Ultra-Low Temperature Stirling Freezer Benchtop Model

OWNER'S GUIDE

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 APPLICATION 4
1.3 SAFETY AND NOTICES 5
1.4 RECEIVING AND SHIPPING DAMAGE HANDLING 9

2. INSTALLATION 11

2.1 UNPACKING 11
2.2 GENERAL RECOMMENDATIONS 13
2.3 LOCATION AND CLEARANCE 14
2.4 OPERATIONAL SURFACE 15
2.5 LID CLOSURE 15
2.6 STORAGE CHAMBER 15
2.7 ELECTRICAL COMPONENTS 15
2.8 ELECTRICAL INSTALLATION 16
2.9 TEMPERATURE PROBE 17
2.10 EXTERNAL/3rd PARTY TEMPERATURE MONITORING 17
2.11 BATTERY BACKUP 17
2.12 EMERGENCY BACKUP PLAN 17
2.13 INITIAL POWER UP AND OPERATION 18

3. CONTROLLER / DISPLAY 19

3.1 OVERVIEW 19
3.2 OPERATING THE CONTROLLER 19
3.3 CALIBRATION, VERIFICATION, AND VALIDATION 23
3.4 ALARM FUNCTIONALITY 23

4. PRODUCT SPECIFICATIONS 23

4.1 OPERATING STANDARDS 23

5. MAINTENANCE 25

5.1 INSPECTION AND SERVICING 25
5.2 SERVICE AND ANALYSIS GUIDE 27

6. WARRANTY 28

6.1 FACTORY WARRANTY 29
6.2 ULT FREEZER WARRANTY 29
6.3 ADDITIONAL WARRANTY INFORMATION 30
6.4 WARRANTY CLAIMS 31

7. COMPLIANCE 33

7.1 SAFETY 33
7.2 ENVIRONMENTAL 33

1. GENERAL

1.1 INTENDED AUDIENCE

This manual is intended for qualified operators, laboratory personnel, and authorized service technicians responsible for the installation, operation, and maintenance of the Ultra-Low Temperature (ULT) Freezer described herein.

1.2 APPLICATION

This manual applies to a benchtop Ultra-Low Temperature Freezer utilizing a free-piston Stirling refrigeration freezer. The equipment is designed for laboratory, research, clinical, and controlled transport applications requiring ultra-low temperature storage.

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 cold 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 electrical cover. Contact a qualified service representative.

 **WARNING:** Do not modify the refrigeration device, electrical wiring or components, unless work is performed by a certified technician.

 **WARNING:** Only use manufacturer-supplied power cords.

 **WARNING:** The controller automatically switches power to components. Always unplug before making repairs.

 **WARNING:** Do not use electrical appliances inside the storage compartments of this appliance.

 **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 ULT. Storing unsealed chemical material in this equipment will void the factory product warranty.

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

substances such as gasoline in this cabinet. This equipment is not rated for flammable material storage.

 **WARNING:** Do not operate this equipment in the presence of explosive fumes. This equipment is not rated as a hazardous locations storage cabinet.

 **WARNING:** Keep ventilation openings clear of obstruction. This includes ventilation inside the appliance enclosure or in the built-in structure.

 **CAUTION:** Before moving the unit, make sure the door is closed, and disconnect the power cord (make sure cord is secured).

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

 **CAUTION:** Do not touch the cold surfaces inside the storage chamber with bare skin. Exposure to extremely low temperatures may cause instant frostbite. Always use appropriate personal protective equipment.

 **CAUTION:** Do not use mechanical devices or other means to accelerate the defrosting process, other than those recommended by the manufacturer.

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

 **CAUTION:** Keep fingers out of pinch point areas; clearances between the doors 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.

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 website.

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.

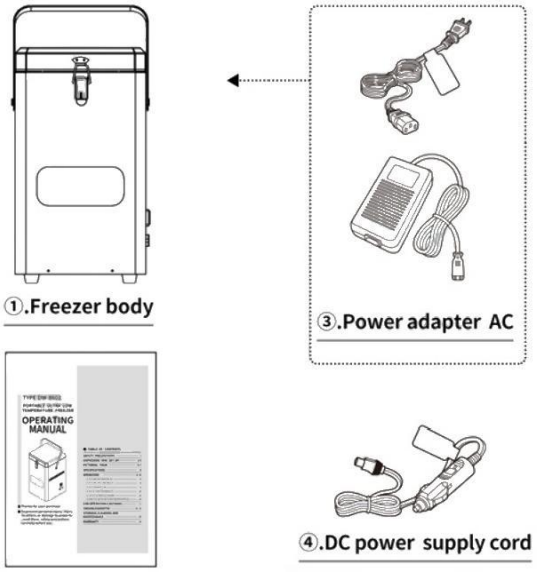


AS STATED ABOVE, THE CARRIER IS YOUR SOLE SOURCE FOR SATISFACTION OF A DAMAGE CLAIM. UNDER NO CIRCUMSTANCES SHOULD THE MERCHANDISE BE RETURNED TO THE MANUFACTURER. NO RETURNS WILL BE ACCEPTED WITHOUT PRIOR AUTHORIZATION.

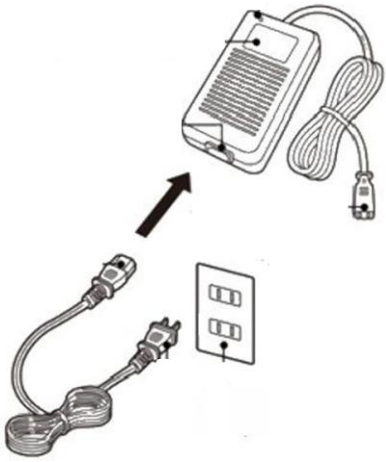
2. INSTALLATION

2.1 UNPACKING

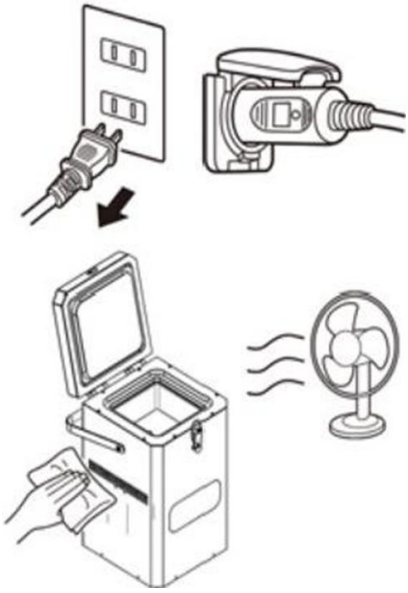
- Remove outer stretch wrap and cardboard packaging for unobstructed access under the unit if included.
- Cut the strapping to free the packaging from the pallet if included.
- Carefully open the outer box and remove the inner box and packet of accessories and the included manual.
- Remove the unit from the internal plastic packaging.



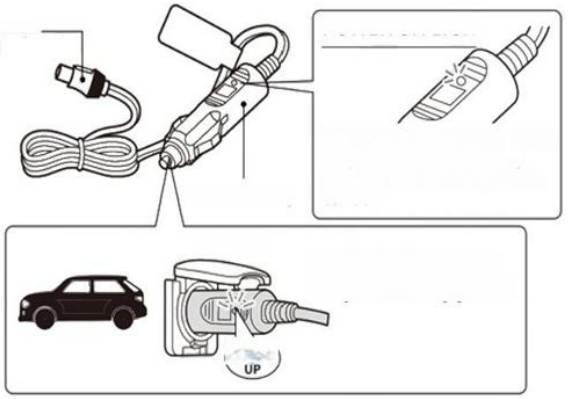
INCLUDED ITEMS

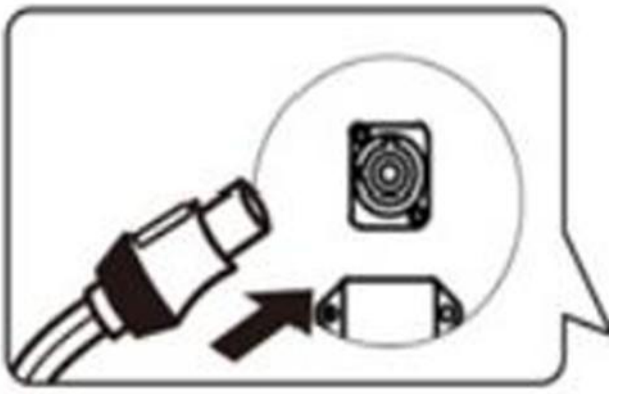


CONNECTING THE POWER SUPPLY



CONNECTING THE ULT TO POWER





CONNECTING FOR 12V INPUT POWER USAGE

2.2 GENERAL RECOMMENDATIONS

- After unpacking, allow the unit to come to room temperature before starting.
- On startup, the high temperature alarm may sound until the unit is able to cool the interior to operating range.
- Allow for the set point to be reached and for the interior temperature to stabilize before storing products.
- Do not overload the unit.

2.3 LOCATION AND CLEARANCE

Ambient conditions:
The ULT is meant to be installed indoors, and operates best in 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 if used in other environmental conditions. Please refer to the Product Specifications section of this manual for guidance.

While the ULT will operate in a wide range of conditions, the following considerations may help to reduce the chance of an undesirable condition. Units placed near room doors, HVAC registers, or windows will be subject to more ambient temperature variation. Direct sunlight or other powered equipment in the room will raise localized temperatures differently than what is registered by an HVAC thermostat. Air currents in a room from building ventilation, windows, or doorways will impact the quality and amount of air exchange between the refrigerated chamber and the ambient during door openings.

Clearance Space:
This model requires a minimum of two (2) inches of clearance space behind and on both sides of the unit to allow proper airflow for cooling.

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

2.4 OPERATIONAL SURFACE

Level operating surface

Ensure that the placement chosen for installation has a level surface (+/- 5°).

2.5 LID CLOSURE

The hinged top lid on this model includes a lockable draw latch for positive sealing when closed. To open pull the lower handle of the latch to release the catch, then swing the catch away from the strike plate to lift the lid. The latching mechanism should not require alignment. If an alignment is required please contact technical service.

2.6 STORAGE CHAMBER

Ensure that the products being stored, including vials, boxes, and/or optional organizers, will fit the storage chamber. The interior insulated cover is removable. It is highly recommended to keep the insulated cover in place when the outer lid is open.

2.7 ELECTRICAL COMPONENTS

The ULT comes with two power cords: a 115V AC to DC universal switching power supply and a 12V DC adapter.

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 ULT.

 The supply circuit to this ULT 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.

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

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

2.9 TEMPERATURE PROBE

The temperature probe is integrated into the structure of the cabinet and positioned / buffered in order to represent the air temperature or sample temperature at the geometric center of the cabinet.

2.10 EXTERNAL/3rd PARTY TEMPERATURE MONITORING

If an external temperature monitor with a wired probe is placed in the storage chamber, care must be taken to route the wiring through the gasket of the hinged top lid. Air gaps in the gasket lead to frost/ice accumulation. Plumber's putty or duct seal may be used to seal gaps and reduce the air gaps.

2.11 BATTERY BACKUP

This model does not include a battery backup. It is the responsibility of the user to provide an adequate power source, including appropriate backup power, if desired.

2.12 EMERGENCY BACKUP PLAN

Before using this ULT, establish an emergency backup plan in case of power outage or other possible unseen issue:

1. How will equipment be monitored?
2. What is the contingency to keep product cold?
    a. External power backups or power generators must be sized appropriately for refrigerator equipment.
    b. Extra cold storage equipment or temporary storage method if the ULT has unexpected issues.

IF YOU PLAN TO STORE IRREPLACEABLE AND/OR HIGH VALUE PRODUCTS IN THIS UNIT TAKE THE PROPER PRECAUTIONS NOW.

The manufacturer'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 those expressly covered by this warranty.

NO CONSEQUENTIAL DAMAGES. The manufacturer 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 or not on account of refrigeration or mechanical failure.

2.13 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. Simply plug the unit into a power outlet that meets the electrical requirements, and the unit will automatically start the cooling operation.

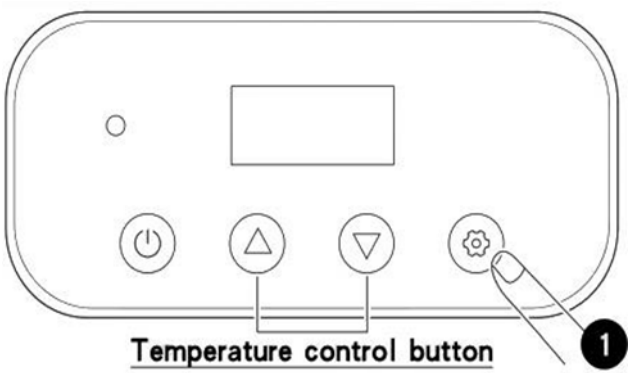
The controller is factory set to an optimal operational temperature. The controller may display a high temperature alarm while the equipment is cooling to the operational temperature range. Alarms will automatically clear once operating temperature is reached.

3. CONTROLLER / DISPLAY

3.1 OVERVIEW

This equipment comes equipped with a digital microprocessor temperature controller for managing the cooling functions. During normal operation, the Stirling freezer will modulate to maintain temperature in the storage chamber. The temperature controller utilizes a dedicated temperature probe that reacts quickly to changes in chamber temperature to manage cooling.

3.2 OPERATING THE CONTROLLER



Please Note: The digital temperature controller has been factory set and tested to allow your unit to operate at its desired temperature cycle.

Adjusting the settings on the controller will alter factory settings. WE STRONGLY RECOMMEND YOU CONTACT THE MANUFACTURER'S TECHNICAL SUPPORT DEPARTMENT BEFORE MAKING ANY ADJUSTMENTS TO THIS CONTROLLER.

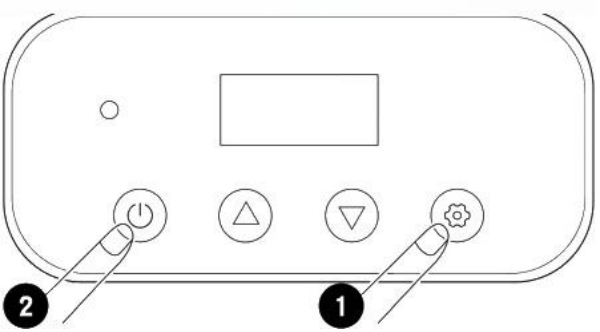
CALL (800) 648 4041, OPTION 5 FOR TECHNICAL SERVICE.

How to turn on the ULT freezer:
When the ULT freezer is connected to the power supply, the operation light will light up and the unit turns on automatically with one beep.

How to power the ULT freezer on/off:

Power on the ULT freezer:
Briefly press ⚙ button, then press hold ⏻ button for 3 to 5 seconds. The operation light will light up with one beep, and the ULT freezer will start running.

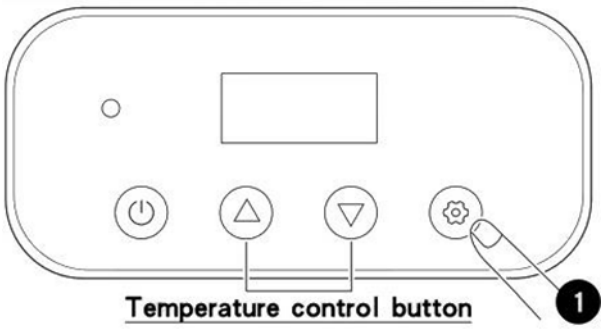
Power off the ULT freezer:
Briefly press ⚙ button, then press hold ⏻ button for 3 to 5 seconds. The operation light will light off with one beep, and the ULT freezer will stop running.



POWER THE ULT FREEZER ON AND OFF

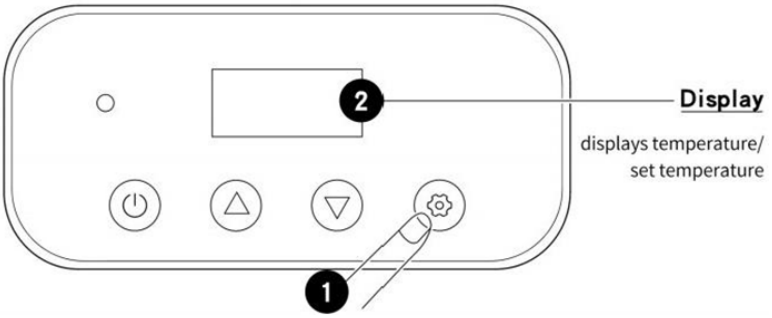
How to change the set point temperature:

Briefly press ⚙ button, the display glows and displays the current set temperature, Briefly, press ▲ button to increase 1℃, Briefly, press ▼ button to decrease 1℃. Briefly press ⚙ button once the desired setpoint is achieved. The display will return to chamber temperature.



CHANGE ULT FREEZER SET POINT

To see the set temperature:
Press the ⚙ button briefly, the display will display set temperature.



SEE THE ULT FREEZER SET POINT

Over-temperature alarm:

If the freezer compartment temperature is 10°C warmer or colder than the set point for five minutes, then it will go into temperature alarm mode. The freezer will make a double beep every 10 seconds.

Situations which can affect the freezer's ability to maintain a steady state or cooling rate include:

- The lid is ajar
- The air vents are blocked
- Power supply problems
- Addition of a large relatively warm mass
- Mechanical and/or electrical problems

Press the ⏻ button and the audible alarm will be silenced for 1 hour.

How to switch between power supplies:
A simple line cord change can allow for multiple power and receptacle types. Make sure to use the cord and plug appropriate for your location.

Electric plug for car 12V DC outlet:
The freezer should be turned off when you need to switch between power supplies.

- Briefly press ⚙ button, then press hold ⏻ button for 3 to 5 seconds. Wait for the free-piston Stirling freezer to slow and stop (10 seconds).
- Unplug the freezer from the current power source and plug into the new, approved power source.
- The freezer can be restarted immediately, no waiting is necessary (auto power on).

3.3 CALIBRATION, VERIFICATION, AND VALIDATION

The display temperatures should be verified on start-up and at least every 3 years thereafter to assure that the unit is performing to the requirements. Comparative measurements can be accomplished by utilizing a calibrated Temperature Monitoring Device.

Place the calibrated Temperature Monitoring Device in a medium that simulates the product being stored (per site verification / validation standards) at the appropriate process temperatures. Allow the medium and thermometer temperature to equalize before comparing the displayed product temperatures and thermometer reading. Note the temperature offset between the display and the calibrated device for future records.

3.4 ALARM FUNCTIONALITY

During normal operation, if an alarm occurs, a visual indicator on the display will show and an audible indicator will sound.

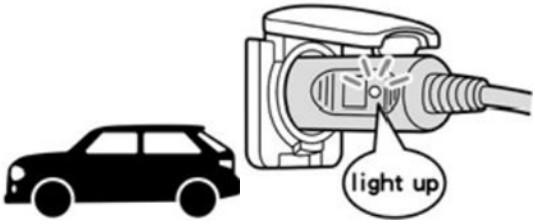
4. PRODUCT SPECIFICATIONS

4.1 OPERATING STANDARDS

This model is 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), <65% RH
- Short duration ambient conditions: 15°C to 32°C (59°F to 90°), <80% RH

Notes on operating in a vehicle:



USING THE ULT FREEZER IN A VEHICLE

- When you use vehicle power supply, please ensure that power is available at the 12V DC car socket.
- Do not turn the car off for extended periods of time, the freezer may consume the available power in the battery.
- The freezer will shut down automatically when the DC power supplies less than 9V.
- Do not operate the freezer in an unattended vehicle. This may lead to overheating if left in the sun and subsequent damage to stored contents.
- The DC and AC Power Connections cannot be used at the same time.

Electrical Specifications:

Model	Input Voltage & Frequency	Rated Amperage	Power Source
Stirling freezer	115V 60 Hz	2.5 A	Grounded outlet, meeting national electric code (NEC) in the U.S. and all local electrical requirements

Functional Specifications:

Insulation	High performance vacuum insulated panels and polyurethane foam
Noise	<45 dB(A)at 1 meter
Control sensor	One RTD (PT100 Class A)
Refrigerating medium	helium (He)
Pull-Down from 25℃ ambient	2.5 hours from 25℃ to -80℃ (Empty chamber)
Steady state energy use 25℃ ambient	Average power 65 watts at -86℃ (Empty Cabinet)
Temperature alarm	Over set temperature ±10℃

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 6 months or as required):

- Check the lid gasket for proper seal
- Check that ventilation openings inside and outside are not blocked

- Check that proper ventilation is still maintained around the unit

Cleaning

- The temperature differential between ambient and the ultra-low interior can attract moisture near the gasket. For best results always wipe away moisture during openings to prevent ice accumulation. Do not use sharp instruments to scrape ice from the surface.
- Turn off the power and allow the freezer to come to room temperature.
- Dry the inside of the freezer compartment and clean any spills after using the freezer.
- The exterior surfaces of the freezer can be cleaned as needed by using a soft cloth and mild detergent. Do not use solvent or harsh abrasive cleansers or abrasive pads.

5.2 SERVICE AND ANALYSIS GUIDE

Malfunction	Possible Cause	Solution
Freezer does not power on	Power is not getting to the freezer from the AC input	Check the connections to the power supply
		Assure that the wall plug is firmly seated
	Power is not getting to the freezer from the DC input	Reseat the connections to DC power cord
		Assure that the DC input has live power
		Replace any blown automobile fuses
Freezer does not achieve desired temperature	Inadequate air circulation	Clean the air vents
		Remove air flow obstructions
	Inadequate power supply	Assure that the wall plug is firmly seated
		Remove any dirt or debris inside the automotive DC socket or on the plug
		Operate freezer only when automobile is running
	Improper environment	Remove freezer from direct sunlight, hot room, etc.
		Check that freezer is level. Tilts of more than 12 deg in some directions will degrade performance
Freezer	Overloading of	Remove some items from

cools slowly	freezer	freezer
	Lid is not completely closed	Check for ice buildup, remove if necessary, and properly close lid
	Lid is open and closed too often	Minimize openings and closing of lid
	Inadequate air circulation	Clean and unblock air vents
12V plug becomes unusually hot	Dirt or corrosion in the DC socket	Clean the socket

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 ULT FREEZER WARRANTY

In addition to the standard warranty, Horizon Scientific, Inc. warrants its hermetically and semi-hermetically sealed ULT freezer engines to be free from defects in both material and workmanship under normal use and service in addition to the standard warranty period. ULT freezer engines 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 an engine or parts of similar design and capacity.

The ULT freezer engines warranty applies only to hermetically and semi-hermetically sealed parts of the Stirling freezer engine and does not apply to any other parts or components, including, but not limited to, cabinet, paint finish, temperature control, refrigerant, engine 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 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 be commenced 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. 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.

7. COMPLIANCE

7.1 SAFETY

Safety testing: The ULT freezer is a low voltage (12 or 24V DC) system utilizing a protected 24V DC switch mode power supply. The power supply is cETLus, CE, RoHS, FCC, CCC and UK/CA compliant.

7.2 ENVIRONMENTAL

EPA: The working gas and foaming agents used in this product EPA SNAP compliant hydrocarbon or helium.

CONTACT US

Technical Support: 1-800-648-4041 x5
Customer Support: 1-800-648-4041 x3
technicalservice@horizonscientific.com