



# 5.5 cu.ft. Undercounter Refrigerator

TSG Series

## Installation and Operation

328966H01 • Revision B • September 2021



**IMPORTANT** Read this instruction manual. Failure to follow the instructions in this manual can result in damage to the unit, injury to operating personnel, and poor equipment performance.

**CAUTION** All internal adjustments and maintenance must be performed by qualified service personnel.

Material in this manual is for informational purposes only. The contents and the product it describes are subject to change without notice. Thermo Fisher Scientific makes no representations or warranties with respect to this manual. In no event shall Thermo be held liable for any damages, direct or incidental, arising from or related to the use of this manual.

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# Product Specifications

## Models

Model	Description
TSG505SA	TSG Under-Counter Solid door Refrigerator, NEMA 5-15P
TSG505GA	TSG Under-Counter Glass door Refrigerator, NEMA 5-15P

## General Specifications and Features

Model Style	5.5 cu.ft. Undercounter Refrigerator
Materials	Durable painted steel exterior with easy-to-clean interior aluminum walls
Internal Chamber Capacity	5.5 cu.ft./156 L
Chamber Temperature Uniformity	<±3°C/±5.4°F from center air temperature
Cooling System	Refrigeration system with single 125 W thermoelectric heat pump
Refrigerant	R744, non-flammable, zero ozone depleting, low toxicity
Refrigerant Charge Quantity	17 g Max
Refrigerant Pressure Rating	12410 kPa
Insulation	CFC and HFC free insulation
Display	1.44" display with capacitive buttons
Power Cord	1.8 meter, NEMA hospital grade plug
Noise Level	43 dBA
Power Input	100-240 VAC 50-60 Hz
Amps	3.9 Amps Max

## Physical Dimensions

Net Weight	115 lbs./52 kg (Solid door) 132 lbs./60 kg (Glass door)
Outer Dimensions (W x D x H)	600 mm x 661 mm (686 mm including door handle) x 813 mm 23.6" x 26" (27" including door handle) x 32"
Internal Dimensions (W x D x H)	496 mm x 521 mm x 585 mm 19.5" x 20.5" x 23"
ADA Height Compliant	Yes
Stability	Leveling feet

# Environmental Operating Conditions

Ambient Operating Temperature	10°C to 32°C at a set-point of 5°C
Humidity Requirements	Maximum Relative Humidity 65% non-condensing
Operating Environment	Indoor use only. Violation of this will void the warranty terms
Altitude	For operation of up to 2,000 m
Pollution Degree	2
Warranty	2 years on all parts and labor, 5 years on thermoelectric heat pumps part
Storage Conditions	Indoors, -40°C to 32°C, Relative Humidity 10% - 95%

## ENERGY STAR<sup>®</sup> Certification

The TSG505 series refrigerator has earned ENERGY STAR<sup>®</sup> 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. ENERGY STAR and the ENERGY STAR mark are registered trademarks owned by the U.S. Environmental Protection Agency. For more information about ENERGY STAR, please visit: <https://www.energystar.gov/>

# Safety Precautions

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

Take care to carry and move the 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 the **Unpacking the TSG Refrigerator** section for details on handling and moving the unit.

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

Symbols used in this manual are described as follows:



Used to indicate an electrical shock hazard.



Used when advice is given to prevent malfunction or injury.

## Electrical Components



Removal of the top cover for maintenance and other service should be performed only by factory authorized personnel.



Before installing, using or maintaining this product, be sure to read the manual and product warning labels carefully.

Failure to follow these instructions may cause the product to malfunction, which could result in injury or damage.



**CAUTION:** 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.



**CAUTION:** ICES-003 Class B Notice—Avis NMB-003, Class B. This Class B digital apparatus complies with Canadian ICES-003.



**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, you are encouraged 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 which the receiver is connected.

Consult a 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 of this product. There are no user serviceable parts inside. Services should be done by qualified personnel only.



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



**CAUTION:** 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.



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



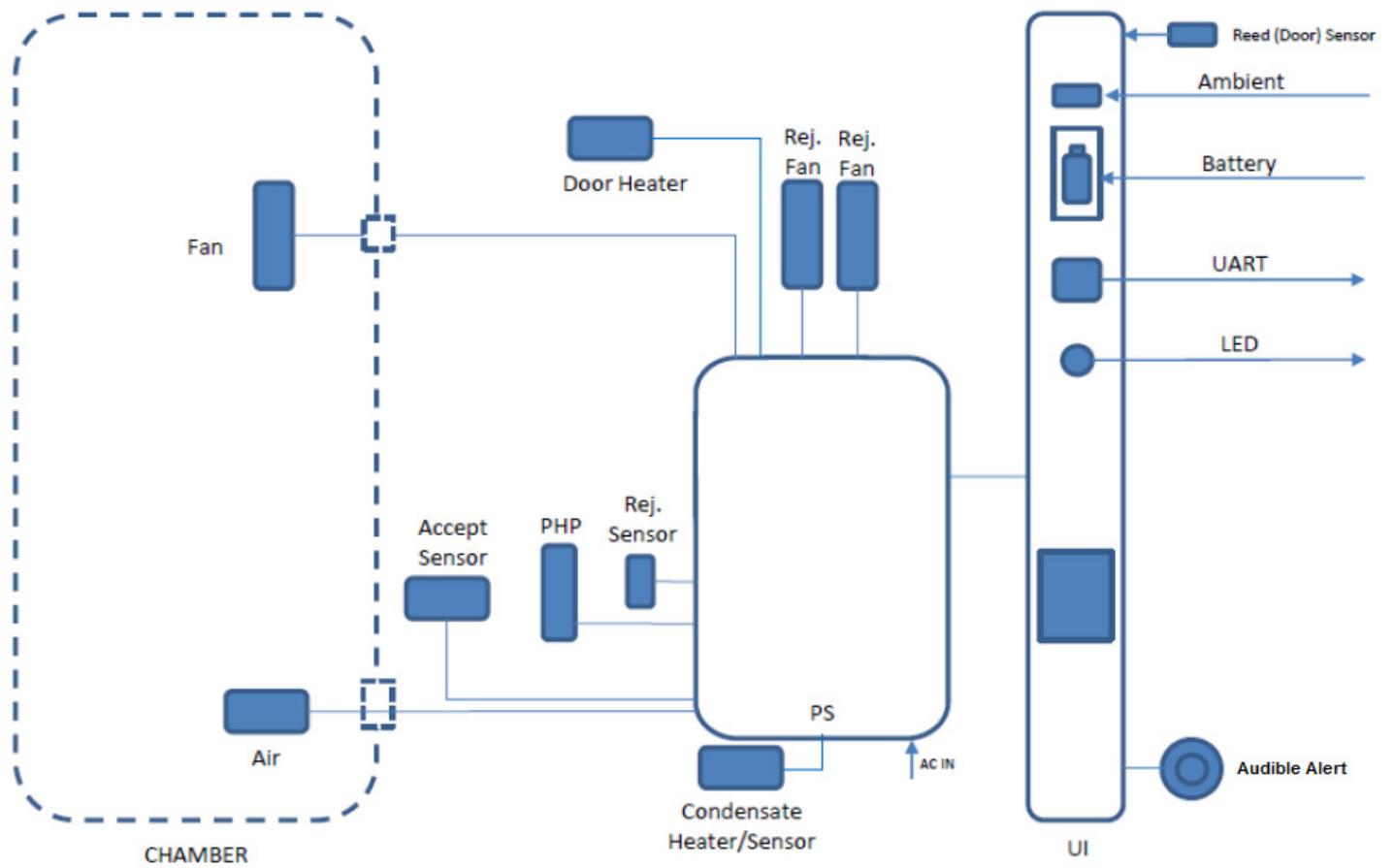
**CAUTION:** Any modifications made to this device that are not approved by Thermo Scientific may void the authority granted to you by the FCC to operate equipment.



**CAUTION:** 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).

# System Block Diagram



# Unpacking the TSG Refrigerator

## Inspecting for Damage

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



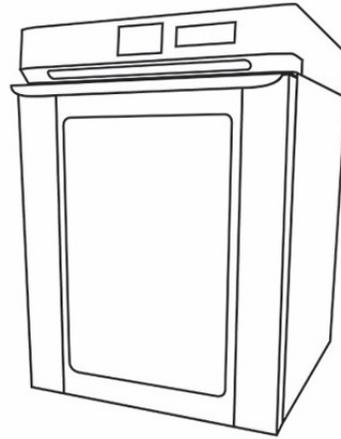
TSG service line does not resolve packaging damage issues.

We have designed intelligent packaging to assist you in unpacking the TSG undercounter refrigerator. The TSG product was built, inspected, tested, and packaged with extreme care. Follow the directions provided to unpack the 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 2 people unpack the refrigerator by lifting at the base of the refrigerator. The packaged unit weighs nearly 145 pounds (66 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



Refrigerator



CR123A Battery



Power Cord



Door Lock Keys

# Installation

## 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 leveled.

## Intended Use

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

The refrigerators described in this manual are designed for professional use. These products are intended for use as cold storage in research use and as a general purpose laboratory refrigerator, storing samples or inventory at operating temperatures between 2°C and 10°C.

It is not considered a medical device and has therefore not been registered with a medical device regulatory body (e.g. FDA): that is, it has not been evaluated for the storage of samples for diagnostic use or for samples to be re-introduced into the body.

This unit is not intended for use in classified hazardous locations, nor to be used for the storage of flammable or corrosive inventory.

## Providing Ventilation



The TSG 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 the product will run at variable speeds. Refer to the **Troubleshooting** section on how to clean and troubleshoot the fan for more information.



**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 call Customer Care at 866-984-3766 for guidance and instructions.

## Power On and Power Cord Guidelines



1. Use only the power cord provided with the TSG 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 (as shown above).



Do not connect to a GFCI (Ground Fault Circuit Interrupter) circuit or outlet as it may be subject to nuisance tripping.

3. Position the refrigerator where you intend to locate it, ensuring the recommended 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 you choose to disregard this power safety steps listed above.

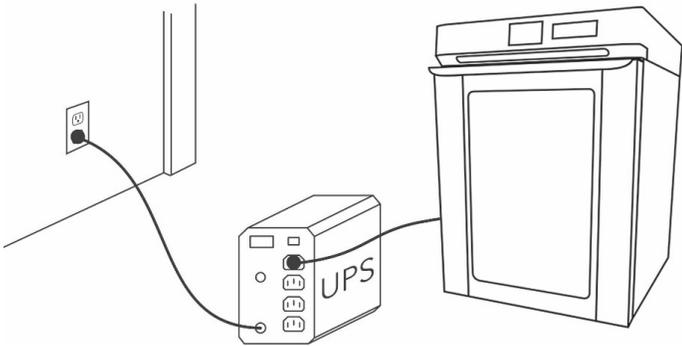


Be careful not to plug into a wall outlet controlled by a wall switch to avoid accidentally switching off the refrigerator. To function properly the refrigerator must continually receive power.



**CAUTION:** Risk of electrical shock. If the cord or plug becomes damaged, replace with a cord and plug of the same type and rating.

## Uninterruptable Power Supply (UPS)



The TSG 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, be sure to follow the directions and precautions accompanying that device.

# Operation

## LED Indicator

When you turn on the refrigerator, verify that the LED indicator is working. The LED indicator appears on the front control panel above the battery. The LED indicator illuminates green when the unit is ON and running (Under normal operation). It illuminates red if there is a concern such as a low battery or other alarms.



A power outage/backup battery would result in a flashing light and audible beep every 5 seconds until battery is exhausted.

## Preprogrammed Settings

Settings can be customized via the Settings and Alerts menus.

Temperature Display & Alarm – Temperatures are detected and displayed in Celsius units to one tenth of a degree. For example, 5.0°C. Upper and lower thresholds are driven by internal air sensor.

- Set Point Temperature – The unit preset/default is set at 5.0°C (41°F)
- Upper Threshold Alarm – The unit preset/default is set at 10.0°C (50.0°F)
- Lower Threshold Alarm – The unit preset/default is set at 2.0°C (35.6°F)

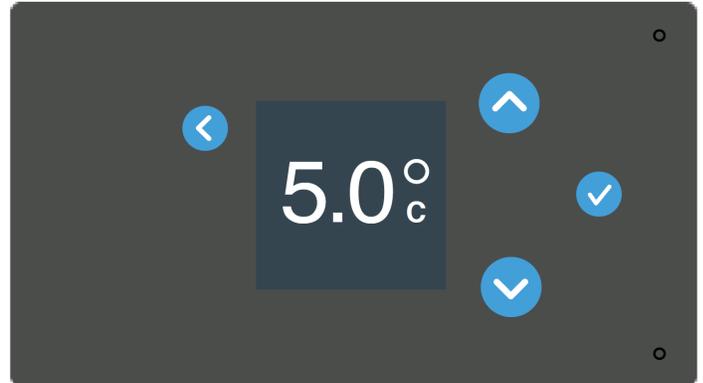
## Preset Alarms/Alerts

The following alarms/alerts are factory preset:

Alarm	Factory Setting	Icon
Temperature Range Alarm	Min 2°C Max 10°C	
Door Ajar Alarm	1 minute	
No Power Alarm	>10 seconds outage	
Battery Low Alarm	<15% remaining	

## 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. Once set point is reached, the fan speed will reduce to conserve energy. The unit will reach air temperature setting rapidly.



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 5°C, then the alarms are enabled when the unit reaches 8°C.

The recommended setpoint for NSF 456 vaccine refrigerators is 5°C. Changing this parameter or any other service parameters may affect the units ability to meet the NSF 456 standard.

## Loading Products for the First Time

After you power on the refrigerator, monitor the temperature display on the control panel. Do not load until the default set point is reached. When you load the refrigerator, do not block air flow around the air sensor. Provide at least one inch (25 mm) of clearance around the air temperature sensor.

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

# 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. It is a health hazard as well as leads to more frequent opening of the door.

**Note:** TSG undercounter refrigerators have a visible and an audible open door alarm that sounds, when door opens for more than a minute.

## Automatic Defrost Cycles

The refrigerator will run an automatic defrost cycle to maintain its performance. The period between defrost cycles will vary depending on the refrigerator use conditions, ranging from 6 to 96 hours. During the defrost cycle it is normal for the fans to cycle on and off and for the air temperature on the display to briefly rise to 6°C (43°F).

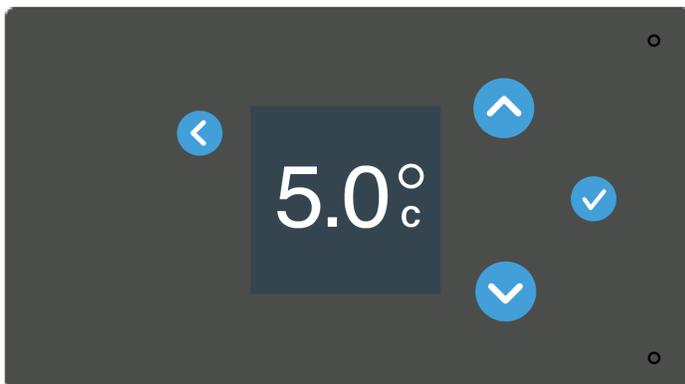
# Getting To Know Your Product

## Product Exterior – Front



## Display

The display is located in the center of the upper console and is the single point-of-use for controlling the refrigerator. The display is a 1.44" full color TFT-LCD display with capacitive touch user interface buttons for easy navigation and control.



5.5 cu.ft. Undercounter Refrigerator

## Backup Battery

**Activating the Battery:** The included battery is shipped with a protective tab to avoid power 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 type CR123A or IEC16340
3. Close the I/O Dock panel

**Note:** The battery serves to support alerting the user in the event of a power loss.



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



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

## Ventilation

The TSG 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.

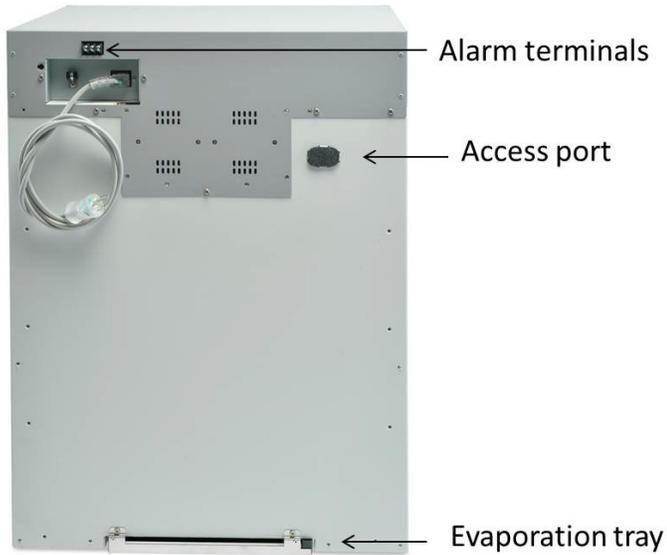


Do not insert objects into the fan screens to avoid damaging the unit.

## Door Lock

The 5.5 cu.ft refrigerator uses a mechanical door lock. The refrigerator ships with two keys taped to the top of the unit. Turn the key clockwise to unlock and counter-clockwise to lock.

## Product Exterior – Rear



## Product Interior



### Access Port

Access port (located on the back side of the unit) is shipped sealed with a foam plug that must be removed prior to use. Additionally, the gray plastic knock-out must be removed. After inserting the 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. If the device is an independent probe, it should be installed on the shelf within the cabinet usable space.

### Evaporation Tray

The evaporation tray is located on the bottom rear of the unit.

### Interior Components

- Air temperature sensor
- External pass-through port
- Adjustable shelving

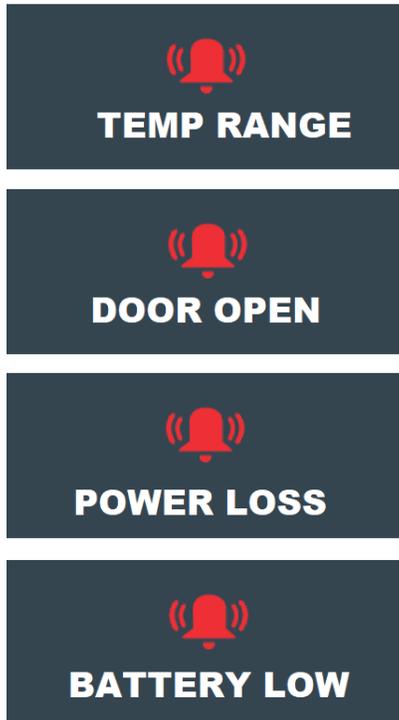
### Adjustable Shelving

The TSX undercounter refrigerator shelves are shipped with protective wrapping that must be removed prior to use. Reposition the shelves by relocating the support clips in the mounting rails to the desired height.

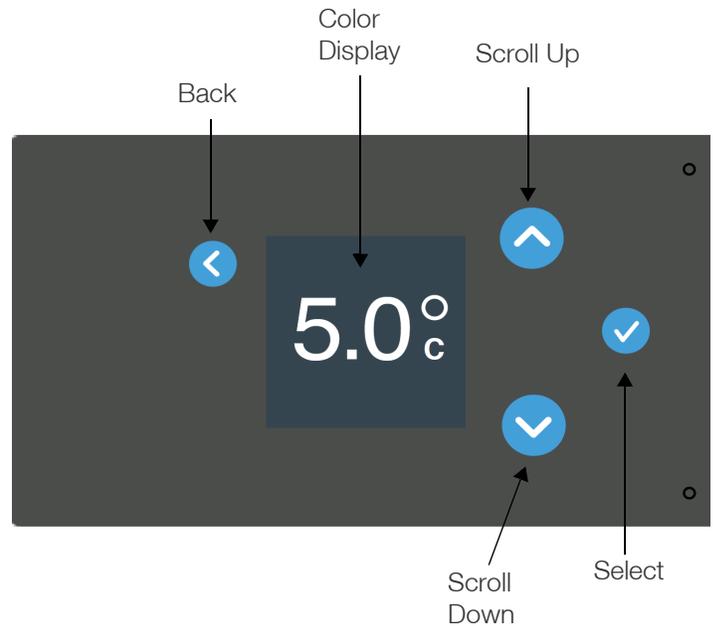
Only use shelves to store product. The floor of the cabinet shall not be loaded.

# Navigating TSG 5.5 Cu.Ft. Refrigerator Controls

## System Alerts



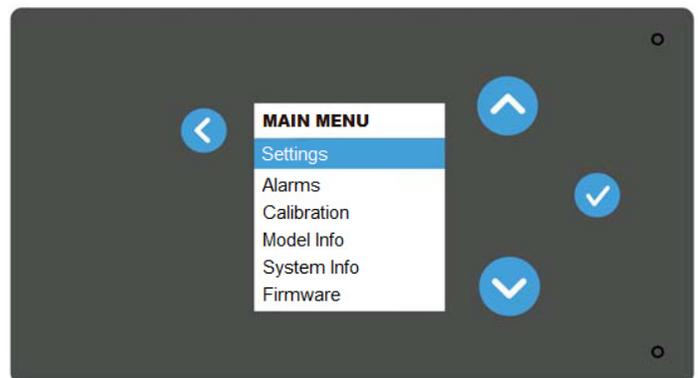
## Reading the LCD (Temperature) Display



## System Alert Values

Alarm	Factory Setting	Icon
Temperature Range Alarm	Min 2°C Max 10°C	
Door Ajar Alarm	1 minute	
No Power Alarm	>10 seconds outage	
Battery Low Alarm	<15% remaining	

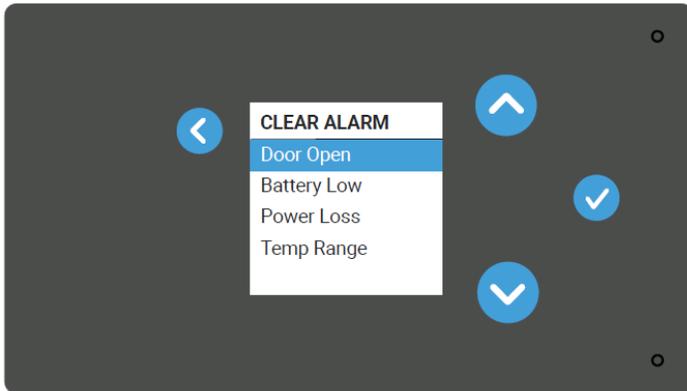
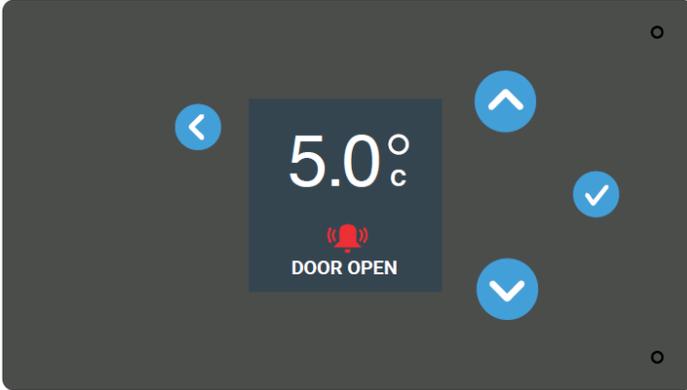
## Access the Main Menu



# Alarms

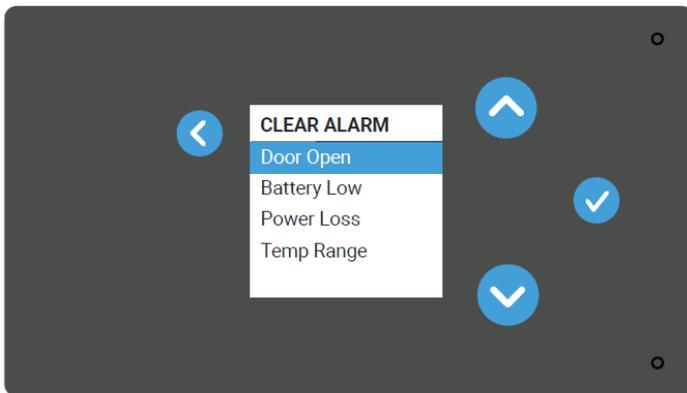
## Active Alarms

To clear an alarm state, touch any blue button to go to a screen that lists each alarm triggered.



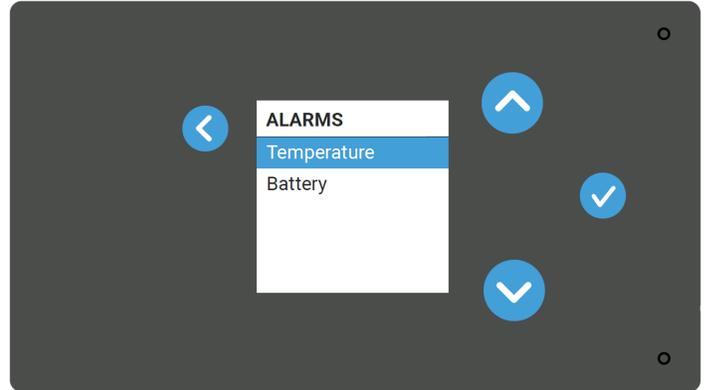
## Alarm Log

The Alarm Log screen displays a history of all alarms.



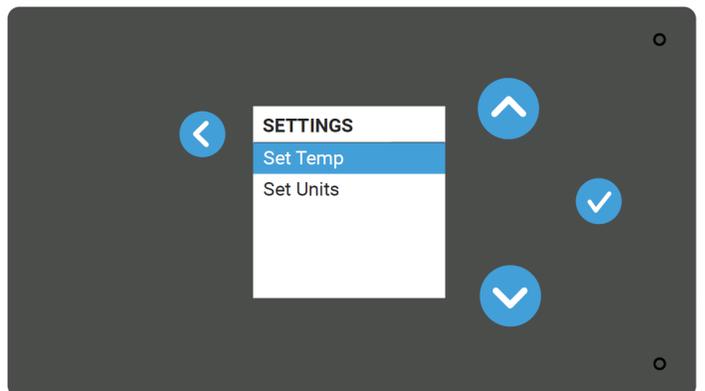
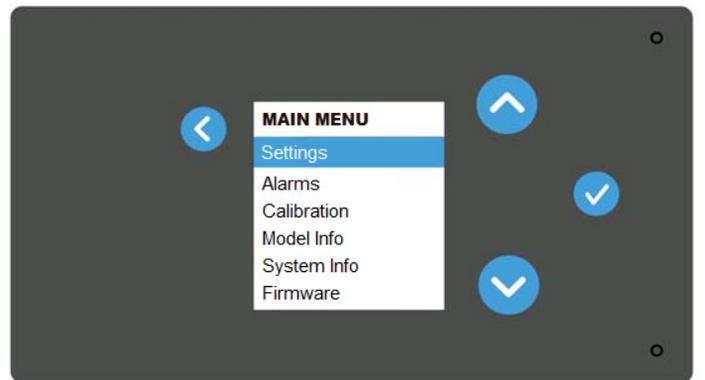
# Alarm Settings

The Alarm Settings menu allows you to Select the high and low temperature alarms. It also lets you choose to enable or disable the low battery alarm.



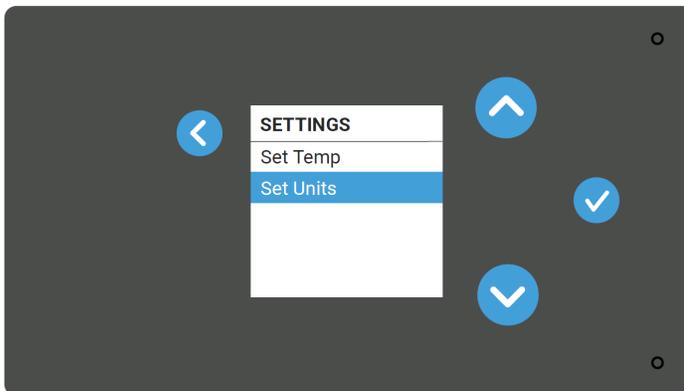
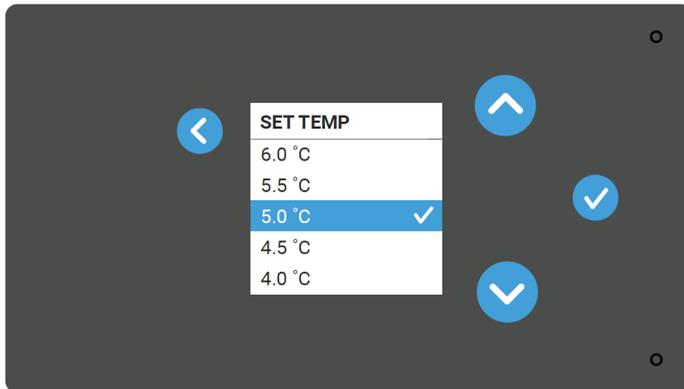
# Settings

Settings allows you to set temperature and units (Celsius (°C) or Fahrenheit (°F)) for the refrigerator.



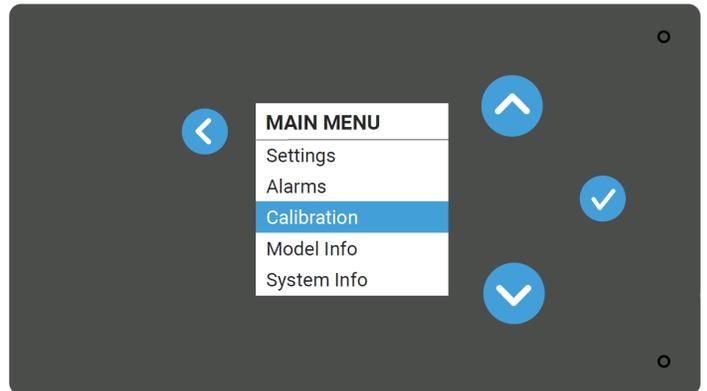
# Temperature Set Point

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



# Calibration

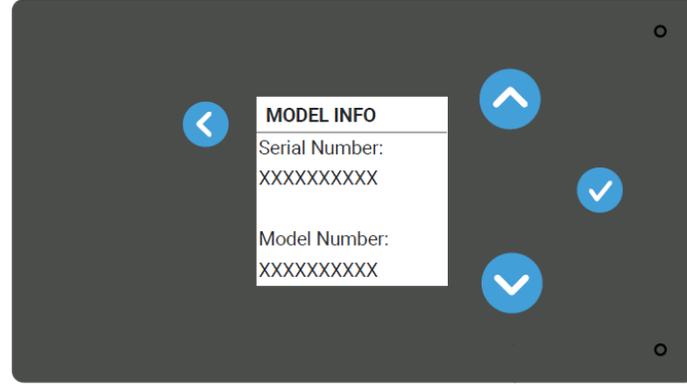
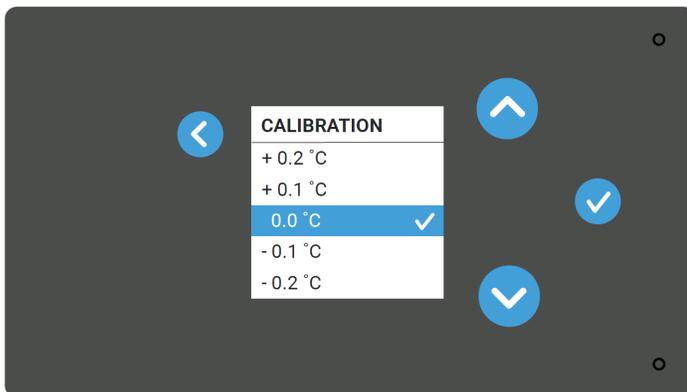
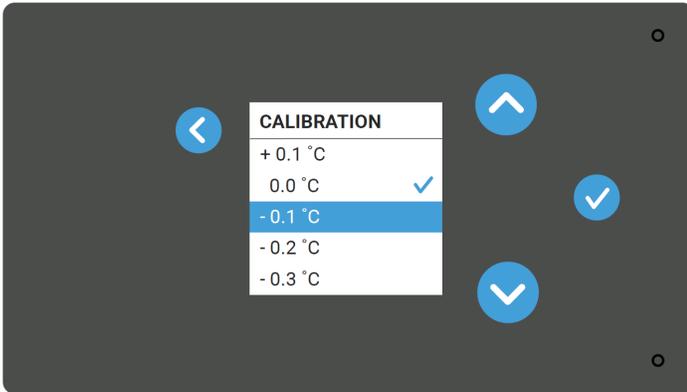
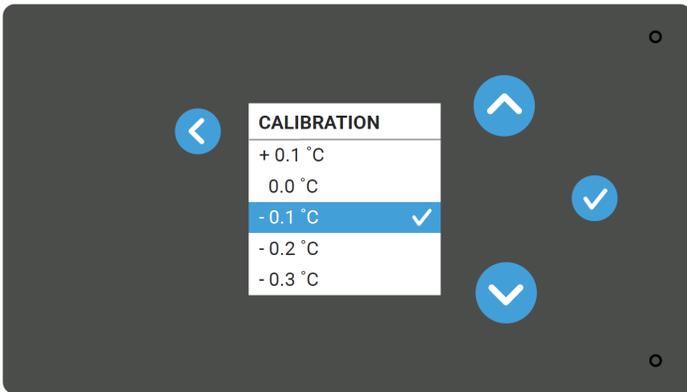
This provides the ability to coordinate the results of a third party external NIST calibrated reference thermometer with the temp displayed on the refrigerator.



Example: Refrigerator air temperature displays as 3.5°C. Calibrated reference thermometer reads 3.6°C. Based on this information the refrigerator is reading 0.1 degree below the reference temperature. By raising the CALIBRATION to +0.1°C the refrigerator will now display 3.6°C.

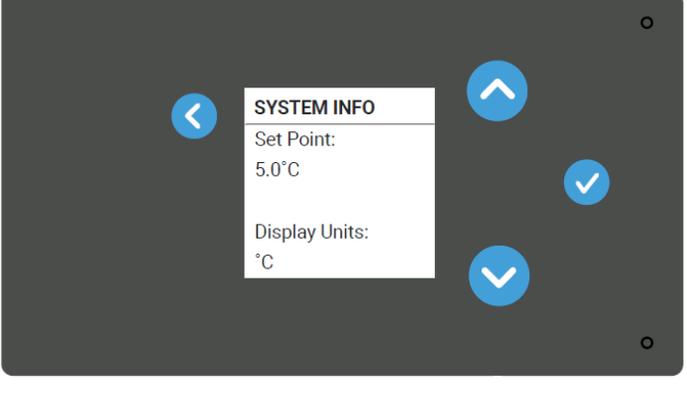
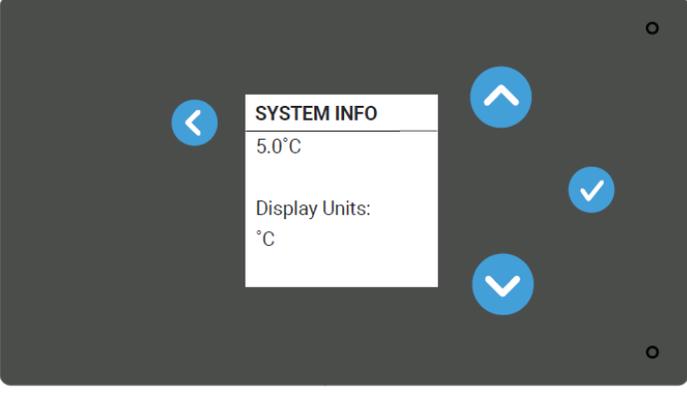
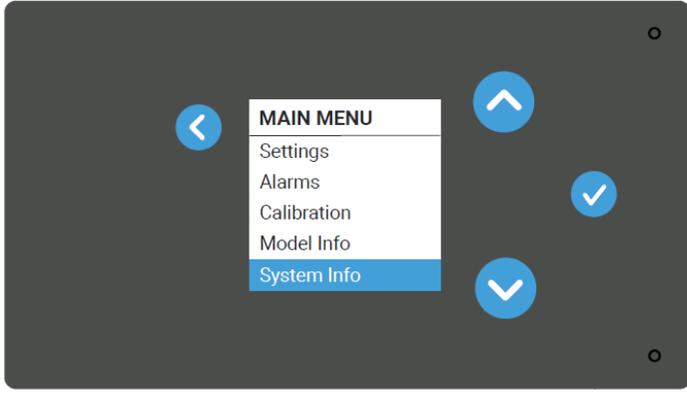


**WARNING:** Changing the calibration offset will change the performance of the refrigerator and cool/warm the unit to reflect the changes made. Changes should only be made to reflect the readings from a NIST calibrated thermometer.



## System Information

This displays the current settings which includes set temperature, high/low temp alarms and calibration.

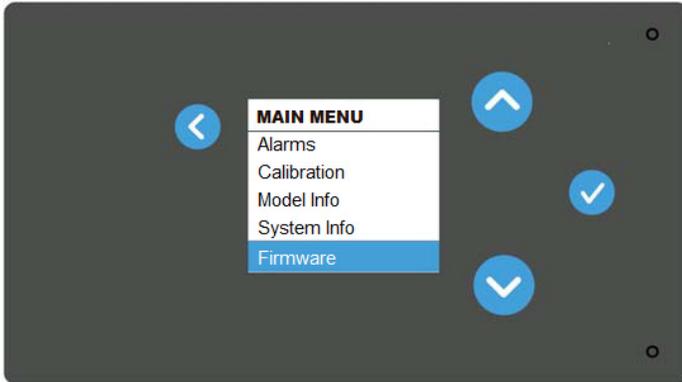


## Model Information

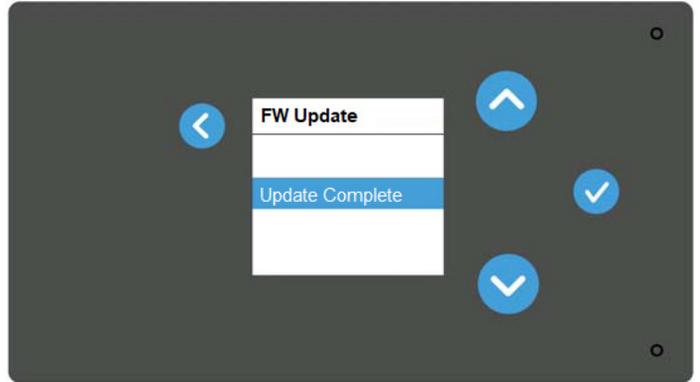
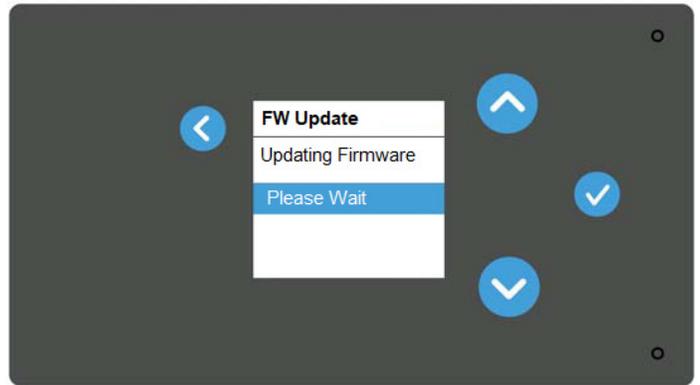
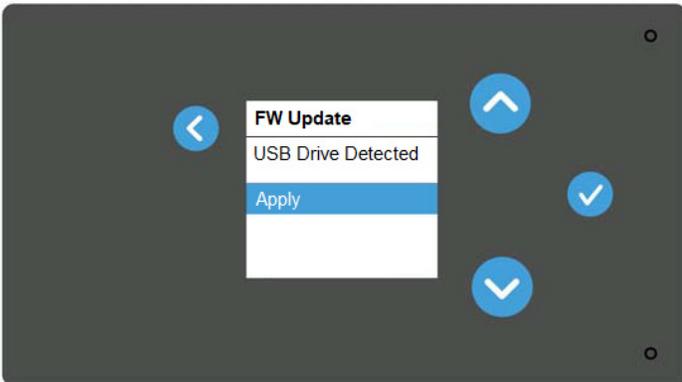
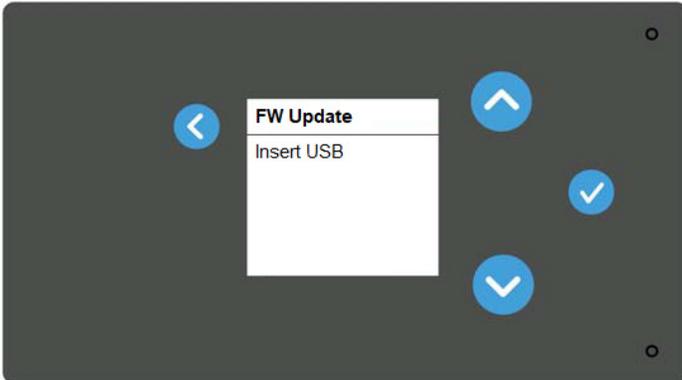
This displays the model number, UI FW version, UI FW date and TEC FW version of the unit.

# Firmware

Firmware updates are conducted via the Firmware menu. 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.



The "Insert USB" screen will not display if a USB is already inserted.



# Maintenance

## **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 painted steel (product exterior) 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.

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

## **Cleaning the Condensate Tray:**

The condensate 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?**

TSG 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 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. TSG systems have no internal mechanical parts and are easy to operate and require minimal maintenance.

## **What is the product warranty?**

Thermo Scientific offers a 2-years product warranty on parts and labor, and 5-years warranty on solid-state heat pump 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 the audible and visual alerts of power loss.

## **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.

## **Where can I find the Serial Number?**

You can find your important and specific product information by accessing the user interface.

The product Serial Number can also be found on the shipping label (on the shipping box) and on the product label (on the side of unit).

## **Is the unit calibrated? Can I calibrate my refrigerator?**

The refrigerator comes standard with a National Institute of Standards and Technology (NIST) certificate. To ensure proper calibration in the working environment, the air sensor should be calibrated annually. See the Calibration section for instructions.

## **What kind of refrigerator maintenance is required?**

Occasional check for dust buildup on the external fan and cleaning it is recommended. Otherwise no maintenance is required to keep the system working at peak performance.

## **Can 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	Check for proper installation of the power plug.
Unit's audible alarm doesn't sound when out of temp range	<p>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.</p> <p>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.</p>
<b>LED Display Issues</b>	
Solid Red	The red LED is active whenever there is an alarm. It can be cleared by clearing the alarm.
Flashing Red (5 second intervals)	Power loss
Solid Green	No action required
<b>Interior Concerns</b>	
I have condensation collecting 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 form on the walls. It will thaw during the next defrost cycle.
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 5°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.
I got a system error code	<p>Call Customer Care for assistance, 866-984-3766</p> <p>Did you remove the red tab to activate the battery contacts? If the battery strength is low it needs to be replaced.</p>

# Warranty and Service

Thermo Scientific 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 Thermo Scientific shall cover the cost of the parts and labor for repair and replacement, and
- ii. An additional period of 5 years with respect to the Thermo Scientific heat pump powering the refrigeration system, during this period the Thermo Scientific shall cover the cost of replacement parts and shall charge Thermo Scientific’s standard labor rates for repair and replacement.

## CONDITIONS OF WARRANTY

1. Equipment must have to be installed and operated in compliance with instructions provided by Thermo Scientific.
2. Warranty labor must be performed by a local Thermo Scientific authorized service agent.
3. Defects caused by alterations, improper operation, outdoor use, neglect, vandalism, fire, act of God, or any situation or causes beyond the control of Thermo Scientific are not covered by this warranty.
4. Thermo Scientific may require any parts covered under this warranty be returned to Thermo Scientific freight prepaid, and this warranty shall apply only if Thermo Scientific verifies the applicable defect upon examination.
5. Any defects or other damages resulting from shipment of the unit are not covered by this warranty. Thermo Scientific 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 Thermo Scientific and are the sole 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. Thermo Scientific 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.
8. 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 [thermoscientific.com](http://thermoscientific.com) or contact Customer Care at 866-984-3766.**

## Agency Approvals

- Unit is SGS & cSGS listed
- CE Marked (RoHS, EMC, LVD)
- REACH compliant

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# WEEE Compliance

**WEEE Compliance.** This product is required to comply with the European Union's Waste Electrical & Electronic Equipment (WEEE) Directive 2012/19/EU. It is marked with the following symbol. Thermo Fisher Scientific has contracted with one or more recycling/disposal companies in each EU Member State, and this product should be disposed of or recycled through them. Further information on our compliance with these Directives, the recyclers in your country, and information on Thermo Scientific products which may assist the detection of substances subject to the RoHS Directive are available at [www.thermofisher.com/WEEERoHS](http://www.thermofisher.com/WEEERoHS) under Services & Support.

## Great Britain



**WEEE Konformität.** Dieses Produkt muss die EU Waste Electrical & Electronic Equipment (WEEE) Richtlinie 2012/19/EU erfüllen. Das Produkt ist durch folgendes Symbol gekennzeichnet. Thermo Fisher Scientific hat Vereinbarungen getroffen mit Verwertungs-/Entsorgungsanlagen in allen EU-Mitgliedstaaten und dieses Produkt muss durch diese Firmen wiederverwertet oder entsorgt werden. Mehr Informationen über die Einhaltung dieser Anweisungen durch Thermo Scientific, die Verwerter und Hinweise die Ihnen nützlich sein können, die Thermo Fisher Scientific Produkte zu identifizieren, die unter diese RoHS-Anweisung fallen, finden Sie unter [www.thermofisher.com/WEEERoHS](http://www.thermofisher.com/WEEERoHS) unter Services & Support.

## Deutschland



**Conformità WEEE.** Questo prodotto deve rispondere alla direttiva dell'Unione Europea 2012/19/EU in merito ai Rifiuti degli Apparecchi Elettrici ed Elettronici (WEEE). È marcato col seguente simbolo. Thermo Fisher Scientific ha stipulato contratti con una o diverse società di riciclaggio/smaltimento in ognuno degli Stati Membri Europei. Questo prodotto verrà smaltito o riciclato tramite queste medesime. Ulteriori informazioni sulla conformità di Thermo Fisher Scientific con queste Direttive, l'elenco delle ditte di riciclaggio nel Vostro paese e informazioni sui prodotti Thermo Scientific che possono essere utili alla rilevazione di sostanze soggette alla Direttiva RoHS sono disponibili sul sito [www.thermofisher.com/WEEERoHS](http://www.thermofisher.com/WEEERoHS) in Servizi e Supporto.

## Italia



**Conformité WEEE.** Ce produit doit être conforme à la directive européenne (2012/19/EU) des Déchets d'Équipements Électriques et Électroniques (DEEE). Il est marqué par le symbole suivant. Thermo Fisher Scientific s'est associé avec une ou plusieurs compagnies de recyclage dans chaque état membre de l'union européenne et ce produit devrait être collecté ou recyclé par celles-ci. Davantage d'informations sur la conformité de Thermo Fisher Scientific à ces directives, les recycleurs dans votre pays et les informations sur les produits Thermo Fisher Scientific qui peuvent aider la détection des substances sujettes à la directive RoHS sont disponibles sur [www.thermofisher.com/WEEERoHS](http://www.thermofisher.com/WEEERoHS) sous Services et Assistance.

## France





## IF YOU NEED ASSISTANCE:

Thermo Fisher Scientific products are backed by a global technical support team ready to support your applications. We offer cold storage accessories, including remote alarms, temperature recorders, and validation services.

Visit [www.thermofisher.com/cold](http://www.thermofisher.com/cold) or call:

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