



Operation Manual



BCBH-102

Benchtop High Speed Centrifuge

Thank you for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

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01 Introduction

BCBH-102 centrifuge is table top Micro Centrifuge , it is high performance, low noise and less vibration equipment. The maximum speed is 16000r/min, the maximum RCF is 19040×g, and the maximum volume is 10x5ml.

The features of BCBH-102 Centrifuge as below shown:

- It uses brush-less motor drive.
- Microprocessor control system & soft touch control panel.
- Digital display which indicates run parameters.
- Safe lid interlock with alarm.
- There are 10 kinds of program and 10 kinds of acceleration and deceleration for your choice.

02 Specification

Main specification and technical parameters:

Form1

The Max.speed	16000 r/min
The Max.volume	10x5ml
The Max.RCF	19040×g
Timer	0~99min
Speed Accuracy	±10 r/min
Noise	≤55dB (A)
Power supply	220V/110 50/60Hz 2A
Product dimension	355mm×270mm×205mm

Rotor Parameters

Form 2

31001	Angle rotor	16000	40*0.2ml	19040
31002	Angle rotor	16000	24*0.5ml	18480
31003	Angle rotor	16000	12*1.5/2ml	17940
31004	Angle rotor	16000	10*5ml	17880
31005	Angle rotor	14000	20*1.5/2ml	15580
31006	Hematocrit rotor	12000	24 capillary tube	15800

Unpacking:

Please check whether there are serious damages on the package as soon as you received the centrifuge. If so, please take its photo and contact us directly. If not, please unpacking the package take out the instruction manual, checking the components and accessories according the packing list in the instruction manual. If you found something missing, please tell us.

03 Installation

The centrifuge should be installed in a stable working table, let its four rubber feet touch the even surface of the table. And then insert one head of the power plug into the socket which mounted on the rear of the centrifuge. Insert another head of the plug into the power supply socket. (attention: the power supply socket must be connected with the earth in case of electric shocks)

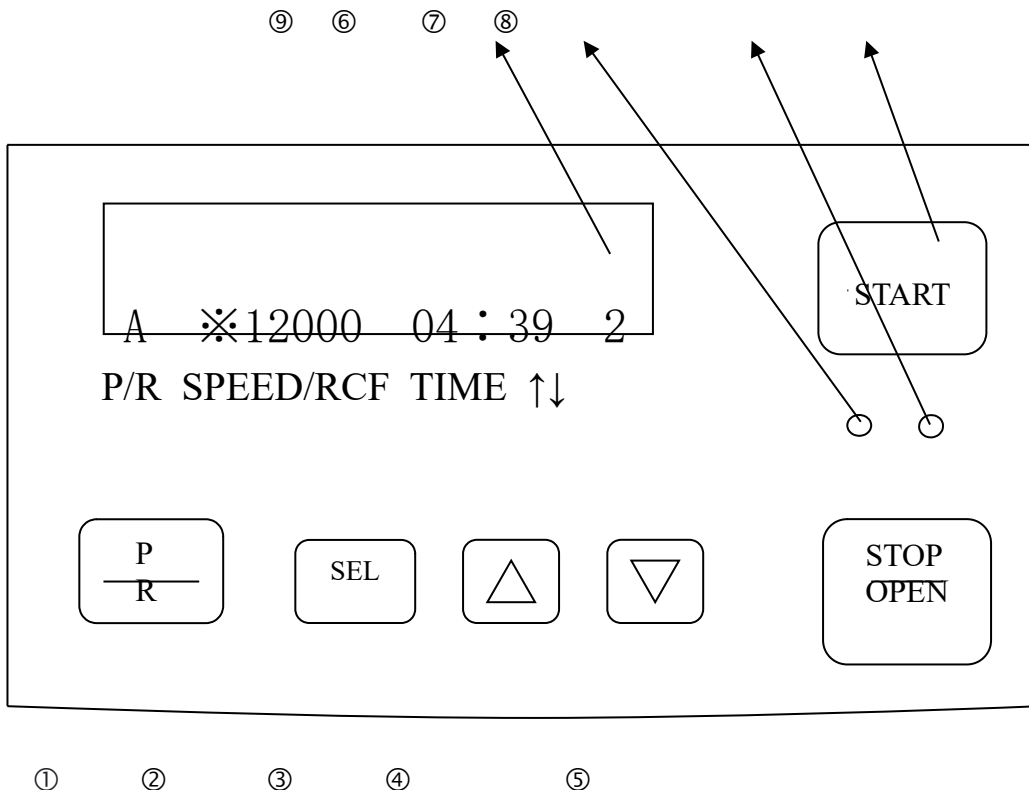
04 Opeartion

Power on

Power switch is located on the right bottom corner of control panel. Turn it to "I" position, the centrifuge is power on(while it turns to "O" position, the centrifuge is power off).

1. Checking whether the round nut in the rotor is loose or not, if so, fasten them.
2. Prepare the tubes; put the test liquids into the tubes, checking whether they are in the same level with your eyes.
3. Load the tubes on the tube rack symmetrically; otherwise it will be resulted in severe vibration in the process of centrifugal or cause accident.
4. Close the lid, make sure it is locked.
5. Set parameters.

Display panel: **Chart 1**



- ① Select program
- ② Speed/RCF/Rotor no./Time/Acceleration &Deceleration setting
- ③ up button
- ④ down button
- ⑤ Stop the centrifuge/Open the lid
- ⑥ Start indicator
- ⑦ Stop indicator
- ⑧ Start the centrifuge
- ⑨ Acceleration & deceleration window

(1) Circularly press "SEL" button, the parameter display window of "speed/RCF/Rotor No." "time" "acceleration/deceleration" will flicker accordingly

- When speed window of speed(eg.12000)/RCF(eg.F15800g)/rotor No.(eg.R0-06) flicker, press ▲↑ or ▼↓ to set the value/No. you want. The value/No. will flicker for a few secs to be confirmed automatically.

Note: No.1 The rotor No. will only show the last two numbers, such as 24 capillary rotor, rotor No.31006,it will show as R0-06,if you want to use this rotor,please set 06by ▲↑ or ▼↓.

No.2 Do not exceed the max speed/RCF of the rotors,for example,31006,with max speed 12000rpm & max RCF 15800g,don't exceed this value when you set value for 06 rotor.

- When the time window(eg.04:39) flicker,press ▲↑ or ▼↓ to set the time you want. The time value will flicker for a few secs to be confirmed automatically.

- When the acceleration/deceleration(eg.2) window flicker,press ▲↑ or ▼↓ to set the value you want.In total 10 grades from 0-9. The bigger the number,the time used for acceleration/deceleration is shortest. The value will flicker for a few secs to be confirmed automatically.

(2) Circularly press① "P/R",program display window will show A-I,in total 9 programs,among these programs,H1-H2 & I1-I3 is a stepwise process,for example,H1-H2, after the program of H1 is finished,it will automatically change to H2 till it is finished. How to set and save programs :for example,we set program A. Firstly,press ① "P/R",when display A,press ②"SEL" to set "speed/rotor No./time,acceleration/deceleration you want according to the above way. After the parameters is finished setting,the program A setting will be stored automatically. You could set program B-I3 like this way. When you want to centrifuge with Program A,just press ① "P/R" to choose A and start the centrifuge. Off course,you could reset all programs you set in previous time.

Start the centrifuge:

Press the "start" button, the green light of the "start" button will be brighten, the instrument

start to run, the speed window display speed; 1-2 minutes later, the speed will rise to the setting speed. When the time counts down to zero, the centrifugation is over. And the red light will be brighten. When the speed counts down to zero, and the rotor is stopping running, the lid will be open automatically.

Stop the centrifuge:

It will cut off the electricity automatically in the process of operation when the centrifugal time is 0, the red light will be on , it will decelerating according the parameters you set, when you hear the buzz sound, the rotors will stop, the instrument also will stop running.

Open the lid:

When the centrifuge stops running,the lid will be open automatically.Then take out the sample, all the centrifugal process finished.

Warranty Policy:

1. We have one –year warranty on our all products
2. After the machine fixed, our professional technician will file it and keep track of the usage of the machine.
3. We will pay attention to the feedback of the customers within 24 hours.
4. We won't charge customers any money for repairing the machine in one-year warranty time.
5. We only charge for the accessories on repairing the machine beyond the one-year warranty time.
6. We have technician training class twice a year, training the technician for our distributor.

05 Safety Notice

Dear Customer,

To prevent any potential accident, please carefully read and fully understand the following safety instruction before you operate centrifuges. If neglected, personal injury and /or instrument damage can be caused.

The safety reminders are indicated as shown below. The signal words " DANGER", "WARNING" AND " CAUTION " are indicated together with the hazard alert symbols in this manual.



DANGER: This note indicates an imminently hazardous situation, which if not strictly Observed, could result in personal severe injury.



WARNING: This note indicates a potentially hazardous situation, which if not strictly observed, could result in personal severe injury or pollution of the environment.

1. For operator safety, maintain a 30-cm "clearance envelope "around the instrument while the rotor is spinning.
2. Do not store dangerous substances capable of developing flammable or explosive vapors in the clearance envelope.
3. Do not attempt to unlock the door forcefully while the rotor is spinning.
4. Do not attempt to slow or stop the spinning rotor by hand.
5. Do not use any sample inapplicable to the rotor (including buckets), like corrode chemical material.
6. Do not incline or move the instrument while the rotor is spinning. Do not lean on the instrument.
7. Do not exceed the maximum rated speed of the rotor or buckets in use.
8. Do not use corroded, scratched or cracked rotor, buckets and assemblies. Check that the rotor, buckets and assemblies are free of such abnormalities before operation. If abnormal sound or vibration occurs, stop the operation immediately and contact machine supplier.



CAUTION: This note indicates a potentially hazardous situation, which if not strictly observed, could result in personal injury or severe damage to the instrument.

1. Do not use any sample inapplicable to the tubes, the bottles, the tube racks, the micro-plates or tube/bottle caps, etc. Using such a sample could deteriorate them. Maximum rotor speed depends on the buckets, assemblies, tubes or adapters to be

used.

2. Do not exceed the allowable imbalance.
3. Use the rotor tubes and bottles within their actual capacities.
4. Mount the rotor onto the drive shaft gently and properly. Do not drop the rotor or apply excessive force to the drive shaft to avoid damage to the drive shaft. Please see the picture and video!
5. Clean the inside of the drive hole (crown hole) of the rotor and surface of the drive shaft (crown) of the centrifuge once a month.
6. If dew drops are in the rotor chamber, drain the chamber through the drain hose to prevent the sample to get mixed up with them or prevent them from leaking into the drive unit. Be sure to recap the drain hose after drainage.
7. Do not pour any solution such as water, detergent and disinfectant directly into the rotor chamber. Otherwise, the bearings of the drive unit may be corroded or deteriorated.
8. Before relocating the centrifuge, remove the rotor from the rotor chamber to avoid damaging to the drive shaft.

“**NOTE**” indicates a note which has no direct bearing on personal safety

Safety During Installation and/or Maintenance



WARNING: 1. Level the centrifuge by using the four level adjusters and secure them completely. Improper securing can cause significant movement of the centrifuge in the event of rotor disengagement.

2. When servicing the centrifuge, be sure to turn off the POWER switch, turn off the distribution board of your centrifuge room, and then wait for at least three minutes before removing covers or tables from the centrifuge to avoid electrical shock hazards.



CAUTION :

Avoid a place exposed to ultraviolet rays for operation or storage of the centrifuge. Otherwise, the covers can be discolored and the coating can be peeled off easily. If installation in such place is unavoidable, cover the centrifuge with a cloth after operation to protect from ultraviolet rays.

Electrical Safety



WARNING: Your centrifuge must be grounded properly to avoid electrical shock hazards. And BCBH-102 centrifuge is 220/110Voltage 2A.



CAUTION: Do not place containers holding liquid in the rotor chamber or on or near the instrument. If they spill, liquid may get into the instrument and damage electrical components

Safety against Risk of Fire



WARNING: This instrument is not designed for use with materials capable of developing flammable or explosive vapors. Do not centrifuge such materials in this instrument nor handle or store them near the instrument.

Chemical and Biological Safety



WARNING: 1. Make sure to prepare necessary safety measures before using samples that are toxic or radioactive samples or pathogenic or infectious blood samples at your own responsibility.

2. If the centrifuge, rotor or the accessory is contaminated by toxic or radioactive samples or pathogenic or infectious blood samples, be sure to decontaminate it according to good laboratory procedures and methods.

3. If there is a fear that the centrifuge, rotor or the accessory is contaminated by toxic or radioactive samples or pathogenic or infectious blood samples that impair human health, it is your responsibility to sterilize or decontaminate the centrifuge, rotor or the accessory properly.



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