

User's Manual

**Premium Touch Screen
Shaking Incubator
Benchtop Model
(4-60°C, Auto Defrosting)**

This Manual applies to:

Modes: INCU-SHAKE MAXI



Thanks!

Thank you very much for purchasing one of our premium benchtop shaking incubator, specially designed for you-the lab professional. Your choice indicates that you have very high requirements on style and performance of this type of incubators.

SciQuip Incu-Shake incubators have achieved a good reputation and trust among various clients for its advanced temperature controlling technology, sound framework design, excellent molded exterior and outstanding professional workmanship. These products have been exported through most leading companies into European, American and East Asian markets.

The constant temperature shaking incubator benchtop model has a number of advanced specifications like intelligent precise control of temperature and shaking speed through the standard control panel and solid operating safety features. This benchtop model is available all with heavy duty orbital shaking mechanisms that provide smooth start and quiet shaking motion under maximum load with maximum speed.

This equipment is specially designed for the research experiment that involves microbiology, pharmacy and agriculture. It is widely used for cell culturing, hybridization, cell aeration, and solubility studies. etc.

Since the date of your purchase of this product, after-sale service will always be close to you through your local dealer and/ or the importing company of your region.

Anyhow, no matter what questions you have using our equipment; please do not hesitate to contact us.

Reminder:

Prior to operation, this manual should be read thoroughly and completely understood-as it might be helpful to master the operation techniques of this unit.

Safety instruction!

Please be sure to follow the instructions, which are really important for your safety.



Danger!

Warnings against injuries and damages.

1. The electrical supply circuit to the incubator must confirm to all national and local electric codes. Check the serial-data plate for voltage, cycle, phase and amperage requirements before you connect the unit.
2. Only use grounded power source (outlet) to avoid an electric shock or fire, and it is recommended that the equipment has an unobstructed access to a dedicated power source.
3. In case of a problem, do not attempt to repair the product yourself. Do not open the power box to avoid electric shocks.
4. Do not pull out the plug when the unit is in use. Never drag on the wire to unplug the unit.
5. This equipment can sustain a maximum of $\pm 10\%$ nominal voltage fluctuation; Otherwise a power stabilizer is needed.
6. A surge protector is recommended to avoid power-related faults.
7. In case of malfunction or burning smell, the unit must be unplugged immediately .Use a circuit breaker to cut off the power supply. Continuance of abnormal state will result in fire caused by overheating.
8. The electric power supply must be cut off in following situations:
 - 8.1.-When opening the door of electrical power box without cutting off power supply might result in electric shock.
 - 8.2.-When replacing the fuse. Replacing the fuse without cutting off the power supply will probably result in electric shock.
 - 8.3.-When a malfunction occurs, mishandling will result in further damage of the equipment or accidental injury to the user(s).
 - 8.4.-If you do not use the unit for a long period of time.
9. Never touch the glass door and/or inner chamber when the incubator is hot
10. Please make sure the platform has been securely locked before starting shaking motions. (Refer to Chapter for more information)



Attention!

Instructions for optimal performance!

1. Before starting your equipment, the unit must be placed horizontally on a solid, flat floor, and elevated and leveled with four foot blocks.
2. The incubator needs even heat lost on all surfaces in order to maintain small internal temperature variations .As a result, a minimum of 20 cm must be allowed between the rear and sides of the incubator to any obstructions.
3. Do not locate the unit exposed to direct sunlight or near heating /cooling ducts.
4. The unit must be kept away from electromagnetic interference sources.
5. Flasks placed inside the shaking incubator should be placed to avoid (as much as possible) imbalance on the shaking platform
6. Slam the door(s) will probably leads to damage of the equipment.
7. When in operation (the platform is still moving), do not open the lid (too much or too long) as this might affect the temperature inside.
8. The incubator must be kept away from volatile, flammable, explosive liquids or gases
9. Please keep the chamber clean. Regular cleaning is required.
10. Please do not touch the screen with sharp objects.

Extra for refrigerated units:

11. After transport or moving –DO NOT USE this unit for at least 24 Hours, unless you are a 100% sure that the unit has been moved in an upright position only.
12. To extend the compressors life and to maintain an excellent performance of your refrigeration system, the condenser of the unit should be cleaned every month.

Clean the shaking incubator before you put it into use and on a regular base.

The interior should be wiped down with an appropriate disinfectant, such as 70 % ISOPROPYL ALCOHOL or equivalent.



**DO NOT USE ANY CHLORINATED OR HALOGEN MATERIAL-
AS THIS IS HARMFUL TO THE POLISHED STAINLESS STEEL!!!**

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1. Performance Parameters

- ★ As one of the unique features, the sophisticated PID controller provides our new units with great flexible choice of not only constant controlling one fixed temperature and speed, but also programmed controlling with a series (up to 9 segments, 99 cycles) of “ramps and soaks”, on just one unit.
- ★ 4.3" LCD 480x272 touch screen panel clearly indicates all parameters in one page display, which also simplifies all fuzzy settings with just quick finger touches.
- ★ Both the interior and exterior are made of robust materials for lifetime operations. The inner chamber is made of high quality #304 stainless steel sheets. All exposed edges are de-burred to insure no sharp edges. The exterior is ABS plastic finished with powder coated polyurethane finish, which is resistant to most chemicals and easily cleaned with mild household detergents.
- ★ The control electronics are protected through a circuit breaker that may trip at 110% of loading rate, but will trip within 1 second at 150% of load rating.
- ★ Cooling system is controlled by solenoid valves, with independent compressor overload protection.
- ★ Door switch stops the main heater and motor if lid is opened, and switches them back on once it's closed in 10 seconds. Otherwise the motor will remain stopped, while the main heater resumes working.
- ★ Heater shuts off when high-temperature limit is exceeded. Shaker stops when excess vibration is detected.
- ★ Curved tempered glass lid provides complete visibility of chamber interior, and is non-scratch and easy to clean.
- ★ Electronic timer, from 0 – 9999 minutes, automatic stop, audio/ visual alarm.
- ★ Audible and visual alarms for motor temperature and set point deviations
- ★ Non-volatile memory for set point retention after a power interruption.
- ★ “Long-Life” brushless AC motor creates a smooth and quiet shaking motion.

2. Technical Specifications

Model	INCUSHAKE MAXI
Control	P.I.D Microprocessor
Control Mode	Fix Value or Programmable (up to 9 Segments)
Control Panel	LCD Touch Screen
Air Convection	Forced
Shaking Mode	Orbit
Volume/ Compartment (L)	69
Working Temperature(°C)	10-35
Shaking speed (rpm)	30-600
Stroke (mm)	1-50 Stepless Adjustable
Temperature Range (°C)	4-60
Temperature Accuracy (°C)	0.1
Temperature Uniformity (°C)	±1°C@37°C
Timer	1 to 9999 mins
Tray (mm) (WxD)	400x370
Inner dimensions (mm) (WxDxH)	490x470x320
Exterior dimensions (mm) (WxDxH)	774x740x610
Packing dimensions (mm) (WxDxH)	860x850x760
Net/Gross Weight (kg)	100/132
Power (W)	700
Electricity	220-240Volt 50/60 Hz
Approval	CE, ISO
Security	Over-temperature Protection, Compressor Overload Protection, Electrical Leakage Protection.
Additional	Built-in Printer, RS-485 COM Kit (Option)

***Glass dimensions may reduce max. capacity**

Capacity	50ml	100ml	250ml	500ml	750ml	1000ml	2000ml	Tube Rack S/S	96 Well Plate
INCUSHAKE MAXI	23	23	12	9	7	5	-	3	8

3. Preparation and Start-up

**Clean the incubator before you put it into use and on a regular base.
The interior should be wiped down with an appropriate disinfectant, such
as 70 % ISOPROPYL ALCOHOL or equivalent.**

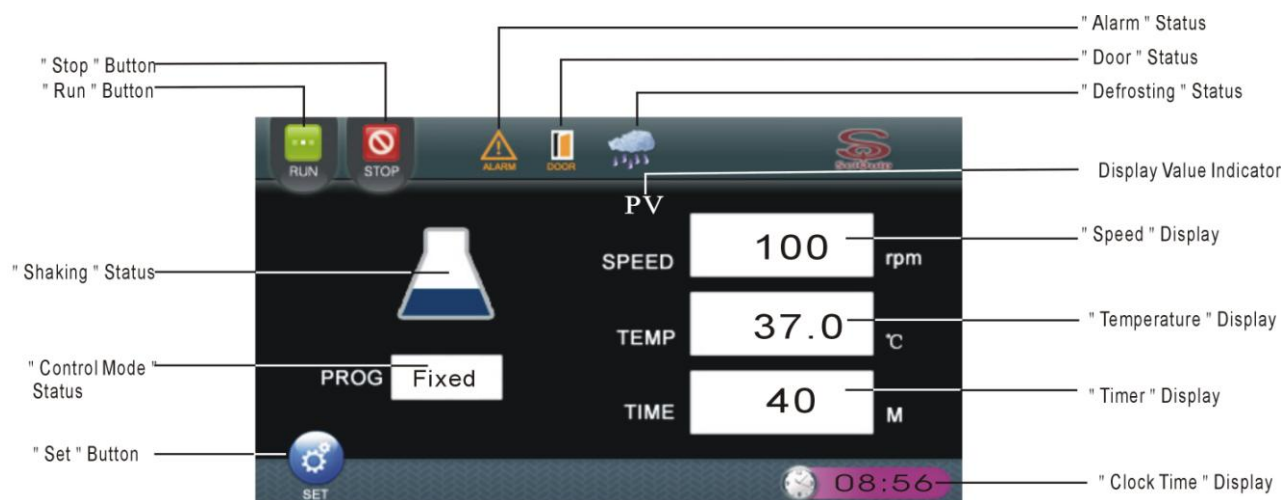


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3.1 Turn the main switch which is located on the right side of the unit, power is applied to the unit.

3.2 The screen will display the welcome picture, then the home page. In the meantime, the system starts controlling temperature, while leaving the shaking motor standby.

4. Home Page Operation



“Stop” button:

Press this to stop the running shaking motion.

“Run” button:

Press this button to start shaking motion.

“Shaking” Status:

The illustration of “flask” indicates the status of the unit; the flask remains still when unit is stopped; or keeps swinging when it’s shaking.

“Control Mode” Status:

This box indicates the status of the current control mode, fixed value mode or programmable mode.

If it is controlled under Fixed Value mode, it displays “Fixed”

If it is controlled under Programmable mode, it displays the current segment number and remaining cycle times.



Special Remind!

Under programmable mode, the “SEG” box shows as followings,
T”m”/L”n”,

m: Current segment No.

n: Remaining cycle times.

“Set” Button: (See Chapter 5)

Press it to enter the Set Page Settings.

“Alarm” Status:

Once the conditions of alarms are fulfilled, the alarm is declared, and indicator will be lighted.

“Door” Status:

This indicator will be lighted if door is opened or closed improperly.

“Defrosting” Status:

This indicator will be lighted if the unit is running defrosting cycle.

Display Value Indicator:

This indicator shows the type of the “Speed”, “Temperature” and “Timer” parameter values displayed.

“PV”: Actual Values

“SV”: Set Values

“Speed” Display: (Press it to display the set values of “Speed”, “Temperature” and “Timer”).

It displays the set speed or actual speed.

“Temperature” Display:

It displays the set temperature or actual temperature.

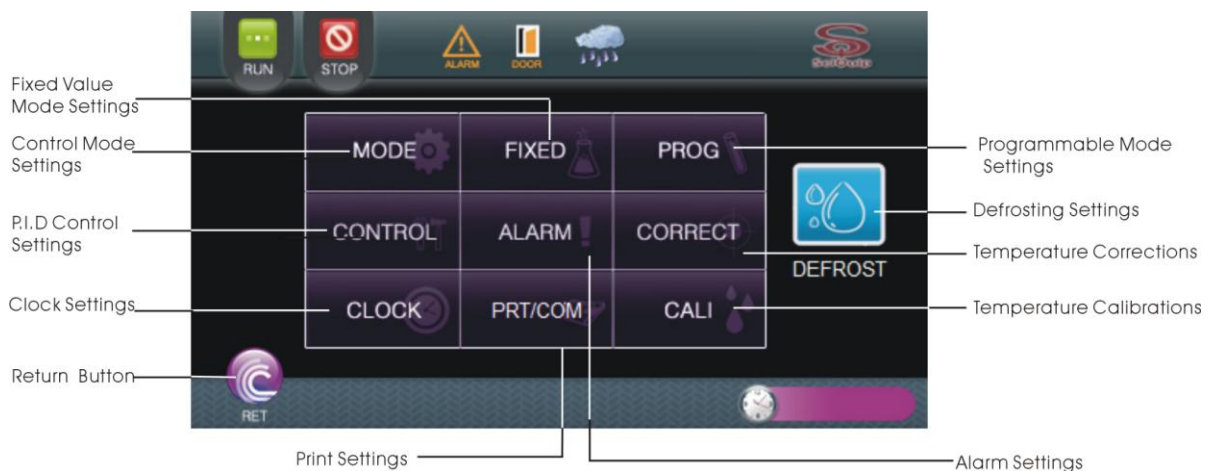
“Time” Display: (Press it to display the actual values of “Speed”, “Temperature” and “Timer”).

It displays the set timer and actual running time.

“Clock Time” Display:

It displays the actual clock time.

5. Set Page Settings

**MODE-- Control Mode Settings** (See Chapter 6)

Press it to enter the page and set control mode, temperature holding (programmable mode use only), cooling control, power recovery, door switch and print.

FIXED—Fixed Value Mode Settings (See Chapter 7)

Press it to enter the page of setting parameters (temperature, speed and timer) for fixed value mode.

PROG—Programmable Mode Settings (See Chapter 8)

Press it to enter the page of settings parameters (ramp timer, end temperature, hold timer, cycle times and hold deviation) for programmable mode.

CONTROL-- P.I.D Control Settings (Factory Default) (See Chapter 9)

Press it to enter the page of setting P.I.D parameters, to set the parameters of temperature controlling.

ALARM—Alarm Settings (See Chapter 10)

Press it to enter the page of setting temperature and speed deviation alarms.

CORRECT—Temperature Correction (Factory Default) (See Chapter 11)

Press it to enter the page of temperature corrections.

CLOCK—Clock settings (See Chapter 12)

Press it to enter the page of clock time settings.

PRT/COM—Print and Communication Settings (See Chapter 13)

Press it to enter the page of setting print timer (interval).

CALI—Temperature Calibration (Factory Default) (See Chapter 14)

Press it to enter the page of Temperature calibrations. Restricted and authorized access only.

Defrost—Defrosting Settings (See Chapter 15)

Press it to enter the page of settings of automatic defrosting, such as defrosting timer and defrosting period, and manual defrost operation.

RET—“Return” Button

Press it to exit the current page after all settings are finished.

6. MODE—Control Mode Settings**MODE—Control Mode Set**

Stop the operation first, then press the buttons to select preferred control mode.

“FIX”—Fixed value mode;

“PROG”—Programmable mode.

**Special Remind!**

Make sure the unit is stopped (or by pressing “STOP”) before changing the state of “MODE”, “KEEP” and “COOL”.

KEEP—Temperature Holding Switch

This function will enable or disable the system to keep constant control, either at the end temperature of last segment after all programmed operation finishes (under Programmable mode), or at the set value after the timer is down to “0” (under Fixed Value mode).

COOL—Cooling System Switch

This function will enable or disable the cooling system.

NRUN—Power Recovery Switch

This function will enable or disable the non-violate running to retain all set points when power interruption occurs.

DOOR—Door Switch

This function will enable or disable the door switch. Enable this function to automatically switch off the motor and main heater when door is opened.

PRINT—Printer Switch

This function will enable or disable the printing function.

RET—“Return” Button

Press it to exit the current page after all settings are finished.

7. FIXED—Fixed Value Mode Settings

**SPEED—Speed Set button**

Press it and use the keyboard to enter the speed set value between 30 and 300rpm, and press “ENT” to confirm and save.

TEMP—Temperature Set button

Press it and use the keyboard to enter the temperature set value between 4 and 60°C, and press “ENT” to confirm and save.

TIME—Timer Set button

Press it and use the keyboard to enter the timer set value between 0 and 9999 mins, and press “ENT” to confirm and save. When the timer is down to “0”, If the “KEEP” in the “MODE” setting page is set as “Off” (see Chapter 6), the “time” will display as “Stop!” with 10 beeps audio alarm.

RET—Return Button

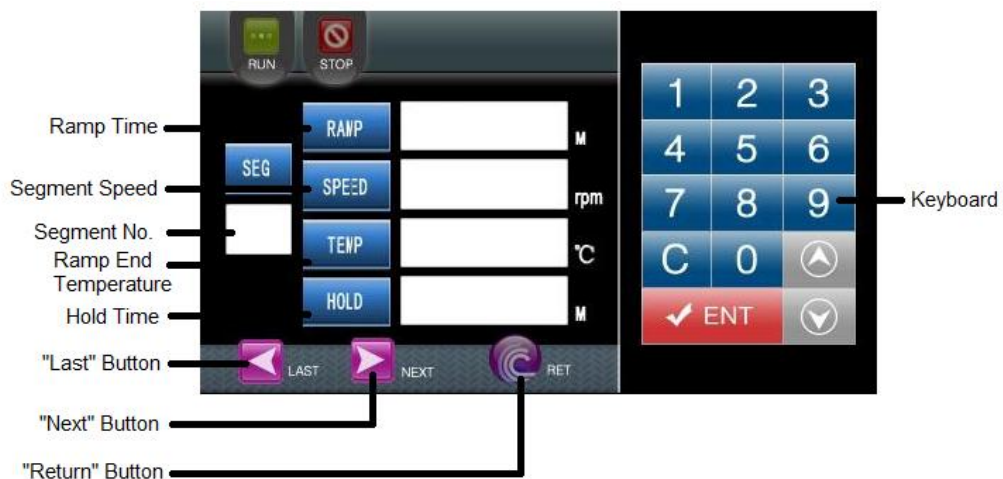
Press it to exit the current page after all settings are finished.

**Special Remind!**

- ◆ If the entered value exceeds the maximum limit, then the max value will be set for this parameter.
- ◆ Press the “C” on the key board to clear the entry.
- ◆ Setting of each parameter must be confirmed and saved by pressing “ENT” button.

8. PROG—Programmable Control Settings

This new particular shaking incubator can operate according to stored program to meet various requirements of professional experiments. Under programmable control mode, it is possible to program up to 9 different segments, each with their own Ramp Time, Ramp End Temperature, Hold Time and Speed. At the end of the settings, you are also required to set the Hold Deviation and Cycle Times.

**RAMP—Ramp Time**

This function indicates the time duration for the temperature to reach from current actual value to the ramp end (temperature) value. Use the keyboard to enter the ramp time from 0-999mins.

SPEED—Segment Speed

This function indicates the speed set for the segment. Use the keyboard to enter the segment speed from 30-300rpm.

TEMP—Ramp End Temperature

This function indicates the ideal temperature value for the unit to reach for the segment. Use the keyboard to enter the ramp end temperature from 4-60°C.

HOLD—Hold Time

This function indicates the time of hold step, which is the length of time that the unit has to maintain the (Ramp End) Temperature for the segment. Use the keyboard to enter the hold time from 0-999mins.

SEG—Segment No.

The function indicates the serial number of current segment. No setting required.

LAST—“Last” Button

Press it to return to the set page of previous segment.

NEXT—“Next” Button

Press it to forward to the set page of next segment.

RET— “Return” Button

Press it to exit the current page after all settings are finished.

Keyboard

Use the keyboard to enter the value of each parameter, and press “ENT” to confirm and save.

Detailed Setting Instructions:

Set the parameters for all segments required. Simply leave as blank for unused segments
Keep pressing “NEXT”, until the following page appears.

**HOLD—Hold Deviation**

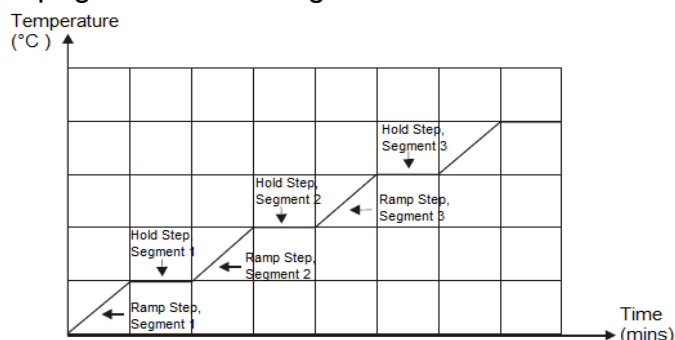
This function indicates the temperature deviation that the incubator may have at the end of each “Ramp Time” before starting the “Hold Time”, in another word, the difference between actual temperature and desired “Ramp End Temperature”, which activates the “Hold Time”. If it’s set as “0”, “Hold Time” will start counting down as soon as the “Ramp Time” dues. Use the keyboard to enter and press “ENT” to confirm and save.

CYCL—Cycle Times

This function indicates the number of times for the whole program to run repeatedly, if it’s set as “1” cycle, the program will run for 1 repeat, so a total of 2 times! Use the keyboard to enter between 0-99 times.

RET—“Return” Button

Press it to exit the current page after all settings are finished.



9. CONTROL—P.I.D. Control Settings (Factory Default)



P.I.D Control Settings

Press the parameter button and use the keyboard to set the value, and then press “ENT” to confirm and save.

RET—“Return” Button

Press it to exit the current page after all settings are finished.



Warnings!

- Factory default setting only!
- Any unauthorized access and changes may result in interference of controlling system!

10. ALARM—Alarm Settings



ALDT—AI


This value determines the maximum deviation, measured in temperature (°C), which the chamber is permitted above/below once the incubator reaches the specified set point before an alarm condition is declared. Use the keyboard to enter and press “ENT” to confirm and save.

ALDS—Alarm Deviation Speed


This value determines the maximum deviation, measured in speed (rpm), which the shaking is permitted above/below once the incubator reaches the specified set point before an alarm condition is declared. Use the keyboard to enter and press “ENT” to confirm and save.

RET—“Return” Button

Press it to exit the current page after all settings are finished.

	<p>Special Remind!</p> <p>The alarm will be deactivated if the alarm value is set as “0”!</p>
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11. CORRECT—Temperature Corrections (Factory Default)

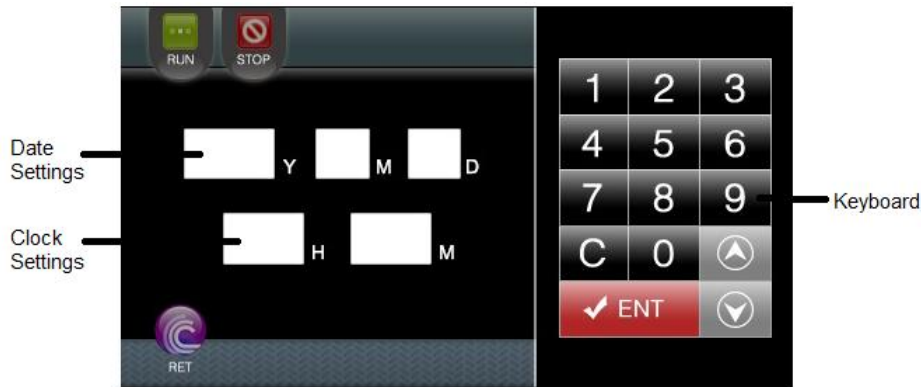
	<p>Attention:</p> <ol style="list-style-type: none"> 1. The unit is delivered with corrections done in the factory, so please perform the corrections only if necessary. 2. This may only be performed by an authorized engineer with certified equipment. Any unauthorized access and changes may result in interference of controlling system! 3. To get a linear temperature in the chamber, a 2 point correction must be executed. 4. The correction range of each point is $\pm 10^{\circ}\text{C}$.
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Detailed Setting Instructions:

- 11.1 Take a certified calibrated thermometer in a small bottle with glycerin and place that in the middle of the incubator.
- 11.2 Change the set point to 8.0°C to perform the “TEMP0°C” (Low Point Correction), let the incubator run for at least one hour—until the temperature is constant.
- 11.3 Read the temperature on the external thermometer; calculate the difference with actual displayed temperature.
- 11.4 Press the SET button in the Home Page; enter the page of “CORRECT”.
- 11.5 The “Low Point Correction” shows the current correction relative to the actual temperature. If necessary- according to the difference calculated above, change this correction temperature (with up and/or down keys) until the actual display value equals to the calibrated thermometer value.

- 11.6 Press “ENT” to confirm and save the “Low Point Correction” value.
- 11.7 Repeat the above procedure, on a high temperature- somewhere around 60°C- to perform the TEMP100°C (High point correction).
- 11.8 Press “ENT” key to confirm and save the new corrected values.
- 11.9 Press “RET” to exit.

12. CLOCK—Clock Settings



Clock Settings

Press the display box and use the keyboard to set date and clock, and then press “ENT” to confirm and save.

RET—“Return” Button

Press it to exit the current page after all settings are finished.

13. PRT/COM—Print and Communication Settings



PRT—Print Timer

This function indicates the time interval between two printing records. Use the keyboard to enter set value between 0-240 and press “ENT” to confirm and save.

COM—Communication Channel Setting for RS-485 (Optional)

This function indicates the communication channel ID for RS-485 connections. Use the keyboard to enter and press “ENT” to confirm and save.

RET—“Return” Button

Press it to exit the current page after all settings are finished.

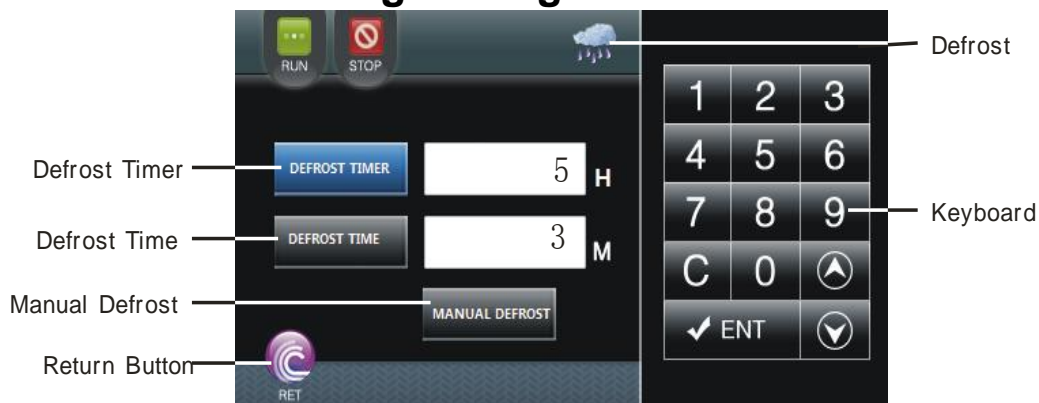
14. CALI—Temperature Calibration (Factory Default)



Attention:

1. This is only be performed by an authorized engineer with certified equipment, with password limited access.
2. Detailed instructions are to be offered upon request.

15. Defrost — Defrosting Settings



This unit is equipped with automatic and manual defrosting functions.

For automatic defrost, there are two parameters to be set,

Defrost Timer—Auto Defrost Cycle

This function indicates the time interval between two defrosting cycles. Use the keyboard to enter the set value between “1-240” hours and press “OK” to confirm and save. Set it as “0” to disable the auto defrosting function. Once the “defrost timer” is set, the unit will automatically perform the defrosting cycle accordingly.

To find out the suitable "defrost timer" setting, the frosting time duration should be counted from start of the low-temperature operation to the point that the actual temperature start bouncing up due to the frosting inside the evaporation chamber. Then set the "defrost timer" as somewhere between 1/10-1/5 of the frosting time duration. For example, if the frosting time duration is 20 hours, the "defrost timer" can be set from 2-4 hours. High relative humidity will require more frequent defrosting cycle.

Defrost Time —Auto Defrost Cycle

This function indicates the time duration for each single defrost cycle both under auto and manual operations. Use the keyboard to enter the set value between “1-24” mins and press “OK” to confirm and save. Set it as “0” to disable the defrosting function.

When the ambient temperature is higher than 25°C, like in summer, the recommended setting is 30 seconds, otherwise, 1 min is considered as adequate. As ambient conditions may vary, therefore, always try to find the most appropriate settings for your own particular ambient condition.

Alternatively, if the set temperature is not so low as critical, in most cases, manual defrosting will be adequate.

Defrost—Manual Defrost

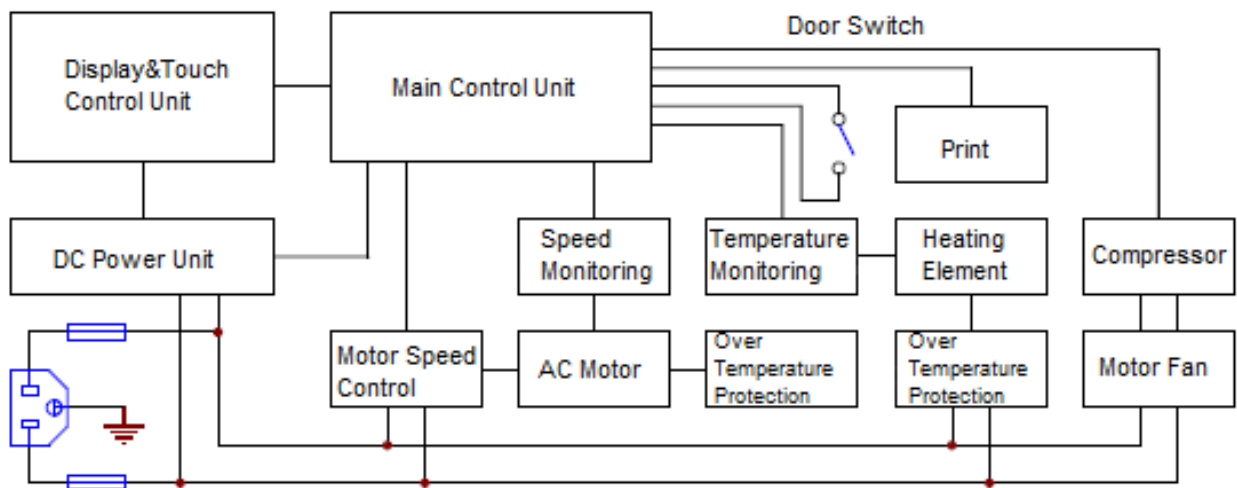
During the operation, press this key to manually start defrosting cycle, press again to stop.



Attention:

It is considered as normal, that the actual temperature slightly deviates during defrosting, and will be stabilized shortly after defrosting cycle.

16. Electronic Control System

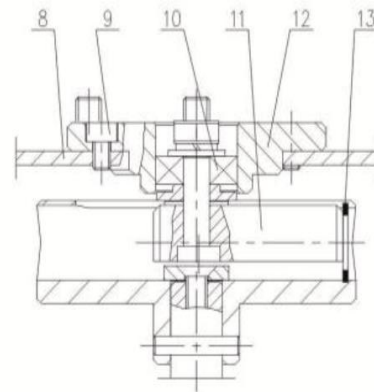
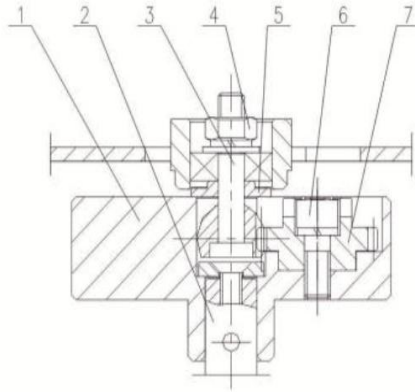


17. Operation of Shaking Diameter Adjustment

These models have an adjustable shaking diameter of $\varnothing 0-50\text{mm}$. To adjust it, please follow the instructions below,

- 17.1 Tools needed: M6 Allen key, M6 Socket Spanner, Gear spanner (Included in accessory pack)

Structure illustrations



1. eccentric
2. main axis
3. pinch bolt
4. hexagon nut

5. pad
6. inner hexagon nut
7. gear
- 8 main shaking board

9. inner hexagon bolt
10. bearing
11. gear back
12. connecting block of main shaking board

13. hole retaining ring

- 17.2 Turn off the unit, unplug the power code, open the glass door, hold platform tray from the bottom firmly and pull the whole shaking tray assembly out. (you do need some strength)

- 17.3 Turn the shaking base with four rubber sockets until seeing the center of the shaking mechanism



- 17.4 Use the M6 Allen key to loosen the inner hexagon bolt (6) on the adjusting kit.



- 17.5 Keep M6 Allen key on the hex bolt to hold the shaking base as stationary, in the meantime, loosen the M6 hexagon nut (4) with turning anti-clockwise with the socket spanner



- 17.6 Now the shaking base is free to move along in the slot of the shaking mechanism. Move the shaking base to adjust the shaking diameter. The closer to the central, the smaller the shaking diameter, while the further away from the central, the larger the shaking diameter. Alternatively, rotate the gear (7) with the gear spanner clockwise to enlarge the shaking diameter and anticlockwise to reduce it. Use front and back sides of the chamber as reference, measure the distance that the pinch bolt moves as the shaking diameter. Keep adjusting until the ideal shaking diameter is reached.

- 17.7 Once adjustment is finished, tighten the M6 hex bolt and M6 nut, and locate the shaking tray assembly back to its original position.



Special Attention:

The below chart indicates the highest speed ranges of three models with certain shaking diameter settings. The top speed indicated in the chart shall never be exceeded.

Chart of ratio between speed and shaking diameter.

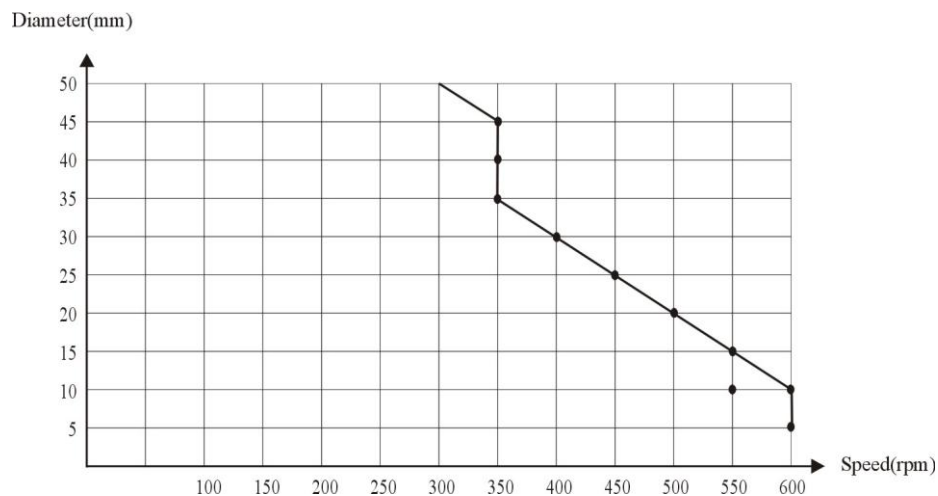


Chart of Ratio Between Speed and Shaking Diameter

18. Trouble Shooting.

Error Indicator	Possible cause	Corrections
Power on , No display	Power supply is not connected	Check the power supply system to see if there is voltage on the line
	Plug has no access to socket	Plug in firmly
	The power switch has not been turned on.	Turn on the power switch on the right side of the unit
	The fuse is broken	Replace fuse with new one of same specification
	Circuit occurs malfunction of power box	Notify distributor for repair service
Actual temperature is higher than the set point, high temperature alarm is activated	Unit has not yet reached the required (constant) temperature.	Wait a moment and observe
	Temperature setting is at the blind area of temperature control	Open the ventilation hole
	Improper setting of refrigeration coefficient	Set the refrigeration coefficient to be "0.5" and close the ventilation opening.
	The ventilation fan is broken	Notify the distributor to replace the fan
	Malfunction occurs with refrigeration system	Notify the distributor to repair the refrigeration system
Actual temperature is lower than the set point. low temperature alarm is activated	Unit has not yet reached the required (constant) temperature	Wait a moment and observe
	The circulation of cold air is excessive	Close(a part of) the ventilation opening
	The ventilation fan is broken	Notify the distributor to replace the fan
	The heater does not work	Notify the distributor to repair the heater
Actual temperature is fluctuating and will not be stable	Improper setting of refrigeration coefficient	Refer to Users Guide and reset the refrigeration coefficient
	The door (lid) is not closed firmly	Close the door (lid) firmly
	Malfunction occurs with the control circuit	Notify distributor for repair service
Temperature is constant out of control	Malfunction occurs with the control circuit	Notify distributor for repair service
The oscillation of platform is unstable	The platform is in imbalance due to a spoiled object	Remove the object , clear and clean the chamber
	The equipment is not placed horizontally	Adjust the left-back foot leveler install the equipment in a proper way.
	Malfunction occurs with control circuit	Notify distributor for repair /service

The shaking platform does not work	The door switch has not yet made contact	Check the door to see if it is closed firmly
	The platform is blocked with an object at the bottom	Remove the platform and clear the object and clean the inside
	The belt is broken	Notify the distributor to replace the belt
	Malfunction occurs with control circuit	Notify distributor for repair service
The oscillation of platform is out of control	Malfunction occurs with control circuit	Notify distributor for repair service
The platform keeps shaking after the door is opened	The door switch has short circuit ,could be caused by humidity	Use a blower drier to dry the chamber Press the Start/Stop button before opening the door
As the door is closed ,the platform starts shaking but the speed runs high suddenly	Improper operating method	Refer to Users Guide and press the Start/Stop button to operate again
Screen has no response when button on the control keyboard is pressed	Equipment is disturbed by high frequency.	Press the Change/Control button and try other operation mode.
		Restart the equipment-if it does not work:
		Notify the distributor.
The equipment causes a strange loud noise	The equipment is not placed horizontally	Adjust the left back foot to make the equipment stable
	The fixed screw of clamp is loose	Remove the platform and tighten the screw
	The platform is loose	Remove the platform and tighten the screws on the four corners
	There is strange object, like a piece of a bottle, under the platform	Remove the platform ,clear the object and clean the inside
	Mechanical malfunction occurs	Notify the distributor for repair service
The accumulation of frost is fast after refrigeration is started, resulting in the rise of temperature	The refrigerating time is too long and the evaporating chamber is too humid	Refer to Users Guide and conduct a drying maintenance on the evaporation chamber