



IntelliCold® Pharmacy Refrigerator RLDF/G19

Operating Instructions



WEEE: Disposal at end of life.

This equipment, when being disposed of in an EU Member State, is subject to the Waste Electrical and Electronic Equipment Regulations (WEEE) and 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. This refrigerator contains flammable insulation gases and must be disposed of in the appropriate way by competent persons. Ensure that none of the refrigerant circuit pipes are damaged prior to disposal.

The symbol below on the appliance or accompanying documents indicates that this refrigerator should not be treated as ordinary waste but must be taken to a special collection centre for the recycling of electrical equipment. For more information regarding the treatment, recovery or recycling of this product, contact your competent local office, electrical waste disposal or vendor from whom you purchased the refrigerator.



As this item is designed for medical or scientific 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.



WARNINGS

Servicing and repairs must be carried out by a suitably qualified engineer.
Only engineers who have been trained in the safe handling and use of hydrocarbon refrigerants can work on the refrigeration system.

If you suspect a leak contact the manufacturer or its service agents immediately. Do **not** touch the refrigerant, it can cause severe eye irritation, redness, tearing, blurred vision, and possible freeze burns. Contact with evaporating liquid may cause frostbite or freezing of the skin.

If the power supply cord is damaged, it **MUST** be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.

Do **not** use mechanical or other means to accelerate the defrosting process.

Keep clear of obstruction all ventilation openings in the appliance enclosure.

This refrigerator is climate class 4 and is designed to operate at +16°C to +30°C ambient room temperature.

Do **not** damage the refrigerant circuit.

Maximum shelf loading 40 Kg/m²

The noise level in normal operation is lower than 70 dB.

Do **not** use electrical appliances inside the refrigerator.

Do **not** store explosive substances such as aerosol cans with flammable propellant in this appliance.

Labcold RLDF/G refrigerators are designed for the storing of pharmaceuticals, medicines and laboratory products and are for professional use only by suitably trained, competent persons.



This refrigerator contains a flammable gas.

This refrigerator contains gas under pressure which may explode if heated.

The refrigerator MUST NOT be located in a room or area with a volume less than 10m³.

Original instructions - Version 5 11.2021

Need calibration?



Labcold are a UKAS calibration laboratory #8898



We can calibrate your refrigerator AND your independent thermometer

We don't just use UKAS traceable equipment, we use UKAS methodology and training for assured technical competence

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ⓘ IMPORTANT: These operating instructions contain information essential to the safe and reliable operation of your refrigerator. Failure to use your refrigerator in accordance with these instructions may invalidate your warranty.

PLEASE RETAIN AND KEEP IN A SAFE PLACE FOR FUTURE REFERENCE

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Before Use

Thank you for purchasing a **Labcold IntelliCold®** Pharmacy Refrigerator. Your fridge has been purposely designed and precision built for the safe storage of vaccines, samples, reagents and other temperature sensitive pharmaceuticals.

Although great care has been taken in the manufacture of your refrigerator, damage can occur in transit. **Before** using for the first time please remove all packaging and give your fridge a thorough visual inspection. If any damage is suspected, please contact your retailer immediately upon receipt of the product. **Failure to do so may invalidate your warranty.**

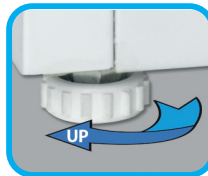
If storing vaccines in this refrigerator, please read the Vaccine Storage Guide page 26

Installation

Place your fridge in the location in which it is to be used.

ⓘ Do not place your fridge near a direct heat source or direct sunlight and leave at least 6cm all round the unit for adequate ventilation. **Failure to do so may affect the performance of your refrigerator.**

Clean your fridge with mild soapy water to remove any dust that may have accumulated during manufacture and dry thoroughly. Ensure your fridge is level by adjusting the feet at the bottom of your fridge.

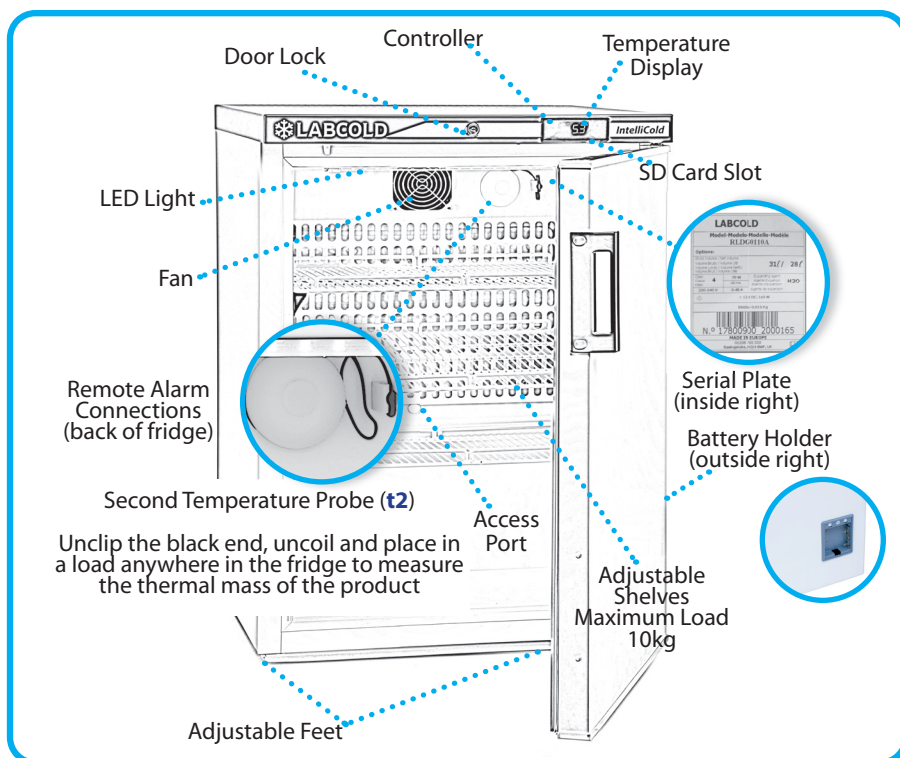


For models RLDF/G0519, 1019 and 1519, insert shelves by placing clips in the racking and resting the shelf on top. When positioning the shelves, please remember to keep adequate room for air circulation. **Failure to do so may cause hot spots in the fridge.**

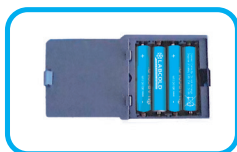


YOUR REFRIGERATOR SHOULD NOW BE LEFT FOR AT LEAST SIX HOURS BEFORE CONNECTING TO POWER FOR THE FIRST TIME

A Closer Look



Alarm Battery Back Up



Insert 4 AA long life alkaline batteries in the holder located on the right side of the refrigerator.

The batteries will power the controller to facilitate the collection of data and alarm **immediately** in the event of a power failure.

ⓘ Batteries will **only** power the controller not the fridge.

Remote Alarm Connections



The remote alarm connection is located at the back of the fridge. If you have a **Labcold** repeat alarm kit this is where the wires need to be connected. Please see the separate instructions for more information.

**The maximum rating for the connection is 1A 30Vdc.
DO NOT CONNECT TO MAINS VOLTAGE**

3 IntelliCold® Controller

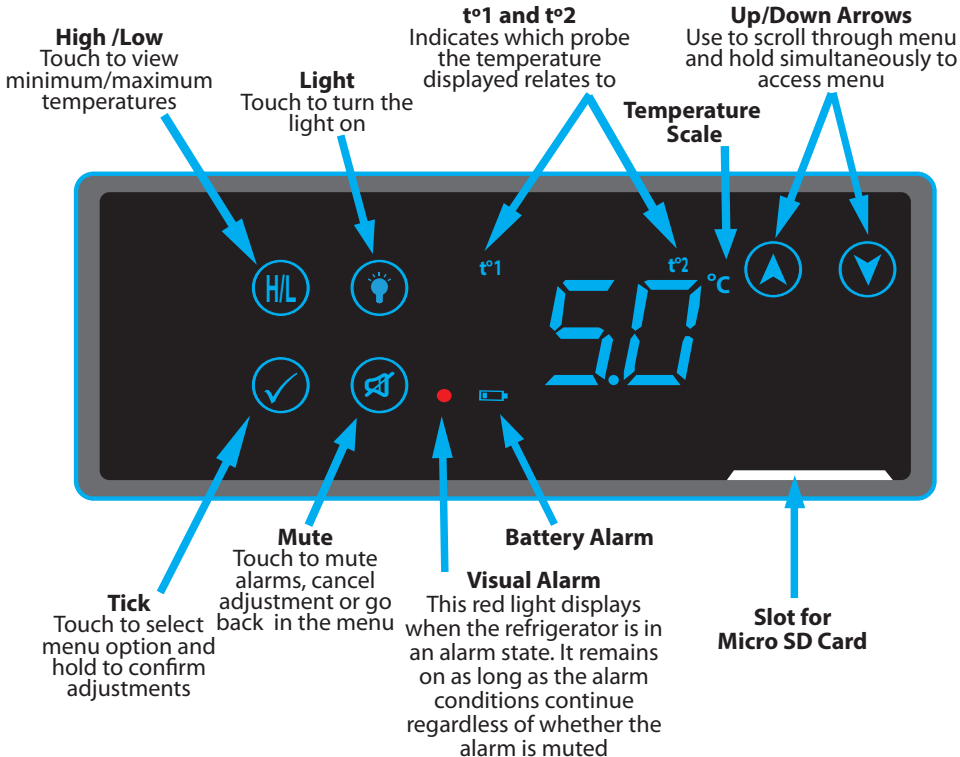
The IntelliCold® controller fitted to the front of your refrigerator has been designed by Labcold for the safe storage of vaccines, medicines, samples and reagents.

It is fitted with an exclusive touch controller that displays the temperature detected by two temperature probes, one located in the back of the fridge and one you can position yourself, for example inside a packet to monitor a load temperature.

Unlike other refrigerator controllers which have buttons you press with your finger, this one responds to the electrical current in your skin like a mobile phone or tablet. When you place your hand over the controller it will reveal the various icons/buttons allowing you to access different functions.

ⓘ Like a mobile phone screen it may not work if you're wearing gloves.

Where the instructions say 'touch' this means tap the icon/button like you would an app on your phone. 'Hold' means leave your finger on the icon/button. The controller emits a sound to confirm it has registered your touch, again similar to a mobile.



Plug In and Switch On

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Before plugging in your **Labcold** refrigerator for the first time make sure the power cable is free from damage and check that your voltage corresponds to that on the serial plate.

It is recommended that you **do not** use extension cords or multiple socket adapters. Make sure the power cable is not bent, pinched or compressed and that it can be easily accessed.

When you first plug your refrigerator in it will alarm and all the icons/buttons will be illuminated.

Setting the Date and Time

This needs to be done as soon as the refrigerator is plugged in. Your fridge does **not** have a GPRS/wireless connection, so this will need to be repeated if the refrigerator experiences a power loss and no batteries are fitted. We recommend fitting batteries to the fridge so it will alarm and record internal temperatures should it become disconnected from a mains power source.

- ⓘ The time should **NOT** be changed when the clocks change to GMT or BST as this may cause stored data loss.

To set the date you need to do the following:



The controller will flash **Y** followed by 2 digits, for example **Y98**. Use the up and down arrows on the right hand side to adjust to the current year, so if it is 2019 adjust the digits to **19**. If you hold the arrow it will scroll through the numbers, if you touch the arrow(s) the value will increase/decrease by one unit at a time. When the controller is showing the correct year, touch the tick icon/button and it will store that setting and then ask you to set the month.

The controller will now flash **■** followed by 2 digits, for example **■98**. Adjust the digits using the arrow icons/buttons as above, so if it is June adjust the digits to **06**. When adjusted, touch the tick icon/button as before.



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After setting the month you next need to set the day. The controller will now flash **d** followed by 2 digits, for example **d98**. Adjust the digits using the arrow icons/buttons as above, so if it is 21st June adjust the digits to **21**. When adjusted, touch the tick icon/button as before.



After setting the day you next need to set the hour. The controller has a 24 hour clock and will now flash **H** followed by 2 digits, for example **H98**. Adjust the digits using the arrow icons as above, so if it is 2 O'clock, adjust the digits to **14**. When adjusted, touch the tick icon/button as before.



After setting the hour you next need to set the minutes. The controller now flash **n** followed by 2 digits, for example **n98**. Adjust the digits using the arrow icons/buttons as above, so if it is half past two, adjust the digits to **30**.



When adjusted, hold the tick icon/button until the display changes to show the temperature inside the refrigerator. The red alarm light will display because the inside of the refrigerator hasn't had time to cool down yet and after a few seconds, the controller will alternate the temperature screen with a **t°1H** high alarm screen. The alarm will sound when this screen is displayed.



Muting the Alarm

To mute the alarm, touch the mute icon/button. Any active alarms will then be muted and the alarm will stop sounding.



Muting an alarm will not cancel it, should the alarm condition remain uncorrected the alarm will sound again after 15 minutes. To change the interval between muting and the alarm sounding again please see section **Alarm Time Out** page 8.

ⓘ After 30 seconds the icons/buttons will disappear from the front of the controller and it will display the temperature alternately with any active alarms. To activate the icons/buttons again, put your hand across the controller and they will become active after 2 seconds of appearing.

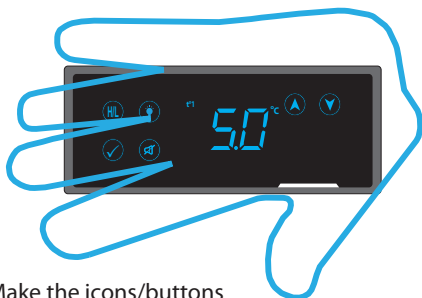
ALTHOUGH THE REFRIGERATOR WILL REACH 5°C WITHIN ABOUT AN HOUR, YOU SHOULD LEAVE THE FRIDGE RUNNING FOR 24 HOURS BEFORE FILLING WITH TEMPERATURE SENSITIVE VACCINES AND PHARMACEUTICALS.

Accessing the Menu

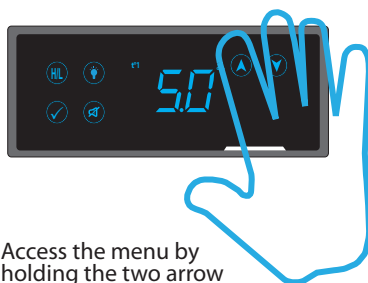
While your refrigerator is cooling down without contents, it is a good time to set up all the functions you want to use on your fridge. Some functions you can only view, not change.

To enable/view functions, first you need to wake the controller menu. This is done by placing your hand for at least 2 seconds across the controller. This contact will make the icons/buttons visible.

To access the menu, hold the two arrow icons/buttons on the right hand side of the controller simultaneously for at least 2 seconds.



Make the icons/buttons visible by placing your hand across the controller for at least 2 seconds



Access the menu by holding the two arrow icons/buttons for at least 2 seconds

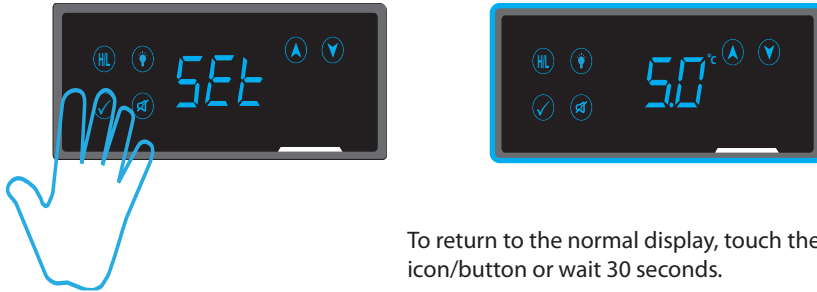
7 Viewing the Set Point



When you access the menu the first menu option is to view the set point, see above.

The set point is one of the parameters that you **can not** change but you can view it. Your **Labcold IntelliCold®** pharmacy refrigerator leaves the factory with a set point of 5°C as advised by the Green Book chapter 3 page 27 and to prevent this being altered accidentally, the set point can **only** be changed by a **Labcold** engineer. If you need the set point changed please contact the **Labcold** service team on **01256 705 580** or service@labcold.com

To view the set point, touch the tick icon/button when the **SEt** screen is displayed and the controller will display the set point temperature.



To return to the normal display, touch the mute icon/button or wait 30 seconds.

Viewing Software Version

This is another function that you cannot change, but you may be asked about the software version if you need to contact us about an issue.

If the controller has reverted to the normal display, hold the arrow icons/buttons as above, if you are already in the menu, touch the up and down arrows as required until you get to a screen with **SFt** on it. Touch the tick icon/button as before and it will display a number. Again touch the mute icon/button or wait 30 seconds for the display to revert to normal.



Centigrade/Fahrenheit

Should you wish to change the temperature scale from centigrade to Fahrenheit enter the menu as before and use the arrow icons/buttons until you get to a screen displaying **C F**. Touch the tick icon/button to enter this function as before.



The **C** will flash, touch one of the arrows until the display shows **F**. Hold the tick icon/button to confirm your selection and the screen will change from **F** to the the normal temperature screen. The temperature will now display in Fahrenheit.

ⓘ The temperature data for the Micro SD card will **always** be saved using the centigrade scale.

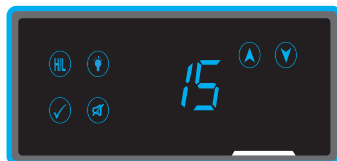
Alarm Time Out

The alarm time out function allows you to change the time interval between the alarm being muted and the alarm sounding again.

Access the menu by holding the two arrow icons/buttons simultaneously and use either one of them to scroll through options until you get to a screen that shows **Ato**.



Touch the tick icon/button to enter the function. The display will now flash with the current number of minutes there are between the alarm being muted and sounding again. The factory setting is 15 minutes as shown below.

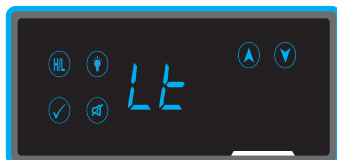


Use the arrow icons/button to adjust the interval in 5 minute units up to a maximum of a 30 minute time out. When you have set it to the length of time you require, hold the tick icon/button and the screen will revert to **Ato**. You can then either leave it alone or hold the mute icon/button and the controller will then revert to the normal temperature display.

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Internal Light

The internal light comes on when the door opens and turns off when it is shut. It can be changed so the light is on or off all the time. To change the setting, access the menu in the usual way by holding both the arrow icons/buttons and scroll through the menu until you get to the **Lt** screen or hold the light icon/button which will take you straight to the **Aut** screen.



Touch the tick icon/button as before to access this function and the screen will show **Aut**. This is the default setting described above. To change the setting to the light being on all the time touch an arrow icon/button until the screen displays **on**. Once selected, hold the tick icon/button until the display reverts to **Lt**. To change the light operation to **not** coming on at all, select **OFF** instead and again hold the tick icon/button until the screen reverts to **Lt**. You can either touch the mute icon/button or just leave the controller alone and the screen will return to the normal temperature display.

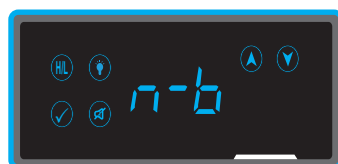


Battery Alarm

The battery alarm is enabled by default. If you put 4AA batteries in your refrigerator the alarm will sound if the batteries are faulty, removed or there is a mains power failure. **Labcold** strongly recommends that you fit batteries to your **IntelliCold**® pharmacy refrigerator for maximum cold chain safety, however, should you decide not to, you will need to disable the alarm please see **Turning the Battery Alarm Off** opposite

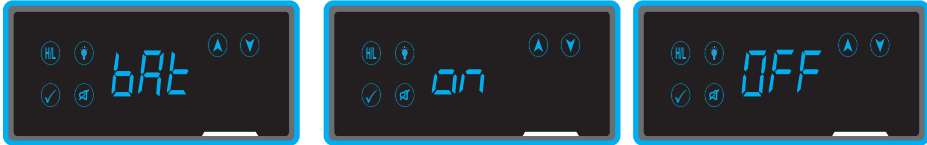
The alarm shows on the normal display as a battery symbol which alternates with a screen showing **n-b**. The alarm will sound when **n-b** is displayed. This alarm can be muted by touching the mute icon/button while the **n-b** screen is displayed. The visual alarm will remain and the screen **n-b** will still alternate with the temperature display. Unless you install batteries the alarm will sound again after the time out interval is exceeded. (see page 8).

Battery Alarm



Turning the Battery Alarm Off

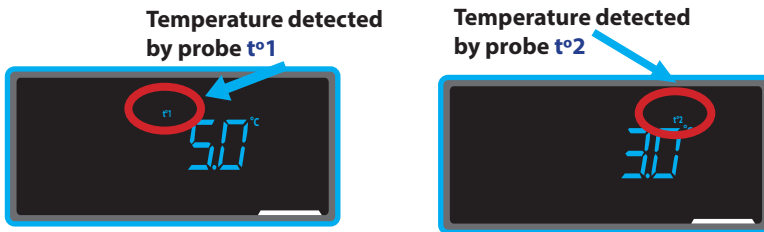
If you do not fit batteries you will need to turn this alarm to **OFF**. To do so, hold both the arrow icons/buttons to enter the menu. Scroll through until you get to the screen that shows **bAt** and touch the tick icon/button. Touch the arrow icon/button to change the screen from **on** to **OFF** and hold the tick icon/button until the display reverts to **bAt** to confirm the change.



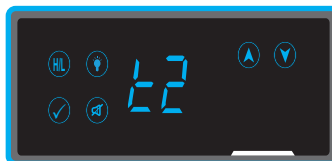
Temperature Probe t^o2

There is a secondary temperature probe at the back of your refrigerator. It is a 'wandering probe' you can uncoil and move anywhere in the fridge, for example, placing it in a simulated load to measure the thermal mass of the product. We recommend it is enabled as data collected by this probe may be required for compliance and quality reasons etc.

Like probe **t^o1** the controller will alarm if it detects that the temperature is lower than 2°C or higher than 8°C where it is placed. The temperature detected by this probe will display after the **t1** screen. You can tell which one is which because a small **t^o1** or **t^o2** will appear above the temperature displayed. Likewise you will be able to tell which probe is alarming as the high or low alarm will be prefixed by **t1** or **t2**.



To **enable** the probe, enter the menu by holding the two arrow icons/buttons simultaneously and scroll until you get to a screen that shows **t2**.



Touch the tick icon/button to enter the **t2** menu and the screen will display **OFF**. Touch the arrow icon/button to reveal the **on** screen and hold the tick icon/button to confirm.

11 Viewing Alarm Limits

You can view the factory set alarm parameters or limits. These limits ensure that you are alerted should your pharmaceuticals experience temperatures outside those recommended by the Green Book, Chapter 3 page 27 and you **cannot** change them. Should you need them to be altered please contact our service team on **01256 705 580** or email service@labcold.com.

To view the parameter, access the menu by holding the two arrow icons/buttons and scroll through the options until you come to screen **Lnt**.



Touch the tick icon/button to access the function and the controller will show the high/low temperature parameters for each probe.

Reviewing the Date

To review or change the date/time enter the menu by holding the two arrow icons/buttons simultaneously and scroll through the menu until you get to the **d-t** screen.



Touch the tick icon/button to access the function and use the tick icon/button to view the year, month, day etc .If you want to change any of the settings, use the arrow icons/buttons to change the number and hold the tick icon/button to confirm the change as described on pages 4 and 5.

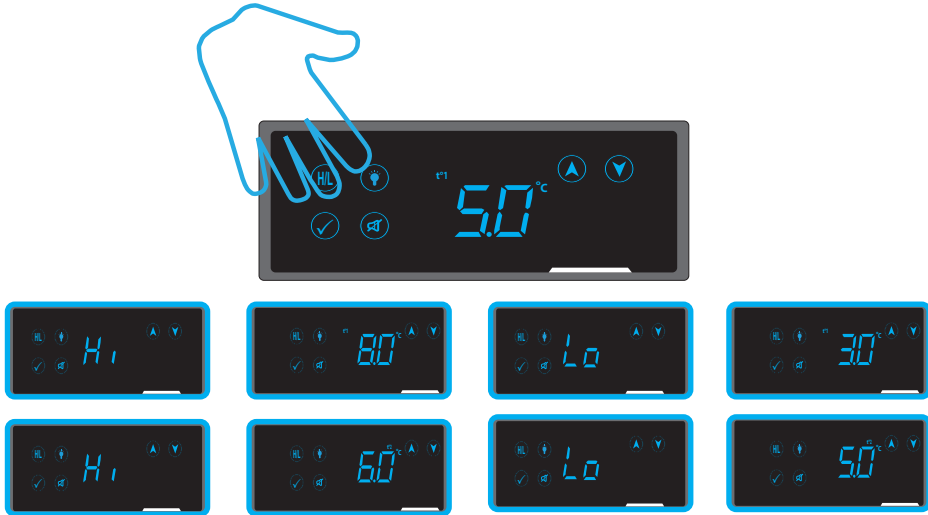
- ⓘ Changing the date/time may lead to data stored by the controller being overwritten. We recommend that once the date/time is set it should **not** be altered unless absolutely necessary, for example if the controller experiences a power issue and batteries aren't fitted. If you are going to use the Micro SD card function, make sure you have downloaded the **latest** data before adjusting the date or time.

Your IntelliCold® pharmacy refrigerator is now set up and ready to use once it has had 24 hours of cooling.

Before loading and using for the first time, make sure that you reset your minimum/maximum (Hi/Lo) temperature readings

Min/Max Temperatures

To view your high/low temperature make the icons/buttons are visible by putting your hand on the controller as described in page 6. Touch the high/low icon (HL) and the controller will display the minimum and maximum temperatures recorded by probe **t°1** and repeat this process for probe **t°2** (if enabled). You can tell which probe the high and low temperatures relate to because **t°1** or **t°2** will display above the temperature.

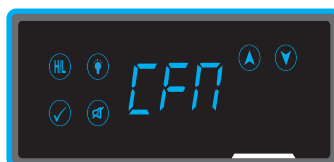


After showing the temperatures, the controller will revert to the normal display and the icons/buttons cease to be active.

- ⓘ The temperatures recorded by the two probes may differ because they are taking readings from different parts of the fridge, especially if probe **t°2** is placed in a simulated load.

Min/Max Reset

To reset the minimum/maximum temperatures to conform with DH Green Book Guidance page 29-30, hold the high/low (HL) icon/button until **CFR** flashes on the display. Hold the tick icon/button until the display reverts to the normal temperature screen and the minimum/maximum temperatures will be reset. Repeat this for probe **t°2** (if enabled). However, if you **don't** want to reset the temperatures, touch the mute icon/button and you will be returned to the normal temperature display.



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Alarm Guide

Your IntelliCold® Pharmacy refrigerator is fitted with audio and visual alarms to help keep the contents safe. All can be muted but unless the alarm condition is resolved, the alarm will return after the time out interval (see page 8).

The controller will show a code to explain why the fridge is alarming. An alarm code screen alternates with the usual temperature screen. For all temperature, door and mains failure related alarms, a red dot will illuminate, regardless of which screen is currently displaying. For battery related alarms a battery icon will display.



t1H - This will display when probe **t1** detects that the air temperature has exceeded 8°C. Because high temperatures can adversely affect the contents of your fridge, it should always be investigated. The alarm will also sound when this screen is displayed.



t1L - This will display when probe **t1** detects that the air temperature is below 2°C. Because low temperatures can adversely affect the contents of your pharmacy fridge, it should always be investigated. The alarm will also sound when this screen is displayed.



t2H - This will display when probe **t2** detects that the temperature has exceeded 8°C. Because high temperatures can adversely affect the contents of your fridge, it should always be investigated. The alarm will also sound when this screen is displayed.



t2L - This will display when probe **t2** detects that the temperature is below 2°C. Because low temperatures can adversely affect the contents of your pharmacy fridge, it should always be investigated. The alarm will also sound when this screen is displayed.



d-o - Door open alarm which displays if the door is left open for more than 90 seconds. The alarm will also sound. It does not cancel when the door is shut so you need to touch the mute icon/button when the screen shows **d-o**. The red light will go off to show it has been cancelled.



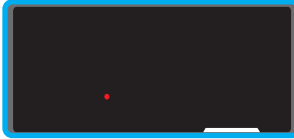
L-b - This warns you that the controller has detected that the batteries are getting low. This alarm will **only** activate if batteries are installed and the battery alarm is enabled. See page 9 for instructions on how to do that. The alarm will also sound when this screen is displayed.



n-b - You will see this if batteries are **not** installed and the battery alarm is enabled, for example when you first plug the refrigerator in and haven't yet installed batteries. If you **do not** want to install batteries, you can disable this alarm, see page 10.



n-P - You will see this if batteries are installed. It means that there has been a loss of mains power. The alarm will also sound.

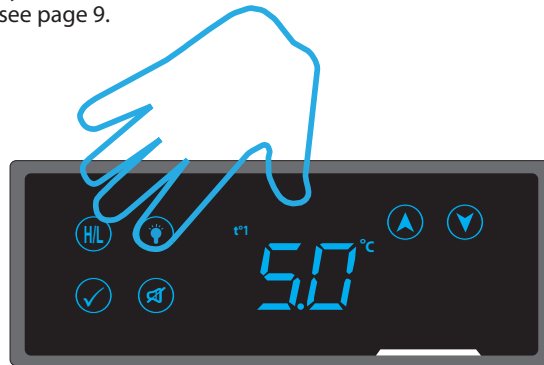


If batteries are installed and there is a mains failure the red dot will display after the **n-P** alarm as the fridge goes in to hibernating mode. This is to conserve power so the controller can continue to record refrigerator and temperature data for the duration of the power outage.

Light Icon/Button

The light icon/button allows you to turn the light of the refrigerator on when the light setting (**Lt**) is in Auto mode.

To do so you will need to illuminate the icons/buttons by putting your hand over the controller as described on page 6 and then touch the light icon/button. The light will turn on even if the door is shut. Please note it will **not** override any settings programmed by entering the **Lt** function on the settings menu so, if the light is set to **on** you can't turn it off using the light icon/button alone, you have to enter the **Lt** menu. For information about how to change the light (**Lt** function) see page 9.



Door Lock

Your **Labcold** pharmacy and vaccine fridge is fitted as standard with a door lock with 2 keys unless the digital lock has been specified. To lock, push the key in gently and twist 90° to the left, to unlock twist 90° to the right. The key can be safely removed from both the locked and unlocked positions.

Keys should not be left in the lock as they protrude from the fridge. They could cause a health and safety hazard or could be knocked, which may damage the lock.

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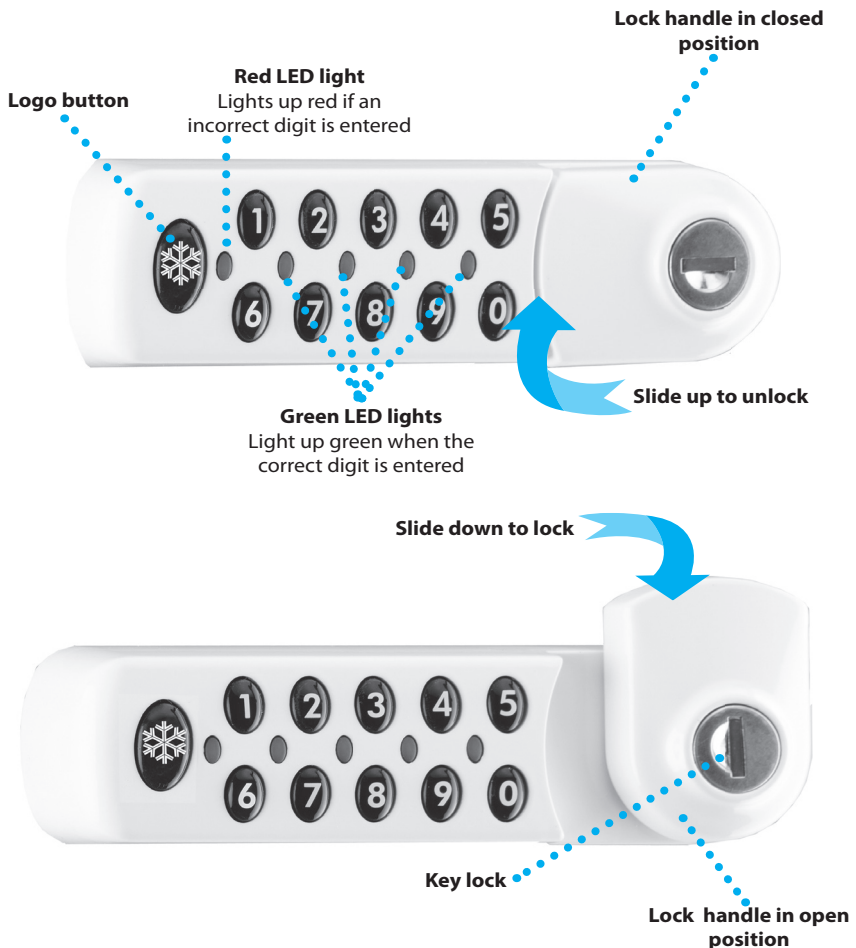
Digital Door Lock

If you have opted to have your IntelliCold® Pharmacy Refrigerator fitted with a digital combination lock, the key lock will be removed and the digital lock fitted in its place.

The digital combination lock has been designed to provide extra security for the contents of your pharmacy refrigerator. There is also a master override key (optional extra) that enables you to open the refrigerator in the normal way should you wish to or in an emergency.

The Labcold digital combination lock is backed by a UK one year parts and labour warranty.

A Closer Look



Getting Started

Follow the instructions on page 4 -11 to set up your refrigerator.

We especially recommend that you install 4 AA batteries (supplied) in to the battery compartment located on the right hand side of the fridge near the base (see page 2) because this will allow you to be able to open the digital lock if there is a failure of mains power.

IF BATTERIES ARE NOT FITTED, DURING A POWER FAILURE YOU WILL NOT BE ABLE TO UNLOCK THE REFRIGERATOR UNLESS YOU HAVE PURCHASED A MASTER KEY

Opening the Door

Once the refrigerator has power, you can now open the door using the factory set user code of **2244**.

Put in the code and after every correct digit a green light will illuminate. **Always wait for the LED to light before pressing the next button.** After the fourth digit is entered the lock will make a noise signifying it has unlocked. You can then rotate the lock handle 90° in a clockwise direction to open the fridge.

If the red LED flashes it indicates you have either entered a wrong digit or the lock hasn't registered the code you have entered and an error has occurred. Obviously, the refrigerator will **not** unlock. Wait 4 seconds before you try entering the code again.

If you **DO NOT** unlock the refrigerator within 4 seconds the door will re-lock automatically if the lock remains in the closed position.



Green LEDs illuminate when you input the correct code



Red LED illuminates when you input the incorrect digit or code

Locking the Door

Shut the fridge door as usual and slide the lock handle 90° in an anti clockwise direction

- ① The digital combination lock does **NOT** self lock but once the lock handle is in the closed position the lock will automatically engage.

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Changing the User Code

It is advised that you change the factory set user code so that you can control who has access to your refrigerator.

The user code **2244** is required to change the user code for the refrigerator when the code is first changed. After the initial change, whatever is the existing user code will be required to change the user code. All new user codes **must** be four digits long.

Press the **logo** button and key in:

Existing user code i.e. 2244
02
New 4 digit user code
New 4 digit user code

Write the new user code for reference here

The fridge will now **only** open using the new user code or a master key

ⓘ If you do NOT press a button within 4 seconds the red LED will flash and you need to start the process again.

Using the key

We advise that you purchase a master key with your lock, to be held by a responsible person, because it will enable the refrigerator to be unlocked in the event of a mains power failure or if the user code is forgotten. The master key is unique to **Labcold** digital combination locks.



Should you wish to use the lock as a digital lock again but have no record of the user code please contact our service team on **01256 705 580** or service@labcold.com.

Micro SD Card

You can purchase a Micro SD card to transfer fridge and temperature data from the controller to your computer. The card is supplied with an adapter for convenience so you can use a regular SD card reader slot if required.



- ❗ You cannot use **any** Micro SD card with your **Labcold IntelliCold®** pharmacy refrigerator. Only the Micro SD cards from **Labcold** are encoded to work with the controllers. They are fridge specific, so one Micro SD card **cannot** be used for a number of **IntelliCold®** fridges, you need one for **every** refrigerator that you want to use this function on.

Downloading Data to the Micro SD card

The controller automatically records data every minute about alarms and fridge function and allows you to download this information as a CSV file. The controller will store this information for 18 months but we recommend that you download the data once a week, especially as the more data there is to download, the longer it takes.

To download the data, you first have to fully insert the Micro SD card, printed side up in the Micro SD slot on the bottom of the controller.



When you insert the card the **Sd** screen will be displayed. Touch the tick icon/button to select options for which data you want to download.



You will have the option to download a number of days of data, all the data since the last download or all the data currently stored on the controller. Use the arrow icons/buttons to select the option you want.

- ❗ The option to download data from where the last download ended is **only** available if there has previously been at least one download.

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dAY

Select to download a number of days ie 5. Touch the tick icon/button and use the arrows to select the number of days required, then touch the tick icon/button for the download to commence.



LSt

Select to download all the data since the last download. Touch the tick icon/button to select and for the download to commence.



ALL

Select to download all the data held by the controller. Touch the tick icon/button to select and for the download to commence.

The controller will first check the card then begin to download the data. You will see the screens below showing the progress of the download and **End** when it is completed. If you see a screen with **Err**, an error has occurred so try again. If you see **Er1**, it means initialization has failed, please contact our service team on **01256 705 580** or service@labcold.com, and if you see **ER2** it means the wrong Micro SD card for that refrigerator is being used. Try again with the correct Micro SD card.



Viewing the data

When you insert you insert the SD card in to your computer you will see csv folders named in yymm format. They contain CSV files named in yymmdd format. Click on the file to select the date you want to download or view.

The csv file will be a mixture of temperature readings against time and fridge operation data such as whether the door was open etc and the time it happened. A zero in a column means no incidence and a one in a column means there was an incidence so in the example below, the compressor was on at 00:11 but off at 00:12.

#	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	
1	Firmware S10297-8																	
2	Unit type: 05-5																	
3	Set point: 5																	
4	Controller: 10397-3234856892821656																	
5	Date: #####																	
6																		
7	Time	T1	T1 HIGH	T1 LOW	T2	T2 HIGH	T2 LOW	MAIN ALARM	LOW BTRY	NO BTRY	DOOR OPEN	DOOR ALARM	COMPRESSOR	LIGHT	FAN	POWER LOST		
8	00:00	6.2	0	0	6.7	0	0	0	0	0	0	0	0	1	0	1	0	
9	00:01	6.2	0	0	6.8	0	0	0	0	0	0	0	0	1	0	1	0	
10	00:02	6.1	0	0	6.7	0	0	0	0	0	0	0	0	1	0	1	0	
11	00:03	5.9	0	0	6.6	0	0	0	0	0	0	0	0	1	0	1	0	
12	00:04	5.6	0	0	6.4	0	0	0	0	0	0	0	0	1	0	1	0	
13	00:05	5.4	0	0	6.1	0	0	0	0	0	0	0	0	1	0	1	0	
14	00:06	5.1	0	0	5.9	0	0	0	0	0	0	0	0	1	0	1	0	
15	00:07	4.9	0	0	5.6	0	0	0	0	0	0	0	0	1	0	1	0	
16	00:08	4.7	0	0	5.4	0	0	0	0	0	0	0	0	1	0	1	0	
17	00:09	4.4	0	0	5.1	0	0	0	0	0	0	0	0	1	0	1	0	
18	00:10	4.2	0	0	4.9	0	0	0	0	0	0	0	0	1	0	1	0	
19	00:11	4	0	0	4.7	0	0	0	0	0	0	0	0	1	0	1	0	
20	00:12	3.8	0	0	4.4	0	0	0	0	0	0	0	0	0	0	1	0	
21	00:13	3.6	0	0	4.3	0	0	0	0	0	0	0	0	0	0	1	0	
22	00:14	3.6	0	0	4.3	0	0	0	0	0	0	0	0	0	0	1	0	
23	00:15	3.7	0	0	4.4	0	0	0	0	0	0	0	0	0	0	1	0	
24	00:16	3.9	0	0	4.5	0	0	0	0	0	0	0	0	0	0	1	0	
25	00:17	4.1	0	0	4.6	0	0	0	0	0	0	0	0	0	0	1	0	
26	00:18	4.3	0	0	4.8	0	0	0	0	0	0	0	0	0	0	1	0	
27	00:19	4.5	0	0	5.1	0	0	0	0	0	0	0	0	0	0	1	0	
28	00:20	4.8	0	0	5.3	0	0	0	0	0	0	0	0	0	0	1	0	

Pharmacy Drawers

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PHARMDRAWER2019 are optional extras for IntelliCold® refrigerators models RLDF/G1019 and 1519 and can be used with shelves depending on your requirement.

We recommend that you clean them with warm soapy water and dry them thoroughly before use.

Should you require any more drawers please contact our sales department on **01256 705 570**



Fitting Instructions



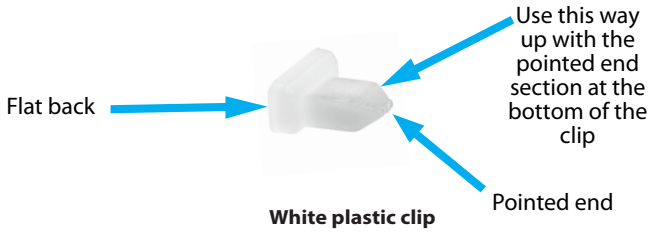
Shelf supports

To install your drawer, position 4 of the shelf supports where you want your drawer to fit in the fridge making sure all they are the same height.

If you are placing the drawer where there currently is a shelf, remove the shelf entirely.

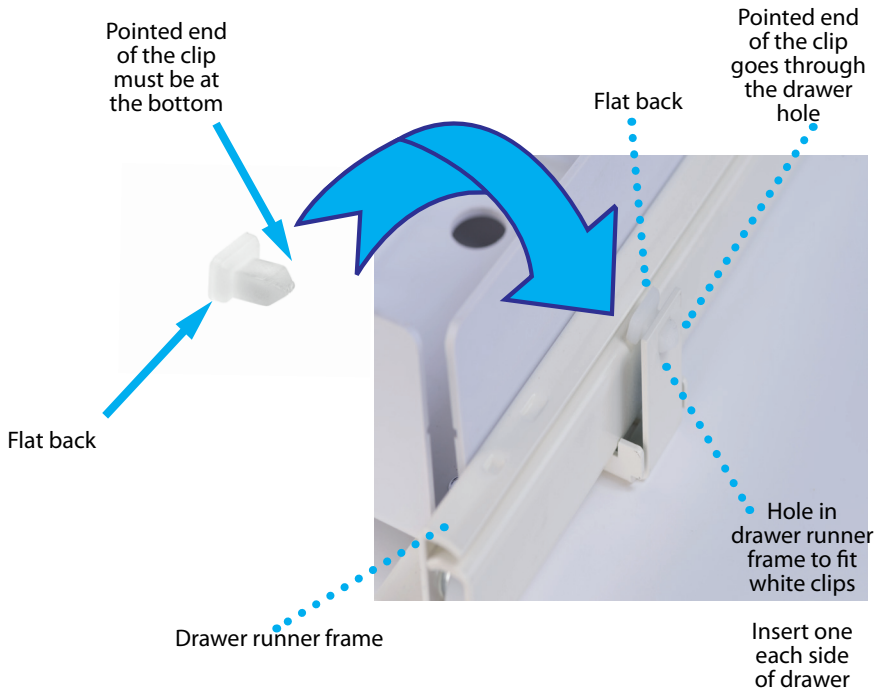
21

Two plastic white clips are supplied with each draw. These must be pushed in to the holes located on either side at the back of the drawer runner frame.



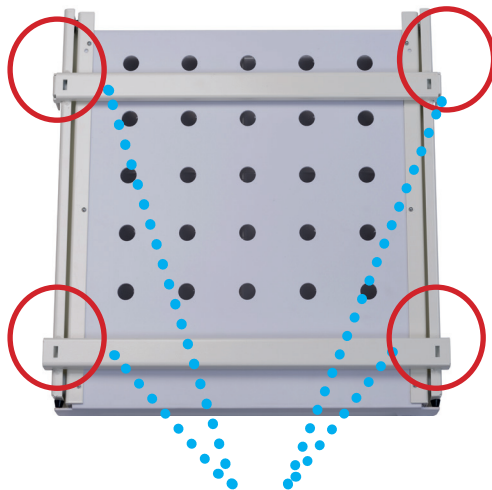
The clips must be inserted with the protruding, pointed part of the clip at the bottom and facing outwards of the frame.

When the drawer is placed in the refrigerator, the clips on either side will need to be pushed against the racking to stop the drawer from tipping when fully extended.



Place the drawer frame on top of the shelf supports.

Make sure that the shelf supports fully engage with the 4 holes on the reverse of the drawer frame.



Holes on the reverse of the drawer frame designed to engage with the shelf supports fitted to the refrigerator racking

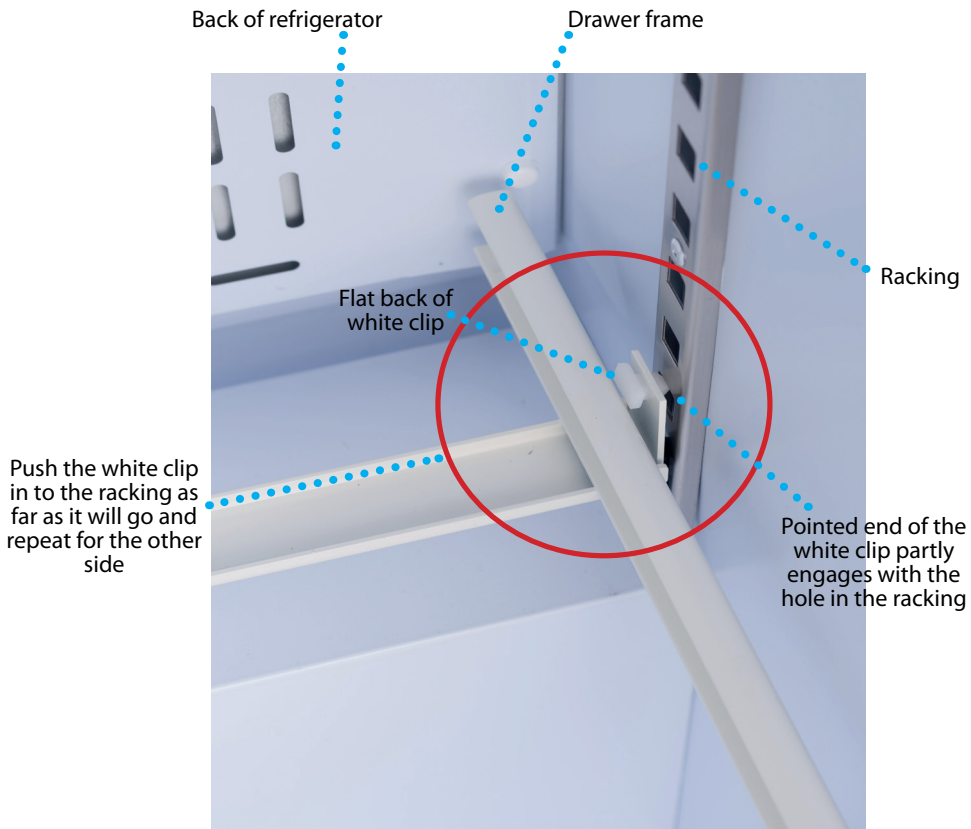


Lower the holes on the drawer frame on to the 4 shelf supports

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Finally, push the white clips at the rear of the drawer frame in to the shelf racking as far as they will go.

The white clips will not engage fully, but they will engage enough to stop the drawer from tipping when fully extended



Once the drawer is installed, you can arrange the internal dividers to suit. Although the drawer is designed to allow ventilation of the contents, as with all products in your pharmacy refrigerator make sure it is not too tightly packed as this will restrict air flow and may cause pockets of high temperatures as a result.

Caring for your Fridge 24

As with all refrigerators, your **Labcold** refrigerator, although designed to provide you with many years of fault free service, will perform better if it is regularly maintained and calibrated as per the Green Book, chapter 3 page 28. In addition to the above, attention needs to be paid to the loading of the fridge to ensure maximum temperature and energy efficiency. The refrigerator also requires regular cleaning and defrosting.

Loading

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

- The shelves are evenly spaced and do not restrict air flow round the product.
- The contents are not packed too closely together.
- The contents do not touch the door, wall or the bottom of the fridge and are stored away from the fan.

Cleaning

ⓘ It is essential that you unplug the refrigerator from the mains to prevent electric shock and transfer the contents where they can be stored and monitored at the correct temperatures before cleaning

When cleaning you should:

- Remove the shelves and clean with weak soapy water. **Do not use strong detergents or bleach**
- Wipe the inside of the fridge in the same solution and dry with a soft cloth. **Take care to avoid the light fitting and ensure that the drain hole at the back of the fridge is clear of debris**
- Wipe the door seal with a damp cloth. **Do not use strong detergents or bleach**
- Gently remove the dust on the back of the fridge. **Take care not to damage the pipes**

Defrosting

Although your **Labcold** fridge features automatic off-cycle defrosting, it is recommended that it is defrosted manually if there is a build up of ice. This can happen for a number of reasons, for example in times of high humidity, if the door has been opened for a long time, the refrigerator is overstocked or the ambient temperature is high.

ⓘ It is essential that you unplug the refrigerator from the mains to prevent electric shock and transfer the contents where they can be stored and monitored at the correct temperatures before defrosting

To defrost you should:

- Leave unplugged with the door open for at least 6 hours at room temperature or until any ice is melted. **Do not use a sharp implement to remove ice as this will damage the internal surface of the fridge**
- Dry thoroughly and remove any surplus water before returning to use
- Leave cooling for at least 6 hours or until the temperature display shows the correct temperature for at least 30 minutes before reloading with temperature sensitive contents such as vaccines or other pharmaceuticals.

Trouble Shooting

My refrigerator is not working

- Check that the refrigerator is plugged in and the plug socket is turned on
- Try another appliance in the power socket. If this appliance works but your fridge doesn't, please contact your retailer

My fridge is making a gurgling noise

All **Labcold** refrigerators work by evaporating a gas with low GWP properties. This is what causes the back of the refrigerator to get cold. As part of this process the gas has to turn back in to liquid. This is why sometimes you will hear liquid sounds coming from the fridge.

There is condensation on the glass door of my fridge

If the fridge door is left open too long, or the fridge is over full, or is working in a high ambient temperature or humid conditions, condensation may form. This is a normal part of the refrigeration process and as long as the temperatures remain in range, is nothing to worry about. **Labcold IntelliCold®** Pharmacy Refrigerators are designed for temperate climates, 16°C to 30°C, with a humidity of 55% RH.

There is ice in my fridge

Small accumulations of ice on the cold plate are quite normal and should melt away after a few minutes. Larger accumulations can occur for a variety of reasons:

- The room is too warm or even damp
- Please contact the **Labcold** service team if the set point is too low (i.e below 5°C).
- The door has been left open too long

There is water at the back of the fridge

Your **Labcold** refrigerator automatically defrosts and ice and water may be observed at the back. Any ice is melted and runs through the drain hole to the condensate removal tray at the back of the fridge. Due to the heat produced by the fridge motor this should evaporate but may occasionally cause water to be observed in the tray. This is perfectly normal and is nothing to worry about.

Why doesn't the alarm react instantly?

Labcold IntelliCold® refrigerators constantly take readings of the air temperature inside the refrigerator and averages and analyses the results. This means that if you have a separate monitor it may alarm before the fridge controller, but the refrigerator will still alarm very shortly afterwards and, if working correctly, will do so long before the temperature poses a threat to the contents.

My independent thermometer shows a different temperature to the front of the fridge

Your **Labcold IntelliCold®** refrigerator has a probe placed at the rear of the fridge and the temperature displayed is calculated by analysing and averaging the temperature data collected by the probe. A thermometer placed in a different part of the refrigerator may read a slightly different temperature especially if it is placed close to the door or at the top or bottom of the fridge as these are the areas where the greatest temperature fluctuations occur.

Vaccine Storage Guide

If you are storing vaccines in this refrigerator, it is important that recognised vaccine storage guidelines are followed including named persons responsible for the maintenance of the cold chain to protect vaccine efficacy.

In accordance with these guidelines and as a minimum Labcold recommend the following actions;

IMPORTANT: Failure to follow these actions may compromise the effectiveness of your vaccines and in extreme cases can cause irreparable damage to your fridge, invalidating any warranty

Fridge Type

Only store vaccines in a fridge specifically designed and validated for pharmaceutical product storage. Arrangements should be in place for back-up facilities to be available in the event of the refrigerator failing or breaking down.

Temperature Range

Most vaccines have a marketing authorisation which means that they must be stored between 2°C and 8°C. Labcold IntelliCold® pharmacy refrigerators have a set point of 5°C and the t1 probe will alarm if the air temperature falls outside these parameters. There should be a local plan in place on actions to be taken if there is a temperature incursion.

Monitoring the temperature

Temperatures in the refrigerator must be monitored and recorded at least once each working day, and documented on a chart for recording temperatures. On an IntelliCold® refrigerator this is done by using the min/max icon (see page 12). You should follow the four R's when doing the check

Read: daily reading of the thermometer's maximum, minimum and current temperatures at the same time every day during the working week

Record: recording temperatures in a standard fashion and on a standard form, including signing each entry on the recording sheet

Reset: resetting the thermometer after each reading. The thermometers should also be reset when temperatures have stabilized after periods of high activity

React: the person making the recording should take action if the temperature falls outside 2°C to 8°C and document this action.

Detailed temperature logs can be downloaded from them via an SD-Card for record-keeping. IntelliCold® refrigerators are fitted with a secondary 'wandering probe' (t²) that provides further verification - see page 10. Independent calibrated data loggers, thermometers and automated temperature monitoring systems are strongly advised.

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Vaccine Storage Guide

Security

All vaccines are POM medicines and should only be kept in locked condition accessible only to authorised persons. IntelliCold® pharmacy refrigerators come with either a key or digital lock.

Door Openings

Minimise door openings in order to maintain a constant temperature. If high access rates are required share the workload between two or more fridges. All Labcold's IntelliCold® pharmacy refrigerators are designed to tolerate openings for 30 seconds every 2 minutes.

Fridge Location

Always position the fridge in a location away from heat sources such as a radiator and sources of intense light. Ensure that adequate ventilation is provided around it by allowing 6cm clearance around all surfaces of the refrigerator - see page 1. IntelliCold® pharmacy refrigerators are climate class 4 and designed to operate in an ambient temperature of 16°C to 30°C with a humidity of 55% RH. Outside of that temperature range performance cannot be guaranteed.

Accidental Power Loss

Guard against the risk of accidental interruption to the electricity supply; have the fridge wired directly in to a switchless socket or clearly labelling the plug with a cautionary notice.

Although your IntelliCold® refrigerator has alarm battery back up this powers the controller and if fitted, the digital lock only. It does not power the refrigerator.

If you do experience a loss of power, keep the vaccine refrigerator door closed until a rapid assessment of the situation has been undertaken and an action plan formed. Keeping the door closed will help to maintain the temperature.

Fridge Size

Your vaccine refrigerator should be the right size to meet the vaccination storage needs. There must be sufficient space around the vaccine packages for air to circulate.

Stocking the refrigerator

Food, drink and clinical specimens must **never** be stored in the same refrigerator as vaccines.

Vaccines must be kept in their original packaging and stock should be rotated within the refrigerator so those with the shorter expiry dates are at the front.

There should be sufficient space around the vaccine packages so air can circulate. The adjustable shelves should also be adequately spaced. Vaccines should be kept away from the side and back walls of the refrigerator; otherwise the vaccines may freeze rendering them inactive and unusable.

Vaccines must **never** be placed on the bottom of the refrigerator.

Vaccine Storage Guide

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Maintenance, servicing and calibration

All vaccine refrigerators should have a maintenance contract that allows for at least yearly servicing and calibration of the thermometer. Maintenance and calibration contracts are available from our sister company Labshield. To find out more or to request a quote please email service@labshield.com

Records must be kept of maintenance, servicing and calibration.

Defrosting

Your IntelliCold® refrigerator must be kept clean and free from ice. Although it has an automatic off cycle defrost, ice may still build up in times of high humidity or if the door has been opened for a long time etc.

Before defrosting the contents of your refrigerator should be moved to where they can be stored and monitored in a suitable alternative refrigerator.

After defrosting your fridge leave plugged in for 6 hours or until the temperature display shows the correct temperature for at least 30 minutes before restocking with vaccines.

Records must be kept of defrosting and cleaning.

Further reading

Green Book Chapter 3 - Storage, distribution and disposal of vaccines

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/223753/Green_Book_Chapter_3_v3_0W.pdf

Guidance on vaccine handling and storage in GP practices

<https://www.publichealth.hscni.net/sites/default/files/2020-02/Guidance%20on%20vaccine%20handling%20and%20storage%20in%20GP%20practices.pdf>

Guidance on Vaccine Storage and Handling (NHS Health Protection Scotland)

https://www.communitypharmacy.scot.nhs.uk/documents/nhs_boards/lanarkshire/vaccine-storage-handling-2010-09.pdf

GP mythbuster 17: Vaccine storage and fridges in GP practices CQC England

<https://www.cqc.org.uk/guidance-providers/gps/gp-mythbuster-17-vaccine-storage-fridges-gp-practices>

Vaccine Incident Guidance Responding to errors in vaccine storage, handling and administration

https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/859773/PHE_vaccine_incident_guidance_January_2020.pdf

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Useful Information

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Your **Labcold** refrigerator comes complete with a five years parts and labour warranty*.

To register your warranty, please complete the enclosed warranty form or visit our web site at www.labcold.com, click on the 'Warranty Registration' tab and follow the instructions. Full warranty terms and conditions can also be viewed and downloaded from the **Labcold** website.

In the unlikely event that there is a problem with your refrigerator, you should contact your retailer in the first instance. If you bought your fridge directly from **Labcold** you should contact our service team on: **01256 705 580** or Email them at service@labcold.com.

When you register your warranty or want to report a performance issue you will need to have the following information to hand. Please fill this in as soon as you get your fridge so we can help you as quickly as possible in the event of a problem.

Model Number _____

Serial Number _____

Retailer _____

Date Purchased _____



*the professional choice for medical
and scientific refrigeration...*

** 5 year warranty available to UK customers only. Outside the UK, warranty is limited to one year parts only.*

*Micro SD cards are available **only** as a chargeable extra.*

Labcold Ltd, Cherrywood, Chineham Park, Basingstoke, RG24 8WF, UK 01256 705 555



**IntelliCold® Pharmacy Refrigerator
RLDF/G19**

Operating Instructions