

4. The rotor must be loaded symmetrically.
5. Do not use the centrifuge or rotor if it is not installed correctly or it is damaged.
6. Do not use the centrifuge or rotor if it shows any sign of external mechanical or electrical damages.
7. The centrifuge must be used only for the specified application. It must not be operated in a hazardous or flammable environment and no hazardous or flammable content should be centrifuged.
8. Do not fill tubes while they are in the rotor. Liquid spillage may harm the device.
9. If liquid is spilled on the rotor or rotor chamber, the centrifuge must be cleaned immediately.
10. "Tube Holders" are a part of the Rotor. They should be placed in the rotor whether 2,3,4, 6...12 tubes are being used.

### 11. TROUBLESHOOTING

The centrifuge has a self-diagnostic function. If a problem occurs, an error/warning code will be displayed on the screen and the operator can determine the malfunction with the warning code below.

| ERROR   | PROBLEM   | SOLUTION   |
|---|---|--|
| No display  | No mains power connection   | Check power and properly plug in power adaptor at both ends  |
|   | Power failure   | Check the mains power fuse   |
|   | Improper connection   | Connect adaptor properly   |
| Lid open  | Lid isn't closed correctly  | Close lid correctly  |
|   | Error with lid closing and opening mechanism                                  | Contact Woodley Equipment Company  |
| Err 55  | Rotor not loaded symmetrically  | Load the rotor symmetrically and restart the centrifuge  |
| Centrifuge lid cannot be opened   | Rotor is still spinning   | Wait for the rotor to come to a stop   |
|   | Power failure   | Press emergency lid release after rotor stops  |
| Centrifuge shakes during acceleration & makes loud running noises while running | Rotor is not loaded symmetrically   | Load rotor symmetrically and restart operation   |
|   | Either a broken tube, damage to the rotor or motor is the cause for run noise | Replace broken tube. For damaged rotor/motor, contact Woodley Equipment Company                                |
|   | Rotor is damaged  | Remove and change rotor  |
| Display error   | Loose connection of display   | Contact Woodley Equipment Company  |
| Err 1   | Latch motor damaged, latch jammed or any limit switch of latch got damaged    | Contact Woodley Equipment Company  |
| Err 52  | Rotor is stuck  | Turn OFF the centrifuge, Check and fit the rotor properly and turn ON the centrifuge                           |
| Power tripping  | Cable not fit properly  | Remove cable and connect properly  |
| Last run memory not displayed   | Turning ON centrifuge immediately after turning it OFF                        | Maintain 3 seconds gap between switching OFF and switching ON again  |
| System freezes  | Electronics error   | Switch off centrifuge and then switch it ON again. If the error still shows, contact Woodley Equipment Company |

#### IMPORTANT NOTE:

1. If the centrifuge is working slowly or is hot due to overdraw current, restart the centrifuge and check it again.
2. Do not use liquid with density higher than 1.2g/ml for full load operation.

### 12. MAINTENANCE AND CLEANING

1. The rotor and the outside of the centrifuge should be cleaned regularly with a damp cloth.
2. Ensure the centrifuge is not connected to power during cleaning.
3. The brushless motor in the centrifuge does not require routine maintenance. Any service required should be performed by Woodley Equipment Company only. Repairs performed by unauthorised personnel may void the warranty.
4. Always keep the centrifuge housing, rotor chamber, rotor and rotor accessories clean. All parts should be wiped down periodically with a soft cloth. For more thorough cleaning, use a neutral cleaning agent (Ph between 6 and 8) applied with a soft cloth. Excessive amounts of liquid should be avoided. Liquid should not come into contact with the motor.
5. After cleaning, ensure that all parts are dried.
6. Do not place the rotor into the cleaning solution

### 13. WARRANTY STATEMENT


This product is warranted to be free from defects in material and workmanship for a period of two (2) years from date of purchase. Your product will be duly repaired upon prompt notification in compliance with the following conditions: This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this instruction manual. This warranty does not cover damage caused by accident, neglect, misuse, improper service, natural forces or other causes not arising from defects in original material or workmanship. This warranty does not cover any incidental or consequential damages, commercial loss or any other damages from the use of this product. The warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities for the products or damages caused by its use. The buyer and its customer shall be responsible for the product or use of products as well as any supervision required for safety. If requested the products must be returned in well packed and insured manner and all shipping charges must be paid.

Some states do not allow limitation on the length of implied warranties or the exclusion or limitation of incidental or consequential damages. This warranty gives you specific legal rights. This warranty is given expressly in lieu of all other warranties, expressed or implied.

The purchaser agrees that there is no warranty of merchantability or of fitness for any intended purpose and that there are no other remedies or warranties, expressed or implied, which extend beyond the description on the face of the agreement. This warranty is only applicable to the original purchaser.

Products received without proper authorisation will not be entertained. All items returned for service should be sent postage prepaid in the original packaging or other suitable carton, padded to avoid damage. Woodley Equipment Company will not be responsible for damage incurred by improper packaging.

### 14. 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 sphere, to which this product is assigned, may no longer be disposed of in municipal or domestic waste. Products are marked with the symbol  to indicate this.

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## User Manual



**WOODLEY**  
EQUIPMENT COMPANY LTD.

**1. INTRODUCTION**

This manual provides important safety information for the Clinispin Micro II Centrifuge. It should be kept near the centrifuge for quick and easy reference. The Clinispin Micro II is a high speed centrifuge equipped with a maintenance free drive, is microprocessor controlled with a digital display and has an imbalance control safety feature. Multiple rotor options make it suitable for a wide range of applications.

**2. INTENDED USE**

This centrifuge is designed for separation of solid suspensions in liquids such as cells, macromolecules such as DNA, RNA and proteins. This centrifuge can be used in various research environments including veterinary practices, laboratories and research institutions.

**3. KEY FEATURES**

- Maximum volume of 12 x 2ml
- Imbalance detector with auto cut off for safe operation
- Brushless DC motor for maintenance free performance
- Lid lock safety – the lid opens automatically on run completion
- Digital display with speed and time indicator
- RPM setting from 500 - 15,000 RPM with a count of 100
- One press changeover from RPM to RCF functionality
- Reduction adaptors for 0.1/0.2 and 0.5ml tubes
- Emergency lid release during power failure
- Automatic internal diagnosis and error display

*NOTE: Before using Clinispin Micro II, please read this user manual carefully. This user manual is intended to assist with the operation and care of the unit only and not its repair. For repair please contact Woodley Equipment Company.*

**4. TECHNICAL SPECIFICATION**

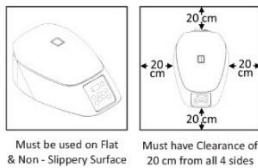
|                   |                                  |
|-------------------|----------------------------------|
| Motor Type        | Brushless DC Motor               |
| Maximum Volume    | 12 x 2 ml (microtubes)           |
| Speed Setting     | 500 - 15,000 RPM                 |
| Maximum RCF       | 15,596 x g                       |
| Speed Accuracy    | ± 100 RPM                        |
| Run Time          | 1 - 99 minutes & infinite mode   |
| Acceleration Time | 60 ± 2 seconds                   |
| Deceleration Time | 50 ± 2 seconds                   |
| Size (L x W x H)  | 190 x 120 x 270 mm               |
| Weight            | 2.45 KG approx. (with rotor)     |
| Input Voltage     | 24V $\overline{\text{---}}$ 2.3A |
| Power Consumption | 55 W                             |

**5. ACCESSORIES**

- Power Adaptor - 100-240 VAC, 50/60Hz, 1Amp (Input), 24V  $\overline{\text{---}}$  4A (Output)
- 12 - Slot Rotor (Pre-installed) with reduction adaptors for 0.1/0.2 and 0.5ml tubes
- T-Allen Key
- Product User Manual
- Warranty Card
- PCR strip rotor (optional)

**6. INSTALLATION**

Gently remove the upper packaging and take out the centrifuge by holding it from the base. When the centrifuge is used for the first time, ensure that all the packaging and accessories are removed from the rotor chamber. The rotor is pre-installed. Please make sure that the rotor is firmly tightened. Accessories and the user manual are kept inside the box with the centrifuge. Please keep all the packaging in safe storage for at least 2 years for warranty purposes.



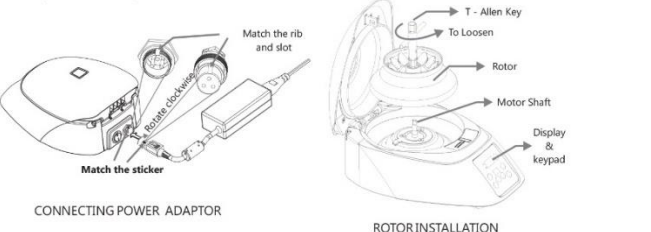
**7. ROTOR AND REDUCED ADAPTORS**

The table below shows the Maximum RCF of the rotor and Maximum RCF with different tubes and adaptors.

| 12 tubes rotor             | 1.5/2.0ml tubes     | 0.5ml Adaptor |        | 0.1/0.2ml Adaptor |        |
|----------------------------|---------------------|---------------|--------|-------------------|--------|
|                            |                     |               |        |                   |        |
|                            | 1.5/2 ml            | 0.5 ml        | 0.4 ml | 0.2 ml            | 0.1 ml |
| <b>Max. Speed</b>          | 15000               | 15000         | 15000  | 15000             | 15000  |
| <b>Max. RCF</b>            | 15596               | 12577         | 12074  | 11105             | 10278  |
| PCR strip rotor (Optional) | 0.1/0.2ml PCR strip |               |        |                   |        |
|                            |                     |               |        |                   |        |
| <b>Max. Speed</b>          | 15000               |               |        |                   |        |
| <b>Max. RCF</b>            | 13080               |               |        |                   |        |

**CONNECTING POWER ADAPTOR & ROTOR INSTALLATION**

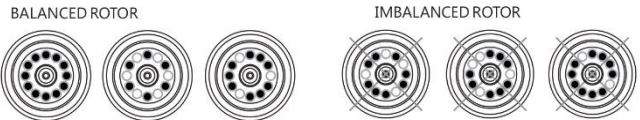
1. Connect one side of the power adaptor to the rear side of the centrifuge and the other to the power supply as shown in the figure below.
2. Rotate the adaptor nut clockwise to tighten the adaptor with the centrifuge. Ensure the power switch is OFF while connecting the power adaptor.
3. The sticker on the body and jack are indicating the position of the rib on the jack. While fitting the adaptor to the unit, please match the sticker position as shown in the figure below & gently push it in.
4. If matched correctly the plug will go in easily without much force (do not try to force the plug in if it is not matched properly). Once the plug is inserted into position, turn the loose upper ring clockwise to tighten and secure the fitment.



The rotor is pre-installed. If any spillage occurs, remove the rotor as shown in the above figure to clean the rotor and its chamber thoroughly.

**8. BALANCING THE ROTOR**

Always balance the rotor before centrifugation - symmetrical loading of tubes in the rotor is necessary otherwise vibration or imbalance can occur which can damage the centrifuge. The diagram below shows the correct method of symmetrical loading of centrifuge tubes inside the rotor. The samples in the tubes should be of equal volume. To achieve a balanced condition, "Reduction Adaptors" are mandatory to place inside the rotor.



**9. OPERATION**

After properly installing the centrifuge, switch ON the centrifuge from the rear side by pressing the power switch. The lid status will be seen in the display. If the lid is open, the display will show "Lid" and if it is closed, the set RPM will be displayed. Please ensure that the Tube Holders are inside the rotor.

**9.1 START**

After setting speed and time parameters as instructed below press the "START" button to run the machine.

**9.2 STOP/OPEN LID**

To stop the machine at any point of time press the "STOP" button. The lid will open automatically. The lid will open on its own upon completion of the run. During acceleration no other button will work except for the STOP button.

**9.3 SPEED**

Upon turning the power on the centrifuge, RPM/RCF display will show the previous set speed. The speed can be set from 500-15000 RPM. The speed can be set by using "+" button for increment & "-" button for decrement of the values. The increment/decrement is in values of 100 RPM. The displayed values will be in multiples of 10 (x10). The values are saved automatically after the display flashes 5 times.

**9.4 RPM-RCF SWITCH**

Long press the RPM/RCF button to change the mode from RPM to RCF. The switch over will be indicated by the LED on respective mode. While RCF mode is ON, speed is to be read as value x10 in the display window. The maximum RCF of the centrifuge is 15596 xg. Press 'SPEED' button to see the corresponding value.

**9.5 TIME**

Upon turning the power on the centrifuge, TIME display will be of previous set timer. The timer can be set from 1 minute - 99 minutes and infinite mode. The timer can be set by using the increment (+) and decrement (-) buttons. The set time will automatically be saved. The timer operates as a countdown so will run in descending order during operation of the centrifuge.

**9.6 SHORT-SPIN OPERATION**

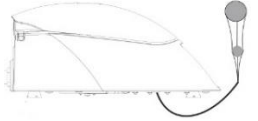
The centrifuge can be operated for a short run by pressing and holding the SHORT SPIN button. The centrifuge will continue to run as long as the Short-Spin button is pressed. The time will count up in seconds on the time display for 1 minute then in minutes. After releasing the short spin button, the time in the display shows the short spin duration. The Short-Spin speed is based on the last run settings in the memory or set rotational speed prior to short spin as required.

**9.7 INCREMENT / DECREMENTS**

Press "+" and "-" buttons to increase or decrease the speed or time values.

**9.8 OPENING THE CENTRIFUGE LID IN CASE OF POWER FAILURE**

Disconnect the centrifuge from the mains power supply. Wait until the rotor comes to a standstill. Once the rotor has stopped, pull out the emergency lid release (as shown in the diagram) to open the centrifuge lid.



After the centrifuge lid opens, push the thread back in the hole with your hand and fit the emergency release cap back in the hole.

**9.9 IMBALANCE DETECTION**

This centrifuge is equipped with an imbalance detection safety feature. When the rotor is not loaded symmetrically the imbalance detector is activated. This will cut off the centrifugation and error "Err55" will be shown on the display. To correct the imbalance, open the centrifuge lid and correct the imbalance load using methods described in the balancing the rotor section (page no.4) of this manual. After correctly loading the tubes into the rotor, turn off the centrifuge and turn it back on.

**10. SAFETY PRECAUTION**

1. Never use the centrifuge in any manner not specified in the manual.
2. Never move the centrifuge while it's operating.
3. The rotor must always be securely fastened. If the centrifuge makes an unusual noise during the operation, the rotor fit needs to be checked.

