

5.5 cu. Ft. Undercounter Medical-Grade Refrigerator



Table of Contents

Evolve™ — A New Cold Has Arrived	5
SilverCore Solid State, Compressor-free Refrigeration System	5
SilverPoint Temperature Monitoring Upgrade	5
Using SilverPoint to Monitor Temperature Data.....	5
SilverPoint Network Setup Detail	6
SilverPoint User Setup	7
New Administrator Account Registration	7
New Unit Registration	8
Protect Plus Only: ENERGY STAR® Certification	9
Unpacking Your Evolve Refrigerator	10
Inspecting for Damage	10
Unboxing and Locating.....	10
Identifying All Parts	10
Leveling	10
Providing Ventilation.....	11
Powering On and Power Cord Guidelines.....	12
Uninterruptable Power Supply (UPS)	13
LED Indicator	13
Checking the Glycol Sample Bottle	14
Preprogrammed Settings	14
Preset alarms/alerts	15
Set Point Temperature.....	15
Loading Products for the First Time	15
Tips for Managing Door Openings.....	16
Automatic Defrost Cycles.....	16
Getting to Know Your Product.....	17
Product Exterior - Front	17
Touch-screen Display.....	17
Input / Output Dock.....	18
USB Port	18
Data Monitoring Backup Battery	18
Ventilation.....	19

Electronic Door Lock	19
Keyed Door Lock	19
Product Exterior - Rear	19
Pass-through Port	19
Evaporation Tray	20
Product Interior	20
Interior Components	20
Adjustable Shelving	21
Navigating Evolve 5.5 cu. ft. Refrigerator Controls	21
System Icons	21
System Prompts	22
System Alerts	22
System Alert Values	23
Reading the LCD (Temperature) Display	23
Protect Plus Only: Login and Unlock Door	24
Login	24
Unlock/Lock Door	24
Access the Main Menu	25
Alarms	25
Data Log	27
Settings	27
Administrator Tools	29
Alarms	30
Active Alarms	30
Alarm Log	30
Alarm Settings	31
Data Log	31
Downloading Data	31
Uploading SilverPoint Data to a Computer	32
Clearing the Data Log (after downloading)	33
Reviewing / Adjusting Data Log Settings	34
Settings	34
Temperature Set Point	34
Temperature Display Settings	35

Defrost.....	35
Date / Time.....	36
Protect Plus Only: Lighting	37
WiFi Connection.....	37
Model Information	38
Administrator Tools	38
Protect Plus Only: Edit Users	38
Protect Plus Only: User Accessibility Levels.....	39
Menu Access	39
Alarms, Data Log, Settings, Administrator Tools	39
Alarms, Data Log, Settings.....	39
Alarms, Data Log.....	39
Firmware	39
Calibration	40
Periodic Product Maintenance.....	41
Use of cloth to wipe interior	41
Suitable products for cleaning interior/exterior	41
Cleaning around ventilation area and precautions	41
Cleaning the Catch Tray	41
Frequently Asked Questions	42
Troubleshooting	44
Troubleshooting Problems.....	44
Customer Resolution	44
LED Display Issues	44
Interior Concerns	44
Product Warranty and Service	49
Product Specifications	50
General Caution and Warnings.....	52
Safety Precautions	54
Symbols used in this Manual.....	54
Electrical Components	54

Evolve™ — A New Cold Has Arrived

Phononic is changing the paradigm of refrigeration with Evolve. Evolve products operate with a patented SilverCore™ refrigeration system and optional embedded temperature monitoring system called SilverPoint™.

The Evolve family of products dramatically modernizes cold storage technology for medical and healthcare facilities and offers a complete solution for protecting vaccines, medications, and temperature-sensitive materials.

Thank you for purchasing the most advanced refrigeration technology available.

SilverCore Solid State, Compressor-free Refrigeration System

Your Evolve refrigerator operates with a refrigeration system that actively channels heat energy through a non-toxic refrigerant and the Phononic heat pump, resulting in unprecedented cooling capabilities within the chamber. Our compressor-free design requires minimal maintenance, consumes less power, eliminates the use of toxic coolants, and operates within whisper-quiet noise levels. As an added benefit, Evolve products can continuously operate on uninterruptable power supply (UPS) battery backup power to protect precious content during power outage events.

SilverPoint Temperature Monitoring Upgrade

SilverPoint is a temperature monitoring upgrade with optional USB downloadable local data and WiFi enabled remote data. Access the SilverPoint web portal to create a multi-unit temperature monitoring dashboard, view historical records and set up email alert notifications.

The SilverPoint temperature monitoring system is designed to be compliant with CDC recommendations for vaccine storage.

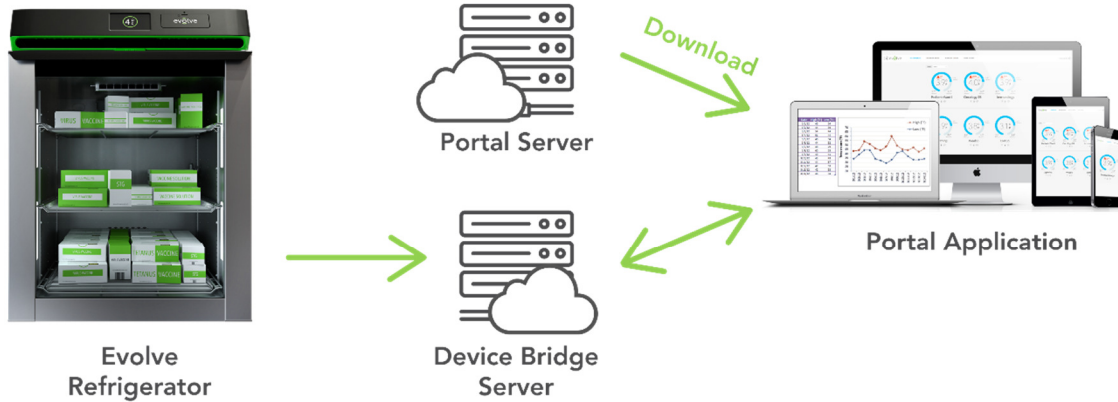


The SilverPoint remote and local temperature monitoring upgrade can be added to any Evolve refrigerator. Visit portal.phononic.com for more information.

Using SilverPoint to Monitor Temperature Data

The temperature of any refrigerator will fluctuate throughout the course of a day. The CDC, requires that temperatures are maintained in a safe range between 2 °C and 8 °C to prevent vaccines from being compromised. Facilities that store vaccines and other sensitive inventory are required to monitor and keep logs of temperature data. Some facilities log temperatures manually by recording thermometer readings at set times, several times daily. The most efficient method of logging is to use an automatic data logger to record interior temperatures at set intervals.

SilverPoint Network Setup Detail



Wireless Interface

Radio Protocol

IEEE 802.11b/g/n,
2.4 to 2.495GHz

Wireless Security

SSID Rules

1 to 32 characters

Numeric: 0-9,

Alphabet: a-z and A-Z,

Passphrase Rules

8 to 32 characters

Special: SPACE ! # \$ % & ' () * + , -
. / : ; < = > ? @ [\] ^ _ ` { | } ~ ”

Wireless Security

Open security
WPA-PSK security
WPA2-PSK security
WPA Enterprise (supported, not implemented)
WPA2 Enterprise (supported, not implemented)
WEP (supported, not implemented)
EAP (supported, not implemented)

Association Keep Alive Time

0 seconds (Disabled)

Network Interface	
DHCP	Supported

Connection	
Device bridge service protocol	TCP
Device bridge service URL	evolve-units.phononic.com/bridge
Data bridge service port	7777
Data rate	<<1Mbps (approx. 1KB per 15 minutes)
Portal protocol	HTTP
Portal URL	portal.phononic.com/evolve
Portal Port	80

SilverPoint User Setup

New Administrator Account Registration

A new user can start the registration process from the portal landing page:

(<http://evolverefrigeration.com/silverpoint-temperature-monitoring>) by clicking on the 'login' button and then 'register' button. By registering, you are creating a master administrative account.


After submitting name, e-mail, and password, a verification e-mail will be initiated to the user's e-mail address.

After receipt of the verification e-mail, click on the confirmation link and the new user registration process will be complete.

New Unit Registration

A new unit can be registered from the dashboard by clicking on the 'Register/Add Unit' button.

The administrator may now enable/disable e-mail alerts, manage units, manage users, and view/manage unit data. (NOTE: To receive e-mail alerts, the administrator and their assigned users must check the box



A circular profile picture placeholder showing a person's head and shoulders.

Preferences

- Receive Unit Alert Emails

[CHANGE PASSWORD](#)

Full Name

Title

Protect Plus Only: ENERGY STAR® Certification

Phononic has always had a commitment to energy efficiency and environmental responsibility. Powered by advanced solid-state technology, our Evolve line of medical grade refrigerators have forever changed expectations in cold storage by providing reliable and accurate temperature control with a compressor-free design and non-toxic refrigerants. We've now advanced our commitment with the Evolve 5.5 cu. Ft. Protect Plus refrigerator achieving ENERGY STAR® certification in the Laboratory Grade Refrigerator and Freezer category.

ENERGY STAR is a voluntary government program backed by the U.S. Environmental Protection Agency (EPA) that helps businesses and individuals save money and protect the climate through superior energy efficiency products. Behind each ENERGY STAR label is a product that has been independently certified by an EPA-recognized certification body to use less energy and cause fewer emissions that contribute to climate change.

The Evolve Protect Plus 5.5 cu. Ft. refrigerator for medical, pharmaceutical and laboratory applications is the first solid-state refrigerator to earn ENERGY STAR certification. The compressor-free design meets guidelines for the controlled storage of vaccines and pharmaceutical drugs, while reducing energy consumption. The resulting energy savings and reduction in greenhouse gas emissions provides a differentiated solution for the healthcare industry, meeting the diverse needs of researchers, medical and pharmaceutical providers, along with facilities and infrastructure management professionals.

ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. Over the past twenty years, American families and businesses have saved more than \$230 billion on utility bills and prevented more than 1.8 billion metric tons of greenhouse gas emissions with help from ENERGY STAR. For more information about ENERGY STAR, please visit <https://www.energystar.gov/>



Unpacking Your Evolve Refrigerator

Inspecting for Damage

Please take a moment to inspect your new refrigerator for damages that may have occurred during shipping. For any damage done to the refrigerator, please contact the delivery carrier directly.



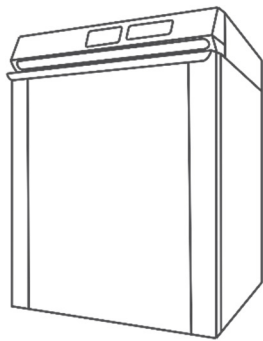
Do not call the Evolve service line to report shipping damages. Call your carrier.

We have designed intelligent packaging to assist you in unpacking your Evolve compact refrigerator. Your Evolve product was built, inspected, tested, and packaged with extreme care. Follow the directions provided to unpack your new product safely and easily.

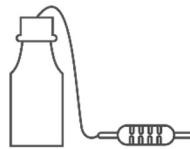
Unboxing and Locating

We recommend you move the box as close as possible to its final location before you begin to unpack. This unit is not provided with handles, therefore it is recommended that two people move and remove the refrigerator from the packaging by lifting at the base of the refrigerator. The packaged unit weighs nearly 150 pounds (63.6 Kg), so lift it with caution. Remove the lower packing strap and lift the top cover of the box to expose the refrigerator for removal and placement. To remove the bottom foam protectors, carefully tip the unit to one side and remove the opposite side foam piece (repeat for other side piece)

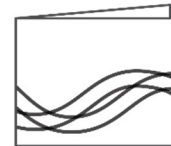
Identifying All Parts



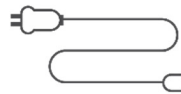
Your Evolve Refrigerator



Glycol Sensor



Quick Start Guide



Power Chord



CR123A Battery

Leveling

Adjust the leveling feet located underneath the refrigerator by turning clockwise to extend the feet, counter clockwise to shorten them. It is important that the unit is level.

Providing Ventilation



Your Evolve medical-grade undercounter refrigerator is equipped with a ventilation area just above the door handle. Do not block or cover the venting area as this can impact the performance of the refrigerator.



The fans on your product will run at intervals of variable speeds and may turn off completely. They do not run constantly. If the fans run frequently, the product may require more space for ventilation. Please refer to the section on how to clean and troubleshoot the fan for more information.



Do not locate or store your refrigerator outdoors. This model was designed for indoor use only and violation of this will void the terms of your warranty.



Warning: Fan has moving parts, product has uninsulated live parts and hot parts. Do not remove the top panel or attempt repairs. For repairs or operating issues please call Customer Care at 1-844-476-4202 for guidance and instructions.

Powering On and Power Cord Guidelines



1. Use only the power cord provided with your Evolve undercounter refrigerator.
2. Plug the power cord into the receptacle on the upper rear of the refrigerator as indicated. Secure the strain relief to ensure the cord cannot accidentally pull out.
3. Position the refrigerator where you intend to locate it, taking care to provide proper cord clearance and plug into a grounded three-prong receptacle. This outlet must be within reach to disconnect power source.

Note: The electrical safety of this product may become impaired if the user chooses to disregard the power safety steps listed above.

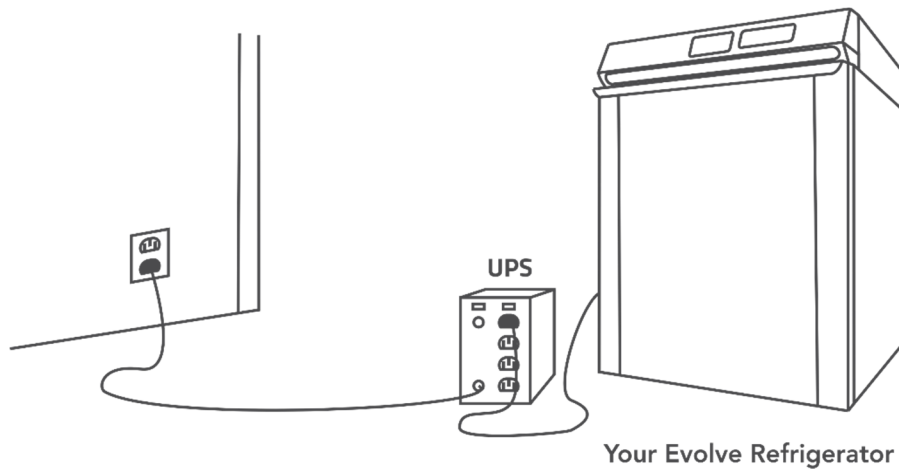


Be careful not to plug into a wall outlet controlled by a wall switch to avoid accidentally switching off the refrigerator. To function properly the refrigerator must continually receive power.



Caution, risk of electrical shock. If the cord or plug becomes damaged, replace with a cord and plug of the same type and rating.

Uninterruptible Power Supply (UPS)



Your Evolve refrigerator is compatible for use with a UPS battery backup. The primary role of any UPS is to provide short-term power when the input power source fails. If you use a UPS backup, take care to follow the directions and precautions accompanying that device.

LED Indicator



When you turn on your refrigerator, verify that the LED indicator is working. The LED indicator appears above the battery door. The LED indicator illuminates green when the unit is on and running. It illuminates red if there is a data log concern such as:

- Low battery
- Full memory
- Data logging error



A power outage would result in a flashing red or green light every 15 seconds. Flashing green indicates continuous data logging. Flashing red indicates a data logging error. See the troubleshooting guide for ways to resolve the issue.

Checking the Glycol Sample Bottle



The glycol sample bottle is pre-installed inside your unit. The sample bottle allows you to monitor the internal temperature of items being stored in the refrigerator.

Please verify:

1. The cord for the sample bottle is fully plugged into the back wall of the interior of your unit.
2. The sample bottle is securely mounted in the clip provided.
3. The level of the propylene glycol in the bottle is full.

In the event that the bottle has broken during shipping, contact our service department for a replacement bottle. Spare replacement bottles and clips are available as accessories.

Preprogrammed Settings







The monitoring system alarms are preset to common Federal Drug Administration (FDA) and Center for Disease Control (CDC) industry standards for pharmaceutical drug and vaccine storage conditions. Settings can be customized via the **Settings** and **Alerts** menus.

Temperature Display & Alarm - The display is preset to read the glycol sensor but can be changed to read the air sensor. Temperatures are detected and displayed in Celsius units to one tenth of a degree. For example, 4.0 °C. Upper and lower alarm thresholds are driven by the sensor selected for the display.

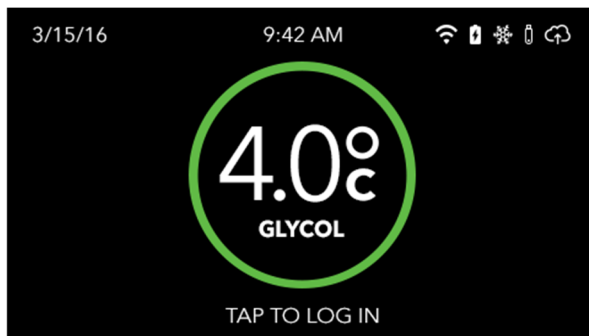
- **Set Point Temperature** - The unit preset/default is set at 4.0 °C (39.2 °F)
- **Upper Threshold Alarm** - The unit preset/default is set at 8.0 °C (46.4 °F)
- **Lower Threshold Alarm** - The unit preset/default is set at 2.0 °C (35.6 °F)

Preset alarms/alerts

The following alarms/alerts are factory preset:

Alarm	Factory Setting	Icon
Temperature Range Alarm	Min 2 °C Max 8 °C	
Door Ajar Alarm	1 minute	
No Power Alarm	Instantaneous	
Battery Low Alarm	< 30% Remaining	
Memory Full Alarm	< 30% Remaining	
No Wifi Alarm	>60 seconds disconnected	

Set Point Temperature



When you first turn on the unit, the fan will run and the refrigerator will work to reach the default set point temperature of 4 °C. Once set point is reached, the fan speed will reduce to conserve energy. The unit will reach the air temperature setting rapidly. Reaching glycol set point temperature will take longer.

When the unit is first plugged in and powered, the Temperature Range Alarms are not enabled until the unit reaches its preset temperature range + an offset of 3 °C. If the set point temperature is 4 °C, then the alarms are enabled when the unit reaches 7 °C.

Loading Products for the First Time

After you power on your refrigerator, monitor the temperature display on the control panel and do not load until the default set point of 4 °C (39 °F) is reached. There are three temperature monitors inside the refrigerator, the glycol sensor and two air sensors. When you

load the refrigerator, always remember to provide some clearance around the air and glycol sensors and make sure the glycol sensor remains properly connected.

Make sure that when loading products to load the bottom shelf first, the middle shelf second and then finish by loading the top shelf.

When loading products previously stored at room temperature, monitor the temperature display to prevent a compromise. We suggest you load room temperature samples in small increments to help maintain a stable temperature.



Do not load product until the preprogrammed set point is reached.



Always provide adequate clearance around both the air and glycol sensors.

Tips for Managing Door Openings

When a refrigerator door is opened, warmer ambient air enters and causes the interior temperature to fluctuate. To limit this effect, there are a few simple steps you can follow to reduce the number of times the door is opened as well as the duration it is left opened:

- List a detailed inventory of the refrigerator's contents on a chart posted outside the unit to reduce the time spent searching for items when the door is opened.
- Use clearly labeled bins to organize and quickly identify contents.
- Avoid storing beverages or any non-sample items (like food) in any unit used for sensitive inventory. Not only is this a health hazard, it also leads to more frequent opening of the door.



Evolve compact refrigerators have a visible and an audible open door alarm that sounds when a door has been open for more than 1 minute.

Automatic Defrost Cycles

The Evolve refrigerator will run a pre-programmed automatic defrost cycle every 24 hours. During the defrost cycle you will likely hear the fan turning off and on. In addition to the automatic defrost cycles, you can initiate a manual defrost cycle through the Settings menu.

Getting to Know Your Product

Product Exterior - Front



Touch-screen Display

The touch-screen display is located in the center of the upper console and is the single point-of-use for controlling the refrigerator. The display is 4.3” diagonal; landscape orientated and full-color TFT-LCD supporting 65K color.

Input / Output Dock

USB Port

A USB port is available to download the data log of the optional SilverPoint local temperature monitoring to a USB memory device. You will use the USB port to download and clear the data log when the storage is full. The USB port is also used to update the firmware. Verify that the port is intact by inserting the USB drive (not included) and looking for the USB icon in the icon bar at the top of the LCD display.

Data Monitoring Backup Battery

Activating the Battery

The included battery is shipped with a protective tab so that its power does not drain. To activate it you must remove the tab from its location inside the I/O Dock panel.

Replacing the Battery

1. Open the I/O Dock panel
2. Remove and replace the battery with only type CR123A
3. Close the I/O Dock panel

Battery Monitoring and Maintenance

This battery backs up the data monitoring system only. It does not run the cooling system of the refrigerator. The monitoring system is designed to display an alert when the battery drops below 30% remaining capacity.



The battery serves to support continuous temperature monitoring during power outages and will need to be replaced periodically.



When replacing the battery, replace only with a CR123A or IEC16340 type battery.



We recommend that you keep spare batteries on-hand. This battery will allow you to continue to monitor internal temperature even in the event of a power outage.



This battery will not power the refrigeration. You must ensure uninterrupted power to the refrigerator and monitoring system at all times.

Ventilation

The Evolve refrigeration system is a solid-state system utilizing fans with moving parts. The functioning of the fans is integral to heat dissipation. The fans are mounted on the top of the unit. They will run continuously until the preprogrammed temperature set point is achieved. After that, the fans will run at a slower speed when needed to stabilize temperature.



Do not insert objects into the fan screens to avoid damaging the unit.

Protect Plus Only: Electronic Door Lock

The electronic door locking mechanism on refrigerator is password protected. A user, sub-admin or admin password or PIN is required to unlock the refrigerator and gain access to stored product. A Universal Password/Pin is provided with the unit and must be entered upon the first/initial login.

Keyed Door Lock

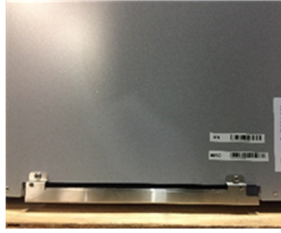
Protect refrigerators can be equipped with a keyed lock. A set of keys is provided for the door lock. Verify that your pack contains two identical keys. Additional keys for your refrigerator are available for purchase.

Product Exterior - Rear



Pass-through Port

The Pass-through Port (located on the back of the unit) is shipped sealed with a foam plug that must be removed prior to use. Additionally, the plastic knock-out must be removed. After inserting your device, we recommend reinserting the foam plug as snug and flush as possible to insulate against cooling loss. Putty may also be used to help reseal the area.



Evaporation Tray

The evaporation tray is located on the bottom rear of the unit to collect and evaporate condensation.

Product Interior



Interior Components

- Glycol temperature sensor port and sample bottle
- Air temperature sensors (2)
- External pass-through port
- Adjustable shelving

Protect Plus Only: Adjustable LED lighting
Sliding Basket

Adjustable Shelving

Your Evolve undercounter refrigerator is shipped with wire ties holding the shelves in place. Remove the wire ties before using the refrigerator. You may place the shelving wherever you choose by removing and relocating the support clips.

Navigating Evolve 5.5 cu. ft. Refrigerator Controls

System Icons



Cloud



USB



Defrost



Battery



WIFI connectivity

System Prompts



Insert a USB Drive



USB Drive Detected



Data Log Saved



Error Saving Data Log

System Alerts



Air Temperature Range



Glycol Temperature Range



Memory Low



Door Ajar



No WiFi Connection









Battery Low



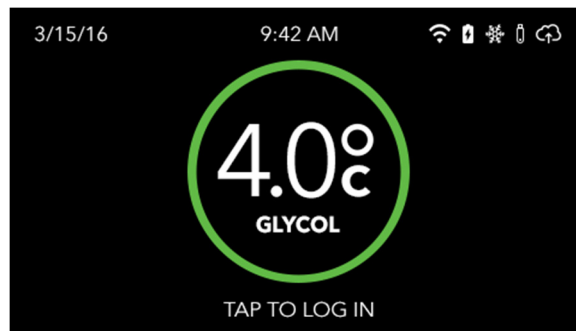
Loss of Power

System Alert Values

Alarm	Factory Setting	Icon
Temperature Range Alarm	Min 2 °C Max 8 °C	
Door Ajar Alarm	1 minute	
No Power Alarm	Instantaneous	
Battery Low Alarm	< 30% Remaining	
Memory Full Alarm	< 30% Remaining	
No Wifi Alarm	>60 seconds disconnected	

Reading the LCD (Temperature) Display

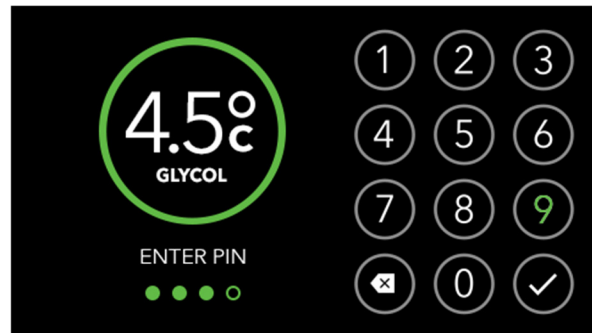
The Temperature Display is preset to show the Glycol Sensor reading, measured in Celsius and to the tenth of a degree. The current temperature, date and time are displayed in every screen in the graphic user interface.



Protect Plus Only: Login and Unlock Door

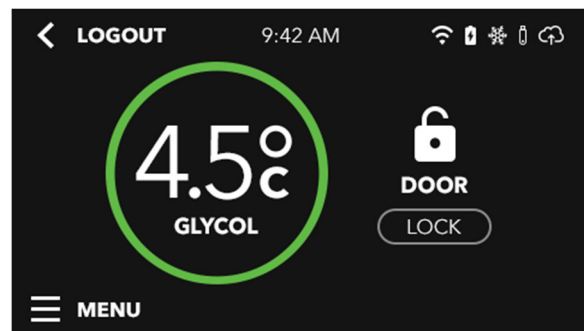
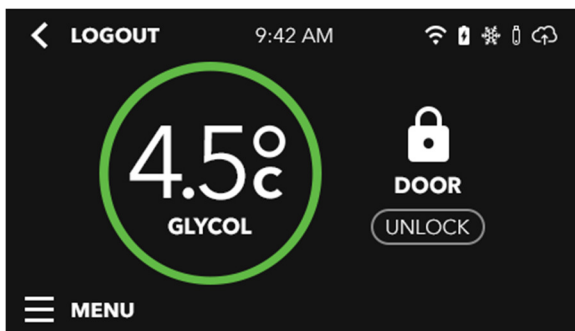
Login

- 1) Tap inside the green circle to bring up the Password/Pin entry screen
- 2) Tap in the appropriate 4-digit Password/Pin (a Universal Password/Pin is provided with the unit and must be entered upon the first/initial login)
- 3) Tap/Select the Check button



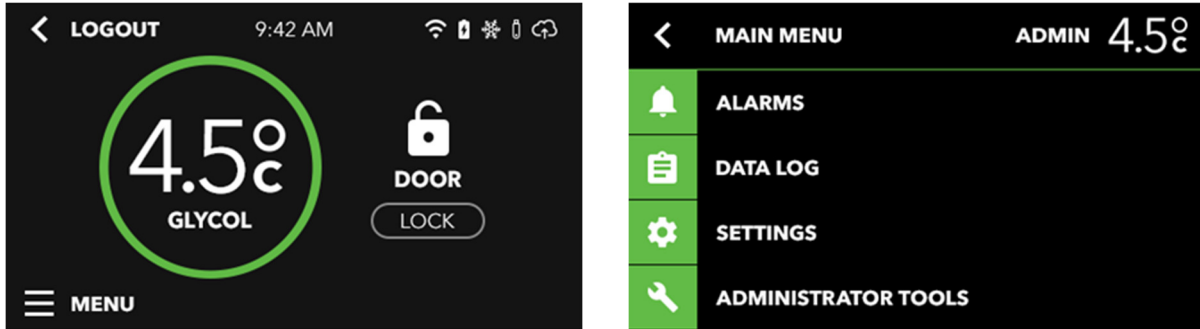
Unlock/Lock Door

- 1) After entering the Password/Pin, tap/select Unlock
- 2) Tap/select the Lock button to lock the door



Access the Main Menu

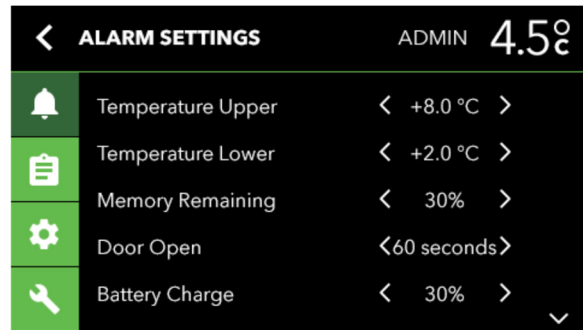
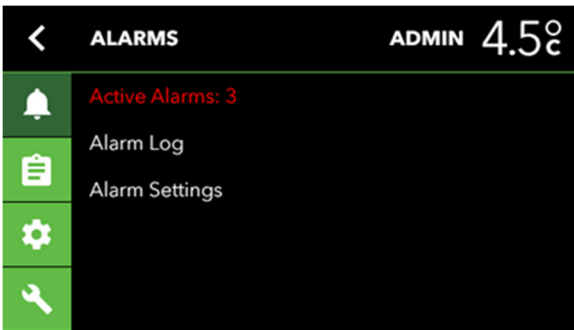
1) Tap the menu icon in the lower right corner of the display.



Alarms

Alarm Overview				
Type	Default Setting	Setting Options	Visual	Audible
Door Ajar	On	On/Off	Yes	Yes
Door Ajar Interval	60 seconds	60, 90 or 120 seconds	n/a	n/a
Temperature Upper Threshold	8 °C	4.5-9 °C (.5 °C) Increments 40.4-48.4°F (1 °F) Increments	Yes	Yes
Temperature Lower Threshold	2 °C	1.0-4 °C (.5 °C) Increments 33.6-33.7 °F (1 °F) Increments	Yes	Yes
Connection	Off	On/Off	Yes	No
Connection Delay Interval	1 minute	1,2,3,4 or 5 minutes	n/a	n/a

Memory Remaining	On	On/Off	Yes	No
Memory Remaining Interval	30%	Off, 10%, 20%, 30%, 40%, 50%	n/a	n/a
Battery	On	On/Off	Yes	No
Battery Remaining Interval	30%	Off, 10%, 20%, 30%, 40%, 50%	n/a	n/a
Power Out	On	On/Off	Yes	Yes



1) Active Alarms

The Active Alarms screen displays a list of active alarms and is one of the ways that an alarm can be cleared.

2) Alarm Log

The Alarm Log screen displays a history of all alarms with the time and date each alarm occurred.

3) Alarm Settings

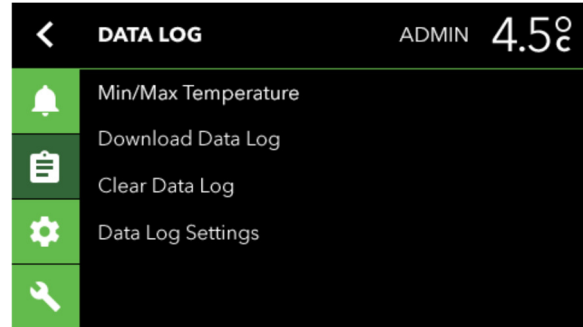
Alarm Settings is where the user adjusts and sets all unit alarms.

Data Log

1) **Protect Plus Only:** Min/Max Temperature

2) Download Data Log

Download Data Log is where the stored historical data is download to a USB device.



3) Clear Data Log

Clear Data Log is where the user clears the stored memory. Clearing the Data Log erases the memory therefore it is important to be certain the user has downloaded the data before clearing.

4) Data Log Settings

Data Log Settings is where the user can view and edit the Data Log frequency.



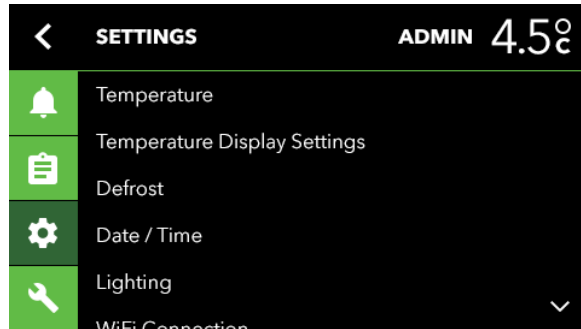
The data log feature is part of the local temperature monitoring accessory and can be added to any Evolve refrigerator. Contact your sales representative for more information.

Settings

Refrigerator Settings		
Type	Default Setting	Setting Option
Door Lock Delay	30 seconds	Off, 30 seconds, 1 minute, 5 minutes
Temperature Set Point	4 °C	2-9 °C (.5 °C) Increments 36-46 °F (1 °F) Increments

Temperature Units	°C	°C / °F
Temperature Precision	Whole	Whole/Tenths
Temperature Display	Glycol	Glycol/Air
Interior Lighting Brightness	80%	Off, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80% 90%, 100%
Lighting Door Open	On	On/Off
Lighting Duration After Close	10 seconds	1-30 seconds
Lighting Door Closed	Off	On/Off
LCD Brightness	75%	Off, 10%, 20%, 30%, 40%, 50%, 60%, 70%, 80% 90%, 100%
Date and Time	MM/DD/YY	Manual Set
Data Log Local	Off	Off, On Available as Option
Local Log Interval	15 minutes	5 minutes, 15 minutes, 30 minutes, 60 minutes, 12 hours
Data Log Remote	Off	Off, On Available as Option
Remote Log Interval	15 minutes	5 minutes, 15 minutes, 30 minutes, 60 minutes, 12 hours

- 1) Temperature
Temperature Set Point is where the user sets the desired temperature in °C or °F (4 °C is the default temperature setting)



- 2) Temperature Display Settings
Temperature Display Settings is where the user determines and sets the desired details of the displayed temperature. As in Air or Glycol, units in °C or °F and whole or tenths of units.

- 3) Defrost
The Defrost setting allows the user to select to run a manual defrost.

- 4) Date / Time
The Date / Time setting allows the user to set and confirm the correct date and time. This is important to have correct for data logging and alarm event purposes.

- 5) Network Connection
The WiFi Connection is where the user can view the connection status, detect networks and enter associated passwords.

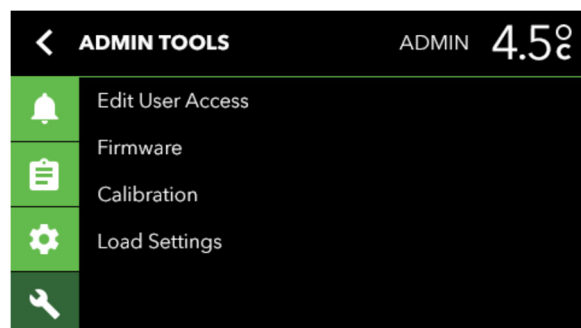
- 6) Model Information
System Information contains important unit information such as the product Serial Number, MAC Address, IP Address and battery health.

- 7) System Settings
System settings contains all of the user configurable settings for the system.

- 8) **Protect Plus Only:** Interior Lighting
The Lighting setting is where the user can adjust the lighting intensity level, turn on at all times, turn completely off at all time or timed with door open.

Administrator Tools

- 1) **Protect Plus Only:** Edit Users
Edit users is the tool to allow customization of user passwords.



2) Firmware

Firmware is the Admin Tool used for updating a new Firmware version.

3) Calibration

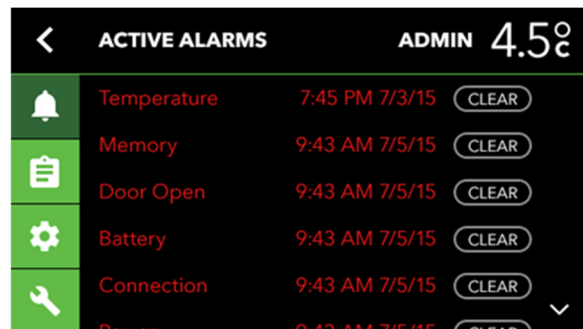
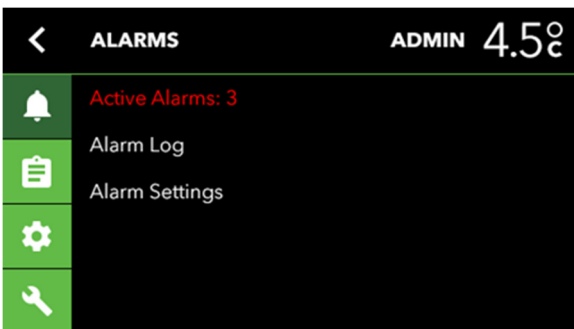
Calibration is where system offsets are entered or modified. Calibration edits require an Administrator PIN or password to complete.

4) Load Settings

Load settings allows you to load pre-configured settings to a refrigerator.

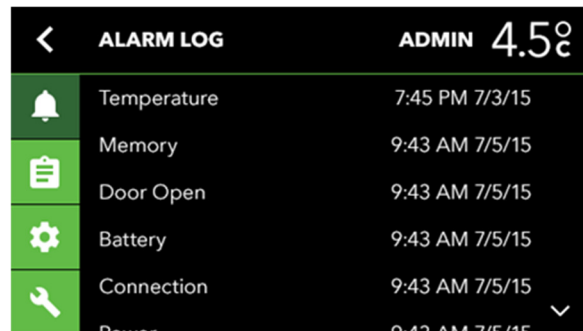
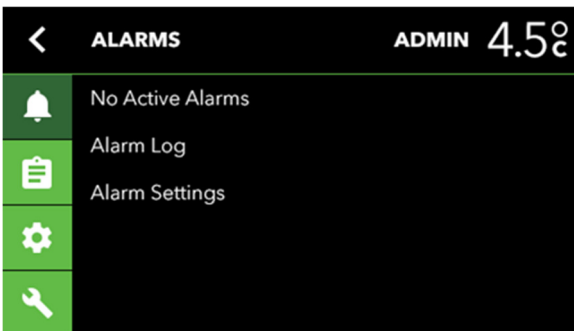
Alarms

Active Alarms



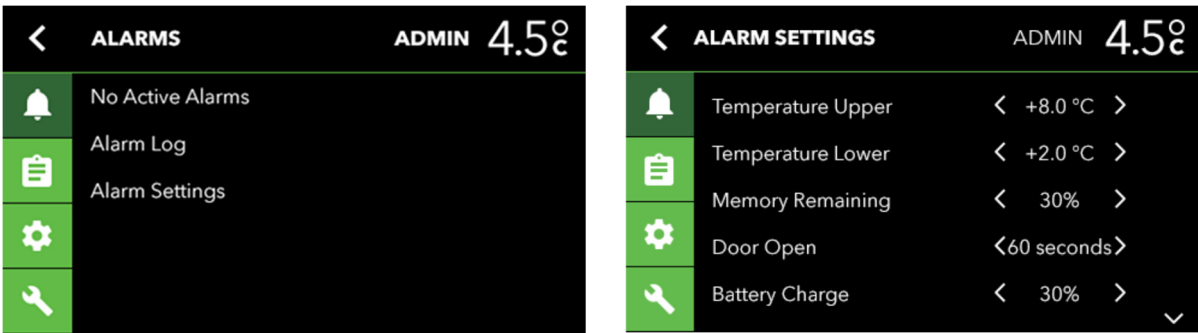
The Active Alarms screen displays a list of active alarms and is one of the ways that an alarm can be cleared. Tap Active Alarms to access the Active Alarms display.

Alarm Log



The Alarm Log screen displays a list of recent alarms per alarm category.

Alarm Settings



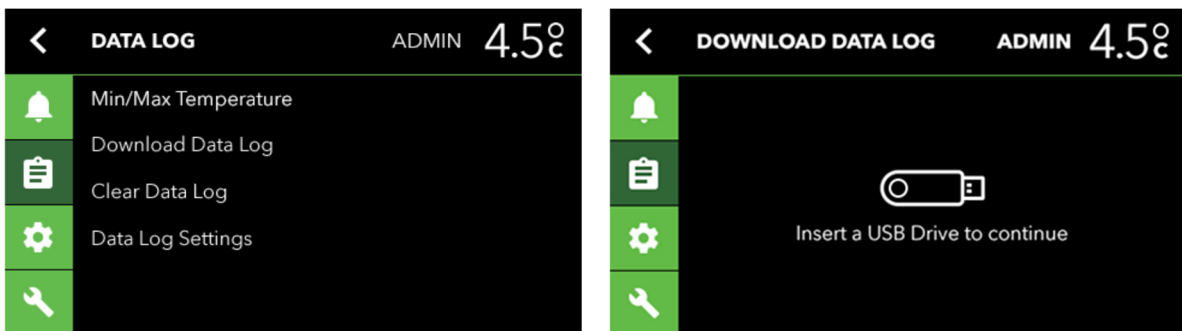
The Alarm Settings menu allows the user to check and adjust all Alarm Settings. Using the left or right arrow lets you scroll through the possible Alarm Setting options. Use the up or down arrow to scroll through the settings.

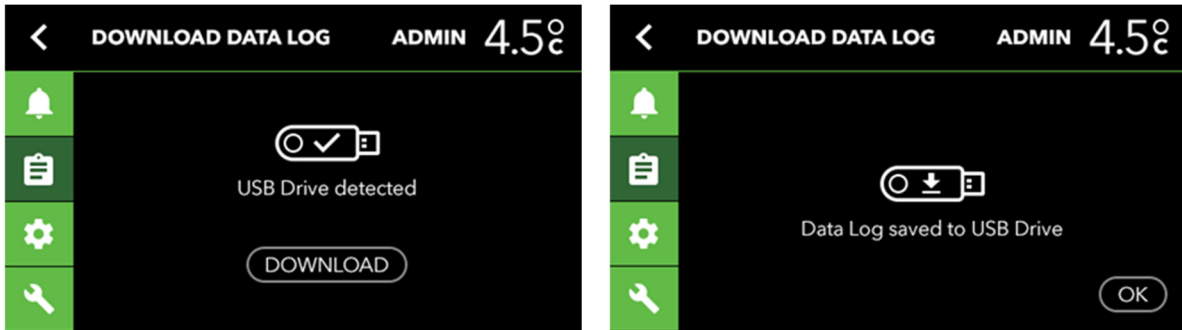
Data Log



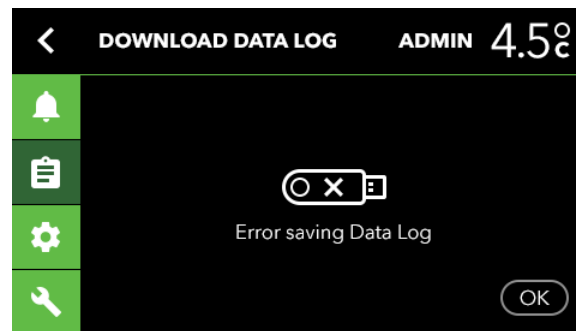
Data log is part of the local temperature monitoring accessory and can be added to any Evolve refrigerator. Visit portal.phononic.com for more information.

Downloading Data





Selecting the Download Data Log will prompt the user to insert a USB drive. Once the USB drive is inserted, the user is notified that the USB drive has been detected by the system. The user then selects Download from the display and once the data download is complete (normally just a few seconds), the user is prompted that the Data Log has been saved to the USB drive.

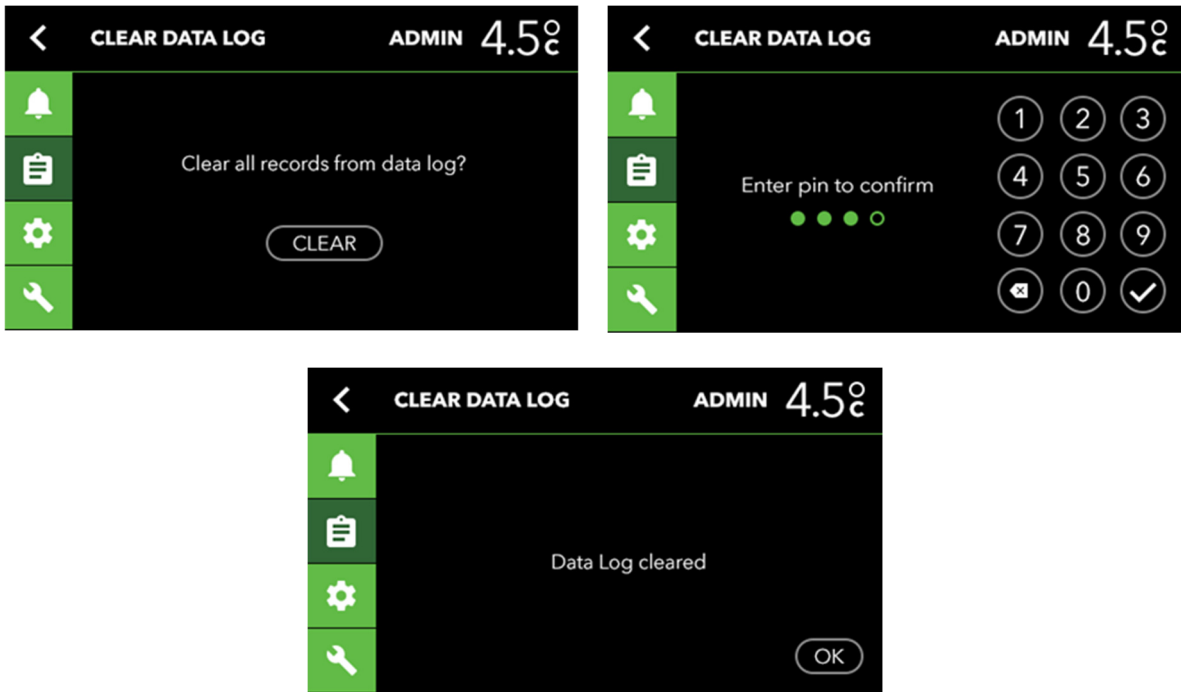


If the user sees the Error saving Data Log screen, there is a compatibility issue with the USB drive OR the USB drive may have other files on the USB drive that interfere with the download. It is recommended that the same USB drive is used for continuous data downloads.

Uploading SilverPoint Data to a Computer

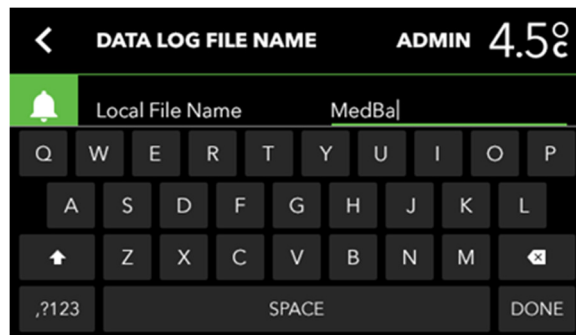
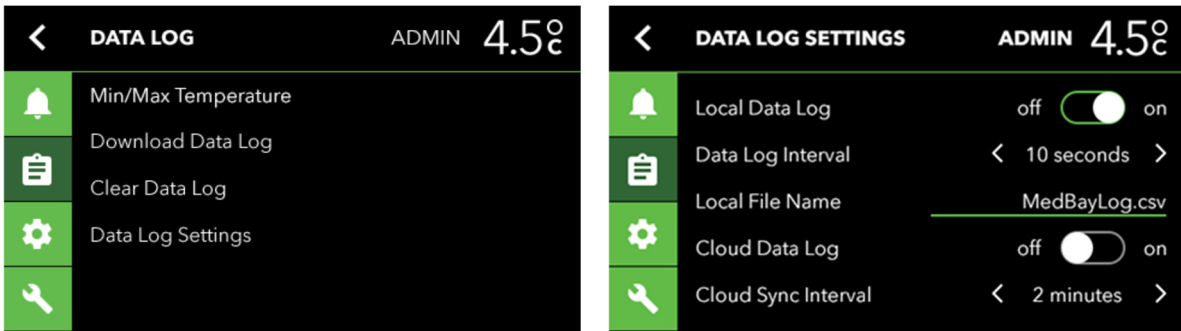
Our system allows you to upload your temperature logs to any USB flash drive for display and analysis on your spreadsheet software such as Microsoft Excel™. When you're ready to review the data extracted on a USB flash drive (see instructions on how to download data above), simply insert the USB flash drive into your computer and open the file in Microsoft Excel™ or any program that can read a .CSV file.

Clearing the Data Log (after downloading)



Clearing the log erases the memory and once erased, the data cannot be recovered.

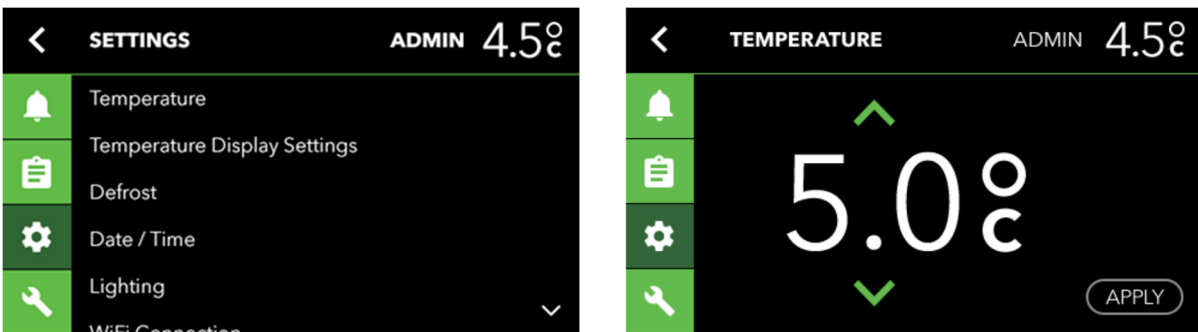
Reviewing / Adjusting Data Log Settings



In the Data Log Settings menu, the user can turn on or off the on-board data logging feature, set the time for Data Log Intervals, turn on or off the Cloud Data Log and adjust the Cloud Sync Interval (the intervals that the unit pushes/sends data to the cloud). Selecting the Local File Name will prompt the user to manually enter the name of the file storage of the unit.

Settings

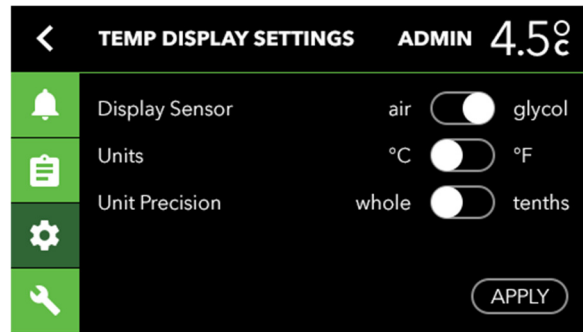
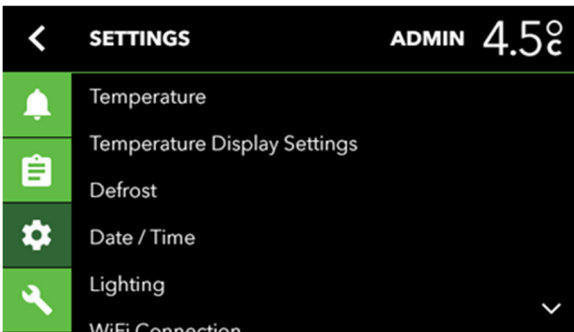
Temperature Set Point



Temperature Set Point is where the user selects the desired unit set point. Using the up and down arrows allow the user to scroll through the preset temperature settings. The temperature is set once the Apply button is confirmed. Temperature settings are in 0.5 degree increments whether the display is set to Celsius or Fahrenheit.

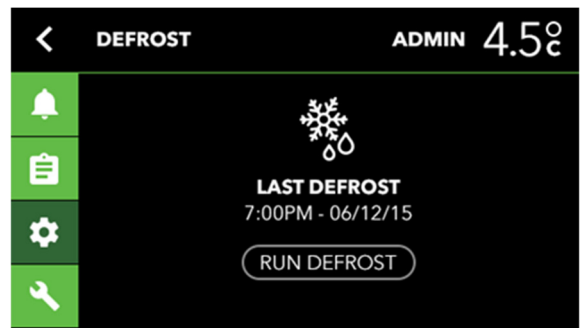
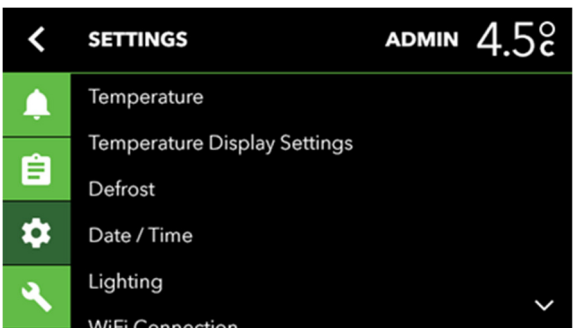
Setting the proper desired temperature is one of your most important display settings. The Evolve 5.5 cu. ft. Medical-grade Refrigerator will hold your set temperature to within 0.5 °C.

Temperature Display Settings



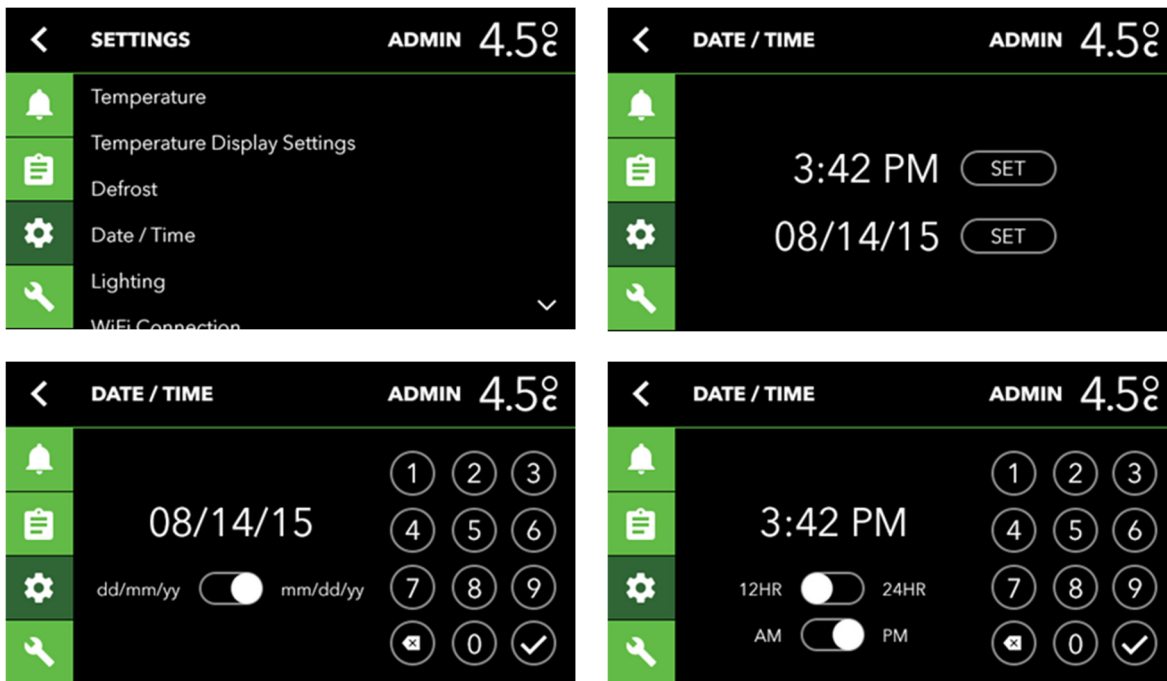
Temperature Display Settings is where the user selects the desired Display Sensor to Air or Glycol temperature reading. By sliding the selection left or right, this screen is also where Units are set to either °C or °F and setting the Unit Precision to whole or tenths of units.

Defrost



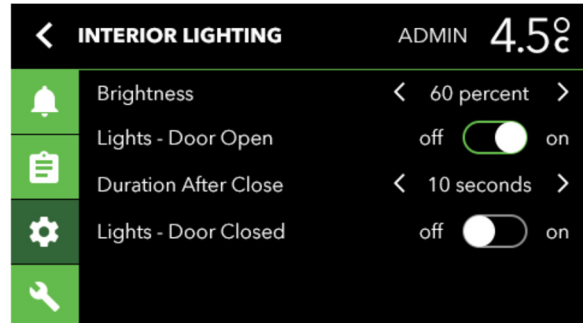
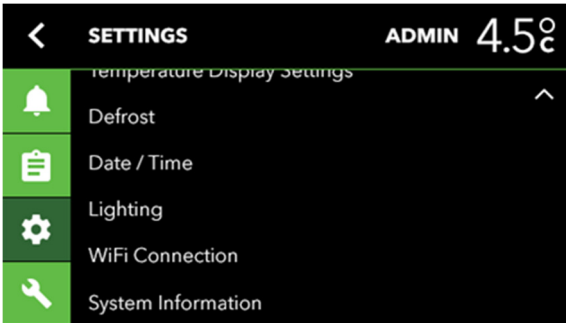
Selecting Defrost from the Settings menu will prompt the user to set-up and run a manual defrost. The Defrost screen also shows when the unit ran a defrost function last.

Date / Time



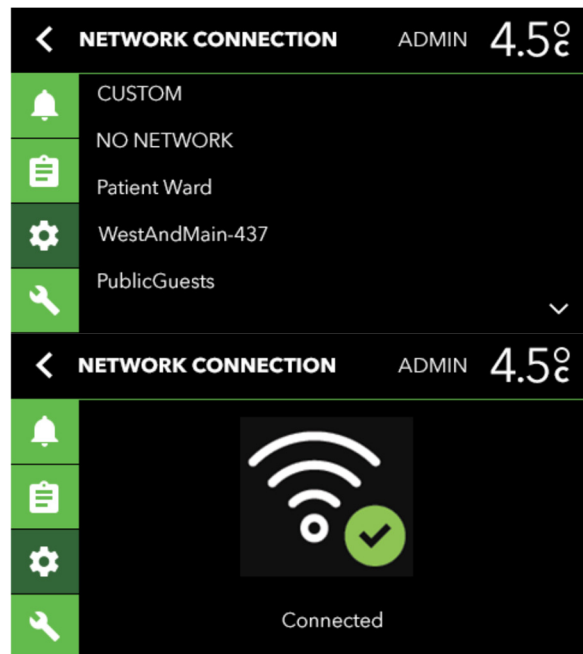
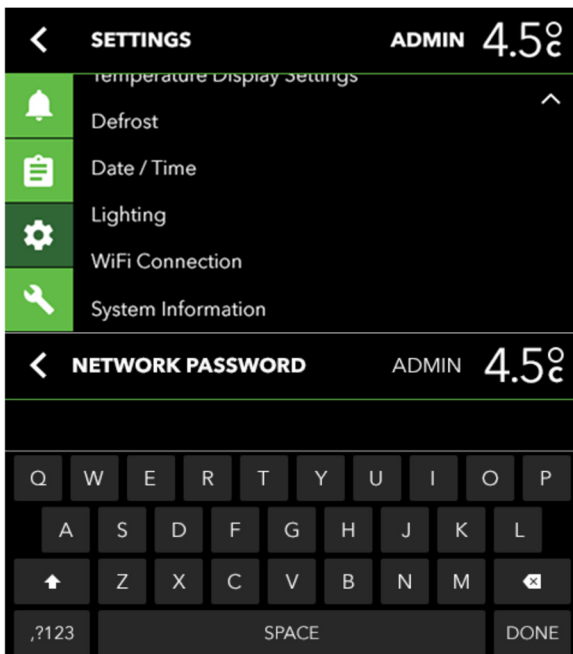
Select Date / Time to manually set-up the current date and time. The initial screen shows the time and date entered and prompts the user to set the time and date. When setting the time, the user can select between a 12 and 24-hour clock (standard time or military time) and AM or PM for a standard clock setting. Using the numeric keypad, the user enters the time and selects the check mark when finished. If the user selects to set the date the user is prompted to enter the current date and can select from the US standard mm/dd/yy or the optional dd/mm/yy setting and selecting the check mark.

Protect Plus Only: Lighting



Select Lighting to adjust the brightness level, lighting on with door open and the duration of the lighting to remain on after closing the door.

WiFi Connection

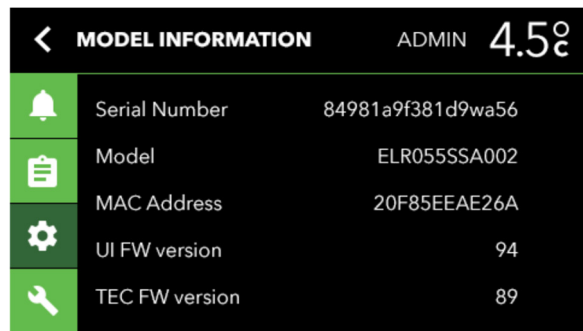
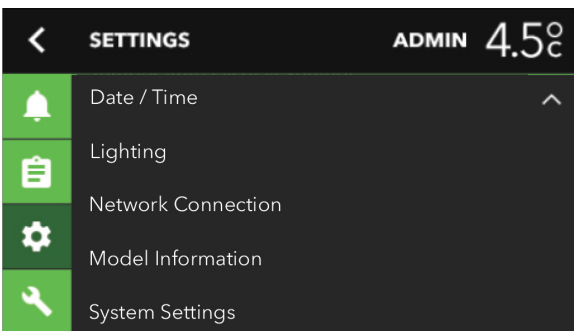


Select WiFi Connection to view the list of detected networks. Once the desired network is selected, the user is prompted to enter the network password using the full touch-screen keyboard.



SilverPoint remote temperature monitoring can be added to any Evolve refrigerator. Visit portal.phononic.com for more information.

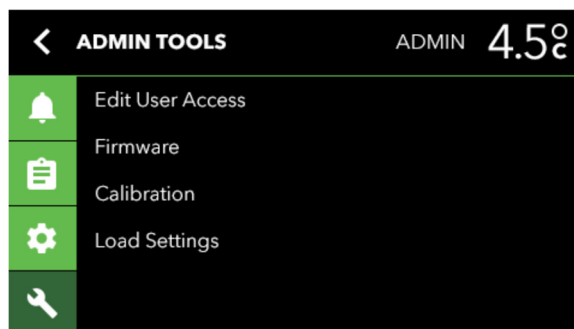
Model Information



Selecting System Information from the Settings menu enables the user to view the key system information on the unit. This is an important area where the user can see the product Serial Number, MAC Address, IP Address and Firmware Versions.

Administrator Tools

Protect Plus Only: Edit Users

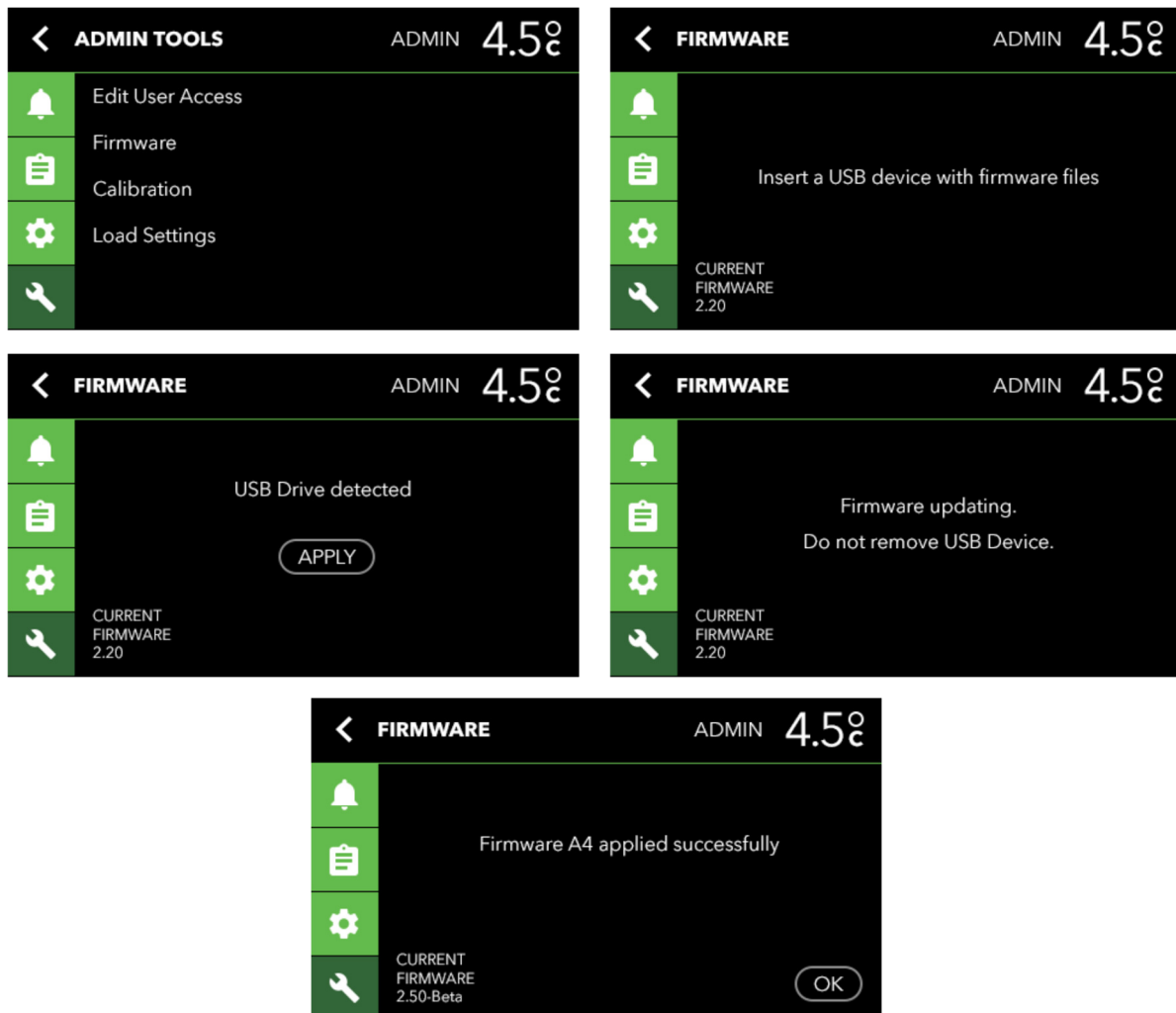


From the main menu, Admin Tools is the section where users are listed and passwords can be edited.

Protect Plus Only: User Accessibility Levels

User Level	Menu Access
Admin	Alarms, Data Log, Settings, Administrator Tools
Sub-Admin	Alarms, Data Log, Settings
User	Alarms, Data Log

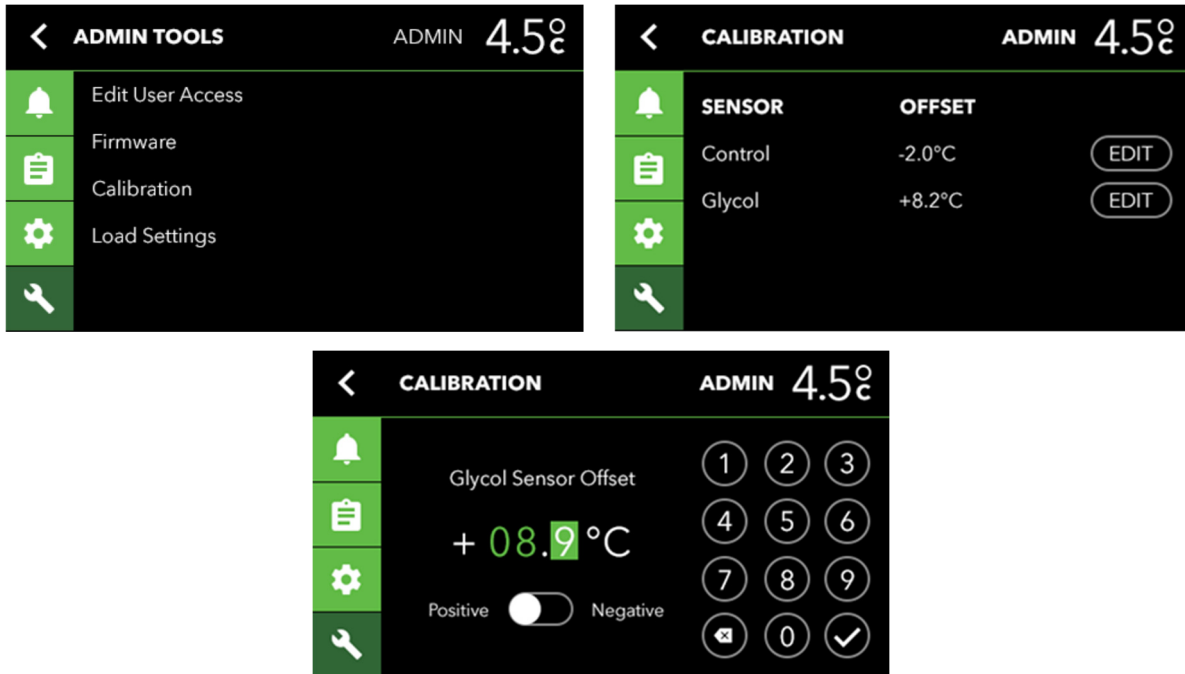
Firmware



Firmware updates are conducted via the Admin Tools. A firmware update is in a BIN file format. The BIN file must be saved or uploaded to a USB drive. The user will be

prompted to insert the USB drive. Once the BIN file is located and selected by the system, the user taps Apply. The control will then display a screen acknowledging that the new, updated firmware is being applied. When the upload is complete the display screen will confirm that the new firmware has been successfully applied.

Calibration



When **Calibrating**, it is recommended to **Calibrate** the **Control** sensor first and allow time for the system to equilibrate before making any adjustments to **Glycol**. An example of calculating an offset value: Your NIST certified temperature reading is 3.7° C, the unit reading is 4.2° C, the offset would be -0.5° C.

Periodic Product Maintenance

Use of cloth to wipe interior

With cold wall refrigerators, condensation may form on the interior of the cabinet and may require periodic wipe-down with an absorbent cloth.

Suitable products for cleaning interior/exterior

The interior may be cleaned, when needed, using a mild detergent and a damp cloth.



Important - avoid the use of chlorides (cleaners with bleach) as well as abrasive cleaners and scrubbers such as steel wool. They will degrade the protective coating on the stainless steel and leave it vulnerable to rust.

Cleaning around ventilation area and precautions

Periodically inspect and monitor the ventilation area just above the door for dust accumulation. It may be cleaned with a duster or vacuum cleaner with a dust attachment.



Do not remove the top cover. Do not attempt to clean the power supply located below the fan assembly. You could damage your unit.

DO NOT use any spray or liquid cleaner in, on or around the display area.

Cleaning the Evaporation Tray

The catch tray is found on the bottom rear of the exterior cabinet. The bottom shelf can be removed for periodic cleaning or when excessive moisture or spills effect the bottom of the unit.

Frequently Asked Questions

How does this refrigeration technology work?

Evolve is built on the SilverCore refrigeration system. It uses a non-toxic, non-hazardous refrigerant embedded in the walls to absorb and channel heat energy to an internal, solid-state heat pump: the component that replaces the compressor in a typical refrigerator. The heat pump cools the refrigerant material when it channels the heat energy out of the system and into the ambient environment.

How reliable is the system?

We have conducted strenuous-life testing studies to develop confidence in the construction and system design of our refrigerator. Our studies indicate at least a 10-year life expectancy based on these stringent test protocols. Evolve systems have no internal mechanical parts, are easy to operate and require minimal maintenance.

Can you guarantee performance?

Our thermal management solutions are tested according to the most demanding consumer and industrial product safety and reliability standards. The heat pump meets or exceeds Telecordia and JEDEC electronic performance, testing and certification standards. In addition, the heat pump is a UL recognized component. Our products contain no mechanical parts, eliminating the most common point of failure. Our solid-state heat pumps have proven to hold any temperature, including freezing, and to date have a failure rate of <.1 percent and a life expectancy of >10 years based on life testing studies.

What is the product warranty?

Phononic offers a 2-year product warranty on parts and labor and a 10-year warranty on the PHP part.

Is the power cord healthcare/NEMA approved?

Yes, it is a National Electrical Manufacturers Association (NEMA) approved plug (indicated by a green dot on the cable).

Why is there a battery?

The included internal, standard-sized, non-rechargeable lithium CR123A battery provides continuous power to internal data logging.

How long before I can use the product?

In a normal ambient environment, your refrigerator should pull down to the target set point within a couple of hours. It is common industry practice to monitor the unit over 48 hours to ensure it is holding the set point temperature.

Why is there condensation building up on the walls?

Condensation is completely normal in a cold wall refrigeration system. Condensation occurs when humid air cools when in contact with the cold walls and excess water vapor condenses on the walls as droplets. There is an out-of-sight system that collects and evaporates the excess runoff. You may see excess condensation during the initial cool down period.

Where can I find the Serial Number, the MAC ID, the IP address?

You can find your important and specific product information by accessing the control interface. This important information includes: Product Serial Number, Model Number, MAC ID, UI Firmware and TEC Firmware. **(Main Menu --> Settings --> System Information)**
The product Serial Number can also be found on the shipping label (on the shipping box) and on the product label (on the back of the unit behind the rear cover).

Is the unit calibrated? Can I calibrate my refrigerator?

The refrigerator can be ordered with a National Institute of Standards and Technology (NIST) certificate. To ensure proper calibration in the working environment, both the air & glycol sensors can be calibrated. See the Calibration section for instructions.

What kind of refrigerator maintenance is required?

As a complete solid-state refrigeration system, there are no internal moving parts to be serviced. Occasionally you will want to check the external fans for dust build up and clean as necessary. Otherwise there is no maintenance required to keep the system working at peak performance.

May the units be placed in a Pyxis cabinet?

As with any electrical or mechanical system, heat accumulation in a closed environment can impact the cooling performance of the refrigerator. We recommend adequate ventilation in the back wall of the cabinet to dissipate heat outside of the cabinet.

Troubleshooting

Troubleshooting Problems	Customer Resolution
Unit doesn't power on	<p>Check for proper installation of the power plug.</p> <ul style="list-style-type: none"> • Did you just power up the refrigerator and is the system pulling down to set point temperature? Alarm will not sound until the set point is met (4 °C default) • Did you have a recent power failure and is the system pulling down to set point temperature? Alarm will not sound until the set point is met (4 °C default)
Unit's audible alarm doesn't sound when out of temp range?	

LED Display Issues	
Solid red Data logging error but unit is operating normal	Download data and clear the data log. If light remains red there may be another issue with the internal data log; download data and contact Phononic Customer Care.
Flashing Red Data logging error during power failure mode (15 second intervals)	Download data and clear the data log. If continues flashing red, possibly there's an issue with the backup battery power running low. Replace it with appropriate battery (see page 13).
Not Lit Power failure and no battery backup power	Change the battery and confirm that the LED begins flashing green status.
Solid Green Normal operation	No action required
Flashing Green Data Logging is active in a power failure mode (15 second intervals)	Restore power to the unit and confirm that the LED becomes solid green.

Interior Concerns	
Condensation I have frost forming on the walls	Are you opening the door frequently? If so, the cooling system is working hard to maintain the target set point and condensation may freeze on the walls. It will thaw during the next defrost

cycle. Run a manual defrost cycle if desired.

Door doesn't close/closes incorrectly	Check to make sure something isn't blocking it from closing completely.
Door alarm keeps sounding	Check to make sure the door is properly aligned in the frame by looking for uneven surfaces. For example, is the gap from the hinge to edge equal in width all the way across the surface?
I can't hear any noise from the unit	Is the power on? Is the LED on front a solid green? If so, the unit is powered and operating normally. Once the refrigerator reaches its set point temperature then it will be very quiet during normal operating conditions.
I hear more fan noise than normal	Has the temperature risen recently? Is the front free & clear for proper ventilation? If you've recently held the door open for an extended period of time or you put warmer product in the refrigerator, then the unit is likely recovering to its set point temperature. Only be alarmed if you hear abnormal fan sounds.
How long do I have to wait before I can load the refrigerator?	Once the unit displays 4 °C, you are safe to start loading. If loading with room temperature product, we recommend loading the refrigerator in small increments to avoid raising the temperature above the controlled temperature zone.
What is the difference between an air sensor and a glycol sensor?	The air sensor is located along the back panel and represents the open air temperature. A glycol sensor is the vial of liquid with a thermocouple inserted in the liquid. The glycol sensor is most representative of the typical product stored in the refrigerator. It will take the glycol sensor longer to reach the desired set point temperature and it will remain stable longer than the air sensor. The display is defaulted to read the glycol sensor.
System doesn't recognize USB drive	We recommend inserting the USB while the display is reading temperature (default screen). Once plugged in you should see a USB icon appear on the icon bar. If it doesn't register after a

few attempts, try inserting a different USB memory stick. Contact Phononic customer service if this persists.

System doesn't download data to the USB

Did you confirm there is a USB icon on the icon bar? Is the LED on USB illuminating? Check the USB device to make sure there is space for the data file. Try using a different USB memory stick.

WiFi-related Issues

I can't find my network

Is the router within range? Have you tried to manually enter a network name? Consult your system administrator for help with your network id & password.

I can't connect to my network

Is the router within range? Have you tried to manually enter a network name? Have you changed the password recently? Consult your system administrator for help with your network id & password.

I have no WiFi signal

Contact your system administrator. Check position of refrigerator versus the access point. Best if router is within 400 feet in front the unit.

How do I connect to WiFi?

See User guide to walk through steps

My WiFi connection dropped, does my refrigerator reconnect automatically or do I have to make it reconnect?

Once connected, the refrigerator will attempt to reconnect to the network. If the unit is having troubles reconnecting, check for changes in password, unit position, and router position.

My user display is unresponsive after I entered my WiFi password

This is a normal delay associated with the unit trying to make a network connection. Allow the unit to reconnect, which will not interfere with the performance of your refrigerator. Give the unit a few minutes to work through its connection and to eventually fail to make a connection. At this time, if you do not see a cloud on the icon bar then the display should be interactive again. You may need to reenter the password in the network settings to make sure it connects correctly the next time it's needed.

My user display is unresponsive

Do you see a cloud indicator on the display? If so, the unit is trying to send data to the cloud and is likely trying to establish a WiFi connection. Allow the WiFi connection to cycle through its process before trying to access the user interface buttons. If you continue having problems, you can press the reset button and upon reboot you can disable the WiFi network by selecting "No Network" from the list of network options.

Call Customer Care for assistance, 844-476-4202

I got a system error code

Did you remove the red tab to activate the battery contacts? If the battery strength is low it needs to be replaced.

Product Warranty and Service

Phononic warrants to the original purchaser that the equipment shall be free from material defects in material and workmanship under normal use and service during the “Warranty Period,” defined as

- (i) a period of 2 years from date of purchase with respect to all parts, during which period Phononic shall cover the cost of parts and labor for repair and replacement, and
- (ii) an additional period of 8 years with respect to the Phononic heat pump powering the refrigeration system, during which period Phononic shall cover the cost of replacement parts and shall charge Phononic’s standard labor rates for repair and replacement.

CONDITIONS OF WARRANTY

1. Equipment must have been installed and operated in compliance with instructions provided by Phononic.
2. Warranty labor must be performed by a local Phononic authorized service agent.
3. Defects caused by alterations, improper operation, outdoor use, neglect, vandalism, fire, acts of God, or any situation or causes beyond the control of Phononic are not covered by this warranty.
4. Phononic may require that any parts covered under this warranty be returned to Phononic freight prepaid, and this warranty shall apply only if Phononic verifies the applicable defect upon examination.
5. Any defects or other damages resulting from shipment of the unit are not covered by this warranty. Phononic advises customers to carefully examine all shipments prior to acceptance and note all potential damage concerns on the appropriate shipping papers.
6. Labor charges resulting from security clearance procedures, safety training, travel time greater than one hour or 50 miles (80 km), premium time labor (including after hours, weekends, holidays, etc.), and service calls for non-defective equipment will not be covered by Phononic and are the responsibility of the equipment owner.
7. The repair or replacement of defective parts in accordance with this warranty is customer’s sole and exclusive remedy with respect to any defects in the equipment. Phononic will not be liable for any consequential damages, expenses, connecting or disconnecting charges, or any losses or damages resulting from a defect in the equipment.

This warranty constitutes purchaser’s sole and exclusive remedy regarding defects in the equipment and is expressly made in lieu of other warranties, expressed or implied, including any implied warranty of merchantability or fitness for a particular purpose.

For any questions concerning this warranty please visit our website at phononic.com or contact Customer Care at 1-844-476-4202.

Product Specifications

General Specifications and Features	
Model Number Solid Door Glass Door	ELR055SSB-XXX ELR055SGB-XXX
Model Style	5.5 cu. ft. medical-grade undercounter refrigerator
Materials	Durable painted steel exterior with easy-to-clean interior aluminum walls
Internal Chamber Capacity	5.5 cu. ft. / 156 liters
Chamber Temperature Uniformity	± 1 °C / ± 1.8 °F from center air temperature
Cooling System	SilverCore refrigeration system with two PHP125 heat pumps
Refrigerant	R744, non-flammable, zero ozone depleting, low toxicity
Refrigerant charge quantity Force Accept System Cold Wall System	17g Max 30g Max
Refrigerant Pressure rating	12410 kPa
Energy consumption	<3.5 kWh/24hrs @ 4 °C set point and 25 °C ambient
Insulation	HF245FA
Display	Full-color 4.5" LCD with LED backlighting
Power Cord	1 meter, NEMA hospital grade plug for US/CAN and country specific cord for EU states.
Noise Level	<45dBA @ 1m
Power Input	100-240VAC, 47-63 Hz
Rated Current	5 A (MAX)

Physical Dimensions

Weight 125 lbs. / 56.8 Kg

Outer Dimensions 600 mm W x 653 mm D x 813 mm H
23.6" W x 25.7" D x 32" H

Internal Dimensions 495 mm W x 521 mm D x 584 mm H
19.5" W x 20.5 D x 23" H

ADA Height Compliant Yes

Stability Leveling feet

Agency Approvals

International Approval CE

NRTL Mark MET

CAN Recognition MET

RoHS TUV Rheinland of North America

REACH TUV Rheinland of North America

Data Monitoring and Logging

WiFi Connectivity May contain 2.4GHz 802.11 b/g/n compatible

Memory 512 kb non-volatile memory

Access Ports Pass-through port for additional monitoring probe
USB port for exporting temperature monitoring data

Temperature Sensors Interior Chamber Air (2) and Glycol (1)

Environmental Operating Conditions

Acceptable ambient temperature 10 °C - 32 °C

Humidity requirements Low humidity. Not warranted for outdoor use

Warranty 2 years on all parts and labor, 10 years on PHP part

General Caution and Warnings



Attention

For Class B - Unintentional Radiators:

This device complies with Part 15 of the FCC Rules. Operation is subject to the following two conditions: (1) this device may not cause harmful interference and (2) this device must accept any interference received, including interference that may cause undesired operation.



Warning

Hazardous voltages are present: To reduce the risk of electric shock and danger to personal health, follow the instructions provided in this manual.



Attention

ICES-003 Class B Notice—Avis NMB-003, Classe B

This Class B digital apparatus complies with Canadian ICES-003.



Attention

NOTE: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation.

If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:

- Reorient or relocate the receiving antenna
- Increase the separation between the equipment and receiver
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected

Consult the dealer or an experienced radio/TV technician for help



Warning

Hazardous voltages are present: To reduce the risk of electric shock DO NOT remove the rear cover on this product. There are no user serviceable parts inside. Please refer service to qualified personnel.



Radiation Hazard

In order to satisfy the FCC RF exposure limit for transmitting devices, a separation distance of 20 cm should be maintained between the body and the Evolve refrigerator while in operation.



Attention

This device complies with Industry Canada license-exempt RSS standard(s). Operation is subject to the following two conditions: (1) this device may not cause interference, and (2) this device must accept any interference, including interference that may cause undesired operation of the device.

Le présent appareil est conforme aux CNR d'Industrie Canada applicables aux appareils radio exempts de licence. L'exploitation est autorisée aux deux conditions suivantes: (1) l'appareil ne doit pas produire de brouillage, et (2) l'utilisateur de l'appareil doit accepter tout brouillage radioélectrique subi, même si le brouillage est susceptible d'en compromettre le fonctionnement.



Warning

The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.



Attention

Any modifications made to this device that are not approved by Phononic may void the authority granted to the user by the FCC to operate equipment.



Attention

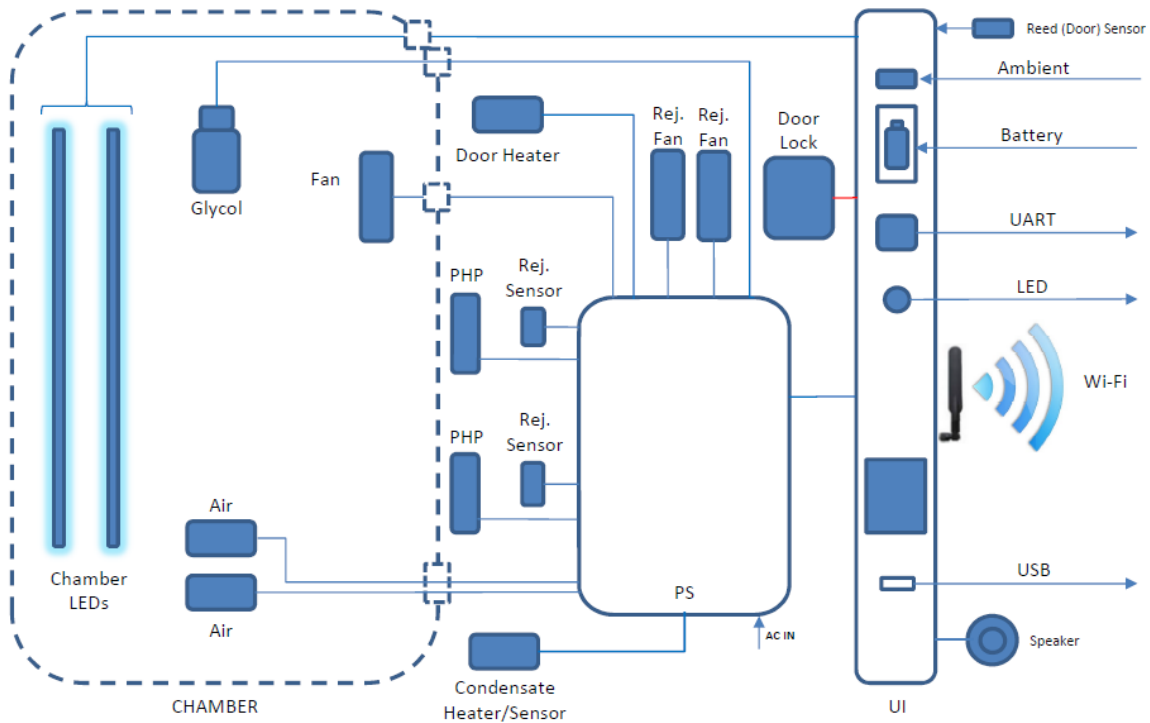
Cells/batteries shall be tested and pass applicable regulations based on type and use such as:

- IEC62133 for secondary battery safety
- UN3090/UN3091 and UN3480/Un3481 for Lithium Battery transport regulations
- Transport regulations based on the following: International Air Transport Association (IATA), International Civil Aviation Organization (ICAO), International Maritime Dangerous Goods (IMDG) Code, Transport of Dangerous Goods (TDG)

Wiring Diagram

Provided for informational purposes only. For repairs or operating issues, please contact Customer Care at 1-844-476-4202.

Wiring diagram for Evolve 5.5 cu. ft. Medical-grade Undercounter Refrigerator



Safety Precautions

All electrical appliances present some risk of injury. Your Evolve refrigerator is designed to meet safety standards.

Take care to carry and move your refrigerator with caution. Do not place it where it can fall, be dropped, or where the electrical connection can be submerged into water or other liquids.



Refer to Unpacking your Evolve Refrigerator for details on handling and moving the unit.



There are no user-serviceable parts within the Evolve 5.5 cu. ft. /156 L product.

Symbols used in this Manual



Used to indicate an electrical shock hazard.



Used when advice is given to prevent malfunction or injury.



Used to prohibit flammable items.



Used to advise not proceeding with an action.



Used to identify an Evolve Refrigerator, SilverCore Cooling System or SilverPoint Embedded Monitoring System benefit.

Electrical Components



Do not remove the top cover or operate unit with top cover removed. Removal of the rear cover can result in electrical shock. Service only by a factory authorized service person.

