> Do not store flammable vapors or liquid in the vicinity of this appliance.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> <b>We strongly recommend that any servicing be performed by a qualified individual only.</b></li></ul>
<ul style="list-style-type: none"><li><input type="checkbox"/> <b>Danger! Risk of child entrapment – Remove the door before you dispose of your appliance.</b></li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> This appliance contains refrigerant – this must be disposed of safely in accordance with the legislation in place at the time of disposal.</li></ul>
<ul style="list-style-type: none"><li><input type="checkbox"/> Do not remove the plug provided – Do not use an adapter plug or extension lead.</li></ul>	<ul style="list-style-type: none"><li><input type="checkbox"/> Never unplug the appliance whilst running – switch off the mains supply before removing the plug.</li></ul>



The freezer operates at extremely low temperatures. Care needs to be taken during loading and dispensing. Please use the correct personal protection gear when loading or dispensing. Protection gear to be worn but not limited to is waterproof cryo gloves. Frostbite or skin burns may occur if the correct protection isn't being used.

## **Installation instructions**

### **Handling**

- Units are supplied to enable handling most easily by forklift truck or pallet truck. Limit the lift by one individual to 25kg or less.
- Keep the unit horizontal.
- Do not tilt the unit more than 30 degrees.
- Keep the lid and latches closed when moving the freezer.
- Allow 24 hours after transportation before starting the compressor.

### **Positioning and cleaning**

- Position the unit with free air flow all around – keep all faces at least 100mm (4”) away from walls.
- Position the unit in the shade and ensure it is NEVER in direct sunlight.
- Clearance of at least 300mm from the top of the unit. Ideally there should be 600mm+ clearance above the top of the unit.

### **Leveling**

Ensure the unit is level when in position and before starting the unit.

### **Connection and turning**

- Allow 24 hours after transportation before starting the compressor.
- Plug in the unit and switch on – There are no user adjustable parameters on this unit.
- Once the freezer has reached temperatures of between -25 and -40 degrees centigrade the freezer can immediately be used (depends on application).

## Operating instructions

### Care and cleaning

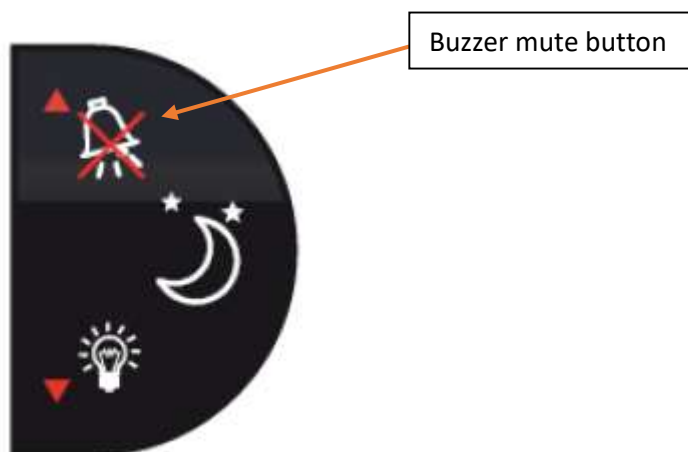
- Wipe the internal surfaces of the freezer with a clean, dry cloth.
- Never use abrasive or scouring materials to clean the freezer.
- Ensure the lid seals are clean and free from obstruction at all times.

### Baskets

- Baskets have been provided to enable separation and storage of vaccines and easy rotation of vaccines.
- Keep the baskets clean.

### Temperature control

- Due to the unique way that this unit operates there is no need for any user control. The unit will operate at  $-40^{\circ}\text{C}$  with a deviation of  $6^{\circ}\text{C}$  (ambient and load depended).
- The temperature controllers set point can be changed to allow the freezer to operate between  $-15^{\circ}\text{C}$  and  $-40^{\circ}\text{C}$ . Please contact the manufacturer if you wish to change the set point.
  - This unit is fitted with a high/Low temperature sensor. After first power on the unit will sound with an audible and visual alarm. This is normal. The mute button on the temperature controller can be pressed once to silence the alarm. The audible alarm buzzer will be silenced for 1 hour. After this time period has elapsed the compartment temperature would have passed the  $-25^{\circ}\text{C}$  and the audible and visual alarm will be off.



### Humidity

- All internal surfaces of the compartment are utilized as cooling elements – this means that heat can move more quickly from the compartment and that temperatures can be stabilized more easily within the refrigerator.
- During any lid opening in humid conditions it is natural for condensation to form on the internal surfaces of the freezer.

### Normal operation

- The freezer operates at a single set temperature which will appear on the temperature controller.

## **Maintenance tasks**

### **Daily**

- Check and ensure compartment temperature is within acceptable range (-34°C to -40°C).

### **Weekly**

- Wipe clean the inside of the freezer.
- Wipe clean freezer door seals.

### **Monthly**

- Check that the condenser is clean and air is free to move over condenser/compressor assembly.
- Check that the electrical cable and plug is in good condition and free from damage.
- Check that the wall socket is in good condition (where the refrigerator is plugged into the main power socket).

### **Defrosting**

A manual defrosting procedure should be performed periodically on the freezer compartment of the appliance to maintain its operating efficiency. Over time, as the lid is opened and closed, allowing in fresh air, water vapor from the air condenses on the cooling elements within the cabinet. When defrosting is required switch off the freezer and unplug it from the wall socket. Defrosting can now be done.

### **Transportation / Transport**

The unit can be transported and stored (when the product is inactivated) in ambient temperatures ranging from -30°C to +55°C and can be transported, stored and used (activated) in relative humidity from 5% to 95%.

### **Alarms**

1. If the compartment temperature rises above -25°C;  
Audible and visual alarm will be activated.
2. If the compartment temperature falls below -50°C  
Audible and visual alarm will be activated

### **Diagnosing a problem**

1. If the temperature indication on the freezer compartment goes below -50°C call a maintenance engineer to look at the thermostat control.  
If the temperature rises above -25°C then:
2. Check the lid is closed and sealing properly – If seals are damaged report this and get the seals changed.
3. Check the mains supply.
4. Check if the freezer has been receiving electricity within the allowed tolerance of voltage output supply in your country.
5. Check connection to the mains.

If 2,3,4 & 5 all appear to be in order then remove the vaccines to a safe location and, report the problem.

## **Technical Specifications**

<b>Model</b>	<b>ECF220 MK2</b>
Product measure (mm) (H x W x D)	950 x 800 x 660
Gross volume (L) Freezer	85
Weight (Kg's) – Packaged	85
Voltage (V)	230
Power consumption (kWh)	0.16
Frequency	50Hz
Refrigerant	Obtain from manufacturer
Refrigerant charge (Grams)	Obtain from manufacturer

## **Refrigeration Circuit Product Disposal WEEE Regulations**



- This symbol means that the product is classed as Electrical or Electronic Equipment and is covered by the European Union WEEE Regulations.
  
- You should take great care in disposing of any such products and MUST NOT under any circumstances dispose of it with your normal waste as they pose a great risk to your community if they are accidentally sent for disposal with landfill.

## **Recycling Information**

Refrigerant: Must be recovered and re-used.

Outer casing: Chromadek.

Foam: Polyurethane Foam

Plastic: Various – Contact manufacturer for advice.

## **Customer support**

Contact manufacturer:

Zero Appliances

Mission Terrace,

Chloorkop Ext. 44,

Kempton Park

Johannesburg

South Africa

Tel: +27 10 207 1600

Fax: +27 10 207 1675

Website: [www.zeroappliances.co.za](http://www.zeroappliances.co.za)