

Low Speed Magnetic Stirrer

Cat. No. BT1017

Thanks for choosing BT Lab Systems' BT1017 Low Speed Magnetic Stirrer. 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

Users should understand how to use the instrument properly before operating it. Please read this operation manual carefully before using the instrument.

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. 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.
- 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.

INTRODUCTION

Our low speed magnetic stirrer for cell culture interface is user-friendly, uses ultra-low speed, ultra-quiet magnetic drive to simulate the dynamic process of cell fermentation tank. By mixing and stirring to improve the fluidity of the liquid and promote the gas exchange, can increase the flow of the culture fluid around the suspension cells and the adherence of the adherent cells to the microcarriers, effectively promote the cell growth while providing the minimum shear force. Suitable for suspended cells, adherent microcarriers in high-density culture, accurate and uniform speed, is conducive to the balanced growth of cells. The digital magnetic stirrer is designed with stir technology using a stirrer bar. It is used in medical science, bioengineering, chemistry, medicine, foodstuff, etc. It is a laboratory Instrument for stirring and mixing of various reagents, solutions, and chemical substances

KEY FEATURES

- Using 3.5-inch color screen as a display interface, friendly visual interface, allowing users to more intuitive operation;
- Uses stepping motor, stable performance, precise control, long life, excellent starting and stopping response;
- Stainless steel sheet metal shell, high strength, high temperature, anti-rust, anti-corrosion;
- Machine design compact, 50° bevel control panel for seated and standing point of view;
- This magnetic stirrer can realize intermittent circulation work mode.

NORMAL OPERATING CONDITIONS

- Ambient Temperature: 5°C ~40°C
- Relative Humidity: ≤70%
- Power: AC100-230V~ 1.5A

TECHNICAL SPECIFICATIONS

Operation Plate Size: 154 x 163mm

Speed Range: 5-200 rpm

Display: 3.5" color screen

Timer range: 0s-99min59s or continuous

Motor Type: Stepping Motor

Power Input: 12W

Voltage: 100 ~230 V AC

Frequency: 50/60 Hz

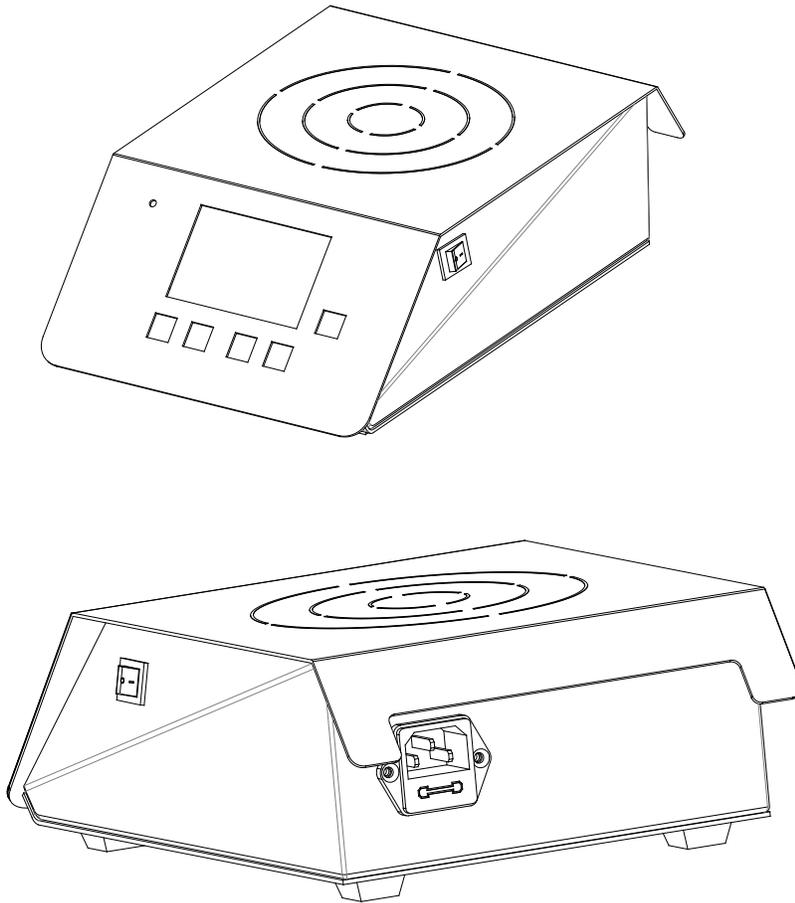
Quantity of Stirrer Point: 1 point

Max. Stirrer Capacity (H₂O): 3L

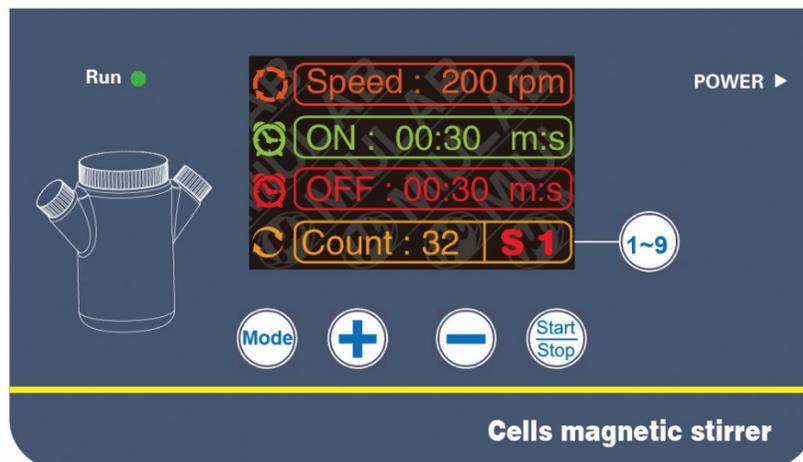
Max. Length of Stirrer Bar: 80 mm

Dimension (WxDxH): 290x180x90 mm
Net Weight: 1.8kgs
Environment Temperature(°C) 5-40°C
Relative Humidity: 70%

EQUIPMENT OVERVIEW



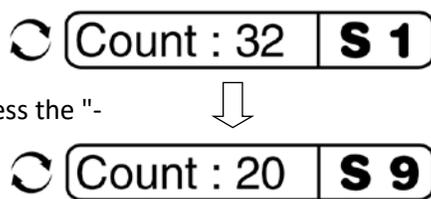
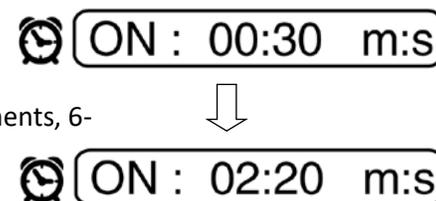
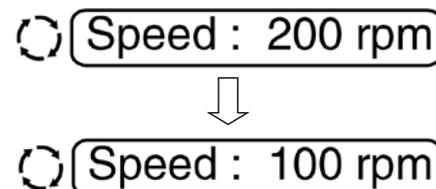
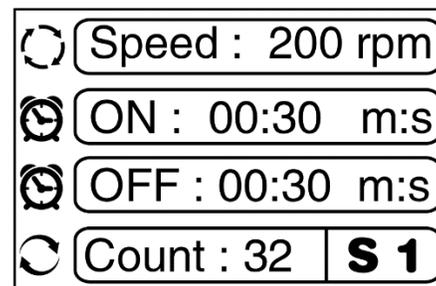
KEYBOARD AND DISPLAY PANEL



OPERATION GUIDE

Setting Speed, time, cycle times and selection of preset settings

1. Turn on the power switch, the display will show the user interface, which is the last running parameter setting used.
2. Press "MODE" button once, a white frame will be displayed at the periphery of the upper right picture. At this time, the speed can be set. Press the "+" key to increase the speed (short press is a single digit increment, if long press, the first 6 sec is incremented by one digit, 6 sec later, it is incremented by tens digit until the maximum speed is 200rpm). Pressing the "-" key decreases the speed (The same rules as "+") and the speed range is 5 ~ 200rpm. For example: change the speed from 200rpm to 100rpm, just let the periphery of the upper right picture show a white frame, and then press the "-" key to make the number 200 become 100.
3. Press "MODE" button twice, the white frame will be displayed on the periphery of the upper right picture. At this time, the running time can be set. Press the "+" key to increase the time (short press is incremented by 1 second, If long press, the first 6 sec is 1 second increments, 6-10 sec is incremented by 10 seconds, 10 sec later is incremented by 1 minute until 99 minutes and 59 seconds), press the "-" key, the time decreases (the same rules as the "+"), The time range 1S ~ 99min59S. For example, change the running time from 30s to 2min20s, just let the periphery of the upper right picture show a white frame and press the "+" key to change the number 30 to 220.
4. Press "MODE" button three times, a white frame will be displayed at the periphery of the upper right picture. At this time, the stop time can be set (the setting method is the same as the operation time setting method), and the time range is 0S ~ 99min59s. For example, change the stop time from 30s to 1min20s, just let the periphery of the upper right picture show a white frame and press the "+" key to change the number 30 to 120.
5. Press "MODE" key four times, the white frame will be displayed on the periphery of the upper right picture. At this time, the number of cycles can be set. Press the "+" key to increase the number of cycles, press the "-" key, the number of cycles decreases, the cycle times range from 1 to 99 times. For example, change the number of cycles from 32 times to 20 times. Just let the outer box of the upper right picture display a white box and press the "-" key to change the number 32 to 20.
6. f) Press "1 ~ 9" keys, on the right site of the displayed number of cycles, the S1 that displayed will change accordingly. The display of S1 will change, preset settings from S1 ~ S9. For example: change



the preset setting from S1 to S9, press "1 ~ 9" key to change S1 to S9. (Note: in the operation of the device, press the "+" or "-" can adjust speed, the final value will be saved as the setting speed)

Stop / Start

1. Press the START/STOP button once to run the current program. After the timing is over, stop running.
(Note: When the motor is accelerating or decelerating, the indicator light flashing, to achieve the set speed keep normally on, the indicator light will be off when there is no speed.)
2. At the end of the operation, the instrument waits for the instructions at the end interface. At this time, press MODE or 1 ~ 9 button to reset the speed, time, cycle number or other pre-stored settings; Press the START / STOP button directly to start the program according to the previously set speed and time parameters.
3. During operation, press the START / STOP button to stop the instrument. Press again to restart operation.

TROUBLE SHOOTING

Issue	Possible Causes	Solution
No signal display when the power is on.	No power	Check the power
	Broken switch	Exchange the switch
	Broken fuse	Exchange the fuse
	Other	Contact BT Lab Systems
Shaking heavily	Samples placed out of balance	Place the samples evenly
Actual speed and displayed speed are not matching	Broken controller	Contact BT Lab Systems
Err displays	Speed out of control	Contact BT Lab Systems

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