

MICROCENTRIFUGE CENCOM-III

Cod. 5022010

Instructions Manual

Foreword

Thank you for purchasing our Products: Super Mini Centrifuge, This Manual for users contains function and operation of the Instrument. In order to use the instrument properly, please read this manual carefully before using the Instrument.

Opening Check

Please check the Instrument and Appendix with the packing list when you first open the instrument packing case. If you find there is something wrong with the Instrument and the Appendix, do contact the vendor or the producer.

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1 Introduction

This centrifuge designed for workstations in training and research laboratories in the fields of bioscience, medicine and chemistry.

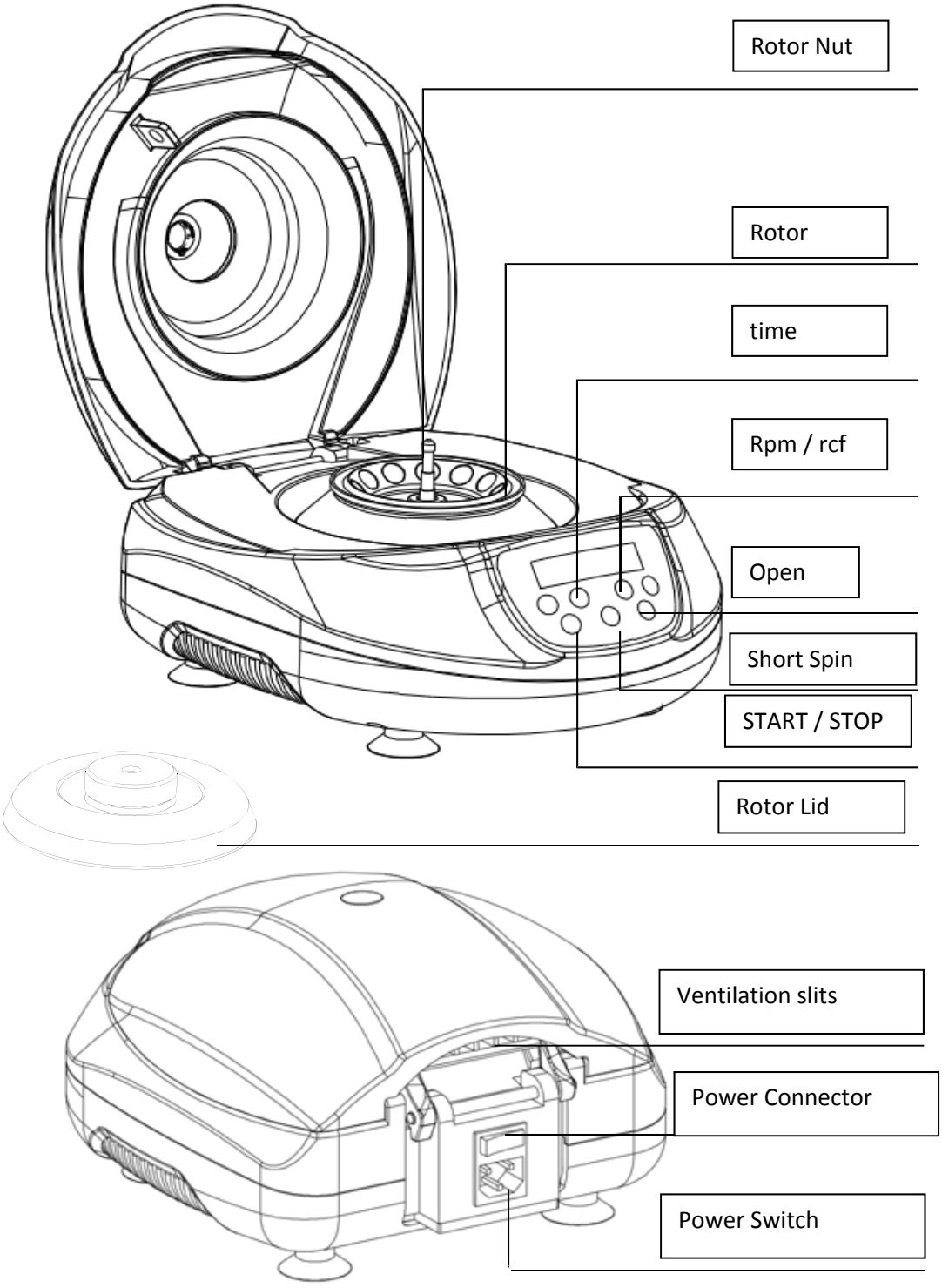
Twelve 1.5ml or 2.0ml mini test tubes can be centrifuged simultaneously in a 45° fixed-angle rotor.

Before starting up this centrifuge for the first time, please read the rest of this operations manual.

1.1 Delivery package

Centrifuge	1pcs
Rotor	1pcs
Rotor lid	1pcs
Rotor nut	1pcs
Operations manual	1pcs

1.2 Structure Description

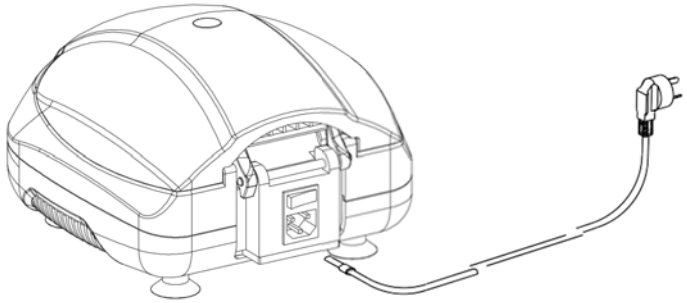


1.3 Installing the device

1.3.1 Place the centrifuge onto a level , horizontal surface. Make sure that the ventilation slits are not blocked.

1.3.2 Insert the column connector of the adapter to power connector of the device ,and insert another connector of the adapter to mains power supply.

240V～



1.3.3 A safety distance of 30 cm should be observed around the centrifuge during operation. No objects which could cause additional damage in the event of a centrifuge crash should be positioned in this space.

1.3.4 Power on the main switch. The centrifuge is ready to operate when the display becomes visible. Place the rotor onto the rotor axle and tighten using the rotor nut.

Before starting up the centrifuge for the first time, make sure the rotor nut is securely fastened.

2.Technical data

Model	**CENCOM III**
Power supply	**100-240 V～ 50-60Hz**
Power	**100W**
Max. speed	**13,400/14,500rpm**
Max. centrifugal force	**12,100/14,100rcf**
rpm/rcf	**ok**
Time	**10sec ～ 99min**
Max. load	**12×1.5/2.0ml tubes**
Max. permitted density	**1.2g/ml**
Acceleration time to max. speed	**13 seconds**
Braking time from max. speed	**12 seconds**
Ambient temperature	**5C ～ 35C**
Dimensions（W×D×H）	**212mm×240mm×138mm**
Weight（with rotor）	**4.1kg**

3.-Safety precautions

	The rotor and the rotor lid must always be securely fastened. If the centrifuge makes unusual noises when started , the rotor or rotor lid is not fastened correctly. Switch the device off immediately by pressing “START/STOP” key
	Do not use damaged rotors
	Do not move the centrifuge during the run

3.1Place the tubes

3.1.1 A liquid density of 1.2g/ml must not be exceeded at the max. speed.

3.1.2 Damaged tubes can not be centrifuged. This is because broken tubes can, in addition to sample loss, result in further damage to the centrifuge.

3.1.3 Close the test tube lids before centrifuging. Open lids can be ripped off during centrifuging and damage the centrifuge.

3.1.4Must load the test tubes symmetrically.

3.2 Maintain of rotor

3.2.1 Even slight scratches and tears of the rotor can lead to serious internal material damage。

3.2.2 Avoid damage caused by aggressive chemicals, including among others: strong and weak alkali, strong acids.

3.2.3 In the event of contamination caused by aggressive agents, The rotor must be cleaned immediately using a neutral cleaning liquid.

4. Operation guide

4.1 Control elements

START/STOP----for start or stop centrifugation

S**HORT-SPIN**----**for reduced-time centrifugation**

OPEN----------**to open the lid**

▲▼ ----------for setting the time and speed

4.2 Rotor insertion and removal

Fit the rotor onto the motor shaft, followed by the rotor nut. Tighten the rotor nut by turning clockwise. To release the rotor, turn the rotor nut counterclockwise.

Before each start, check that the rotor is firmly tightened!

4.3 Loading the rotor

Rotor must always be loaded symmetrically. Minimize differences in weight between the filled sample tubes-taring with a scale is recommended. This will reduce wear on the drive and cut running noise.

4.4 Centrifugation with a preset time

4.4.1 Turn on the mains switch, pressing “OPEN” to open the lid, load the rotor symmetrically. Fasten the rotor lid and close the centrifuge lid.

4.4.2 Pressing Time’s ▼▲change the run time, the time can be pre-selected between 20 seconds and 99minutes, and pressing speed’s ▼▲ to change the run speed，the max. speed is 13,400/14,500rpm

4.4.3 Pressing the first “START/STOP” to start the run . Pressing the second “START/STOP” to end the run prematurely. The remaining run time appears in the display.

After the run , the lid lock of centrifuge opens automatically.

The time setting and the rotational speed may be changed during the run. The remaining run time appears in the display.

4.5 Short-spin centrifugation

4.5.1 Turn on the mains switch, pressing “OPEN” to open the lid, load the rotor symmetrically. Fasten the rotor lid and close the centrifuge lid.

4.5.2 Pressing “SHORT-SPIN”. Short-spin centrifugation is possible for as long as this key is held down. The maximum rpm is 13400/14500

4.6 Switching to the rcf display

Pressing speed’s▲▼ simultaneously，the display switches from rpm to rcf. Also pressing speed’s ▲▼ simultaneously again, the display switches from rcf to rpm.

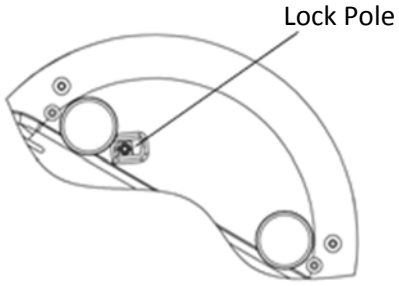
You can calculate with the following formula：

$rcf=1118 * 10^{-5} * n^2 * r_{max}$

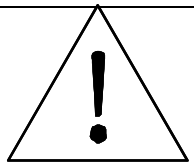
n: rotational speed in 1/min

r_{max}= 6 cm, max. centrifuging radius in cm

4.6 Open the centrifuge in the event of a power failure Disconnect the centrifuge from the mains supply. Wait until the rotor has come to a standstill, Then left up the device, remove the lock pole to right , the lid lock will be opened.



5 Maintenance and cleaning

	**The rotor and the outside of centrifuge should be cleaned regularly with a moist cloth. Disconnect the centrifuge from the mains supply, remove the rotor and clean it separately. Only neutral agents may be used for cleaning.**
	**Please check the rotor and especially the rotor bores regularly for deposits or damage, then reinsert the rotor and tighten the rotor nut.**

6 Troubleshooting

Error	Cause	Solution
No display	**No main power connection.** **Power failure.**	**Plug in mains cable on both sides.** **Check the mains fuse**
Lid can't be opened.	**Power failure.** **Rotor is still spinning.** **Lid lock failure.**	**Emergency lid release(see sec.4.7).** **Stop centrifuge run. Contact service.**
Centrifuge shakes during acceleration	**Rotor not loaded symmetrically.**	**Stop centrifuge run and load centrifuge symmetrically.**
Er=01	**Open lock failure**	**Contact service.**
Er=02	**Close lock failure**	**Contact service.**
Er=08	**Motor failure**	**Contact service.**

Annex 1 Wiring Diagram for Centrifuge

