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A large version of the Holland Green Science logo, featuring the text "Holland Green Science" in blue and a stylized orange leaf with three main lobes and a vertical stem to its right.

10308001
Boreas
Freezer

User Manual

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For claims under the warranty please contact your local supplier. You may also send the instrument directly to manufacturer, enclosing the invoice copy and by giving reasons for the claim.

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II. Safety

IMPORTANT Safety Items to be Observed.

Safety Warnings

! DANGER (may cause serious damage to property and or casualties)

1. Please carefully read this User Manual prior to operating the instrument and observe the instructions on safe operation.
2. The power source must be grounded reliably and away from any sources of electromagnetic interference.
3. Confirm that the voltage and frequency of the power supply matches the specified voltage and frequency specified prior to use.
4. The instrument should be operated on an independent power outlet.
5. Do not allow the instrument to be plugged in or unplugged whilst the power switch is in the on position.
6. Do not modify the power cord.
7. The working environment must be free of any flammable, explosive, volatile or corrosive substances.
8. The instrument is deenergised only when the power cable is disconnected from the power source.
9. This instrument is for indoor use only.
10. The instrument should be operated in a low humidity, well ventilated, dust, and water free environment, without direct sunshine or an intense magnetic, light or heat source. Ensure that the instrument and its accessories are free of any potential defects.
11. Ensure that the instrument is secured tightly, and only standard accessories supplied by the manufacturers are used with this instrument.

! WARNING (may cause property damage or personal injury)

12. Prevent water from splashing on the electrical elements of this instrument.
13. Before assembly, disassembly, cleaning or maintenance, the power source must be disconnected.

! ATTENTION (may affect operational performance or service life)

14. When pulling the power plug out from a power source, do not pull out using the power cord directly.
15. Only accredited and qualified professional repair technicians can open the instrument or conduct required repairs. Persons performing repairs on the instrument other than those selected or approved by the Company shall operate to void any warranty contained hereinabove for the product
16. Do NOT operate this instrument immediately after transport, due to the Compressor await 1-2 days before operating. The instrument must be used in accordance with this User Manual.

III. Proper Use

The instrument is designed for non-residential use and to be used in conjunction only with accessories recommended within this manual and by the manufacturer.

IV. After Sales Support

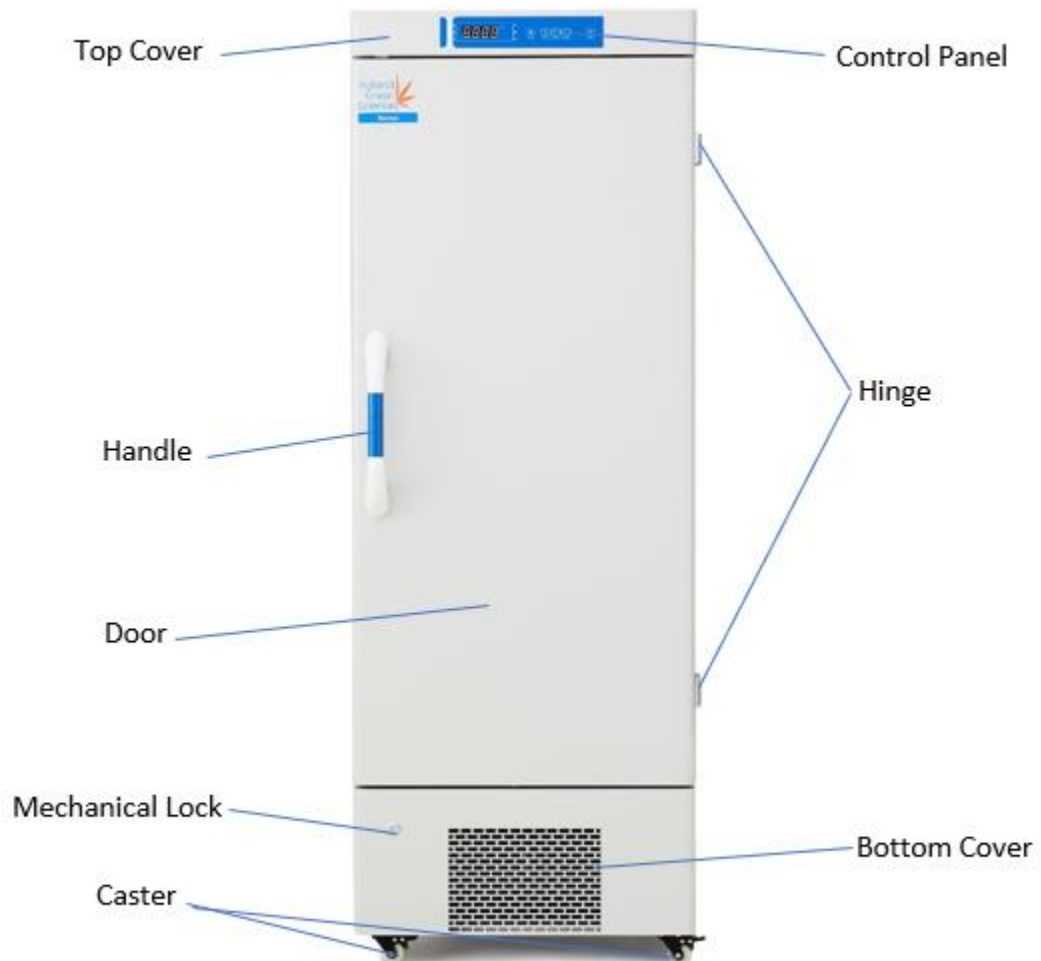
If problems are encountered or technical support is required when installing or using the instrument, please contact serviceusa@hollandgreenscience.com

The Company may provide technical assistance and information regarding the instrument or equipment or service without charge at its sole discretion. Buyer assumes sole responsibility for any reliance on or use of such assistance and information, and the Company makes no warranty thereon.

Upon contact the following information is required:

- Product serial number (located on the instrument nameplate)
- Description of issue or problem
- Method and or operating steps you have undertaken towards resolution.
- Your contact details inclusive of telephone number and email address.

V. Boreas Series Freezer Introduction



VI. Technical Specifications

Model	10308001	
Product Name	Boreas	
Power Specification	120V 60Hz 1ph – 280W	
Climate Type	SN/N	
Cabinet Temperature	-10 °C~-25 °C	
Effective Volume	320L	
Rated Voltage	220V	
Frequency	50Hz	
Refrigerant	R290	
Ambient Temperature	5 °C ~ 28 °C	
Ideal Temperature	18 °C ~ 25 °C	
Ambient Humidity	<80% RH	
Temperature Resolution	0.1 °C	
Cooling Time	≤ 2.6 °C	
Altitude	<2000m	
Power Failure Alarm	YES	
High/Low Temperature Alarm	YES	
Door Open Alarm	YES	
Inner Doors	5	
Shelves	4	
Levels	5	
Door Opening W x H	508 x 1393 mm	
Interior Dimensions W x D x H	508 x 455 x 1393 mm	
Outline Dimension	W	673mm
	D	676mm
	H	1886mm

VII. Standards and Conformity

Construction in Accordance with the following Safety Standards:

UL 61010-1:2012

CSA C22.2#61010-1-12:2012

UL 61010-2-011:2021

CSA C22.2#61010-2- 011:2019

Construction in Accordance with the following EMC Standards:

EN 61010-1:2010

EN 61326-1:2013

VIII. Inspection

Unpack the equipment carefully and check for any damage which may have arisen during transport. In the event of identified damage, please contact serviceusa@hollandgreenscience.com

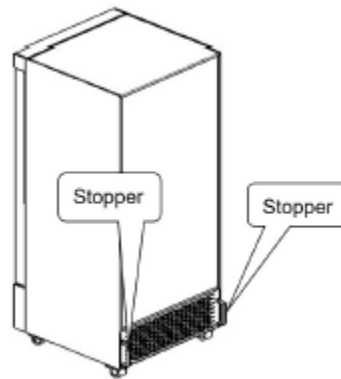
The package includes the following items

Item	Description	Unit	Quantity
1	Key	PCS	2
2	Stopper	PCS	2
4	Shelf	PCS	3
5	Clip	PCS	12

IX. Installation Instructions

9.1 Initial Setup

- Leave a 30cm ventilation gap around all four sides of the cabinet.
- Install the instrument only on a stable and level floor surface
- When the freezer is located into the desired position, set the front castor brakes.
- The freezer must NOT be moved with the product loaded inside.
Allow adequate space in the front of the freezer for door opening.
Remove all packing materials and the packing bag.
- Install the stoppers at the rear side of the machine set as per figure below.
- Do not install the instrument within small, closed or confined spaces.



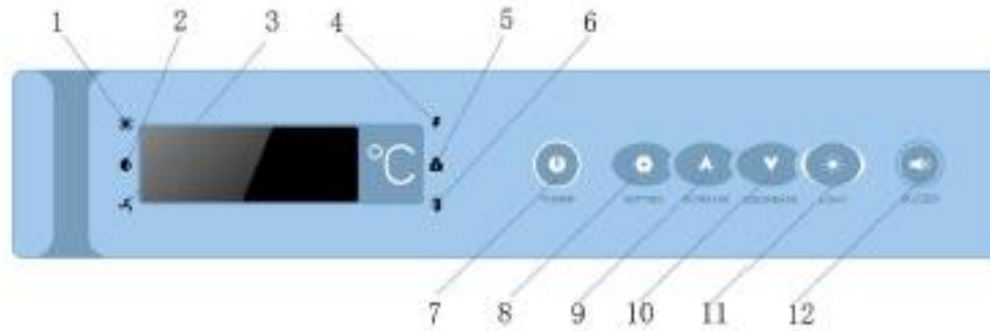
Note: If tipped more than 45°, allow the Freezer to sit upright for 24 hours prior to Start.

9.2 Powering On

- Inspect all external components to confirm they are not damaged.
- Check the rated voltage on the nameplate
- With an empty cabinet, connect the power plug to a dedicated power socket.
- After power 'ON', if an alarm sounds, press the 'Buzzer Button' to mute the alarm. The alarm light continues to display until the temperature reaches the required setting data.
- After checking the freezer is operating as required, gradually place items into the cabinet.

X. Operating Instructions

10.1 User Interface



1. **Cooling Status Indicator**
2. **Defrost Indicator**
3. **Fan Status Indicator**
4. **Power Indicator**
5. **Keyboard Lock Indicator**
6. **Door open Indicator**
7. **Power Switch**
8. **Setting Key**
9. **Increase Key**
10. **Decrease Key**
11. **Lamp Switch**
12. **Mute Alarm**

- Long press 'Power Switch' to switch 'OFF'
- Long press 'Power Key' to switch 'ON'
- Long press the Keypad 'Lock Key' (combination of keys 8 and 9 together) to lock and unlock the keypad. The keyboard lock LED will Light confirming that all keys are now locked.
Press 'Mute' to disable the audible alarm, the alarm indicator and code continues to display.

10.2 Parameter Settings

Upon power on, the screen displays the current internal temperature value.
To change the set temperature

Function	Keys Operation	Display
1	Default	Displays the inside temperature
2	Press the key 8 for 3 seconds	Displays the initial set data and flashes
3	Press the key 9	Figure increases
4	Press the key 10	Figure decreases
6	Press the key 8 for 3 seconds	Saves the user settings and displays the inside temperature

10.3 Temperature Query Settings

Press key 9 to check high and low temperature record.

NO.		Display
1	Default	Displays inside temperature
2	Press key 9	Display highest temperature (HT)
3	Press key 9 again	Display HT date HD
4	Press key 9 again	Display HT hour HH
5	Press key 9 again	Display HT minute
6	Press key 9 again	Display lowest temperature (LT)
7	Press key 9 again	Display LT date
8	Press key 9 again	Display LT hour
9	Press key 9 again	Display LT minute
10	Press key 9 again	Go back to '3'
11	Long Press Key 9	Delete record

10.4 Review and Set Time

NO.	Key operation	Display
1	Default	Display cabinet temperature
2	Press key 10	Display Time, Year Y_17
3	Press key 10 again	Month N_03
4	Press key 10 again	Date D_15
5	Press key 10 again	Hour H_08
6	Press key 10 again	Minute E_20
7	Press key 10 again	Second S_21
8	Long press key 10	Set Time, Year
9	Press key 9 or 10	Set Year or Displayed Parameter
10	Press key 8	Cycle through 3,4,5,6,7
11	Long Press Key 8	Store

10.5 Alarm Codes.

NO.	Alarm code	Describe
1	AH	High temperature alarm
2	AL	Low temperature alarm
3	AUF	Power failure alarm

During a power failure or fault a battery will activate allowing the display to continue, the power failure alarm displays 'AUF' and the current inside temperature will cycle on the display.

After 8 hours, the display blanks.

The power failure alarm light will illuminate continuously until the battery is fully recharged.

10.6 Error Display

NO.	Alarm code	Describe
1	AD1S	Temperature controller fault
2	AS1S	Temperature sensor fault

If the temperature sensor alarm occurs, switch 'OFF' the power and check the connecting wire of the sensor.

XI. Maintenance

Keep the instrument dry and clean in routine operations.

Clean the outer surface with a non-abrasive cleanser and only connect the power supply when the entire instrument surface is dry.

If liquid or moist solids enters the instrument, please immediately disconnect the power supply and contact serviceusa@hollandgreenscience.com

- Surface stains on the instrument should be cleaned only by a clean, soft rag and detergent.
- The power must be disconnected before any maintenance or cleaning.
- Do not clean the instrument with any corrosive cleaning solutions.
- If the instrument is left unused for a long period, switch 'OFF' the power and store within a dry, clean, level, and stable surface at normal temperature.



Caution!

Before any Maintenance or Inspection, the Power Cable **MUST** be removed from the power socket.

11.1 Defrost

Frost may occur on the rack within the cabinet and may possibly cause a gap between the cabinet body and the door seal and reduce performance. Please remove frost only after disconnecting the power supply.

NEVER remove frost with any sharp edge object such as a knife or screwdriver.

1. Take out all items from the cabinet and store them within an alternate cabinet or container with frozen liquid carbon dioxide.
2. Disconnect the power supply.
3. Open the small doors, and keep the external door open to defrost for a moment.
4. Remove the water from the bottom of the cabinet with dry fabric cloth.
5. Start the instrument after cleaning the cabinet body.
6. Ensure the temperature is correct prior to return to the original items to the defrosted and cleaned cabinet.

XII. Trouble Shooting

12.1 Poor Cooling Performance

- Check ambient temperature is within limits.
 - Check if the external door is closed. (Check for frost on seal)
 - Check if the temperature is set correctly.
 - Check if the storage cabinet is near a heat source.
-
- When stopped temporarily due to power failure or other faults, the inside temperature of the refrigerator will rise from -40°C to -30°C within 1 hour.
If power cannot be restored, relocate all stored goods to avoid damage or loss.
 - Prior to storing goods confirm in that the inside temperature is in accordance with the set temperature for item storage to avoid losses caused by goods damage due to the improper temperature.
 - Due to the refrigeration inertia, the instrument cannot be kept at an exact constant temperature and differences between the actual temperature and the set temperature will occur.