



Wealtec Corp.

**E-Centrifuge
Microcentrifuge
Operation Manual**

Version 3.0

Item # 03010-1

**This instrument is intended for laboratory use only*

<http://www.wealtec.com>

E-mail: support@wealtec.com

Packing List

- _____ x 1 main body + power cable
- _____ x 1 angle rotor for 1.5/2.0 ml tubes + 6 o-rings
- _____ x 1 angle rotor for 8x0.2ml strip tubes
- _____ x 1 manual
- _____ x 1 warranty card



Wealtec Corp.

1885 Meadowvale Way Sparks, NV 89431 Tel: (775) 351-2066 Fax: (775) 351-2077

<http://www.wealtec.com> E-mail: support@wealtec.com

Index

A. Important Notice	2
A-1. Warranty	
A-2. Technical and Service Contact	
A-3. Safety Notice	
A-3-1. Certification	
A-3-2. Safety Information	
B. Introduction	5
B-1. Specifications	
B-2. Product Descriptions	
C. Installations	8
D. Operation Instructions	9
D-1. Basic Procedures	
D-2. Load and Balance	
D-3. Rotor Exchange	
E. Maintenance	11
E-1. General Cleaning	
E-2. Periodic Inspection of Rotor	
E-3. Lubrication	
E-4. Transport E-Centrifuge	
E-5. Troubleshooting and Parts Replacement	
F. Order Information	13
Appendix: Wiring Diagram	14

A. Important Notice

The instrument is designed for laboratory use only.

Before setting up and operating the instrument of E-Centrifuge, please carefully read these instructions to get familiarized with installation and operation process. Instructions should be read by well-trained individuals or by technical people from Wealtec Corp. before operating the instruments.

Any improper usage of the instruments may cause damage, please refer to the safety notice.

The instruments shall not be modified or altered in any way. Any modification or alteration will void the warranty, void the regulatory certifications and create potential safety hazard. Wealtec is not responsible for any injury or damage caused by using the instruments for any non-intended purpose or by modifying the instruments by any person who is not authorized by Wealtec Corp.

A-1. Warranty

E-Centrifuge is warranted to be free from defects in materials or workmanship for a period of one year from the original invoice date, under normal usage. Any defects occurring during warranty period, Wealtec Corp. will repair or replace defective products or parts without charge unless the defects arising from below conditions. The defects described below are specially excluded from Wealtec warranty policy.

1. Improper operation of the instrument.
2. Repair or modification by any person who is not authorized by Wealtec Corp.
3. Damage caused by any (in)-direct accident, neglect or misuse.
4. Damage caused by disaster.

5. Damage caused by any improper solvents or samples

A-2. Technical and Service Contact

Most of the operation details are described in the instruction manual and operator can find appropriate solutions according to these instructions. For any other technical/ service questions, please contact your local representative or contact Wealtec international technical/ service specialist by E-mail: support@wealtec.com.

A-3. Safety Notice

A-3-1. Certification

E-Centrifuge is designed to meet the international electrical safety standards EN61010 and EMC regulations. This product holds CE marking and operation is according to the guidance of its instruction manual certificated safe. Any modification or alteration will void the warranty, void the regulatory certifications and create potential safety hazard.



A-3-2. Safety Information

Basic safety precautions must be observed when operating the centrifuge in order to avoid hazards of electrical shock or possible physical injuries.

E-Centrifuge is not to be used in Class 1, Division 1, Group C hazardous location defined by the National Fire Protection Association, Bulletin No.56A (Inhalation Anesthetics), as extending upward to a level of 5 feet above the floor where flammable anesthetics are used.

CAUTION: Below information should be read before using E-Centrifuge to prevent possible injury.

To Avoid Electrical Shock:

- Plug the power cord only into a grounded 3-wire receptacle.
- Do not remove the grounding prong from the power plug.
- Always unplug the power cord before attempting to service the E-Centrifuge.

To Avoid Physical Injury:

- Do not use any external force to stop E-Centrifuge while the rotor is spinning.
- Do not operate E-Centrifuge without properly closing the cover. Corrosiveness solvent in the tubes can splash and hurt the operator.
- Do not operate E-Centrifuge with unbalanced rotor. The instrument can be damaged by bounced tubes and corrosiveness solvent in the tubes can splash and hurt the operator. (Please refer to D-2 Load and Balance)

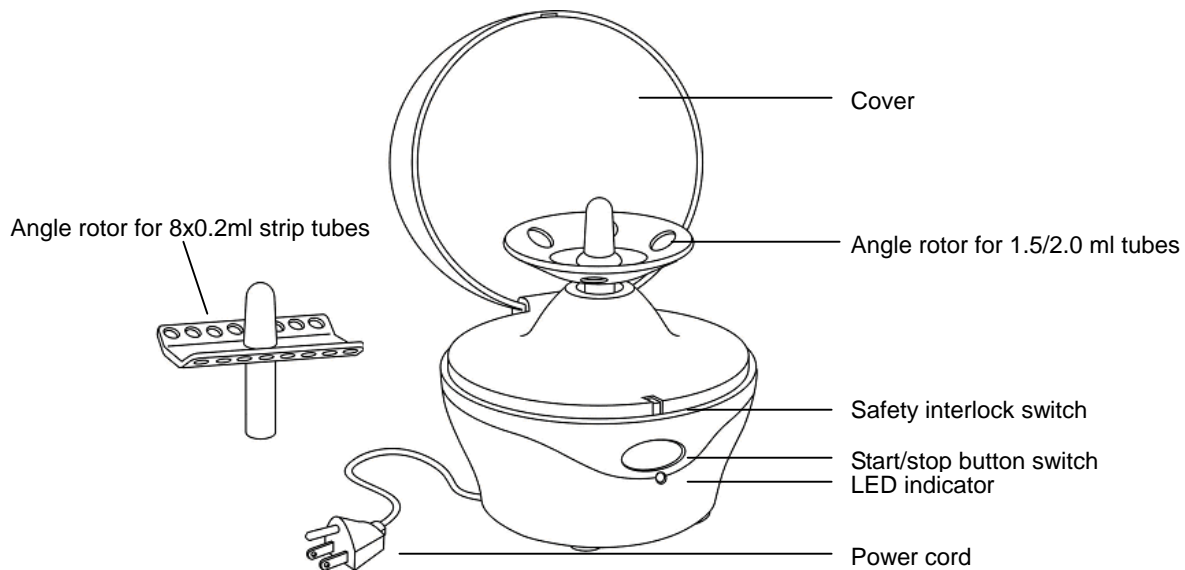
B. Introduction

E-Centrifuge is a personal bench-top device for quick spin down contents in micro-centrifuge tubes. Standard unit comes with rotors for 1.5/2.0ml micro-centrifuge tubes and 8-strip tubes. Easy and safe operation makes E-Centrifuge the best partner for researchers daily usage.

B-1. Specifications

Speed at rated voltage	Approx. 6400 RPM (under empty load) Approx. 4400 RPM (under full load)
Relative centrifuge force (at rated voltage)	Approx. 2046g
Start/stop button switch	Yes
Safety interlock switch	Yes
Indicator light	Red LED indicator
Rotors	Rotors for 1.5/2.0 ml tubes & 8x0.2ml strip tubes
Power	120/230, 50-60Hz
Weight	620g
Dimensions	Diameter: 131.9mm, Height: 156.7mm

B-2. Product Descriptions



- **Safety interlock switch:**

Actuated by the lid latch. E-centrifuge can only be operated when cover closed.

- **Start/stop button switch:**

Press start/stop button to switch on/off E-Centrifuge.

- **LED indicator:**

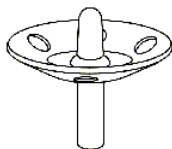
Red LED indicator lights up while E-Centrifuge is running.

- **Power cord:**

UL listed with 3-prong grounded plug.

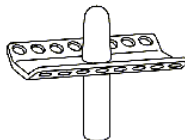
- **Angle rotor for 1.5/2.0 ml tubes:**

Angle rotor for 1.5/2.0 ml tubes can accommodate up to 6 units of 1.5/2.0 ml microcentrifuge tubes or any other tubes not exceeding 10.5 mm in diameter and 47mm in length. (Please refer to D-2 Load and Balance)



● Angle rotor for 8x0.2ml strip tubes

Angle rotor for 8x0.2ml strip tubes can accommodate 2 sets of 8-strips PCR tubes. Tubes are centrifuged at a fixed angle of 30 degrees. (Please refer to D-2 Load and Balance)



C. Installation

1. Carefully take out E-Centrifuge from the package box and place it at a stable, suitable place.
2. Make sure the rotor is fully installed into position and the cover is closed.
3. Connect power cable to correct power source and press the start/stop button switch to check E-Centrifuge is working properly.

D. Operation instruction:

D-1 Basic Procedures

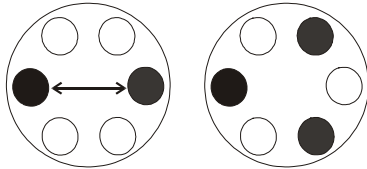
1. Open the cover.
2. Load the tubes
3. Well close the cover.
4. Press the start/stop button switch to start the run.
5. Press the start/stop button switch again to stop the run.

In order to obtain properly centrifuged specimens and to prevent damage to the equipment, the following basic operating precautions should be carefully observed when using E-Centrifuge.

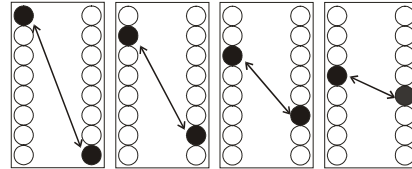
- **Electrical:** Operate the centrifuge only from an AC power source approved for the particular model.
- **Load balancing:** To avoid damaging the instrument and to prevent hazard to operator, it is important that tubes are installed in a balanced array.
- **Cleanliness:** Always keep the centrifuge clean and dust-free. Avoid spilling liquids into the centrifuge bowl.

D-2 Load and Balance

It is essential to load tubes as equal and in balance as possible. If there is only one tube to centrifuge, it is necessary to use another tube with equal liquids as a balance. The balanced arrays are as below.



Angle rotor for 1.5/2.0 ml tubes



Angle rotor for 8x0.2ml strip tubes

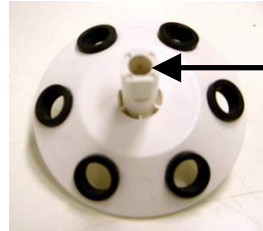
NOTE: Never attempt to balance by adding weights, mercury or shot to the bottom of a tube.

D-3 Rotor Exchange

1. Put one hand on the base of E-Centrifuge.
2. Hold the rotor in other hand's palm.
3. Pull the rotor vertically upwards



4. Re-assemble the rotor. Fit flat sides to each other when assemble the rotor.



E. Maintenance

E-1. General Cleaning

E-Centrifuge can be cleaned by soft moisten tissue or cloth. Organic solvents or strong detergents may damage the instrument and should be avoided.

E-2. Periodic Inspection of Rotor

The rotor of E-Centrifuge must be inspected as described below for cracks or defects that could impair its continued safe use.

Remove and inspect the rotor for defects at least every 4 months and each time for cleaning. Carefully inspect all top and bottom surfaces, particularly around the center region of the rotor. Install a new replacement rotor assembly if any of the following defects are observed:

- Severe dents
- Deep scratches
- Corrosion on surface especially in the region of the motor shaft
- Cracks, especially hairline cracks in the region adjacent to the motor shaft

NOTE: Safe, trouble-free service also requires that the rotor assembly be cleaned only with the approved agents.

E-3. Lubrication

E-Centrifuge motor incorporates permanently lubricated bearings. Extra lubrication is not required.

E-4. Transporting Centrifuge

Even though E-Centrifuge can withstand the rigors of normal laboratory use, it can be damaged by dropping or any excessive abuse in handling. If the centrifuge must be shipped, package it carefully in a strong, shock-proof container to prevent damage from vibration and impact.

E-5. Troubleshooting and Parts Replacement

Failure of starting E-Centrifuge may be due to one of the following conditions:

- Cover is not closed properly
- Start/stop button switch is not turned on
- Fuse blows

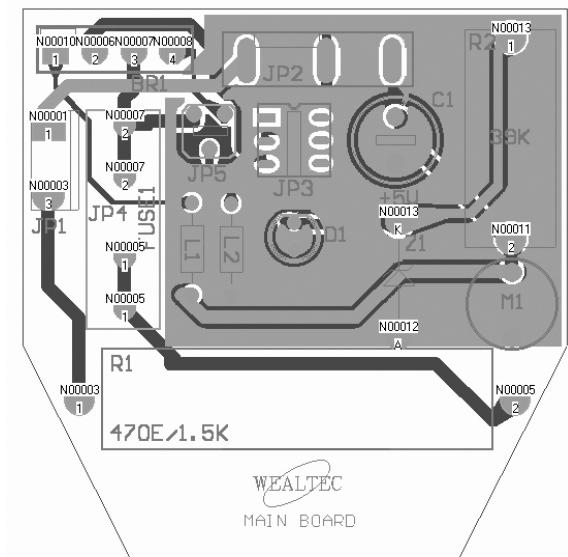
F. Order Information

Item #	Description
1090001	E-Centrifuge, 120V include 1.5/ 2ml tubes rotor & 8x0.2ml strip tubes rotor
1090002	E-Centrifuge, 230V include 1.5/ 2ml tubes rotor & 8x0.2ml strip tubes rotor

Accessories

Item #	Description
1091001	Angle rotor for 1.5/2.0 ml tubes
1091002	Angle rotor for 8x0.2ml strip tubes
1091004	O-ring

Appendix: Wiring Diagram





WEALTEC CORP.

1885 Meadowvale Way
Sparks, NV 89431

TEL: +1-775 351 2066

FAX: +1-775 351 2077

E-mail : sales@wealtec.com
support@wealtec.com

Web site: www.wealtec.com

Warranty Card

THANK YOU FOR ORDERING AWEALTEC PRODUCT.

Wealtec Corp. warrants all Wealtec instruments to be free from defects in design, workmanship, and material under normal use for a period of one year from the date of initial shipment.

This warranty covers all parts and components of the instrument except those normally requiring frequent replacement, such as tubing, gasket, O-rings, etc. Wealtec will not be liable for any personal injury, bodily injury, misuse, improper maintenance, negligence or accident.

This warranty is in lieu of all other warranties, expressed or implied, but not limited to, the implied warranties of merchantability or fitness for a particular purpose.

PLEASE KEEP THE WARRANTY CARD FOR FUTURE USE.

Instrument Model : E-Centrifuge

Item Number :

Serial Number :

Initial Shipping:

Package
Identification

03010-1

Printed in Taiwan

Wealtec Corp.

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