



LABORATORY LOW SPEED CENTRIFUGE

BCFL-302-B

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1. Safety Notices

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 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 this BCFL-302-B centrifuge is 220V±20V 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.

Summary of BCFL-302-B Centrifuge

BCFL-302-B centrifuge is table top low speed, it is high performance, low noise and less vibration equipment. The maximum speed is 6000r/min, the maximum RCF is 3790xg, and the maximum volume is 6x100ml.

The features of BCFL-302-B Centrifuge as below shown:

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

2. Main specification and technical parameters

The Max.speed	6000 r/min
The Max.volume	6x100 ml
The Max.RCF	3790xg
Timer	0~99min
Speed Accuracy	±20 r/min
Noise	≤55dB(A)
Power supply	220V±20V 50Hz 2A
Product dimension	485mmx320mmx265mm

Table 1

3. Rotor Parameters

Rotor No.	Rotor type	Speed (r/min)	Volume (ml)	RCF (xg)
05137	Angle rotor	6000	6x15ml	3660
05139	Angle rotor	5000	12x15ml	3080
05142	Angle rotor	6000	4x50ml	3620
05143	Angle rotor	5000	6x50ml	2850
05146	Angle rotor	6000	4x100ml	3790
05147	Angle rotor	5000	6x100ml	3130
05221	Swing rotor	5000	6x10ml	3460

Table 2

4. 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.

5. 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)

6. Operation

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 parameter

Display panel: Chart1

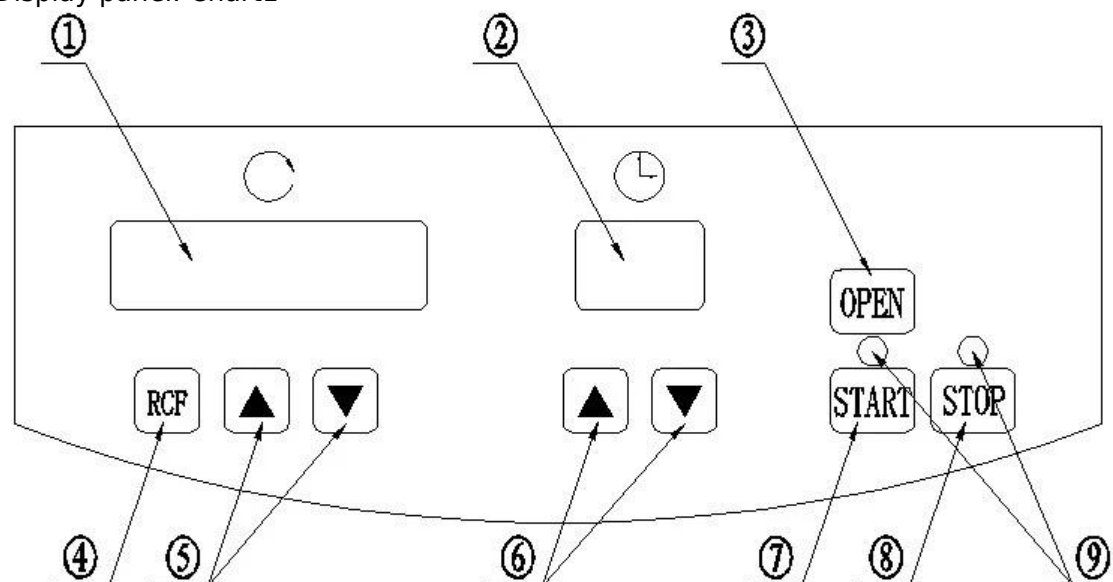


Figure 1

① Speed/RCF/Rotor No. screen ② Timer screen ③ open the lid ④ RCF ⑤ +/- key for speed ⑥ +/- key for run time ⑦ Start the centrifuge
⑧ Stop the centrifuge ⑨ start light and stop light

In "①" Rotor No./Speed/RCF conversion window

You can circularly press the button RCF will respectively display rotor no., speed and centrifugal force (RCF)

Note: Speed screen: usually "rpm" is shown as a default set in this screen in factory done.

(1) Set the speed

As shown in Chart 1, press speed button ⑤, speed selection range from 0rpm to maximum, press speed button ⑤, speed will be down, set the speed you prefer, after the digital tube flashes twice, then the setting speed will storage automatically.

2) Set RCF

As shown in Chart 1, Pressing ④ "RCF" button in the display window ①, it will show the RCF, press button ⑤ Δ , the RCF selection range from 0 to maximum RCF. Press button ⑤ ∇ , the RCF will be down. Set the RCF you prefer, after the digital tube flashes twice, then the setting RCF will storage automatically.

(3) Select Rotor NO.

It shows the parameters of rotors. It will display the last 2 digits of the rotor no.

For example: 12x15ml angle rotor no.05139, it was set no. 39. So if you need use this rotor, please select no.39

(4) Set acceleration and deceleration.

When in power on, long time pressing Stop key, instrument has a sound with "di", time screen display, press Δ , ∇ under time screen to select suitable deceleration and acceleration rate. After setting the parameter, no need to press any key, parameters can be stored automatically. 5 seconds later, change to time display automatically. There are 10 grades can be chosen (0-9), the larger of the No, the quicker of the deceleration and acceleration rate.

(5) Set the time

As shown in Chart 1, Press time button ⑥, the time selection range from 0 minute to 99 minutes, then press time button ⑥. The time will be down, set the speed and time you prefer, after the digital tube flashes twice, then the setting speed will storage automatically.

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 rising to the setting speed. When the time counts down to zero, the centrifugal is over. And the red light will be brighten. When the speed counts down to zero, and the rotor is stopping running, the lid can be open.

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 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.

7. Trouble Shooting

1. Press the up side of the switch button,the centrifuge doesn't work, please check the fuse in the socket mounted on the rear of the centrifuge,if it is damaged, please replace it with the 5A fuse. if not , then check the switch,if the above two places is in good condition, please contact us.
2. Make sure never ask the non-professional person to solve the electronic board problem.

8. 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.



Biolab Scientific Ltd.

Trillium Executive Center, East Tower, 675 Cochrane Dr, Markham, Ontario L3R 0B8, Canada
Email: info@biolabscientific.com | Website: www.biolabscientific.com