



Operation Manual



BCFL-203

Benchtop Low Speed Centrifuge

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

Index

01 Application04

02 Unpacking05

03 Operation08

We appreciate your business with Biolab. To prevent any potential accident, please operate centrifuges according to the following safety protocol.

1. Unplug the main power cord, when performing maintenance or when centrifuge is expected not being used for a long period of time.
2. Load the rotor with samples arranged symmetrically. Opposing tubes must be of equal weight. If necessary, use "water blank" tubes to balance sample tubes of unequal weight. Do not conclude that tubes are balanced by sight over volume. Use the pan balance provided in the centrifuge room for balancing tubes in rotors for the centrifuge.
3. Never exceed the maximum speed posted for the rotor!
4. Never use the rotor that appears damaged (e.g. O-rings missing, scratched, corroded, cracked).

01 Application

BCFL-203 Table top low speed large capacity Centrifuge is widely used in the fields of clinic medicine, biochemistry, genetic engineering and radio immunity, best choice to all labs of science units and hospitals.

Major technical parameters

Max. Speed: 5000r/m

Max. RCF: 4730×g

Time Range: 0-99min

Power Supply: 220/110V 50/60Hz

Noise: ≤65dB (A)

Dimension: 685×500×405mm (L×W×H)

Net Weight: 67kg

Rotor type and parameters

Order No.	Rotor	Max speed (r/min)	Max capacity (ml)	Max RCF (*g)
NO30671	Swing rotor (round cup)	4000	4×800ml	3450
NO30696	Swing rotor (round cup)	4000	4×500ml	3380
NO30679	Swing rotor (Square cup)	4000	4×500ml	3310
NO31494	Swing rotor	4000	4×4×96well	2840
NO31491	Bucket rotor	4000	2×4×96well	2490
NO31376		4000	2×3×48well	2300
NO31377	Swing rotor	5000	4×1×50ml	4730
		5000	4×1×100ml	4730
NO30690	Swing rotor	4000	4×24×5ml Vacuum tube	2840
			4×24×7ml Vacuum tube	3140
			4×18×10ml Vacuum tube	3140
			4×31×7ml Radiation and immunity tube	3140
			4×31×5ml Radiation and immunity tube	2840
NO31493	Swing rotor	4000	Milk fat	3830
NO30638	Fixed rotor	5000	6×15ml	2540

NO30607	Fixed rotor	5000	12×15ml	3080
NO30639	Fixed rotor	5000	24×15ml	3500
NO30627	Fixed rotor	5000	30×15ml	3830
NO30640	Fixed rotor	5000	4×50ml	2520
NO30611	Fixed rotor	5000	6×50ml	2850
NO30641	Fixed rotor	5000	12×50ml	3860
NO30642	Fixed rotor	5000	24×50ml	4640
NO30613	Fixed rotor	5000	4×100ml	2630
NO30614	Fixed rotor	5000	6×100ml	3130
NO30643	Fixed rotor	5000	12×100ml	4640

Major features

Microprocessor control, LED display, directly driving by brushless frequency conversion electromotor. PWM speed adjustment.

(1) Adopt special vibration isolator for ideal effect of vibration damping and automatic balance.

(2) Accuracy PWM speed adjustment, no carbon dust pollution, low noise and small vibration. It will give a quiet lab.

(3) Many rotors are available for this model of centrifuge with convenient operation.

02 Unpacking

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

(1) The centrifuge should be installed on a rigid, even surface.

(2) Electrical source should be 220V/110V Single phase, with independent earth line, never replace the earth line with the neutral line.

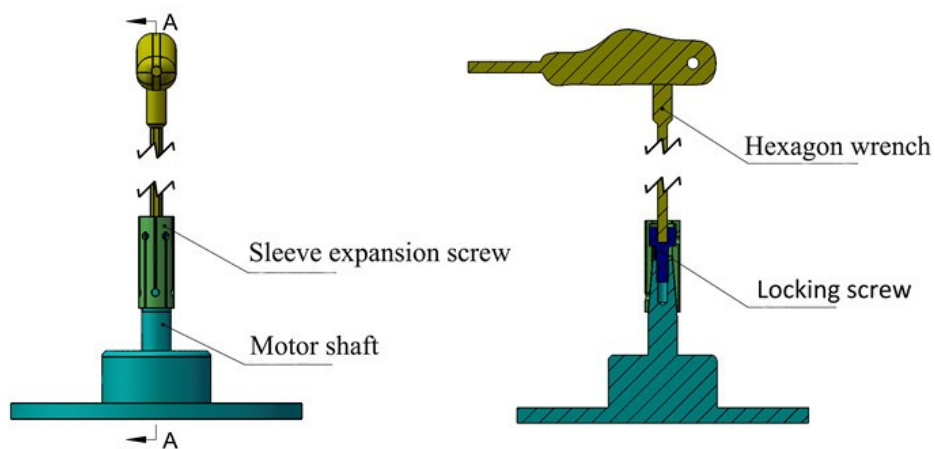
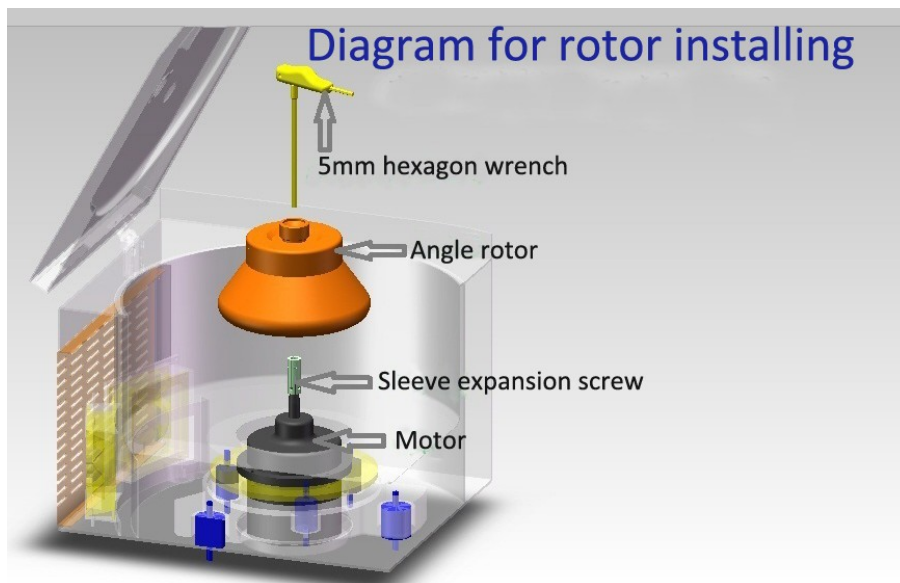
(3) No shock wave-generating items, nor corrosive gas in the nearby environment

(4) Relative humidity of environment: 85%

(5) To guarantee sufficient ventilation, please ensure that the centrifuge has at least 15 cm free space on all sides, including the rear.

(6) Use the attached power cord

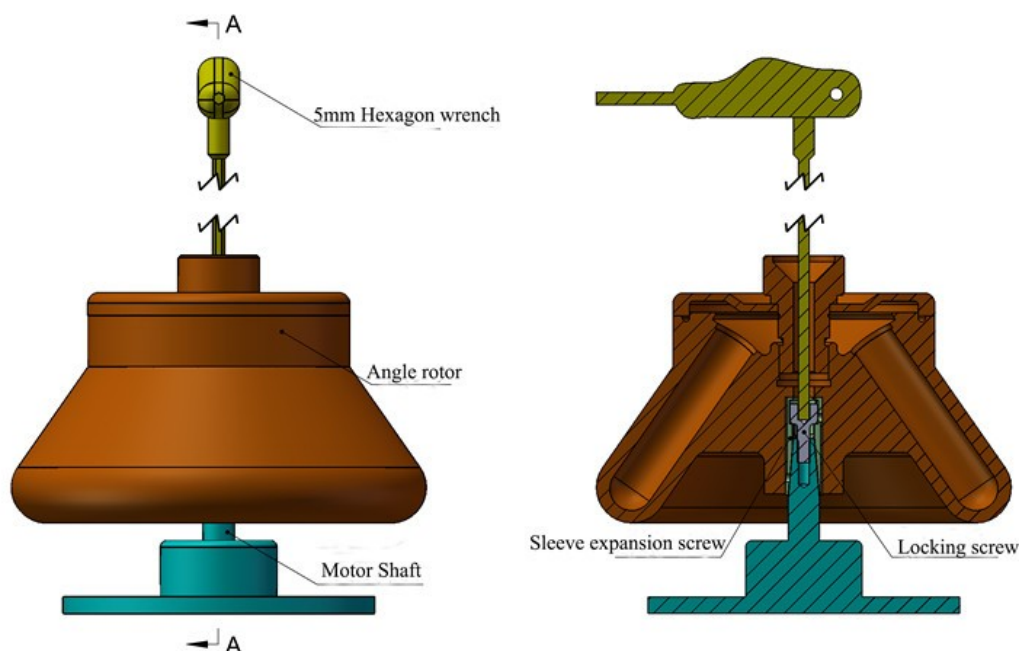
(7). Installation of the rotor: (Pay attention to this part carefully)



No.1 Please make sure the sleeve expansion screw is very loose before putting into rotor.

No.2 If the rotor is fully installed down to the shaft, move up and down the rotor you could hear "bang bang" sound.

Diagram of angle rotor and the motor parts



Do remember, we can tighten the rotor only after the rotor is installed fully down to the shaft.

Rotating sleeve expansion screw with the wrench from clockwise with 1-2 circles, then put the rotor. Check the sleeve expansion screw to make sure it is very loose before putting into rotor. That is because only when the sleeve expansion screw is very loose, the rotor can be fully installed down to the shaft which is correctly installed. If the rotor is installed fully: move the rotor up and down from the shaft, you could hear "bang bang..." sound. If you find the sleeve expansion screw is tight and the rotor can not be installed down fully, rotating with the wrench from anticlockwise 3-4 circles to loose the screw and move the rotor up and down to check, if you can hear "bang bang", it is correct, if not, continue to loose the screw till the rotor can be fully installed down to the shaft. Only after the rotor is fully installed down to the shaft, then you can tighten the rotor.

03 Operation

(1) Power on

Power switch is located on the right bottom corner of control panel. Turn it to "On" position, the power indicator will turn red.

(2) Lid release

Press on "Open" button, the lid will "click" to open, push the lid upward until it open completely. Spring level will help to open the lid.

(3) Proper loading of the rotor

Check the rotor before loading. Never use rotors showing signs of cracking or corrosion, never use expired rotors.

Load the rotor to the central adapter located on the axle of electrical motor, and tighten the screw on it.

Fill the tubes equally by eye (about 75% of the total volume), balance the tubes by scale. The difference in weight between the tubes should not exceed 2 grams.

Load the tubes symmetrically.

(4) Closing the lid

After the rotor has been properly loaded, close the centrifuge lid. If "E-1" appears on the "Speed screen", it means the lid is not shut properly.

(5) Set the parameters

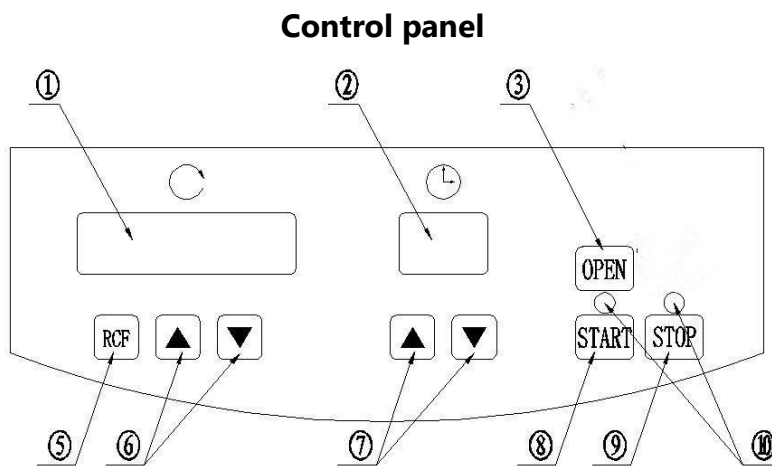


Figure legend ①RCF/RPM window ②time window ③open ⑤RCF and RPM converse ⑥speed up and down ⑦time up and down ⑧start ⑨stop ⑩working and stop indicator

Plug in and turn on the switch · the time window and speed window in the panel will be brighten.

Pre-selection of the parameters :

①Set the speed

Press speed button , speed selection range from 0rpm to maximum 4000rpm (4000R/MIN), press speed button speed will be down, choose the speed you prefer.

②Set the time

Press time button , the time selection range from 0 minute to 99 minutes, then press time button , the time will be down, choose the time you prefer.

③Observe RCF

Press “RCF” button, “rpm” on the “Speed screen” will switch to “RCF” immediately, but “rpm” will resume on the “Speed screen” after 5 seconds.

(6) Start the centrifuge

Press the start button, the start indicator will be brighten · the centrifuge starts to work · the speed window will show the speed ; the time window begin to count down, the speed will be up to what you preselected within 1-2 minutes.

(7) Stop the centrifuge

When the time window count down to 0 (or press the stop button) , stop indicator will be brighten, the speed will be down to 0, then the centrifuge will stop running.

Open the lid; take out the tubes, centrifugation finished.

(8) Power off

Press the down side of the switch button, now the panel is cut off, but the whole machine is not power off, if you stop using the machine, you should take out the plug from the power supply socket.

Warning:

(1) Do not move and open the centrifuge in working status.

(2) Place the centrifuge on a steady platform. Make four rubber cushions stand in balance to prevent vibration.

(3) The liquid added to the centrifuge tube must be even. Large difference may cause big shaking in running. In this case, the centrifuge should be stopped for checking. The tubes should be placed symmetrically by even number.

(4) If the centrifuge tubes break while working, great shaking will occur. The centrifuge should be stopped for checking and further treatment.

(5) The centrifuge must be connected with grounded outlet.

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



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