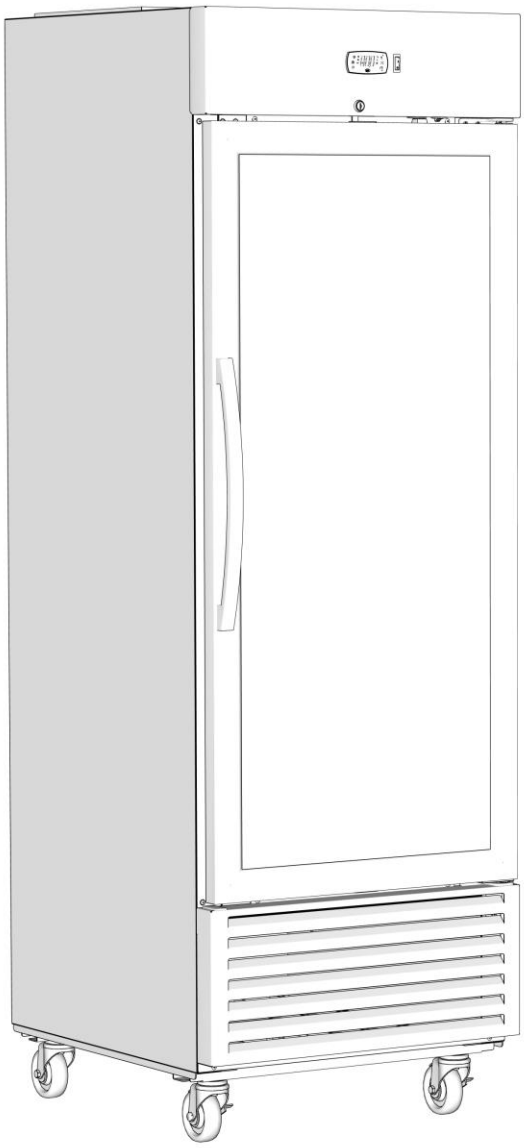
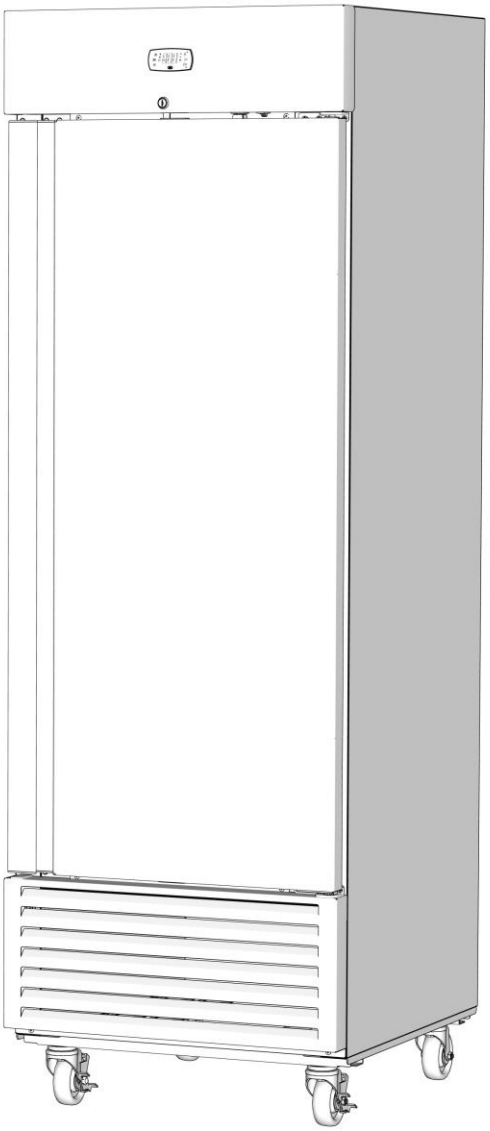




OWNERS' MANUAL

Disclaimer

This manual is intended as a resource to provide the operator with instructions on the proper use and maintenance of particular Horizon Scientific, Inc. products.

Failure to adhere to the instructions as herein could result in improper product operation, injury, and potentially void product warranties Horizon Scientific, Inc. accepts no liability or responsibility for results stemming from improper use or maintenance of its products.

The content within this guide is provided for illustrative purposes only and may vary from the actual hardware or software photos, screen shots or illustrations.

Horizon Scientific, Inc.
125 Varnfield Drive
Summerville, SC 29483

www.horizonscientific.com

TABLE OF CONTENTS

1. GENERAL 4

1.1 INTENDED AUDIENCE 4
1.2 INTENDED USE 4
1.3 SAFETY AND NOTICES 4
1.4 RECEIVING AND SHIPPING DAMAGE HANDLING 7

2. INSTALLATION 8

2.1 UNPACKING 8
2.2 GENERAL RECOMMENDATIONS 9
2.3 LOCATION AND FUNCTIONAL INSPECTION 10
2.4 LEVELING 11
2.5 DOOR ALIGNMENT 11
2.6 WIRE SHELVES 12
2.7 ELECTRICAL COMPONENTS 13
2.8 ELECTRICAL INSTALLATION 14
2.9 TEMPERATURE PROBES 15
2.10 EXTERNAL PROBE ACCESS PORT 16

3. OPERATION 17

3.1 INITIAL POWER UP AND OPERATION 17
3.2 NORMAL OPERATION 17
3.3 CONTROLLER 17
Control Panel 18
Alarms 18
Adjusting the Set Point 18
Converting ˚C to ˚F 19
Advanced Settings 19
Change Password 19
Change Alarm Points 21
Advanced Settings Continued 22

4. PRODUCT SPECIFICATIONS 23

4.1 OPERATING STANDARDS 23

5. MAINTENANCE 23

5.1 INSPECTION AND SERVICING 23
5.2 SERVICE AND ANALYSIS GUIDE 25

6. WARRANTY 26

6.1 FACTORY WARRANTY 26
6.2 COMPRESSOR WARRANTY 26
6.3 ADDITIONAL WARRANTY INFORMATION 26
6.4 WARRANTY CLAIMS 27
7.1 SAFETY 29
7.2 ENVIRONMENTAL 29

1. GENERAL

1.1 INTENDED AUDIENCE

This manual is intended for authorized end users and service technicians. The information herein pertains only to the specifically indicated products.

1.2 INTENDED USE

This unit is intended for medical and laboratory use.

1.3 SAFETY AND NOTICES

Symbols found in this manual

 This is a general warning, caution, hazard, or important consideration symbol.

 This is an electrical hazard caution / warning symbol.

 This is a hot surface hazard caution / warning symbol.

 This is a flammable hazard caution / warning symbol.

 This is a pinch or potential injury hazard caution / warning symbol.

Warnings, cautions, and important considerations

 **WARNING:** This product can expose you to chemicals including chromium which is known to the State of California to cause cancer and birth defects or other reproductive harm. For more information, go to www.P65Warnings.ca.gov

 **WARNING:** Electric Shock Hazard. Do Not Remove top electrical cover. Contact a qualified service representative.

 **WARNING:** Do not remove electrical system components access unless instructed to do so.

 **WARNING:** Do not modify, change, damage, refrigeration circuit or electrical components, unless work is performed by a certified technician.

 **WARNING:** Only use manufacturing supplied power cord, never use an extension cord.

 **WARNING:** The controller automatically switches power to devices such as the light circuit, compressor, or evaporator fans. Always unplug before making repairs.

 **WARNING:** Do not overload shelves with heavy products or concentrated loads, this increases the likelihood of items falling and causing injury.

 **WARNING:** Do not store any unsealed chemical material in this cabinet. Corrosive fumes from chemical material can linger inside of the chamber and cause serious damage to the refrigeration coils. Storing unsealed chemical material in this equipment will void the factory product warranty.

 **WARNING:** Do not store or use gasoline, or other flammable liquid in this cabinet. This equipment is not rated for flammable material storage.

 **WARNING:** Do not operate this equipment in the presence of explosive fumes.

 **WARNING:** This equipment is not rated as a hazardous locations storage cabinet.

 **CAUTION:** Before moving the unit, make sure the door is closed, casters are unlocked and free of obstructions, and disconnect the power cord (make sure cord is secured).

 **CAUTION:** Do not touch the hot surfaces associated with the condenser system.

 **CAUTION:** Do not use any devices to accelerate the defrosting process.

 **CAUTION:** Avoid any sharp edges or points when working on or in the unit.

 **CAUTION:** Keep fingers out of pinch point areas; clearances and between the doors and cabinet are necessarily small; be careful closing doors.

 **IMPORTANT:** Only use manufacturer supplied or approved components and authorized personnel, when servicing the unit.

 **IMPORTANT:** This unit must be properly installed and located in accordance with the Installation Instructions before it is used.

 **IMPORTANT:** This unit must be decontaminated prior to sending for repair or service. Contact Horizon Scientific or your distributor for decontamination instructions.

Specific to hydrocarbon refrigerants only:

 **DANGER:** Risk of fire or explosion, flammable refrigerant used. Do not use mechanical devices to defrost the unit. Do not puncture refrigerant tubing.

- **DANGER**: Risk of fire or explosion, flammable refrigerant used. To be repaired only by trained service personnel. Do not puncture refrigerant tubing.
- **CAUTION:** Risk of fire or explosion, flammable refrigerant used. Consult repair manual/owner's guide before attempting to service this product. All safety precautions must be followed.
- **CAUTION:** Risk of fire or explosion, flammable refrigerant used. Dispose of properly in accordance with federal or local regulations.
- **CAUTION:** Risk of fire or explosion, flammable refrigerant used. Do not puncture refrigerant tubing; follow handling instructions carefully.
- **Environment:** Proper ventilation must be provided, and all ventilation openings kept free of obstruction

1.4 RECEIVING AND SHIPPING DAMAGE HANDLING

Each unit is carefully inspected to meet our high quality standards before it ships to you. Unfortunately, shipping damage can happen during transportation to you. There are two general types of shipping damage. The first is visible damage. This type of damage includes visible loss, damage, shortage or any external evidence of loss or damage that is visible at the time of delivery. This type of damage must be noted in detail on your delivery receipt. Make sure the driver signs and dates the delivery receipt, acknowledging the damages. We also recommend taking many pictures to demonstrate and document the damaged area(s). This must happen at the time of delivery. Keep a copy for your records and send another to the carrier's damage claims department along with a formal request for an inspection report. Follow up with a phone call. Their contact information can be found on the carrier's web site.

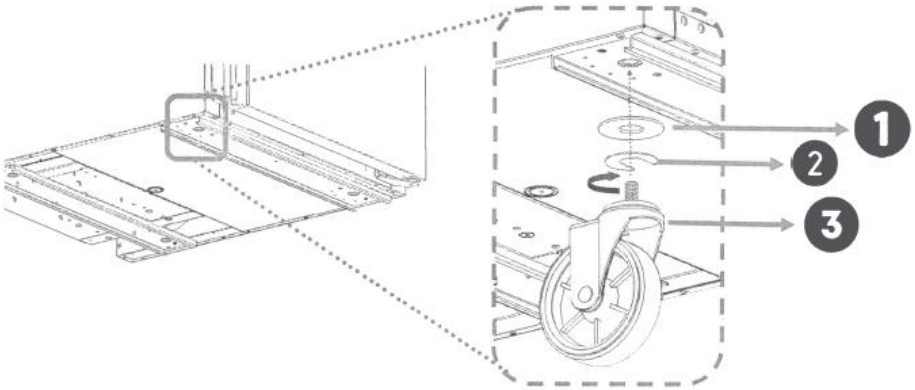
The second type of shipping damage is concealed damage. This type of damage will probably not be apparent at time of delivery and may not be discovered until unpacking and inspecting the unit. Remember, time is of the essence. You should unpack and inspect the unit as soon as possible. Each day that passes reduces the likelihood that the carrier will pay the claim. As soon as the concealed damage is discovered, stop unpacking and retain all packing materials. Take many pictures to demonstrate and document the concealed damage area(s). Contact the carrier by phone to report the claim. Note the date and time and person you spoke with. Get a claim number. Follow up with a written letter referencing the claim number and including a formal request for an inspection. Again, consult the carrier's website for specific claim instructions and follow them precisely.

 **AS STATED ABOVE, THE CARRIER IS YOUR SOLE SOURCE FOR SATISFACTION OF A DAMAGE CLAIM. UNDER NO CIRCUMSTANCES SHOULD THE MERCHANDISE BE RETURNED TO THE MANUFACTURER. NO RETURNS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION.**

2. INSTALLATION

2.1 UNPACKING

- Remove outer stretch wrap, cardboard, and wooden packaging for unobstructed access to the unit.
- Use 3/4" (19mm) socket or open-end wrench to remove 4 bolts holding the unit to the pallet.
- A fork truck or pallet jack is *recommended* to remove the unit from the pallet.
  - When using a fork truck or pallet jack, align the front of the forks level with top of the pallet in front or behind the unit. Fork width should be the same distance from each edge of the unit, at least 3” to avoid interfering with caster mounting locations. Placing forks too close to the center of the unit may result in the unit tipping over.
  - Carefully slide unit off the pallet and onto the forks, keeping unit centered and balanced to avoid tipping over.
- Locate (2) casters with brake at the front of the unit, (2) casters without brake in the rear of the unit.
- Place large round washers over each caster stem, then thread stems into each of the 4 threaded locations in the bottom of the unit. Thread casters completely using the provided wrench until the caster stem is tight against the frame of the unit.
- Alternately, if fork truck or pallet jack is unavailable, carefully rotate the unit so the unit is 45° to the pallet, with a corner of the pallet centered at the front of the unit. Pull the unit forward to expose the front caster mounting locations. Install the front casters, then pull unit forward keeping the rear of the unit supported by the pallet, until the rear casters can be installed.
- If necessary, optional leveler plates may be added to any caster to aid leveling the unit.



INSTALL THE CASTOR PLACING THE ACCESSORIES
IN THE FOLLOWING ORDER.

1. WASHER 2 5/16” **“ MANDATORY “**
2. LEVELER PLATE. (OPTIONAL)
3. FRONT CASTOR WITH BRAKE
   REAR CASTOR WITHOUT BRAKE

Remember to remove foam/cardboard shipping supports from the inside of the chamber prior to powering on the unit to prevent damage.

2.2 GENERAL RECOMMENDATIONS

- Allow the unit to come to room temperature before starting. The high temperature alarm will sound until the unit is able to bring the internal temperature down from initial start-up.
- Allow for the set point to be reached and for the unit to stabilize before storing products.
- Do not overload the unit.
- Only store items on the shelves. Products on the floor, against walls, against the door, or too close to the fan may obstruct air flow and impair the performance of the unit.

2.3 LOCATION AND FUNCTIONAL INSPECTION

Ambient conditions: Unlike household units, this equipment is designed for scientific and medical applications. Many components are heavy duty and optimized to meet demanding temperature performance requirements. Therefore, the sounds generated from its operation may not be accepted by everyone in the room. Please take the operation sound factor into consideration and locate the unit accordingly.

Please ensure the ambient temperature is typically climate-controlled, +18°C to +26°C (+65°F to +78°F), <60% RH, to ensure efficiency and strong thermal performance. Some ambient state excursions are acceptable, but performance may be impacted by prolonged use outside recommended conditions. Careful consideration must be given to units placed near room doors, HVAC intakes/exhausts, in hallways, or near windows as these are susceptible to localized conditions that are different from other areas of a controlled environment. High humidity conditions will increase the likelihood of condensation on the door or around the door frame. Please refer to the Product Specifications section of this manual for guidance.

Clearance Space: This model requires a minimum of two (2) inches of clearance space around the unit. This will allow good airflow and access to the unit for periodic maintenance, or service. If placing 2 units side by side, there should be a minimum of four (4) inches between units.

The cabinet must be located within reach of an outlet that has an appropriate power supply as listed above with a protective earth ground. The outlet should be easily accessible when installation is complete as this is the only method for powering off the equipment.

 **IMPORTANT:** Do not stack items on top of the unit. This can damage sheet metal components and falling items could injure users.

2.4 LEVELING

Leveling

Ensure that the placement chosen for installation has a level floor. The unit must be level side to side and front to back. If the unit is not level, corrections can be made using hard and durable shim stock (hard plastic or corrosion resistant metal sheets) under the casters. Ensure that the caster locks are engaged.

IMPORTANT: If the unit is not level, self-closing door function may be negatively impacted.

2.5 DOOR ALIGNMENT

Verify that the door is level and opens and closes easily. Verify that door gaskets do not show signs of deformation and completely seal against the frame of the unit. Improper sealing will affect the ability to maintain temperature over time and may lead to excessive condensation in refrigerator units. Freezers will be especially impacted by poor sealing gaskets as excessive frost may form due to warm air leaking into the frozen chamber.

If adjustment is needed, a qualified person may properly align the door as follows:

1. Open the door more than 90 degrees.
2. Loosen the 2 screws at both the top and bottom hinge brackets.
3. To adjust door level, move the top and/or bottom hinge bracket(s) left or right.
4. To adjust door sealing, shim the top or bottom hinge bracket with thin rigid material.
5. Tighten all screws once adjustment is complete.
6. Close doors to verify proper alignment. Repeat as needed.





2.6 WIRE SHELVES

Product Storage Setup

The cabinet comes standard with wire shelves. Shelves are rated for 50 lbs capacity, evenly distributed. Pilasters are factory installed and allow user to select spacing between each shelf.

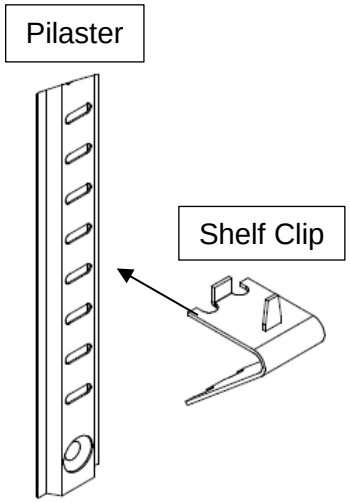
IMPORTANT: For shelves to remain level and strong; it is critical that the shelf clips are properly installed and locked securely into position.

CAUTION: Beware of pinch points when assembling and disassembling shelf clips.

WARNING: Do not use pliers or any crimping tools when installing shelf clips. Altering shelf clips in any way can lead to shelving instability.

Shelf Installation and Repositioning

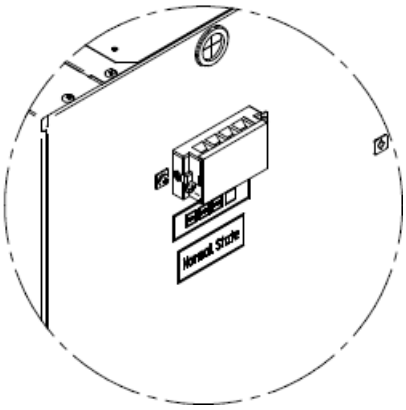
1. Locate shelf clips delivered in a plastic bag with the unit.
2. Start at the bottom in terms of shelf installation and work your way up.
3. Properly insert the shelf clips in the desired height (Remember all shelf clips will need to be installed at the same height to keep the shelf level.)
4. Always lay the back of each shelf down on the rear clips before the front.
5. The Bottom tab of the shelf clip will fit tightly. You may need to squeeze or twist the bottom of the shelf clip to install.
6. After installation, the shelf clip will fit snug into the shelf standard. The shelf clip should not be loose or able to wiggle out of the shelf standard.
7. When placing the shelves on the shelf clips ensure the shelf is pushed back as far as it can go to ensure proper temperatures across the entire shelf.



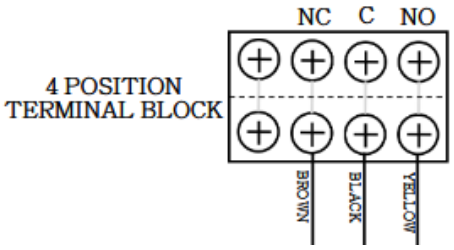
2.7 ELECTRICAL COMPONENTS

Remote Alarms Contacts

The remote alarm contacts terminal block is located at the back of the cabinet near the top, as shown. Terminals are voltage free, state switching during alarm conditions. Terminals are labeled NC (normally closed), COM (Common), and NO (normally open). Terminal connections are rated according to the specification table. The end user is responsible for proper field installation.



Remote Alarm Contact (RAC) Terminal Block on The Back of The Unit:
Black and Brown – Normally Closed, Black and Yellow – Normally Opened



2.8 ELECTRICAL INSTALLATION

Check the proposed external power outlet/supply to be used to ensure that the voltage, phase, and current carrying capacity of the circuit from the electrical panel correspond to the requirements of the cabinet.

 The supply circuit to this cabinet must conform to NEC (National Electrical Code). Consult the cabinet Serial-Data plate for voltage, cycle, phase, and amperage requirements before making connection.

 Supply voltage should not vary more than 10% from the serial plate ratings.

 DO NOT connect this equipment to a GFI (Ground Fault Interrupt) circuit.

 Equipment should be connected to a dedicated power circuit, not shared with other freezers/refrigerators or other high power draw equipment.

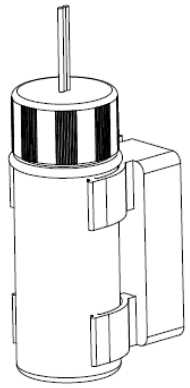
 **Do not use an extension cord or any multi-outlet strip or plug**. Using such devices can lead to insufficient power and component failure, such as the compressor or starting components.

 If the power cord is damaged, it should be replaced immediately by an authorized service technician.

 Be sure your unit is properly grounded. Use the 3-prong plug provided into a 3-prong grounded outlet. Unless the above grounding method is followed, you are not protected against severe or lethal shock in the event of a short circuit of an electrical component or wiring of the unit.

2.9 TEMPERATURE PROBES

The controller utilizes 2 different temperature probes in refrigerators and 3 temperature probes in freezers. The control probe measures air temperature and is used to control the cooling functions of the unit. The temperature displayed on the front of the controller is from the sample bottle probe. This probe is located on the right side, near the top of the cabinet interior. The sample bottle more closely represents the temperature of stored product during normal operation. It is highly recommended to unclip the bottle from the wall and place in the center of a shelf to represent the stored product temperature accurately. For freezers only, the 3rd temperature probe is located on the evaporator and is used to control the automatic defrost function.

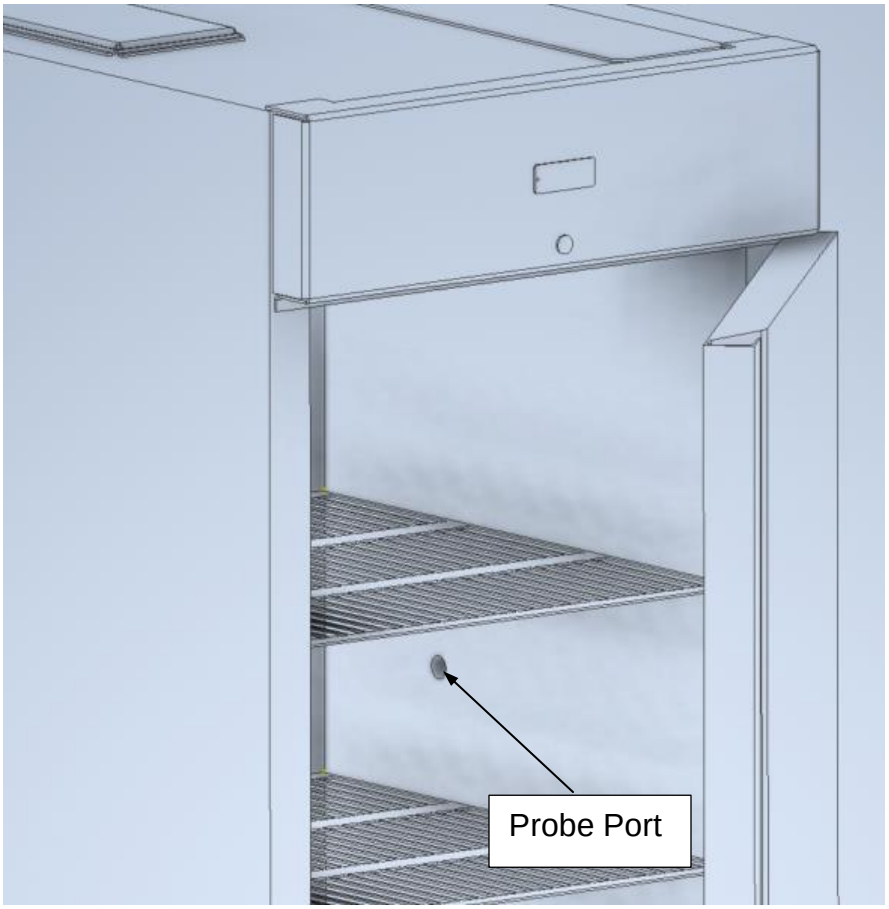


Sample Bottle

2.10 EXTERNAL PROBE ACCESS PORT

This unit is equipped with a ¾" (19 mm) port that can be used for routing external monitoring device wires into the chamber. This port is located on the right side of the unit. Remove the rubber plug in the port for routing. For single door units there is a secondary plug that needs to be removed.

Route wires through port, then seal both interior and exterior with flexible material to close all air gaps. Plumber's putty remains pliable at cold temperatures and is removable if wires or probes need to be serviced.

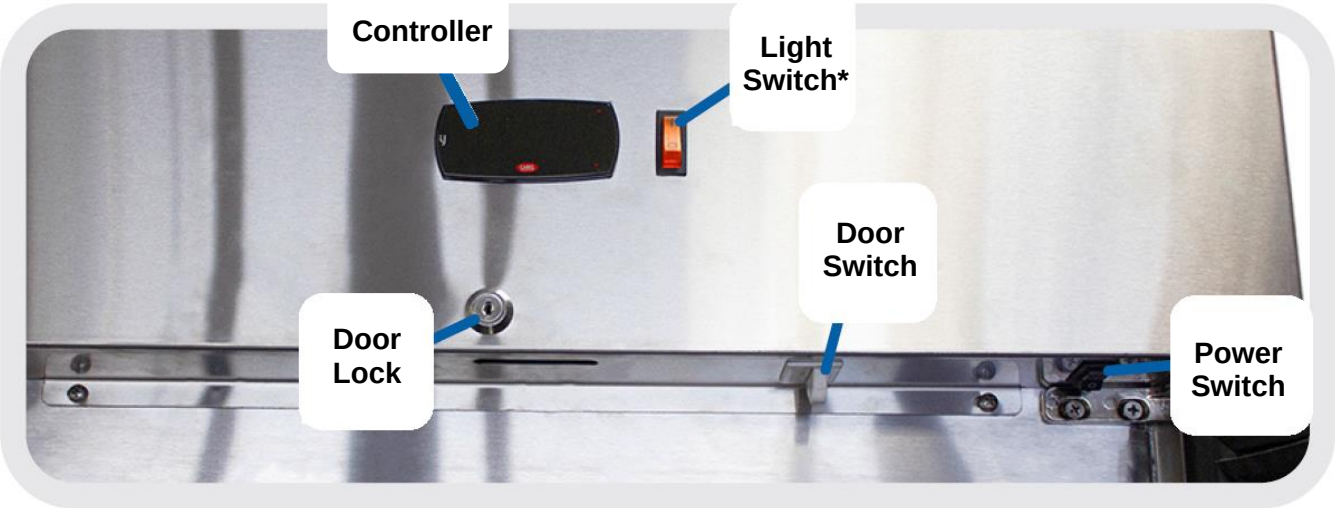


3. OPERATION

3.1 INITIAL POWER UP AND OPERATION

Once all elements of the installation and any on-site IQ (Installation Qualification) have been completed, your unit is ready for startup. Plug the unit into a grounded outlet that meets the electrical requirements. After plugging in the unit, flip the power switch (located under the canopy) to the **ON** position. The controller display should light up and function will start automatically.

The location of critical components below. *Note: The light switch only applies to glass door models.



3.2 NORMAL OPERATION

The controller utilizes duty cycle control to turn on and off the compressor. The setpoint defines the point that the compressor turns off. The temperature difference between the compressor off and the compressor on is known as the differential. As a result, the average air temperature may be slightly warmer than the setpoint. Air temperature will fluctuate slightly above and below this average temperature, but the display will indicate the average chamber temperature as measured by the sample bottle probe.

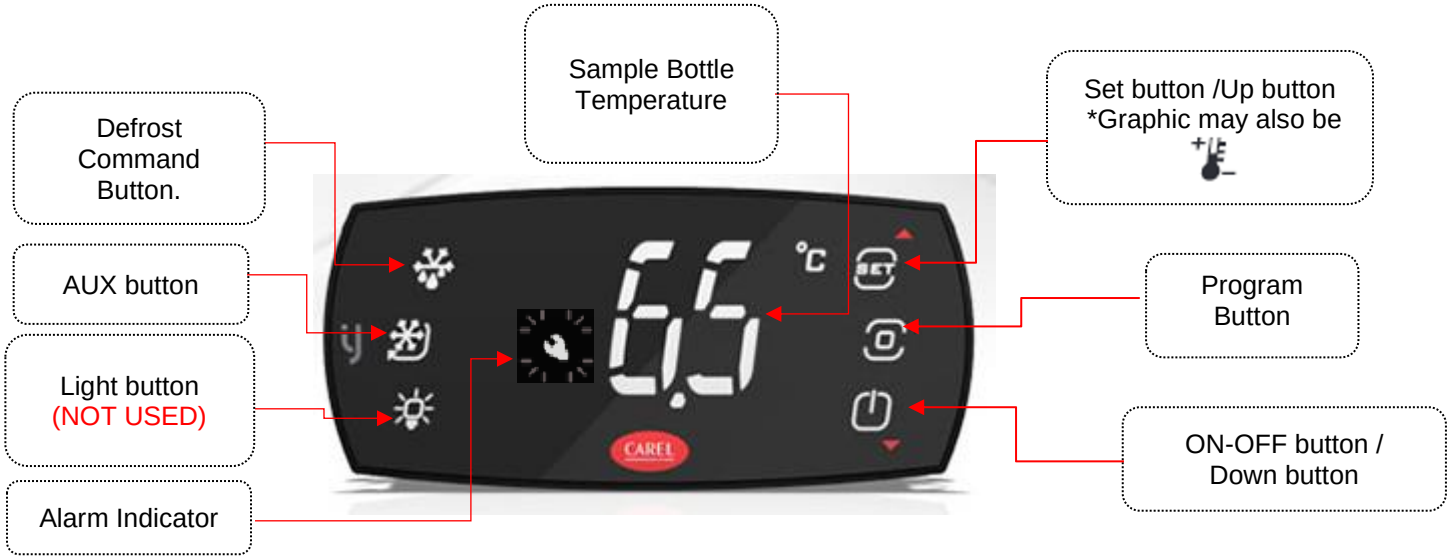
For refrigerators only, the off time of the compressor is used to ensure no ice accumulates on the evaporator. This cycle defrost is highly reliable, and is the reason the setpoint cannot be adjusted too cold; setpoints near 0°C or 32°F would allow ice buildup on the evaporator which will diminish cooling capacity and consume more energy.

For freezers only, the system utilizes an automatic defrost cycle using heaters to melt the ice that accumulates on the evaporator. These settings have been factory verified as optimal for most applications. It is highly recommended to contact technical service before attempting to adjust any defrost settings. Improper defrost settings may result in loss of cooling due to ice buildup.

Adjustments may be made to the setpoint, differential. To change other settings, contact the Horizon Scientific technical service department.

3.3 Controller

Control Panel



Alarms

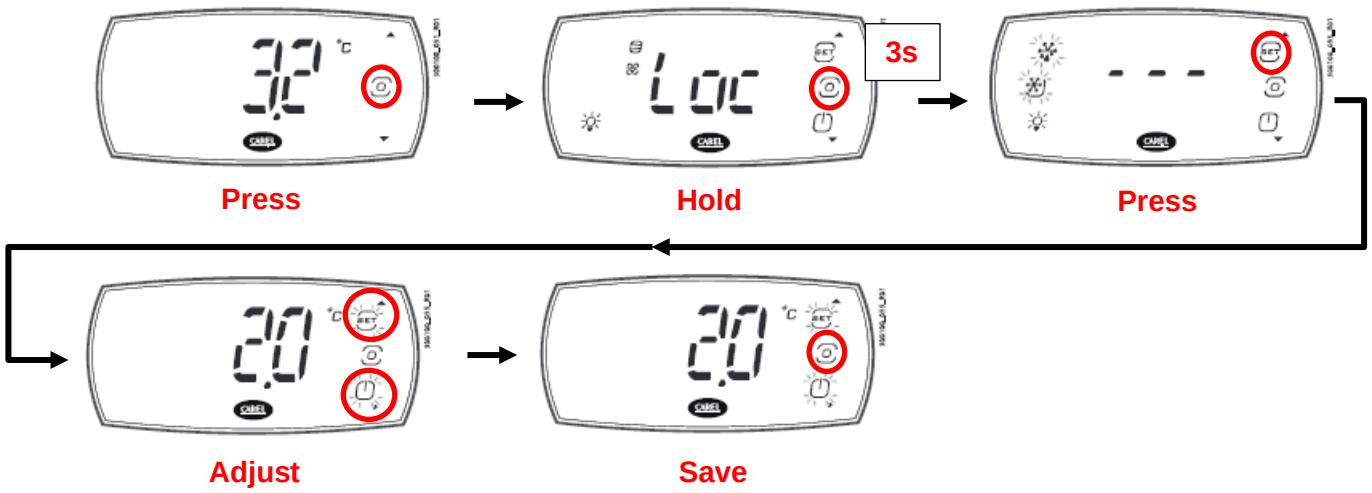
Pressing any button will mute the alarm buzzer, but the alarm will remain active until the alarm condition is resolved. Once returned to the normal operating limits, the alarm will clear automatically.

Temperature alarms will indicate as “GHI” or “GLO” if the bottle probe temperature is outside of the acceptable temperature range.

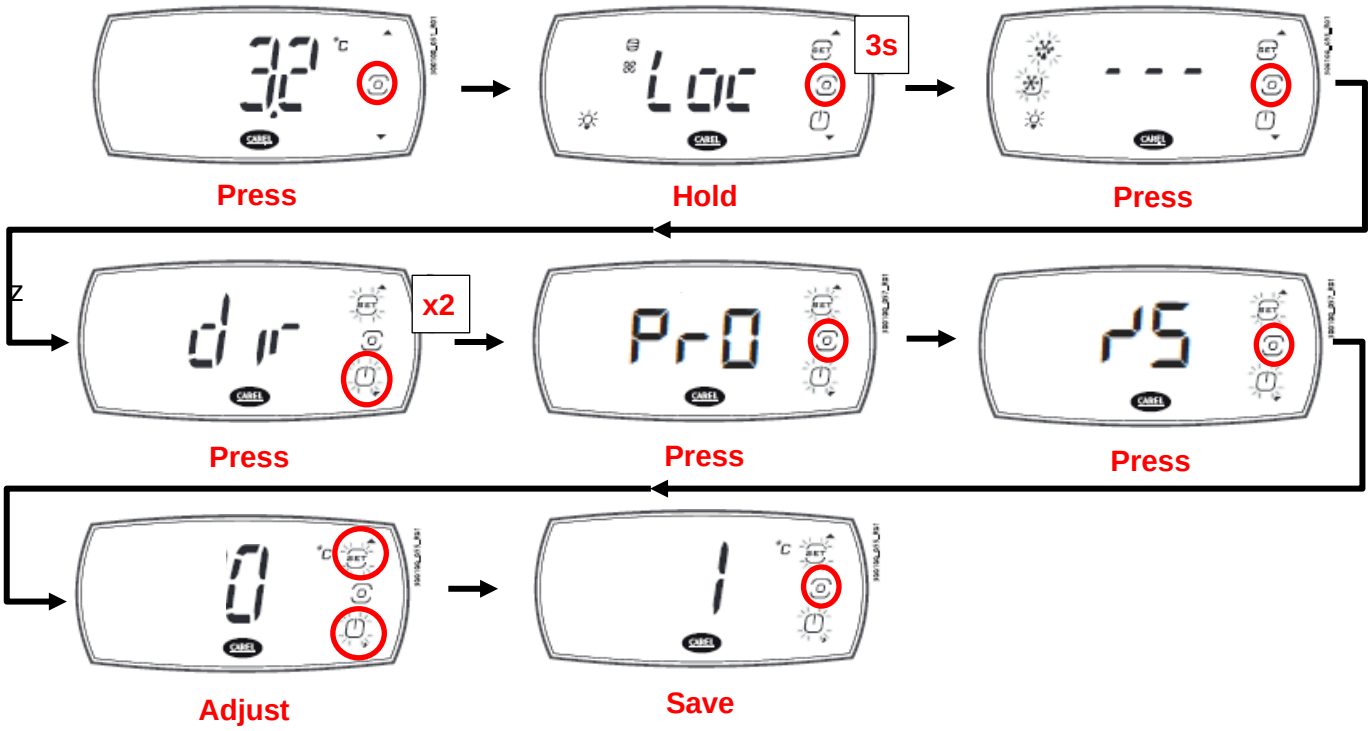
Door alarm indicates as “dor” if the door remains open for more than (120) seconds.

Adjusting the Set Point

Note: no input reverts to status screen after several seconds



Converting °C to °F



Advanced Settings

This unit utilizes Bluetooth communication to allow the user to make changes to parameters like high and low alarm points, and many other advanced settings. Download Carel Applica on a Bluetooth enabled Apple or Android device to gain access to more advanced settings.

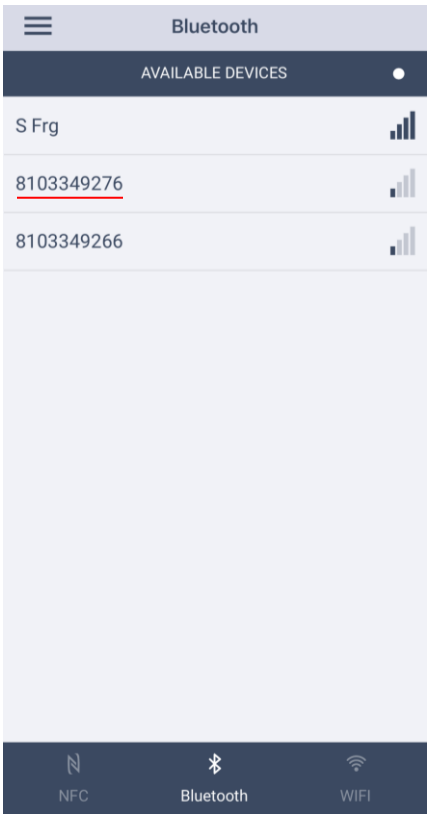
Change Passwords

The application has 3 levels of access: User, Service, and OEM. For security purposes, it is recommended that a supervisor or administrator download this app and change the passwords for the Service and OEM levels **UPON SETUP**. The passwords may be up to 3 digits. Recommend that admin have access to OEM levels, while general staff have access to Service.

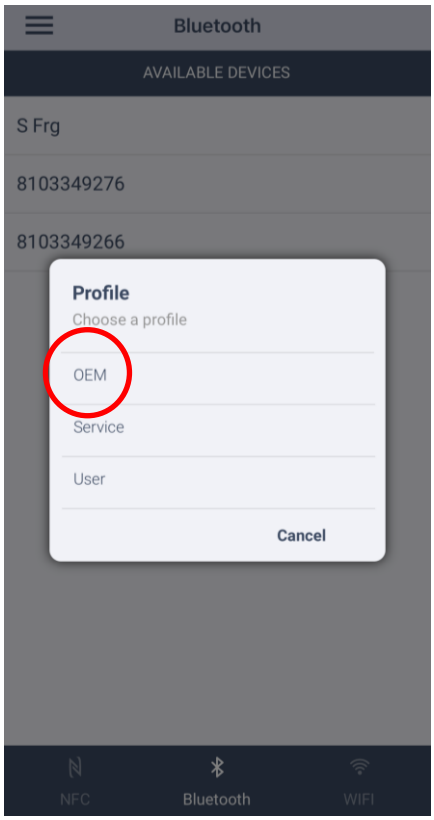
Once the app is installed, open it and accept the license agreements. Perform the following sequence to restrict each level of access behind passwords, as the factory stock passwords are available online:



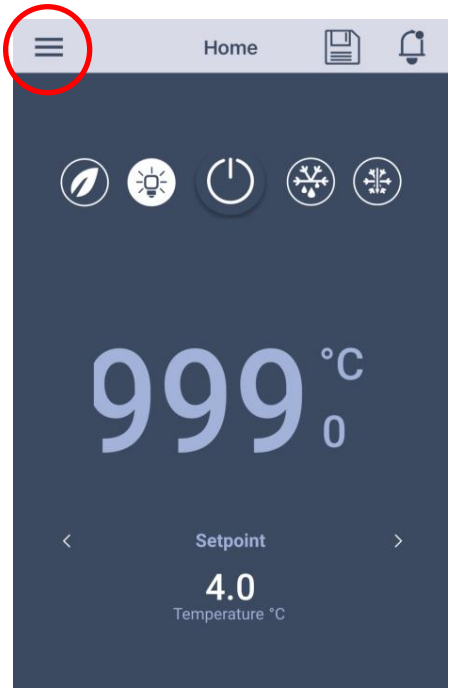
Choose Bluetooth as your connection medium



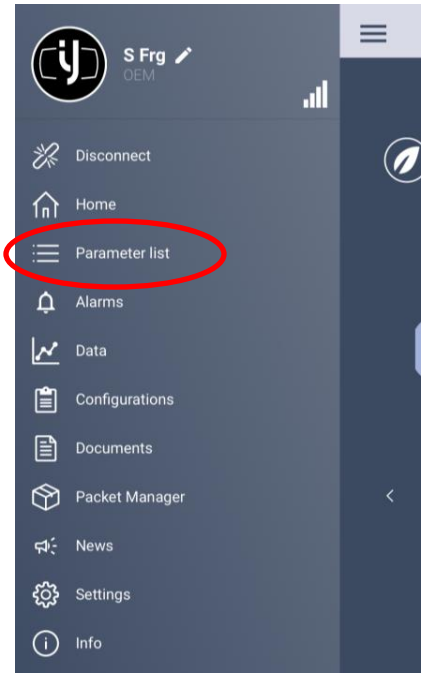
Select the name that matches your unit's serial number on the left interior wall



Select OEM to gain full access to the control parameters. Use password 44 for OEM and 22 for Service. Your target controller will flash 'bLE'



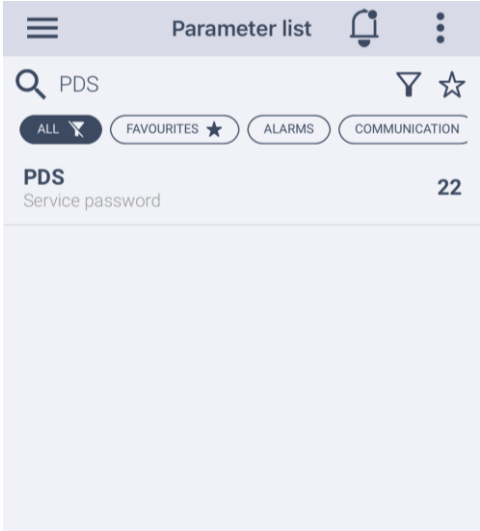
Tap on the hamburger menu in the top left of the screen



Select 'Parameter List'



Use the search bar to type PDM, and select it to change the password for the OEM access level. If this password is lost, there is no way to access the OEM profile.



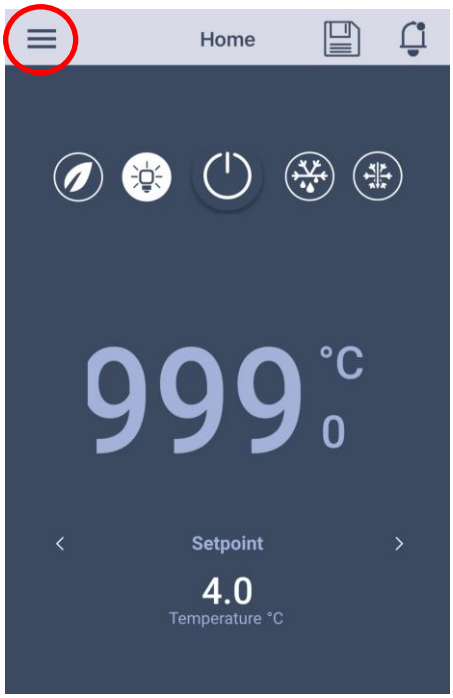
Use the search bar to type PDS, and select it to change the password for the Service access level. If this password is lost, there is no way to access the Service profile.

The passwords shown in the above pictures are the default factory passwords.

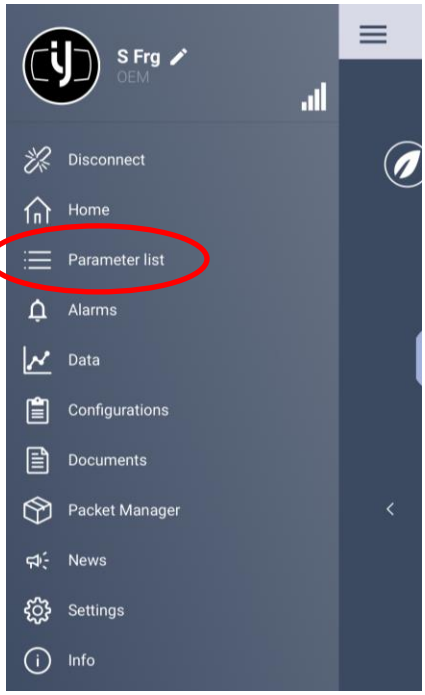
Return to the hamburger menu in the top left corner and disconnect from the controller.

Change Alarm Points

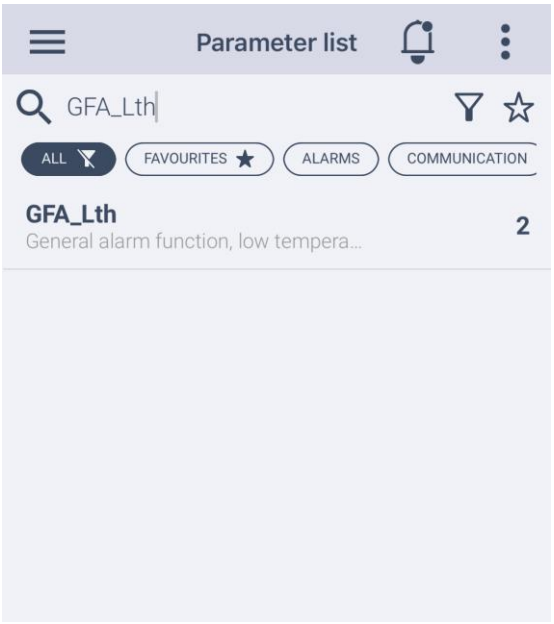
To change the alarm points, the user must access either the Service or OEM profile using the default passwords, or passwords set, if applicable. Details are shown above.



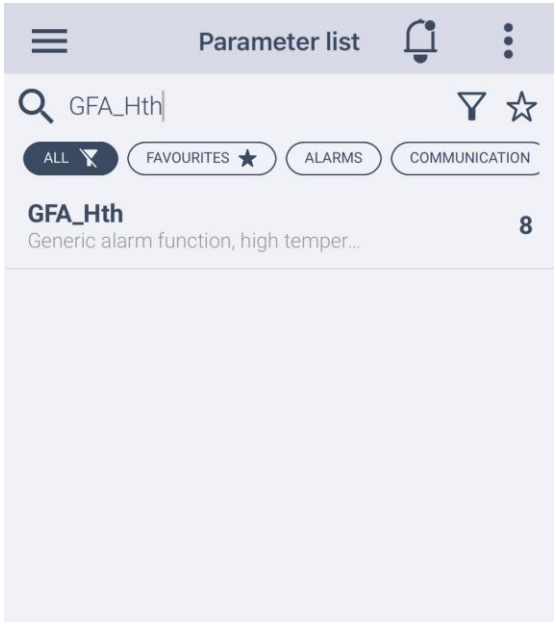
Tap on the hamburger menu in the top left of the screen.



Select ‘Parameter List’



To change the low temp alarm threshold, search “GFA_Lth” in the search bar, and tap to adjust it.



To change the high temp alarm threshold, search “GFA_Hth” in the search bar, and tap to adjust it.

Advanced Settings Cont.

For more advanced settings adjustments, such as temperature differential, temperature calibration, or defrost setting changes (freezer only), contact technical service at 1-800-648-4041 Option 5, Option 2.

Horizon Scientific, Inc. and Carel Group shall not be held liable for any damages arising from user-initiated modifications (meaning, made without instruction from technical service or this user manual) made within the Applica platform. Such actions may void the product warranty, in whole or in part, depending on the nature and severity of the changes.

4. PRODUCT SPECIFICATIONS

4.1 OPERATING STANDARDS

These models are designed to operate under the following conditions:

- Indoor use only
- Maximum altitude: 6562 ft. (2000 m)
- Optimal ambient conditions: 18°C to 26°C (65°F to 78°F), <60% RH
- Short duration ambient conditions: 15°C to 32°C (59°F to 90°F), <80% RH

Electrical Specifications:

Model	Input Voltage & Frequency	Voltage Tolerance	Rated Amperage	Power Source	Remote Alarm Maximum Capacity
1 Door Refrigerator	115V 60 Hz	± 10%	2.5	Grounded outlet, meeting national electric code (NEC) in the U.S. and all local electrical requirements	115VAC @ 10A and 30VDC @ 10A
1 Door Freezer			7.0		

5. MAINTENANCE

Observe all Warning Labels. Disconnect power to eliminate injury from electrical shock when servicing equipment or cleaning.

Important: It is critical that cleaning recommendations are followed to ensure optimal performance and longevity of the unit.

5.1 INSPECTION AND SERVICING

Periodic inspections

Every 3 months or as required:

- Check that the condenser coil is free of obstruction.

Every 6 months or as required:

- Clean the condenser coil
- Check the door gasket for proper seal
- Check drain line from evaporator pan for blockage or leaks
- Check freezer evaporator for ice accumulation. Manually defrost freezer by turning off for 24 hours, if required

Cleaning

- Never use abrasive cleaners or instruments (steel pads, wire brushes, etc.) on stainless steel.
- Never use acid-based cleaners, which will damage the stainless finish. Warm soapy water is best, but if a cleaning solution is required, use only alkaline based cleaners.
- Avoid chlorides during cleaning which could damage the stainless-steel finish. Chlorides are commonly found in hard water, salts, and household or industrial cleaners. If cleaners with chlorides are used, rinse with clean water and dry thoroughly.
- Gaskets should be cleaned only with warm soapy water. Cleaning products could damage gaskets or cause them to embrittle over time. Never use tools which could cut or tear the gasket.
- Inspections should be performed quarterly, and the condenser cleaned as necessary to maintain good thermal transfer properties. A soft bristle can be used to loosen these particles that are attached to the fins so that they may be removed with a vacuum cleaner. Care must be taken not to damage the condenser. It is recommended that the condenser be cleaned at least once every 6 months.
- All moving parts have been permanently lubricated and will generally require no maintenance.

 Important: Failure to keep the condenser coil clean and clear of obstructions could result in poor performance and possibly damage to the compressor.

5.2 SERVICE AND ANALYSIS GUIDE

MALFUNCTION		POSSIBLE CAUSE		SOLUTION
Equipment will not turn on	1.	Power cord unplugged	1.	Plug in power cord
	2.	Power switch is off	2.	Change power switch to on
	3.	Building overload tripped	3.	Reset building circuit breaker
Compressor will not start	1.	No power to equipment	1.	See “Equipment will not turn on” above
	2.	Control not calling for cooling	2.	Verify temperature is above setpoint
	3.	Compressor overload tripped	3.	See below
	4.	Contactor failure (Freezer)	4.	Check/replace contactor
	5.	Defective start components	5.	Check/replace start components
Compressor trips on overload protection or short cycles	1.	Low voltage to unit	1.	Determine reason and correct
	2.	Excessive head pressure, components too hot	2.	Verify ambient temperatures, check condenser airflow
	3.	Excess refrigerant charge	3.	Evacuate and recharge refrigerant
	4.	Improper wiring	4.	Check for loose/disconnected wiring
	5.	Defective overload	5.	Check/replace compressor
Refrigerated space too warm	1.	Control setting too high	1.	Lower the set point
	2.	Evaporator fan not running	2.	Check door switch position, evaporator fan wiring.
	3.	Dirty condenser	3.	Clean condenser
	4.	Evaporator coil iced	4.	Adjust defrost (freezer), setpoint/off-cycle (refrigerator)
	5.	Improper cabinet seal	5.	Check door gasket, probe ports, wiring/tubing penetrations all sealed
	6.	Overloaded storage blocks cabinet airflow	6.	Move product away from fan, back walls, floor
	7.	Refrigerant Leak	7.	Locate and fix leak, evacuate and recharge refrigerant
Product freezes	1.	Set point is too low	1.	Raise the set point
	2.	Control points stuck	2.	Replace the controller
Objectionable noise	1.	Fan blade hitting fan shroud	1.	Align fan and shroud or replace components
	2.	Tubing rattle	2.	Locate and reform
	3.	Vibrating fan blade	3.	Replace fan blade
	4.	Evaporator or condenser fan	4.	Check/tighten motor mounting
	5.	Worn fan motor bearings	5.	Replace fan motor
Ice buildup	1.	Poor door seal	1.	Repair or replace door gasket
	2.	Drain Line blocked	2.	Remove obstruction, defrost unit
	3.	Drain line frozen	3.	Replace insulation and/or drain heater
	4.	Defrost disabled	4.	Enable Defrost
	5.	Defrost Settings	5.	Adjust defrost termination, drip time, fan delay
Water inside unit	1.	Drain line not connected	1.	Connect to evaporator drain
	2.	Drain line blocked	2.	Remove blockage (manually defrost if ice)
Water under unit	1.	Drain/pan in wrong position	1.	Position drain line over drain pan
	2.	Cabinet is not level	2.	Level unit

6. WARRANTY

Horizon Scientific, Inc. warrants to the original purchaser every new Horizon Scientific, Inc. refrigerated unit, the cabinet, and all parts thereof, to be free from defects in material or workmanship, when such unit is installed, used, and maintained in accordance with provided instructions. The warranty period starts two weeks from the date of shipment from Horizon Scientific, Inc. This two-week period allows ample shipping time so that the warranty will go into effect at approximately the same time your equipment is delivered. Unless subject to prior written agreement with Horizon Scientific, Inc., this warranty does not allow for any warranty start deferment greater than two weeks from date of shipment due to a delayed installation and/or start-up. By purchasing any product from Horizon Scientific, Inc., you, and any entity for which you are purchasing acknowledge and agree to every provision contained herein, and all other Notices and Terms provided to Purchaser by Horizon Scientific, Inc., which are hereby incorporated.

6.1 FACTORY WARRANTY

Under this warranty, Horizon Scientific, Inc., through its authorized service organizations, will repair, or at its option, replace any part found to contain a manufacturing defect in material or workmanship without charge to the owner for parts and service labor. Replacement or repaired parts will be warranted for only the unexpired portion of the original warranty. Horizon Scientific, Inc. will not assume any shipping or cartage costs for parts under warranty. These costs shall be paid by the customer.

6.2 COMPRESSOR WARRANTY

In addition to the standard warranty, Horizon Scientific, Inc. warrants its hermetically and semi-hermetically sealed compressors to be free from defects in both material and workmanship under normal use and service in addition to the standard warranty period. Compressors determined by Horizon Scientific, Inc. to have been defective within this extended time period will, at Horizon Scientific, Inc.'s option, be either repaired or replaced with a compressor or compressor parts of similar design and capacity.

The compressor warranty applies only to hermetically and semi-hermetically sealed parts of the compressor and does not apply to any other parts or components, including, but not limited to, cabinet, paint finish, temperature control, refrigerant, metering device, driers, motor starting equipment, fan assembly or any other electrical components.

Horizon Scientific, Inc.'s sole obligation under this warranty is limited to either repair or replacement of parts, subject to the additional limitations below.

This warranty neither assumes nor authorizes any person to assume obligations other than expressly covered by this warranty.

6.3 ADDITIONAL WARRANTY INFORMATION

NO CONSEQUENTIAL DAMAGES. Horizon Scientific, Inc. is not responsible for economic loss; profit loss; or special, indirect, or consequential damages, including without limitation, losses or damages arising from contents spoilage claims whether because of refrigeration failure, electrical failure, power failure, or compressor failure.

HORIZON SCIENTIFIC, INC.'S MAXIMUM CUMULATIVE LIABILITY RELATIVE TO ALL CLAIMS AND LIABILITIES, INCLUDING OBLIGATIONS UNDER ANY INDEMNITY, WHETHER OR NOT INSURED, SHALL NOT EXCEED THE COST OF THE PRODUCT(S) GIVING RISE TO THE CLAIM OR LIABILITY.

WARRANTY IS NOT TRANSFERABLE. This warranty is not assignable and applies only in favor of the original purchaser/user to whom delivered. Any such assignment or transfer shall void the warranties herein made and shall void all warranties, express or implied, including any warranty of merchantability of fitness for a purpose.

NO IMPLIED WARRANTY OF MERCHANTABILITY OF FITNESS FOR A PARTICULAR PURPOSE. There are no other warranties, express, implied, or statutory, except the standard warranty and the additional compressor warranty as described above. These warranties are exclusive and in lieu of all other warranties, including implied warranty and merchantability of fitness for a purpose. There are no warranties which extend beyond the description on the face hereof, whether based on contract, warranty, tort (including negligence), strict liability, indemnity, or any other legal theory, and whether arising out of warranties, representations, instructions, installations, or non-conformities from any cause. Purchaser further acknowledges that the purchase price of the Product reflects these warranty terms and remedies.

ALTERATION, NEGLECT, ABUSE, MISUSE, ACCIDENT, DAMAGE DURING TRANSIT OR INSTALLATION, FIRE, FLOOD OR OTHER EXTERNAL CAUSES.
Horizon Scientific, Inc. is not responsible for the repair or replacement of any parts that Horizon Scientific, Inc. determines have been subjected after the date of manufacture to alteration, neglect, abuse, misuse, accident, damage during transit or installation, fire, flood, or other external causes. It does not apply to defects resulting from failure to properly install, operate or maintain the product in accordance with the printed instructions provided, or damage caused by the storage of any corrosive material that comes in contact with the interior or exterior portions of the cabinet, or the use of spark producing equipment or containers (such as galvanized or carbonized steel containers) that come in contact with any interior portion of the cabinet.

OUTSIDE U.S./CANADA. This warranty does not apply to, and Horizon Scientific, Inc. is not responsible for, any warranty claims made on products sold or used outside the United States and Canada.

CHOICE OF LAW/VENUE. The laws of the State of South Carolina shall govern the validity, interpretation, and enforcement of this warranty, regardless of conflicts of law principles. Purchaser agrees that the proper venue for any action to enforce the terms of this warranty shall be the Dorchester County District Courts, South Carolina. Purchaser submits the jurisdiction of such courts over the Purchaser and the subject matter of any such action. Any action for breach of these warranty provisions must commence within one (1) year after that cause of action has accrued.

6.4 WARRANTY CLAIMS

To obtain prompt warranty service, simply contact the manufacturer at 800-648-4041 (option 5, then option 1). Horizon Scientific, Inc.'s shipping records showing date of shipment shall be conclusive in establishing the warranty period. All claims should include model number of the unit, the serial number of the cabinet, proof of purchase, date of installation, and all pertinent information supporting the existence of the alleged defect. Any repairs must be authorized by Horizon for the warranty to be honored.

This page is intentionally left blank.

COMPLIANCE

7.1 SAFETY

Safety testing: This unit is safety certified by Intertek ETL, CETL Listed  (certified to UL471 standard, verified compliance with hydrocarbon refrigerant safety).

Microprocessor controller: Complies with the following additional standards electrical safety: IEC/EN/UL 60730-1, CSA E60730-1, IEC 60335-1 (sections 29 & 30). **Electromagnetic compatibility:** IEC/EN 61000-6-1, IEC/EN 61000-6-2, IEC/EN 61000-6-3, IEC/EN 61000-6-4.

7.2 ENVIRONMENTAL

EPA: The refrigerant and foaming agents used in this product EPA SNAP compliant hydrocarbon.
Microprocessor controller: Wireless compliance: RED directive (EN 301489-1), FCC (section 15, subsection B) IC.

CONTACT US

Technical Support: 1-800-648-4041 (option 5, then option 1)
Customer Support: 1-800-648-4041 (option 3)
technicalservice@horizonscientific.com