

# Air Bath

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**Cat. No. BT1117**

Thanks for choosing BT Lab Systems' Air Bath. This operation manual describes the function and operation of the instrument. In order to use the instrument properly, please read this manual carefully.

### **IMPORTANT SAFETY INFORMATION**

- Please read this operation manual carefully before using the instrument.
- This product is an indoor Instrument.
- These units are designed for laboratory use by persons knowledgeable in safe laboratory practices.
- The operator should never open or repair the instrument. Opening or repairing the instrument will void the guarantee and can cause accidents.
- The power plug should safeguard against an electric shock. The 3-pin plug supplied with the instrument should be matched with a suitable grounded socket.
- The instrument should be used in an area with low temperature, little dust, no water, no sunshine or hard light and with good air circulation. Do not use where there is corrosive gas or a strong magnetic field. Keep far away from central heating, camp stove and other hot sources. Do not put the instrument in a wet and dusty area. The vent on the instrument is designed for aeration. Do not wall up or cover the vent. The distance between each device should be more than 100cm when there is more than one instrument.
- Power off when not in use. If the instrument will not be used for a long period, unplug, and cover with a piece of cloth to protect it from dust.
- In case of the following, unplug the instrument at once and contact BT Lab Systems.
  - The instrument comes into contact with liquid
  - The instrument gets soaked or burned
  - The instrument emits an abnormal sound or smell
  - The instrument is dropped or the outer shell damaged
  - The instrument functions abnormally.

### **MAINTENANCE**

The instrument and the accessories should be cleaned with a cloth dampened by alcohol. If there are smudges on the instrument, clean it with a dry cloth.

### **WARRANTY**

The instrument is warranted against defects in materials and workmanship for 1 year. If any defects occur in the instrument or accessories during this warranty period, BT Lab Systems will repair or replace the defective parts at its discretion without charge.

For any inquiry or request for repair service, contact your local BT Lab Systems office. Inform BT Lab Systems of the model and serial number of your instrument.

## **INTRODUCTION**

The air bath is a multipurpose incubator with built-in micro-processor. It is used in sample incubating in micro-plates, Gel cards, beakers, culture dishes, etc.

## **KEY FEATURES**

- Transparent cover makes experimentation visible.
- LCD displays temperature and time.
- Various sample containers such as micro-plate, reagent cards frame, beaker, culture dish, etc. can be put into the incubation space.
- Micro-processor controls temperature and time. Safe and reliable. Beep alarm when time has ended.
- Simultaneously incubate various containers to improve experiment efficiency.

## **NORMAL OPERATING CONDITIONS**

Ambient temperature: 4°C ~45°C

Relative humidity: ≤ 70%

Power supply: AC 110V

## **TECHNICAL SPECIFICATIONS**

Temperature range: R.T.+5°C ~60°C

Time range: 1 min ~ 99h59min

Temperature Uniformity: ±0.5°C

Temperature Stability: ±0.2°C

Temperature Accuracy: 0.5°C

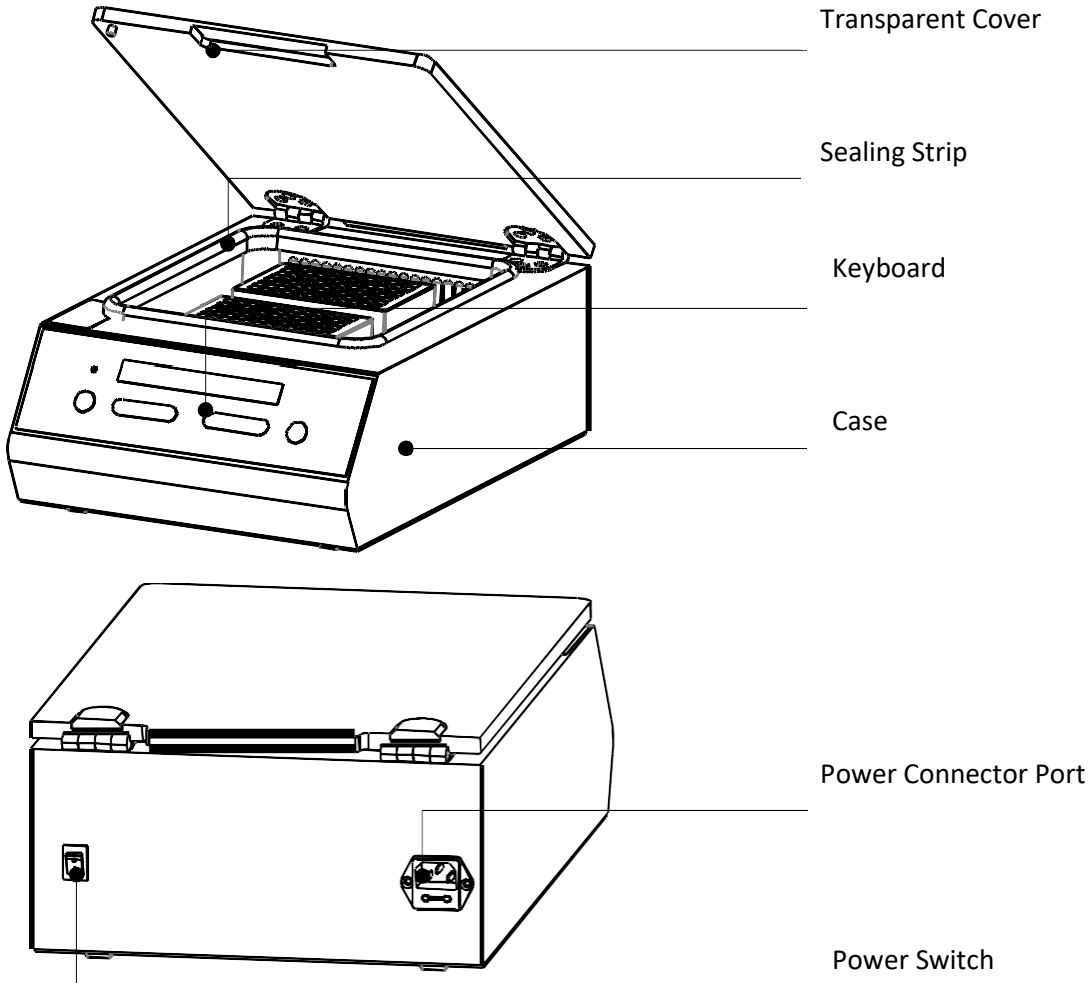
Power Supply: 110V 4A 300W

Incubation Space Size: 245x 215 x 85 mm

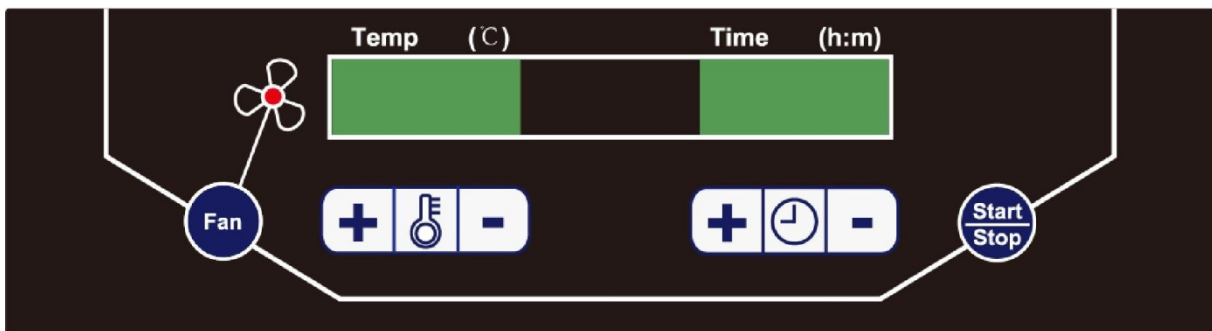
Dimensions: 395 x 275 x 130 mm

## OVERVIEW

This section describes the instrument's mechanical structure, the keyboard and functions of each key, as well as preparation before turning the power on. Please learn this section well before operating the instrument for the first time.



## KEYBOARD AND DISPLAY PANEL



## KEY FUNCTION

+ Increase the temperature or time setting value

- Decrease the temperature or time setting value

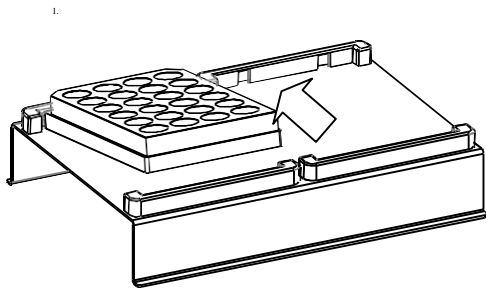
**FAN** Key to switch display between temperature and fan speed. The indicator lights, the display value is the fan speed. Fan speed can be adjusted.

**Start/Stop** Key to start or stop operation. Press Start/Stop key to start the operation. Hold Start/Stop key around 2 seconds during operating to stop operation.

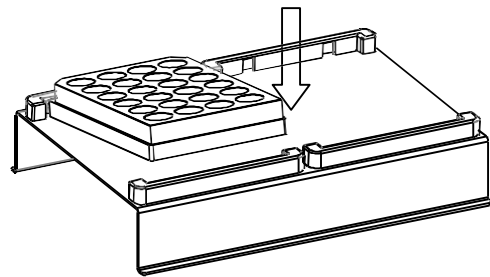
## STAND INSTALLATION

Two kinds of stands are optional for air bath

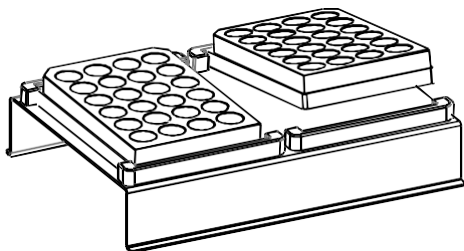
### Stand for micro-plate



Hold the micro-plate up against one side of the edge of the stand (refer to above figure)

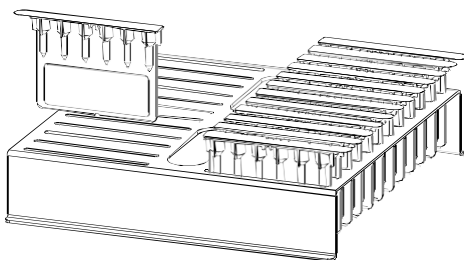


Engage the micro-plate by pressing gently on the other side (refer to above figure)



Fix the 2<sup>nd</sup> micro-plate in the same way (refer to above figure).

### Stand for Gel cards



Vertically put the Gel card in the stand. One stand can hold max. 24 pieces of Gel cards. (Refer to above figure)

## OPERATION

### Time and Temperature Setting

1. LED displays all "8" when power is turned on. The instrument enters into the initial program with a beep.
2. Press "UP" or "DOWN" arrow of temperature key. It displays last setting temperature. The last digit flickers. Press "UP" or "DOWN" arrow of temperature key to adjust the temperature value. Holding the key down increases or decreases it in X10 speed. The instrument confirms and saves the value automatically.

Press FAN key, the indicator lights, display speed changes from shaking speed to fan speed.

Press "UP" or "DOWN" arrow of speed key. It displays last setting speed of fan. The unit digit flickers. Press "UP" or "DOWN" arrow of speed key to adjust the speed value. Adjust step is 200rpm.

3. Press "UP" or "DOWN" arrow of time key. It displays last setting time. The last digit flickers. Press "UP" or "DOWN" of time key to adjust the timing value. Hold down the key to increase or decrease in X10 speed.

**NOTICE: The time set at 00:00 means the operation time is  $\infty$ .**

### Start/Stop

1. Press "start/stop" key to start the operation.
2. Press "start/stop" to run the program after setting time and temperature value. When program completes, instrument stops running and alerts.
3. Hold "start/stop" for 2 seconds to stop the running program.
4. When the program completes, or program stopped by pressing "start/stop" key, the instrument will be in stand-by mode. In stand-by mode, press "UP" or "DOWN" arrow of time or temperature key to reset value.
5. Press "start/stop" without adjusting any value in stand-by mode, the instrument operates the program on the last setting.
6. When the cover is open, pressing the "Start/Stop" key is invalid.

## TROUBLE SHOOTING

Issue	Possible Causes	Solution
No signal display when power-is turned on.	No power	Check the power connection.
	Broken Fuse	Exchange fuse (250V 3.0A $\Phi$ 5x20)
	Broken Switch	Exchange the switch
	Other	Contact BT Lab Systems
The actual and displayed temperatures are different.	Broken sensor	Contact BT Lab Systems
“OPEN” in the temperature display with an alarm sound.	Temperature sensor is broken or ambient temperature is below 0 degrees C	Contact BT Lab Systems
Button does not work.	Broken button	Contact BT Lab Systems
Button does not make sound and beep alarm sounds	Cover is not closed	Close the cover

## TECHNICAL SUPPORT

BT Lab Systems offers technical support for all of its products. If you have any questions about the product's use or, operation, please contact BT Lab Systems at the following:

E-Mail: [info@BTLabSystems.com](mailto:info@BTLabSystems.com)