Water Bath Shaker

Cat. No. BT2301

Thanks for choosing one of BT Lab Systems' Water Bath Shaker. 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

The operation, maintenance and repair of the instrument should comply with the basic guidelines and warning below. Ignoring these instructions will affect the life of the Instrument and safety precautions.

- This product is an indoor Instrument which conforms to Standard B style- I type- GB9706.1.

- 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. Make sure the power supply voltage matches the voltage that the instrument needs.

- The instrument should be used in an area with low temperature, little dust, no water, no direct 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 and other hot sources.

- The temperature of the Instrument can be very high during the normal operation. There is a possibility of burns. Wear protective clothing and gloves.

- The water baths must only be used when the water level is between ½ and ¾ full.

- 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.

    o The instrument comes into contact with liquid

    o The instrument gets soaked or burned

    o The instrument emits an abnormal sound or smell

    o The instrument is dropped or the outer shell damaged

    o 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.

INTRODUCTION

BT Lab Systems Water Bath Shaker is a temperature-controlled thermostatic bath with a 0-26mm oscillating platform that shakes at 20-200rpm and has a timer function.
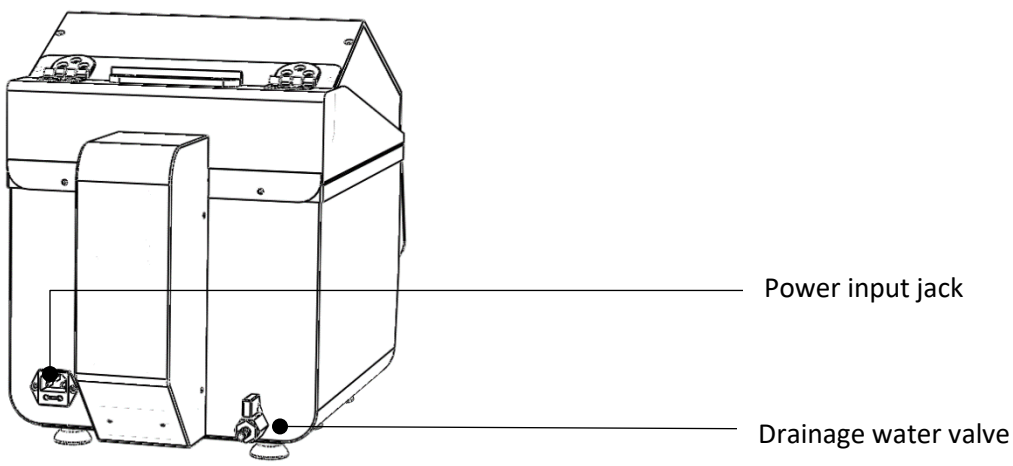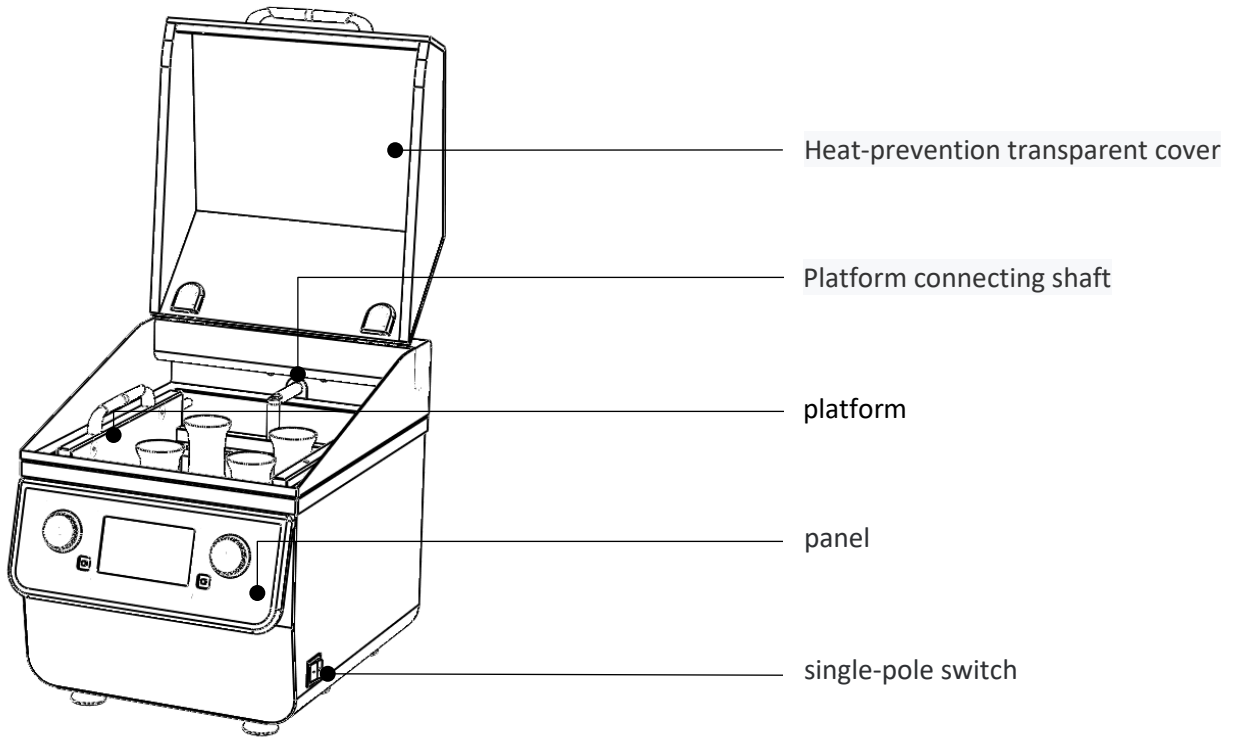
KEY FEATURES

- Small size to conserve bench space

- Clear TFT LCD display for speed, temperature and time

- Punch formed stainless steel inner liner for anti-corrosion and no leakage

- Microprocessor controlled for high precision temperature control

- Store up to 9 shaking and heating programs

- Oscillating platform can be removed to use bath as a standard thermostatic water bath

- Built in water level sensor
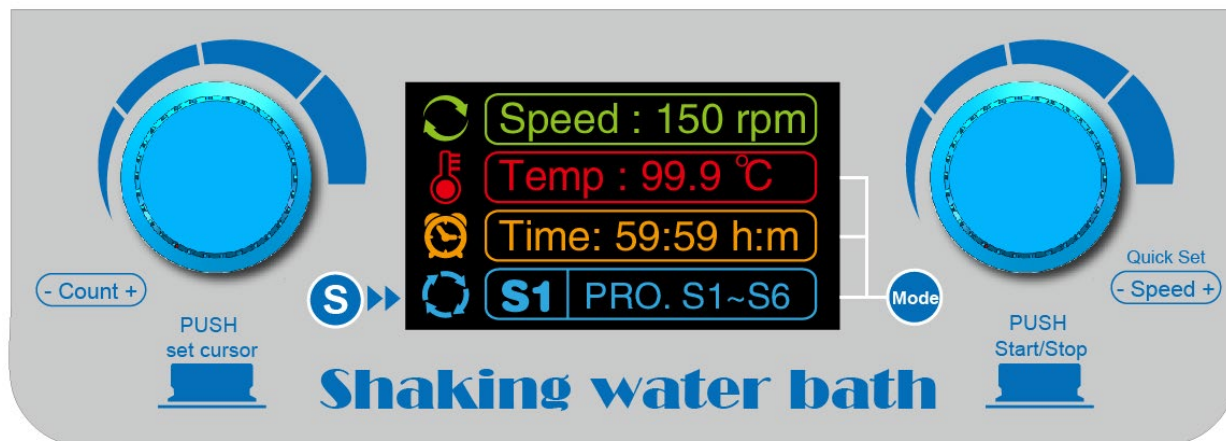
NORMAL OPERATING CONDITIONS

- Ambient Temperature: 4-45°C
- Relative Humidity: ≤70%
- Power: AC220V/AC110V,50/60Hz

TECHNICAL SPECIFICATIONS

Type	BT2301
Bath volume	10L
Temp. range	Ambient+5°C-100°C
Temp. stability	±0.5°C
Oscillation mode	Reciprocating
Oscillation range	0-26mm
Speed	20-200rpm
Internal bath dimensions (mm)	250 x 304 x 200
Outer Dimension (mm)	288 x 506 x 350
Net Weight (kg)	10

Heat-prevention transparent cover

Platform connecting shaft

platform

panel

single-pole switch

Power input jack

Drainage water valve

KEYBOARD AND DISPLAY PANEL

Left Knob: Pushing the knob in setting mode will switch the cursor position for changing the temperature and time. Turn knob to increase or decrease.

Right Knob: Turning the knob will increase and decrease the speed of the shaker platform. Pushing the knob will start and stop the shaker.

 This button selects the saved programs.

 This button sets the temperature time and multi program parameters. This works with the left knob.

OPERATION

Time and temperature settings

1. Add clean water to each of the baths. The water level must exceed the heating tube.
   NOTE: *Do not press the temperature control switch before adding water. To avoid burning the heater tube, the heating tube will not work if the water level is too low.*

2. Turn on the power switch, the display will light up and displays various parameters of the instrument into initialization.
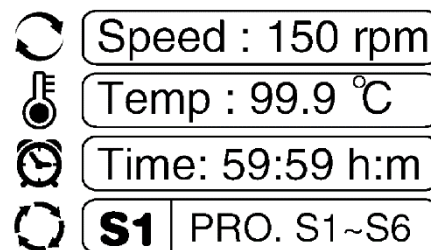
3. Set speed: Turn the right knob and set the speed value immediately. Stop turning the knob, the instrument will automatically confirm the implementation of the new set value and saves it, just as the right picture shows. If increase of modification range is needed, just turn the knob.

4. Set temperature: press mode key: The temperature parameter frame changes from colorful one to white one
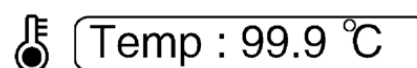
and enters the setting mode. At this point, the temperature value is the setting value of the last time, and the cursor flickers at the end. Turn the left knob to increase or decrease the current cursor value. Press the knob to move the cursor forward and set the leading digit. Stop turning the knob, the instrument will automatically confirm the implementation of the new set value and saves it.

5. Set Timer: Press mode key, the time parameter frame changes from colorful one to white one and enters the setting mode. At this point, the time value is the setting value of the last time, and the cursor flickers at the end. Turn the left knob to increase or decrease the current cursor value. Press the knob to move the cursor forward and set the leading digit. Stop turning the knob, the instrument will automatically confirm the implementation of the new set value and saves it. *NOTE: When time setting shows 00:00, it means time running value as ∞.*

6. Click START/STOP (right knob) to run the current program. The timing ends, the operation will stop and the buzzer calls an alarm.

7. After the operation has finished, the instrument waits for the instruction and the time parameter displays "OVER". Press any key can restore the initial state. Press the START/STOP button directly, and the program can start with the speed and time parameter of last time setting.

8. During the operation, pressing START/STOP key to stop the operation. If press START/STOP key again, program will restart.

9. If operation starts at the situation of the temperature is set, it needs to be heating to the set temperature before blending. Please wait for a moment.

10. In the process of temperature heating, the indicator light in the screen temperature parameter icon will flash and long light after reaching the set temperature.

PROGRAMMING MODE

1. Single program: The built-in chip of the instrument can remember nine programs from S1 to S9, which can be displayed by repeatedly pressing the S key.

2. Click the START/STOP key (right knob) to run the current program.

3. Users can store common parameters into the instrument for easy operation.

4. Multi-program: This machine can realize multiple program cycle running.

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.

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