



High Speed Micro Centrifuge

User Manual



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1. Introduction & Safety

The Clinispin Micro III centrifuge should be used in accordance with this User Manual. Incorrect use may result in equipment damage or personal injury. The Clinispin Micro III should be used:

- In accordance with design requirements
- By users who are trained and have read the user manual
- By users who have followed the safety protocols set out in this manual



Please read and understand this manual fully before attempting to operate the centrifuge.

This manual provides important safety information for the Clinispin Micro III Centrifuge. It should be kept near the centrifuge for quick and easy reference.

The Clinispin Micro III is a high speed centrifuge designed for centrifuging small volumes of biological fluids at speeds of up to 16,500 RPM.

Speed and time can be easily changed before each run.

The Clinispin Micro III has a welded steel outer and inner casing to protect the motor and rotor. An automatic lid lock ensures that the lid cannot be opened during running or braking.

When the centrifuge is running, please make sure that there are no hazardous materials within 30cm of the centrifuge and that no materials are blocking the vent of the centrifuge.

Incorrect use may result in equipment damage or personal injury.

- Do not use the following materials in the centrifuge:
 - Flammable/explosive materials
 - Strong chemical materials
 - Toxic or radioactive materials
- For the separation of corrosive substances and biological samples, ensure all tubes are sealed correctly.

1.1 Notes on Operation

- Please ensure that the rotor is installed correctly and tightened before running the centrifuge.
- Do not try and open the door manually if the centrifuge is still running.
- The accessories of this centrifuge should be provided by Woodley Equipment Company.
- The replacement of mechanical and electronic parts of the centrifuge should be implemented by Woodley Equipment Company authorised personnel.
- Check the rotor regularly. Do not use the rotor if there are obvious signs of corrosion or damage on the rotor.
- Ensure the rotor is balanced before running.

2. Features

- Maximum volume of 12 x 1.5/2.2ml tubes.
- The tube holders in the rotor are on an angle making it easier to load/unload and helps to protect the integrity of the separated sample.
- Time is adjustable in increments of 1 minute up to a maximum of 99 minutes.
- Speed is adjustable in increments of 100 RPM up to a maximum of 16,500 RPM.
- RCF display is available with a maximum of 18,320xg.
- Brushless motor for quiet running, fast speeds, fast braking and low maintenance.
- Automatic braking reduces cycle time.
- End of run audible alarm sounds when the rotor has stopped and it is safe to open the lid.
- Automatic lid lock ensures the lid cannot be opened during a run and until the rotor has come to a complete stop.
- The outer case is constructed of strong welded steel with an internal casing to protect the motor and rotor.
- Conforms to all CE directives.

3. Specifications

Motor Type	Brushless DC Motor
Maximum Speed	16,500 RPM
Maximum RCF	18,260 xg
Maximum Volume	12 x 1.5/2.2ml tubes
Run Time	1 – 99 minutes
Power	AC 220-230V, 50/60Hz
Net Weight	7kg
Dimensions (Centrifuge)	300 (L) x 250 (W) x 200 (H) mm
Gross Weight	8kg
Dimensions (Packaging)	340 (L) x 330 (W) x 250 (H) mm
Temperature Range	5°C – 40°C
Relative Humidity	≤80%
Altitude	≤2000m
Noise (at Maximum RPM)	≤65dB (A)



4. Unpacking the Centrifuge

Carefully unpack the Clinispin Micro III centrifuge and ensure to keep all packaging.

Accessories Supplied:

- Instruction Manual
- Power Lead
- Rotor
- Spanner for Adjusting Lid-Lock Pin Nut
- Allen Key to Allow Removal of Rotor for Cleaning

Put the Clinispin Micro III on a flat, level surface with at least 30cm of space surrounding it.

Plug the power supply firmly into the back of the centrifuge and connect to main power.

5. Operating Instructions

5.1 Control Panel and Display Interface

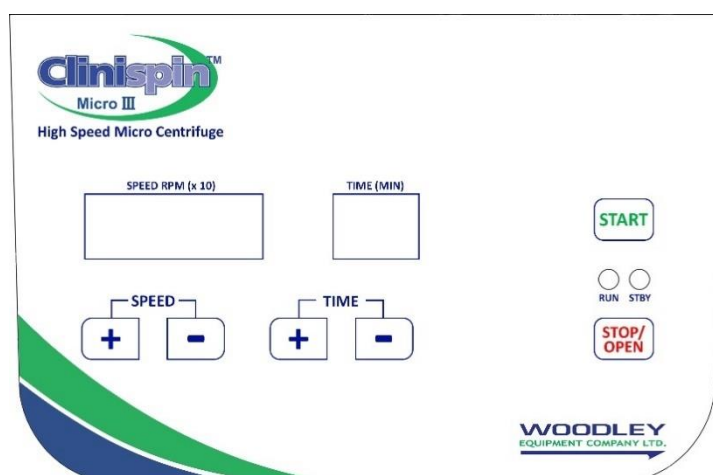


Figure 1 Schematic Drawing of Control Panel

SPEED RPM: Speed display $\times 10$ RPM

TIME (Min): Time display in minutes

+/- : Set Speed/Time

STOP/OPEN: Stop button/Lid open button

START: Start button



Figure 2 12 x 1.5/2.2ml Rotor

Switch on the power at the mains and then turn on the power at the back of the Clinispin Micro III. The front panel should light up with the red “STBY” light on.

Press the “STOP/OPEN” button to open the lid and wait one second for the lock to open and the lid to lift slightly.



→ Do not touch the top of the lid while pressing the ‘STOP/OPEN’ key.

Ensure blood tubes are balanced before starting the centrifuge.

Close the centrifuge lid carefully until it clicks into position.

Select the Speed and Time settings required with the +/- keys.

Press the key twice quickly in succession for an incremental change or for larger changes, press the key twice and hold key down until

the desired setting is achieved.

Press the ‘START’ key. The ‘RUN’ light will come on.

If the centrifuge sounds loud and vibrates a lot, press ‘STOP/OPEN’, wait for the centrifuge to stop and the lid to open, then check that the tubes are balanced.

At the end of the run, wait until the alarm sounds and the speed display has returned to 0. Press the ‘STOP/OPEN’ button to open the lid.

Do not hold or press down on top of the lid.

6. Troubleshooting



The table below shows the error codes of the centrifuge and the reason, as well as the way to solve the error.

Table 1 Error Codes and Troubleshooting Information

Error Code	Problem Detected	Troubleshooting Information
E2	Overspeed. It stops working because of detection of overspeed of rotor.	<ul style="list-style-type: none"> • Problem with microcomputer control system, please contact Woodley Equipment Company. • Problem with speed sensor. Please contact Woodley Equipment Company.
E3	Centrifuge lid issue.	<ul style="list-style-type: none"> • Open and close the lid. • Please contact Woodley Equipment Company if the lid is broken.
E5	Parameter setting is wrong.	<ul style="list-style-type: none"> • Please re-set according to content of parameter setting.
E7	Motor fault.	<ul style="list-style-type: none"> • Contact Woodley Equipment Company.
E8	Parameter setting error.	<ul style="list-style-type: none"> • Follow the parameter settings to re-set in part.

Table 2 Faults - Causes and Troubleshooting

Fault	Causes and Troubleshooting
No display.	<ol style="list-style-type: none"> 1. Check whether the power outlet and the connection is ok and if the power supply is on. 2. Check whether the switch is ok. 3. If the issue still isn't resolved, please contact Woodley Equipment Company.
Stops working suddenly.	<ol style="list-style-type: none"> 1. The speed exceeds the maximum rated speed of the rotor. 2. Once the speed of the rotor exceeds the rated speed by 250 RPM, the overspeed alarm will sound. Wait until the centrifuge stops and reset the speed. 3. The speed exceeds setting speed of the rotor. 4. If the motor is overheating, the power supply will be cut inside the centrifuge and the centrifuge will stop working.

	<p>5. If there isn't any display on the keyboard panel, please check the power supply system of the centrifuge.</p> <p>6. The voltage could be low. Please check whether the voltage of the power supply is ok.</p>
<p>Lid won't open.</p>  <p>Manual Lid Release Cord (Front View)</p>	<ol style="list-style-type: none"> 1. The lid can't open until the rotor stops turning. 2. Check the assembly of the lid lock. 3. Check the electrical wires of the lid lock. 4. Open the lid manually using the manual release cord (see image). 5. If the issue still isn't resolved, please contact Woodley Equipment Company. <p>If the manual release cord does not work, follow the process below:</p> <ul style="list-style-type: none"> • Use the supplied spanner to loosen the nut (anti clockwise) holding the metal component (lid 'prong') in the lid • Unscrew the prong in or out until its collar is 1cm from the nut  <ul style="list-style-type: none"> • Once the prong is installed correctly, tighten the nut again (clockwise), checking it is still the same length (1cm)
<p>Heavy vibration of centrifuge.</p>	<ol style="list-style-type: none"> 1. The speed of rotor is over the critical speed and the centrifuge vibrates. 2. Check whether the rotor is securely in place. 3. Check the rotor is balanced. 4. Check the motor shaft, rotate the rotor by hand and if it doesn't rotate smoothly there could be a problem with the motor shaft or motor. If the issue still isn't resolved, please contact Woodley Equipment Company.
<p>Indicator light of panel LED doesn't display after turning power on.</p>	<ol style="list-style-type: none"> 1. Power supply is not connected, please check the power.

	<p>2. The fuse of the PCB board and power outlet is broken. Please ask trained personnel to change the fuse.</p> <p>3. If the issue still isn't resolved, please contact Woodley Equipment Company.</p>
Unusual display of operating panel.	<p>1. Interference of the power grid, please shut down and restart after 1 minute.</p> <p>2. If the issue still isn't resolved, please contact Woodley Equipment Company.</p>
The motor doesn't work after pressing the start key.	<p>1. The electric control circuit is broken.</p> <p>2. Please contact Woodley Equipment Company.</p>
Burning smell coming from centrifuge.	<p>1. Turn off the power.</p> <p>2. Please contact Woodley Equipment Company.</p>

7. Fuse Replacement



Unplug the unit from the mains power. The fuse is located underneath the power supply at the back of the centrifuge.

Remove the old fuse and replace with a 3A fuse.

Replace the power cord and plug into a power source.

8. Maintenance

The rotor, accessories and the inside of the centrifuge should be cleaned using either soap and water or a mild bleach solution. Apply cleaning solutions with a damp cloth. Do not submerge the centrifuge in water or other cleaning solutions as this will cause damage and void the warranty. Contact Woodley Equipment Company for additional information.

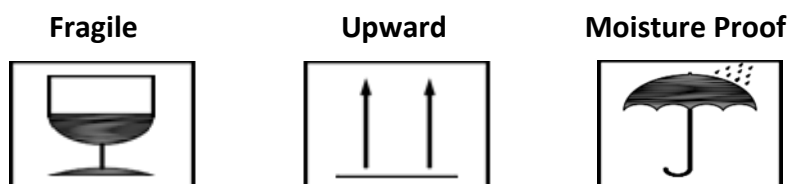


Figure 3 Terms of Transportation and Storage

9. Warranty

Woodley Equipment Company warrants this centrifuge to be free from defects in material and workmanship under normal use for one year from the date of purchase (including electrical components).

It does not cover damage resulting from abuse or misuse, repairs or alterations performed by anyone other than Woodley authorised personnel, or damage occurring in transit.

If you have any problems with your Clinispin Micro III, please contact Woodley Equipment Company.

10. Product Disposal

In case the product is to be disposed of, the relevant legal regulations are to be observed.

The disposal of electrical devices is regulated within the European Community by national regulations based on EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to-business sector, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. They are marked with the following symbol to indicate this.





Old Station Park Buildings
St. John Street
Horwich
Bolton
BL6 7NY, UK

Tel: +44 (0) 1204 669033

Email: sales@woodleyequipment.com

Web: www.woodleyequipment.com