

Frequently Asked Questions

There is moisture on the glass door of my vaccine refrigerator

Primarily this is condensation generated by moisture in the air being condensed on a colder surface. Because the glass door is colder than the surrounding environment, the moisture has been attracted to the glass. This is the same effect that you may see in your house over winter when condensation forms on the inside of your windows.

It is recommended that the glass be wiped down to remove the moisture as the fridge will be also trying to cool the water on the surface decreasing the efficiency of its operation.

How do I prevent it from reoccurring?

Use of a dehumidifier or heat pump to warm and dry the air is usually recommended.

There is ice in the back of my vaccine refrigerator

All Rollex Medical / LEC vaccine refrigerators are programmed to defrost a minimum of 3 times per day.

Ice build-up can be caused by a number of factors and experience has shown us that overstocking, poor airflow or the refrigerator doors being left ajar are the primary cause. Vaccines and stock should be stacked in such a way as to allow airflow between stacks of vaccine (i.e. do not create a wall or block of vaccines which will inhibit air flow). Rarely, ice build-up can be caused by a problem with the refrigeration system.

Solid bottom containers or trays should not be placed within the refrigerator.

Once the ice has built up to such an extent, the automatic defrost will be unable to remove the ice as it will not melt sufficiently in the allocated time.

In extreme cases the ice will block the entire evaporator, severely restricting the air flow in the cabinet. It can also stop the internal circulation fan leading to the fan motor burning out and requiring replacement of the fan. You may pick up higher than normal internal temperature on a data logger if this is the case despite the minimum and maximum temperatures in the fridge memory remaining normal.

Ice also acts as insulation and prevents the refrigerator from cooling efficiently and will overwork the compressor which may result in a shortened lifespan or serious damage occurring to the compressor.

In such cases the vaccines should be removed from the refrigerator and placed in appropriate temporary storage and the fridge should be disconnected from the power supply and the door left ajar. Manual defrost may take several hours depending on the climate.

At the rear of the unit, the water falls straight into the evaporation tray, these may require temporary blocking of the drain hole which is located inside the cabinet and using a sponge to remove the water or temporarily relocating the fridge to a wet floor area.

When all ice has been removed from the cabinet, replace the drain tube to its normal position and restart the fridge. You should hear the internal circulation fan start operating after you reconnect the power supply. If not, contact Rollex Medical.

The alarm may sound after 10 minutes and this is normal, just cancel the alarm and reset the memory when the fridge is back to normal operating temperature.

There is water on the floor under my fridge or in my fridge

Check for condensation on the door, this may be the cause. Otherwise check for ice in the back of the refrigerator, it is likely that the internal drain has blocked and the water has pooled inside the fridge and run out of the door. Follow the instructions for removal of the ice build-up.

Sometimes it can also be caused by a power cut / door being left ajar and some ice in the cabinet defrosting and overflowing the evaporation tray above the compressor at the rear of the fridge. You may need to extract the excess water from the tray and wipe up the floor.

I have recorded a too low / too high temperature in the memory

Your vaccine refrigerator is programmed to run between 2°C & 8°C in normal operation. In some climates when the ambient temperature drops below 10°C the fridge will slow down and not operate as often due to it not warming as quickly. If the ambient temperature is too low a fridge can fall below 2° as a fridge cannot warm itself up. You may need to warm the room with a night store heater or heat pump to maintain normal operating conditions. This may result in a low recording and it may be worth checking your data logger. The data on your logger, if it is programmed correctly, will tell you the approximate time of the event, the duration and the temperatures recorded.

- If the audible alarm is sounding or the display is flashing AL, LO or HI contact Rollex Medical and your immunisation coordinator immediately.

- If the fridge has gone above 8°C, this can also be considered a normal part of day to day operation. Was the refrigerator restocked or a stock take done? Is it flu season and has the fridge been opened repeatedly in short succession? Opening the fridge during defrost or shortly after a defrost operation has completed can also result in a rise in temperature.
- Also consider the possibility of a power cut.
- Check the current display temperature, is it normal? The high temperature in memory merely indicates an event sometime since the controller memory was last reset. The data on your logger if it is programmed correctly will tell you the approximate time of the event, the duration and the temperatures recorded.
- If the alarm was sounding and has been silenced and the fridge is not returning to normal operating temperature within 15 minutes contact Rollex Medical. Remember to check the display temperature, not the memory unless you have correctly reset it.

If you are concerned by a temperature breach, check your data logger if available, and contact your local immunisation coordinator.

My Daily Min Temperature seems to be the same most days

Firstly check that you are completing the Fridge Temperature reset correctly.

The Refrigerator has been programmed to run to a set point of 3.5 degrees (bottom of the temperature graph). When the fridge is going through a cycle the unit's compressor will turn on and cool until it reaches this setpoint of 3.5 degrees. Once the set point has been reached the compressor will turn off to warm 2 degrees (approximately – this will depend on the controller settings) before the cycle commences again and compressor turns back on to begin cooling. This

means in normal operation the temperature will fluctuate between 3.5 and 5.5 degrees.

Please note that the displayed temperature on the LCD screen is actually an averaged reading based upon a software algorithm that aims to simulate the behaviour of a 10ml vaccine sample. Please also note that the values used for the fridge control (i.e. not display) are not averaged.

There's a difference between the high & low from the display memory and my data logger

Firstly check for ice on the evaporator plate and cover in the back of the refrigerator cabinet. A quick visual check is sometimes enough, or reach in with one hand, with your fingers above the drainage channel and curl them up behind the plates in the rear of the fridge. You should be able to feel the bottom of the cover plate, the evaporator plate and the rear wall of the fridge freely. In newer models you will only feel the cover plate and the rear wall of the fridge. Also check that you can hear or see that the internal circulation fan is operating. If the fan is not working, this will have a serious impact on the fridge operation and cabinet temperatures within.

It is normal to record temperatures in the cabinet up to 2° higher depending on the size of the cabinet and the amount of stock and the placement and type of logger used.

It would be expected that when logging near the refrigerator probe that temperatures should be within 0.5° of each other.

Can we validate the Fridge Controller Probe

At the time of purchase, and during the annual preventative maintenance services, Rollex Medical technicians validate the refrigerator's control probe

using a calibrated datalogger at the time of completing the service. This control probe is the source of the min/max recorded value, therefore it is validated as part of normal maintenance schedules. Due to the averaging algorithm on the fridge controller referenced above, it is not possible or recommended to perform a direct temperature comparison to a datalogger (simple validation); this must be performed by a fridge technician or other appropriate third party testing agent.

Does my ETemp Datalogger require validation

The Rollog eTemperature datalogger kit uses the thermocron datalogger, which is calibrated for its lifespan from the factory. The calibration certificate can be found by accessing the logger and clicking "Calibration Certificate" within the eTemperature software.

There's a high temperature or spike on my data logger

This can be normal. If the fridge door was open at the time of a logger recording or had been open shortly beforehand for an extended period, the temperature within the cabinet will have temporarily increased before the refrigerator has come back into normal range. If there are several subsequent recordings (depending on recording frequency), was the door left ajar or was there a power cut? Otherwise check for ice build-up, and the circulation fan operating correctly.

The important thing is the recovery time, on a logger recording frequency of 20 minutes one reading may be high because of the above factors. The readings beforehand were fine and the readings after the event were also ok. This means that the event was of a short duration.

If using a more frequent data recording you can expect to see more variation due to the refrigeration cycle and also spikes when the refrigerator defrosts.

The display on the refrigerator says DEF

This stands for defrost and is part of the normal operation of the refrigerator. This will occur a minimum of 3 times every 24 hours. Opening the fridge during defrost or shortly after a defrost operation has completed may cause a high temperature to be recorded in the refrigerator or data logger memory.

The fridge dropped below 2 but the alarm didn't sound

For the audible alarm on the vaccine fridge controller to sound, the event must be continuous, typically this is 10 minutes below 2°, if the temperature returns above the low alarm point within this time there is no audible warning however the lowest temperature is recorded in the controller memory. As mentioned earlier this can be because of low ambient temperatures, another scenario is where the fridge cooling cycle has been extended due to frequent door openings or recovery from a higher temperature, this may cause the cabinet temperature to briefly drop below the normal operating temperatures while the cabinet stabilises.

The fridge went above 9 but the alarm didn't sound

For the audible alarm on the vaccine fridge controller to sound, the event must be continuous, typically this is 10 minutes above 8°, if the temperature returns below the high alarm point within this time there is no audible warning however the highest temperature is recorded in the controller memory.

The power has just gone off... How long will the vaccines be ok for?

This will depend on the cabinet temperature at the time of the power cut, it will also depend on the ambient temperature that the refrigerator is situated in. Glass door refrigerators may warm slightly quicker than a solid door model. If the event is expected to be of short duration, lock the refrigerator door and DO NOT open it, until power has been restored and the cabinet temperature has returned to normal conditions. The refrigerator controller may go into alarm 10 minutes after the power has been restored.

If the power outage is expected to be of a longer duration then follow your emergency plan, this may mean relocating your product to another working refrigerator in another location or temporary storage in a correctly packed and insulated chilly bin. Contact your immunisation coordinator for further advice.

The power has just gone off... Do I have to reprogramme the controller?

The settings in the controller are permanently stored and do not require reprogramming after a power cut or having the fridge relocated.

The power went off and the refrigerator didn't alarm

When the power goes off, all functions of the refrigerator are inactive unless an emergency supply or UPS is fitted. When power is restored, the controller will reinitialise and then restart the compressor after a short period. Depending on the cabinet temperature and the efficiency of the refrigerator the audible alarm will not sound if the cabinet reaches normal operating temperature within 10 minutes. The high temperature

will be recorded as the controller reinitialises and will be stored in the memory until it is next accessed, recorded and reset.

Please note that the vaccines may have been exposed to higher temperatures if the duration has been some time, the better temperature data will be available from a temperature logger within the refrigerator cabinet if fitted. If the temperature takes longer than 10 minutes to return below the upper alarm point, the audible alarm will sound until the correct button on your controller is depressed.

Consult the manual of your refrigerator for the correct operation or visit www.rollexmedical.co.nz/support for a PDF copy or data sheet.

The door of my refrigerator doesn't self-close

We appreciate that medical centres are busy and hectic places at times. The refrigerator doors do not have self-closing mechanisms but all of our current models have adjustable front feet on the base of the cabinet. It is recommended in the manual that the refrigerator is installed on a level flat surface and carpet is not generally recommended. By using a furniture cup under each of the front feet to tilt the cabinet body back slightly you can ensure that the door will self-close in the majority of cases. Fit the cups or adjust the feet and open the door 1cm, then let it go and the door should close automatically. This should ensure that the door does not get left accidentally ajar.

We want to relocate the fridge

Turning off the fridge and relocating is not a problem. If the refrigerator remains upright during the process the power can be restored as soon as convenient. If the refrigerator is transported sideways then the refrigerant and compressor oil must be allowed to settle before reconnecting power to the unit. Contact us for advice.

The refrigerator will not require recalibration after shifting

If you are changing address, please let us know of your new address and contact details so that we may update our client records.

Plug In Residual Current Device (RCD) Warning

Plug in RCD devices are different to a switchboard fitted device providing electric shock protection to body protected areas. The essential difference is that when the power goes off, a plug in RCD device **does not** reset and restore the power, whereas a switchboard mounted device will only trip due to an electrical fault or short circuit. **A condition of the warranty is that a surge protector is fitted to reduce the effect of power spikes which can damage your unit. A RCD unit does not qualify and will void the warranty if used.**

We want to use a UPS unit

Rollex Refrigerators and Freezers must not be plugged into a UPS unit that produces a simulated sine wave AC output. The UPS must feature a pure sine wave output when operating in battery backup mode. If using a UPS unit please check with Rollex prior to use as if not suitable they can cause failure.