



## Blast Chiller/Freezer

449SF3, 449SF5, 449SF10

11/2021

*Please read the manual thoroughly prior to equipment set-up, operation and maintenance.*

## Warning

DANGER – RISK OF FIRE OR EXPLOSION. FLAMMABLE REFRIGERANT USED. TO BE REPAIRED ONLY BY TRAINED SERVICE PERSONNEL. DO NOT PUNCTURE REFRIGERANT TUBING.

PELIGRO - RIESGO DE INCENDIO O EXPLOSION. REFRIGERANTE INFLAMABLE UTILIZADO. PARA SER REPARADO SOLAMENTE POR PERSONAL DE SERVICIO CALIFICADO. NO PINCHAR LA TUBERÍA REFRIGERANTE.

DANGER – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONFIER LES RÉPARATIONS À UN TECHNICIEN SPÉCIALISÉ. NE PAS PERFORER LA TUBULURE CONTENANT LE FRIGORIGÈNE.

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.

ATENCIÓN - RIESGO DE INCENDIO O EXPLOSIÓN. REFRIGERANTE INFLAMABLE UTILIZADO. CONSULTE EL MANUAL DE REPARACIÓN / GUÍA DEL PROPIETARIO ANTES DE INTENTAR DAR SERVICIO A ESTE PRODUCTO. DEBEN CUMPLIR CON TODAS LAS PRECAUCIONES DE SEGURIDAD.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION. LE FRIGORIGÈNE EST INFLAMMABLE. CONSULTER LE MANUEL DU PROPRIÉTAIRE/GUIDE DE RÉPARATION AVANT DE TENTER UNE RÉPARATION. TOUTES LE MESURES DE SÉCURITÉ DOIVENT ÊTRE RESPECTÉES.

CAUTION – RISK OF FIRE OR EXPLOSION DUE TO PUNCTURE OF REFRIGERANT TUBING; FOLLOW HANDLING INSTRUCTIONS CAREFULLY. FLAMMABLE REFRIGERANT USED.

ATENCIÓN - RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A LA PERFORACION DE LA TUBERÍA REFRIGERANTE; SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO. REFRIGERANTE INFLAMABLE UTILIZADO.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION SI LA TUBULURE CONTENANT LE FRIGORIGÈNE EST PERFORÉE; SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN. LE FRIGORIGÈNE EST INFLAMMABLE.

CAUTION – RISK OF FIRE OR EXPLOSION DUE TO FLAMMABLE REFRIGERANT USED. FOLLOW HANDLING INSTRUCTIONS CAREFULLY IN COMPLIANCE WITH LOCAL GOVERNMENT REGULATIONS.

ATENCIÓN – RIESGO DE INCENDIO O EXPLOSIÓN DEBIDO A REFRIGERANTE INFLAMABLE UTILIZADO. SIGA LAS INSTRUCCIONES DE MANIPULACIÓN CON CUIDADO CONFORME A LAS REGLAS DE LA MUNICIPALIDAD.

ATTENTION – RISQUE DE FEU OU D'EXPLOSION SI LE FRIGORIGÈNE EST INFLAMMABLE. SUIVRE LES INSTRUCTIONS DE MANUTENTION AVEC SOIN CONFORMÉMENT AUX RÈGLEMENTATION GOUVERNEMENTALE LOCAUX.

## Installation

Please read this manual thoroughly prior to equipment set-up, operation and maintenance.

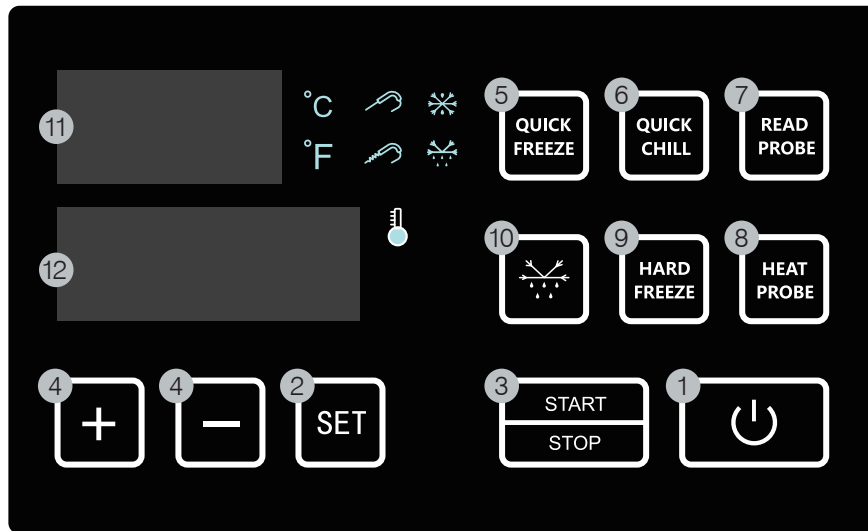
### **Important!!! Please Read Before Installation**

- If the unit has recently been transported on its side, please let the unit stand upright for a minimum of 24 hours before plugging it in.
- Make sure all accessories are installed (shelves, shelf clips, etc...) before plugging in the unit.
- Make sure the unit has pre-cooled to the proper temperature before loading the unit with product.
- Do not attempt to remove or repair any component of the unit. Consult an authorized service technician for servicing / repair.
- Do not hang on doors or stand inside the unit.
- Please read through this manual in its entirety.

### **Cabinet Location Guidelines**

- Install the unit on a strong and leveled surface.
  - If the surface is uneven, the unit may be noisy.
  - The unit may malfunction if the surface is uneven.
- Install the unit in an indoor, well ventilated area.
  - For best performance, maintain 6" of clearance on the sides and the back of the unit at all times.
  - Outdoor use may cause decreased efficiency and damage to the unit.
  - Avoid direct sunlight.
- Avoid installation in a high humidity and / or dusty area.
  - High humidity can cause the unit to rust and may decrease efficiency.
  - Dust collected on the condenser coil may cause unit to malfunction.
  - Malfunction due to high ambient temperatures, humidity, or improperly maintained condenser coil will void the warranty.
- Select a location away from heat and moisture-generating equipment.
  - High ambient temperatures may cause the compressor to malfunction.
  - Malfunction due to high ambient temperatures and humidity will void the warranty.

## Digital Temperature Controller



#	Control	Description
1	Power Button	When power button is engaged, the unit will engage in pre-cooling mode. The temperature displays the current temperature in the cabinet, and the time will display the last set time.
2	Set Key	From the Pre-cool mode, press the set button to change the time or temperature. When temperature flashes, press '+' or '-' to change temperature from -22°F to 77°F. When hour or minutes flash, press the '+' or '-' to adjust time from 00:10 to 99:59.
3	Start/ Stop	After setting time and temperature. Press the start/stop button. Cooling indicator should light up and timer should start counting down. While unit is in cooling cycle, the Start/Stop button will stop the current cycle.
4	'+/-'	Adjustment buttons, used to adjust time and temperature settings.
5	Quick Freeze	Quick freeze function reduces temperatures of 194°F to 0°F in 240 minutes. This is a shortcut function and is preset to be 0°F and the time is 4 hours. Then press start to initiate.
6	Quick Chill	Quick Chill function reduces temperatures of 194F to 38F in 90 minutes. This is a shortcut function and is preset to be 38F and the time is 1.5 hours. Then press start to initiate.
7	Food Probe	Insert Probe into food and press Food Probe Key. The probe icon will light up, and the display will show the temperature of the probe. Press a second time to return the display to the cabinet temperature.
8	Heat Probe	To make probe removal easier in frozen food, press the heat probe button. The probe heating icon will light up, the temperature display will show the temperature of the probe. When the heat probe icon is off, the food probe can be removed.
9	Hard Freeze	This setting will cool the food to the target temperature set on the display as read by the probe. Use this option for the fastest cooling performance. Hard Freeze must be pressed before the start/stop button is initiated on the cycle. When using the Hard Freeze mode, verify the probe has been inserted into the food before initiating cycle.
10	Defrost button	Pressing this button enables the manual defrost cycle. The defrost indicator light will be enabled. Unit is programmed to automatically defrost every 6 hours by default when cooling.
11	Temperture Display	Displays current cabinet temperature.
12	Time Display	Displays the last set time value, or the remaining time on the cooling cycle.

Other Controls	Description
To change between C and F	Can be switched by pressing and holding the SET and '-' button for 3 seconds.
View the set temp and time	Press and hold the SET button to view set temperature and set time.

## Electrical

- Please ensure that the required voltage is being supplied at all times.
- The unit should be plugged into a grounded and properly-sized electrical outlet with appropriate over-current protection. Please refer to the electrical requirements on the unit's nameplate.
- The unit should have its own dedicated outlet.
- Do not use extension cords.
- Ensure the unit is not resting on or against the electrical cord.
- If the unit is not in use for a long period of time, please unplug the unit from the outlet.
- To avoid shock and fire hazards, do not plug in or unplug the unit with wet hands.
- After unplugging the unit, wait at least 10 minutes before plugging it back in. Failure to do so could cause damage to the compressor.

## Defrost System

Refrigeration units contain an automatic defrost system. Refrigeration coils are kept below the freezing point (32 degrees fahrenheit). During compressor downtime, the evaporator fan continues to circulate air through the evaporator coil. This air circulation raises the coil temperature above the freezing point, melting any accumulated frost. Run-off water is drained into the evaporator pan and evaporated.

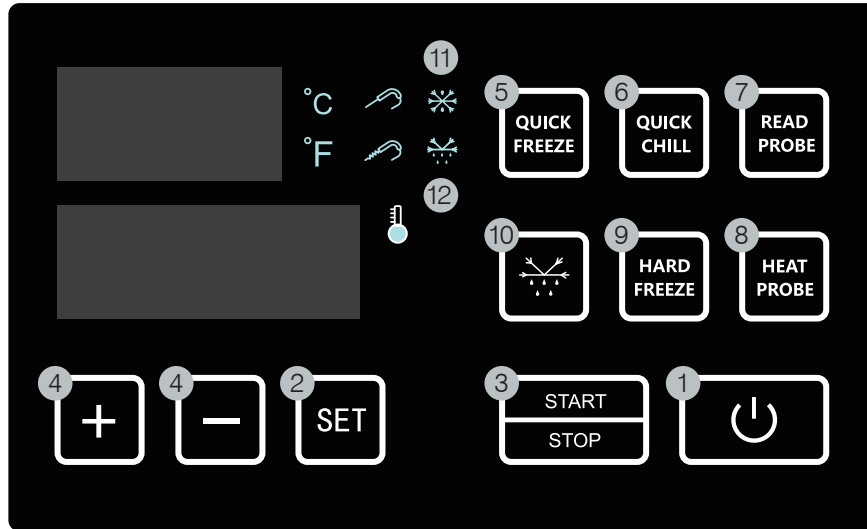
## Use

High liquid content foods should be limited to 50% capacity of the machine's total cooling capacity.

To avoid surpassing the internal pressure limit of the compressor, and extend the life of the compressor, allow the unit 2 minutes in between cycles. After 2 minutes, press start/stop button, the compressor will start, and after another 2 minutes the evaporator fan starts.

In the quick freeze modes, if the start/stop button is pressed, and the temperature of the cabinet is less than the set temperature, the compressor will not start until the temperature is greater than or equal to the set point.







## Quick Start Guide





### Getting Started

1. To get started, press the Power Button (1)  to enter the precooling mode. Allow the unit to precool for 20 minutes before starting the cooling process.

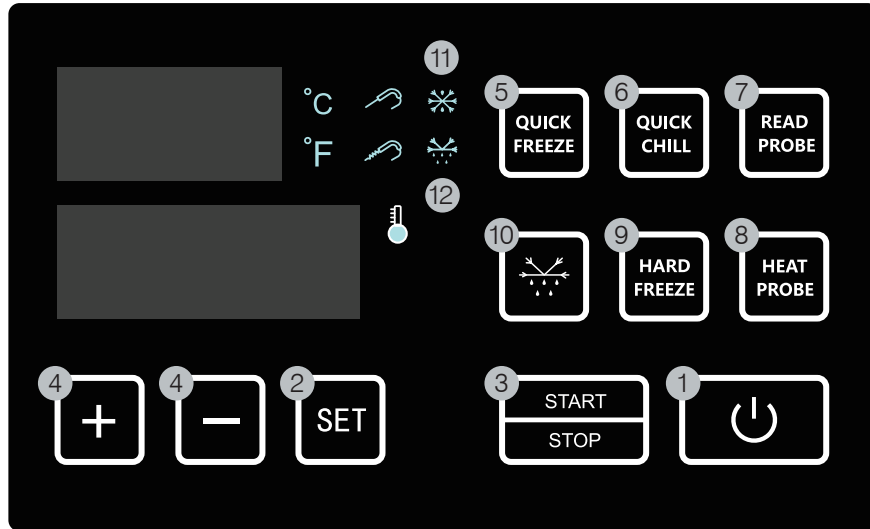
### Manual Set

1. Under the precooling mode, press the Set Button (2)  to switch between the temperature and time settings. When the field is flashing, press the (4)  or  to change the time and temperature settings.
2. After setting the desired time and temperature, press the Start/Stop Button (3)  to initiate the cooling cycle.
3. During the cooling process, pressing and holding the Set Button (2)  will show the current time and temperature setting.
4. The Start/Stop Button (3)  can be pressed at any time to stop the cooling cycle during cooling. NOTE: After the cooling cycle is stopped, restart should not be attempted for 2 minutes. If restart is attempted within 2 minutes, there will be a delayed start of 2 minutes until the compressor starts.




### Quick Chill

1. Pressing this button is a shortcut alternative to manual setting the unit for 38°F and time to 1 hour and 30 minutes.
2. Under the precooling mode, press the Quick Chill Shortcut Button (6) .
3. Then, simply press the Start/Stop Button (3)  to initiate the cooling cycle.

## Quick Start Guide





### Hard Freeze

1. The hard freeze setting is used to switch between reading and displaying the temperature of the probe and the temperature of the cabinet (probe is default).
2. The Snowflake (11) ❄️ indicator light will illuminate to show that the unit is reading the temperature of the core of the product using the probe.
3. To use the hard freeze mode, press the Hard Freeze Button (9)  and insert the probe before pressing the Start/Stop Button (3) .
4. When using the Hard Freeze mode, the Heat Probe Button (8)  will heat the core probe to allow the user to remove the probe from the core of the frozen food product.

### Manual Defrost

During the cooling process, the unit will defrost automatically every 6 hours.

1. To initiate a Manual defrost process, press the Half Snowflake Button (10) . The manual defrost indicator light (12)  will illuminate.

## Troubleshooting

### Compressor Not Running

Fuse blown or circuit breaker tripped.	Replace fuse or reset circuit breaker.
Power cord unplugged.	Plug in power cord.
Thermostat set too high.	Set thermostat to lower temperature.
Cabinet in defrost cycle.	Wait for defrost cycle to finish.

### Compressor Continuously Running

Compressor is continuously running.	Check evaporator for frost. Clean condenser coils and run manual defrost cycle.
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### Cabinet Temperature is too Warm

Thermostat is set too high.	Set thermostat to lower temperature.
Airflow is blocked.	Rearrange pans for proper air flow. Ensure food product weight limit has not been exceeded.
Low refrigerant levels.	Contact a service technician to check refrigerant levels.
Door is slightly ajar.	Make sure door is completely closed.

### Condensation is Collecting on the Cabinet and/or Floor

Gasket is not sealing properly.	Clean, repair, or replace the gasket as necessary.
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## Error Codes

#	Control	Description
HI	Cabinet probe high Temperature Alarm (Temperature over 113°F)	Press the START/STOP button to start the cooling. After 2 hours, check the temperature inside the cabinet. If the cabinet temperature is greater than or equal to the high temperature alarm temperature of 45 °C / 113 °F, the temperature display column alternately displays the cabinet temperature and HI until the temperature is lower than the alarm temperature. At this time, check whether the door of the machine is closed, or stop the machine to check whether the temperature probe or compressor is faulty.
LO	Cabinet probe low Temperature Alarm. (Temperature under -49°F)	Press START/STOP to START the refrigeration, and test the temperature inside the cabinet 2 hours later. If the temperature of the cabinet is less than or equal to the low temperature alarm temperature of -45°C/-49°F, the temperature display bar will alternately display the temperature of the cabinet and LO until the temperature is higher than the alarm temperature. At this time to stop the cabinet temperature probe and other devices to check whether there is a fault.
E01	Communication Failure Code	Power off and restart the machine or check the connection between the motherboard and the panel cable is connected to the right. Restore factory settings: In the pre-cooling mode, press the “+” and “-” keys simultaneously for 3 seconds, the temperature bar will display “rS”, and then automatically shut down. Press the Power button to start the machine, and the machine parameters will be restored to factory Settings. The factory setting is: temperature unit: °C; Set the temperature value: -18°C; Setting time: 4:00. If there is no mention of the fault, do not disassemble the machine at will. Please contact our authorized service technician for related testing and maintenance to avoid safety failure.



## Operation/Maintenance

**NOTE:** We strongly recommend that any servicing be performed by an authorized service technician.

### **Loading Product**

- **Do not block the air vents.**
- Ensure all shelves are sitting level and properly secured before loading products.
- Do not store flammable and explosive gas or liquids inside the unit.
- Do not use trays or containers deeper than 2 $\frac{5}{8}$ ".
- Do not stack food. The thickness of the food product should not be more than 1 $\frac{5}{8}$ ".

### **Cleaning the Condenser Coil and Filter**

- For efficient operation, keep the condenser surface free of dust, dirt, and lint.
- We recommend cleaning the condenser coil and filter at least once per month.
- Clean the condenser with a commercial condenser coil cleaner such as Noble Chemical Tech Line Evaporator/Condenser coil cleaner.

### **Cleaning the Fan Blades and Motor**

- If necessary, clean the fan blades and motor with a soft cloth.
- If it is necessary to wash the fan blades, cover the fan motor to prevent moisture damage.

### **Cleaning the Interior of Unit**

- When cleaning the cabinet interior, use a solvent of warm water and mild soap such as Noble Chemical Sunbright and Sani-512 to sanitize/disinfect.
- Do not use steel wool, caustic soap, abrasive cleaners, or bleach that may damage the interior finish.
- Periodically remove the shelves and shelf brackets from the unit, and clean them with a mild soap and warm water.
- Models 449SF5 and 449SF10 have a condensation drain that should be cleaned and clear whenever in use.
- 449SF3 does not have a drain for condensation and should be wiped out periodically to prevent damage from moisture.