



Low Speed Centrifuge

Model YR134

Instruction Manual

Thank you very much for purchasing our Low-Speed Centrifuge Model YR134

Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation. After reading these documents, be sure to store them securely together with the "Warranty" at a hand place for future reference.



Warning: Before operating the unit, be sure to read carefully and fully understand important warnings in the operating instructions.



OUR SERVICES

Benefits and Support

In Kalstein France, we take care of the full satisfaction of our customers, that is why we provide value-added services of the highest level based on our experience.



Online Inductions and Trainings

In any part of the world, receive your induction or training from our specialized team of engineers



Quick Response

Our work team is always available to response all your consults or questions, in order to support you in any situation.



#Letsgivemore

Thanks to your purchase, a donation will be made to a non-profit foundation that fights against breast cancer and helps most vulnerable communities.



Technical Support

Enjoy of personalized advice for the correct preventive and corrective maintenance of your equipment, thanks to Kalstein's manuals and articles, special catalogues and video tutorials.



Delivery Logistics

We take care of all the necessary logistics for the dispatch of your goods, whether is by sea, land or air.



Kalstein Worldwide

With more than 25 years growing with our customers, Kalstein's multiformat and modern content, is now present in more than 10 countries and increasing.





For users:

The Instruction Book will guide you how to install, test, use and maintain the Centrifuge. Please read the Instruction Book first.



Caution!

- ◇ The Centrifuge should be operated by the technical staff and maintained by professional engineer.
- ◇ Don't use and maintain the centrifuge before you read the Instruction Book.
- ◇ Please use the corresponding socket, and make sure its in a good condition.
- ◇ When you move the machine, please keep the four corner of the base bear homogeneous power.

Notice:

- * Before your operation, please read the Instruction Book carefully.
- * Only professional engineer have the right to maintain the centrifuge.
- * The centrifuge should be controlled by the technical staff and maintained by professional engineer.
- * The weight of sample in tube should be approximate; weight error is no more than 1.5g. For angle rotor, the sample volume should be less than 80% of the single tube volume. As for swing rotor, the sample capacity will be no more than 90% of the single tube volume.
- * Don't use the following material:



- Flammable and explosive material;
- Poisonous and radioactive material.

Explanation of the logo



Please pay more attention to the content with this sign above.



High-voltage danger !

Model

Tabletop Low Speed Centrifuge

Technical Specification:

1. Max Speed: 5000r/min
2. Max RCF: 5030xg
3. Timer Range: 0-99 min
4. Power Supply: AC110V 60Hz
5. Dimensions: 460×540×340mm(L×W×H)
6. Net Weight: 31kg

Allocated Rotor's specification refer to Table I

Table I





Rotor	Max Capacity (ml×tubes)	Max Speed (r/min)	Max RCF (×g)
No.1 Swing Rotor	500ml x4	4000	3200
No.1 Swing Rotor	4 bucket rotor	4000	3220
No.2 Swing Rotor	50ml x 8	5000	5030
No.3 Swing Rotor	10ml/15ml x 32	4300	3200
No.3 Swing Rotor	250ml x 4	4300	3200
No.3 Swing Rotor	7ml x 72	4000	3200
No.4 Swing Rotor	8 x 96 well	4000	2200
No.5 Swing Rotor	7ml x 48 15ml x 36 50ml x 8 100ml x 4	4000	3000

Brief introduction

The instrument has microcomputer control, DC brushless motor, real-time change of SPEED and RCF and Instantaneous centrifugation. In addition, it is allocated various rotors for users to select.

Requirement of the installment

- 1、 The lab table shall be stable. The four rubber feet of the instrument should touch the table completely.
- 2、Single phase alternating current, with earth wire. Don't use Zero line replace earth wire. Use the attached power line.
- 3、 There shouldn't be electric dust and caustic air. Please note that the humidity should be no more than 85%.
- 4、 There should be more than 150mm distance between the instrument and its surroundings.

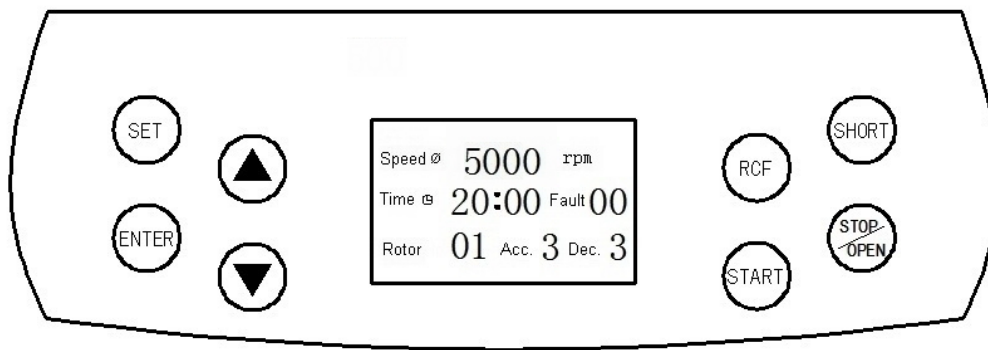
Operation



Before your use please check the Rotor No. and rotor's Max. Speed.

1. Description of keystroke

Table II



SET: Setup

ENTER: OK

▲: Up

▼: Down

RCF: Centrifugal force output

SHORT: Instantaneous centrifugation. (Close the gate, press the key, the machine starts to centrifuge. It will stop with your release of SHORT key. It is mainly used in short-time centrifugation)

START: Start

STOP: Stop / Door open

Display Window Function:

ROTOR: Number of Rotor

SPEED/RCF: This display window shall show two types of information: it shows the



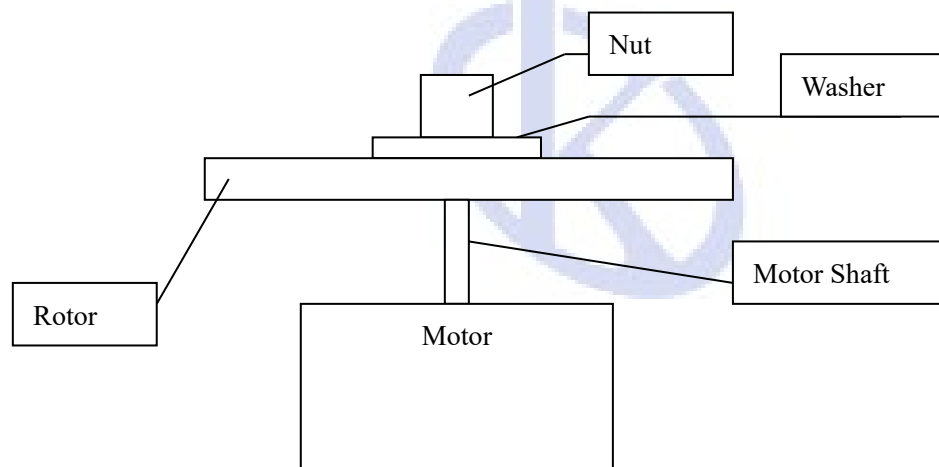
speed of motor in normal. If you press the RCF key, it shows the value of RCF. Press RCF key again, you will see the figure of speed.

TIME: Time

ACC/DEC: Accelerate/Decelerate

2、Rotor Install

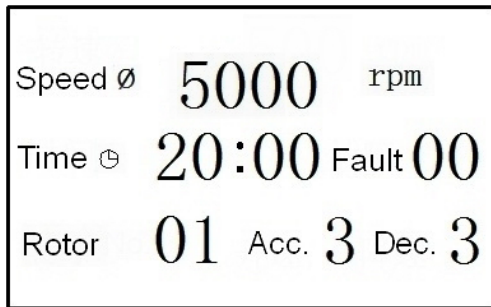
- a、 Check the rotor, if it have any flaw or eroded spot.
- b、 Put some lubricating oil on spindle, install the rotor, screw the nut.
- c、 The tubes shall be place in symmetry with balance. The error must be less than 1.5g.
- d、 Screw up the nut cap.



3、 lock the door.

4、 Plug in

Before plug in, check the machine carefully. The explanation of keypad please refer to Table II. When power is "On", the machine starts to work. Pleas setup the parameter. For example:



*Setup the Speed: Press “SET” →press “▲” or “▼”, the cursor shall be blinked where under “SPEED”→Set “5000”→press ENTER

*Setup the time: Press “SET” →Press “SET” →press “▲” or “▼”, the cursor shall be blinked following“TIME” →set “20:00”Setup the rotor No.: Press “SET” → press “▲” or “▼”, chose No. 1→press ENTER

*Setup Time: Press “SET” →Press “SET” →press “▲” or “▼”, the cursor shall be blinked following“TIME” →set “20:00”→press ENTER

*Setup Acc/Dec: Press “SET” →Press “SET” →press “▲” or “▼”, the cursor shall be blinked following“Acc or Dec” (Kindly note 9 is the fastest, 0 is the slowest.)

*SHORT. If you need instantaneous centrifuges, press “SHORT” button.

“START”. Press start button, the centrifuge shall be working. (If you need stop the centrifuge when it is working, please press the “STOP”.) Centrifuge shall auto stop working when program is done. When speed is 0, you can open the lid and take out the sample, then turn power off.

6. Stop working

When the time gets down to “0”, the machine will stop automatically. Please open the lid and put out the tubes.

Fault analysis



1、 Failure

Table III

Failure	Imbalance	Over speed	Gate lid	Motor	setup	Electronic board or Control panel
Display	E1	E2	E3	E4	E5	E8

E1、 Imbalance:

- (1) The weight of sample in each tubes have great difference; weight error is more than 1.5g.
- (2) Rotor is out of shape.
- (3) The spindle of motor bend.

E2、 Over speed

- (1) Rotor number is wrong.
- (2) The real voltage don't meet the demands of machine. Power supply isn't stabilized.
- (3) Speed sensor is in trouble

E3、 Gate lid

- (1) Gate isn't closed completely.
- (2) The gate lid protection devices don't work.

E4、 Motor failure

- (1) Motor breaks down.
- (2) The wire between the motor and control panel is loosen.

E5、 Setup failure

