

CO₂ Orbital Shaker

105008US/EU

User's Manual

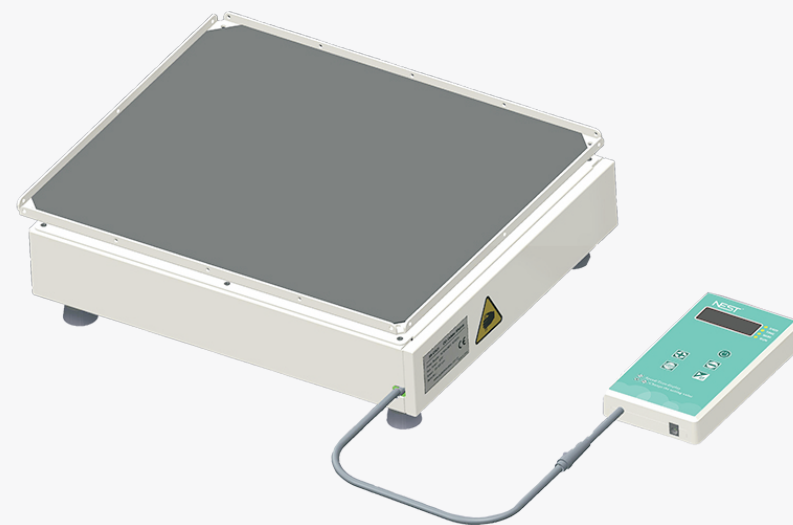


Table of Contents

Introduction.....	1
Cautions for Usage.....	1
Receiving and Inspection.....	2
Features.....	3
Specification.....	3
Structure.....	4
Panel.....	5
Operation Instructions.....	6
Appllication.....	6
Maintenance.....	7
Troubleshooting.....	7
Packing list.....	8
Warranty Card.....	9

Introduction

Thank you for choosing NEST' s product. This product is developed for modern medical cell culture and can be used in CO2 environments. The drive system uses magnetic force to deliver very precise speed control, maintenance free operation and long reliable life.

Before you use the unit, please read this entire manual carefully to understand how to operate, and maintain. Your satisfaction with the unit will be increased if you take the time to read about its safety and operational notices.

Keep this manual on-hand so it can be used by all operators of the unit. Be sure all operators of the unit are given appropriate training before you put the unit in service.

Cautions for Usage

1. Be sure you follow any city, county, or other ordinances in your area regarding the use of this unit.
2. Use only approved accessories. Do not modify system components. Any alterations or modifications to your instrument may be dangerous and will void your warranty.
3. Do not modify the power cord provided with the unit. If the plug does not fit an outlet, have a proper outlet installed by a qualified electrician.
4. Please only use the enclosed power supply adaptor with the unit.
5. Place the unit on level and sturdy surface to avoid vibration and noise.
6. DO NOT clean the unit with corrosive or flammable liquids.
7. Make sure the load is no more than 6kg.
8. Leave sufficient space for shaking.
9. I don't quite know what you mean here. You may wish to remove.

If it has one of the following situations, Please unplug the instrument:

- When you move & transport this instrument.
- When you open the electric control box or move any parts.
- The instrument breaks down.
- The instrument is not in use for an extended period of time.

Receiving and Inspection

Your satisfaction and safety require a complete understanding of this unit, including its proper function and operational characteristics. Be sure operators are given adequate training before attempting to put the instrument in operation.

1.1 Inspection: Upon delivery please inspect the package for visible exterior damage, note and describe on the freight bill any damage found and enter your claim on the form supplied by the carrier.

1.2 Inspect for concealed loss or damage on the unit itself, If any, the carrier will arrange for official inspection to substantiate your claim. Save the shipping crate until you are sure the unit has been delivered in good condition.

1.3 Return Shipment: If for any reason you must return the unit, please contact your distributors customer service department.

1.4 Accessories: Make sure that all of the equipment indicated on the packing slip is included with the unit. Carefully check all packaging materials before discarding.

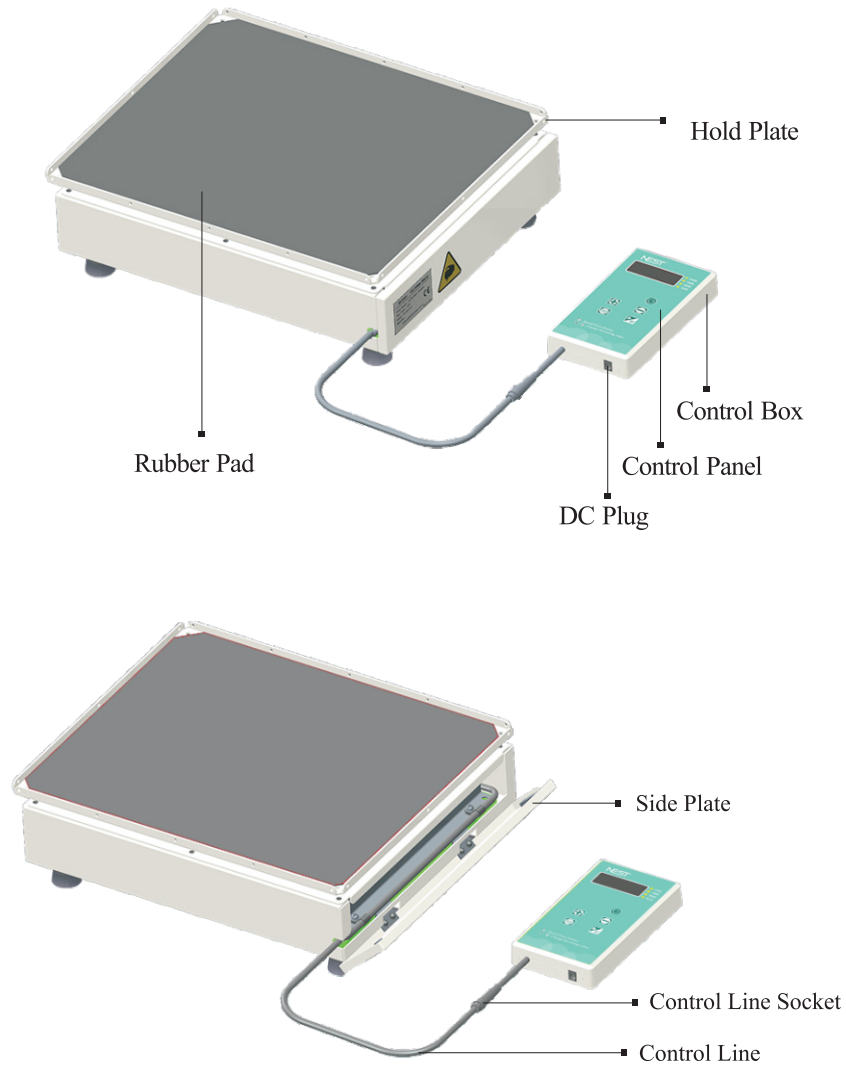
Features

LED display	Display the set parameters and the actual parameters
Easy operation	Easy to understand, easy operation
Timer	Display remaining time, alarm after timed operation completed
Gentle Start-Up	Ensures samples in flakes do not spill out
Magnetic drive	Compact structure, stepless speed regulation, stable and reliable running, long life
Separate control system	The control box can be left external of the CO ₂ incubator and the host machine is placed in it separately

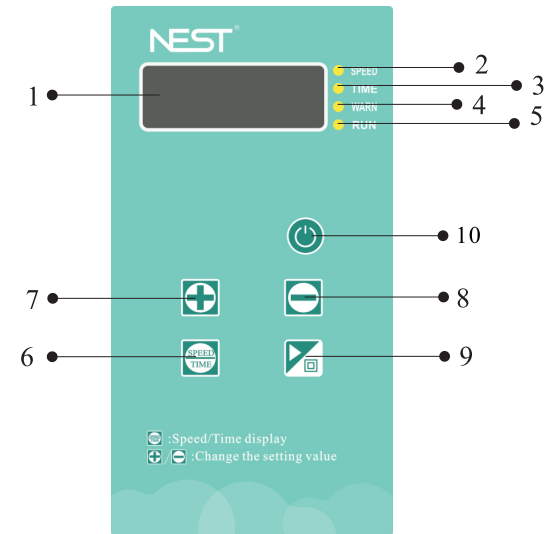
Specifications

Model	105008US/EU
Orbital Diameter	19mm
Speed	30~300 rpm
Timer	00:00~99h:59min. ("0" for running continuously)
Platform Size	355×300 mm
Max. Load	6kg
Ambient	5°C~60°C, <99%
Max. Power	30W
Power Supply	AC100-240V, 50 Hz/60Hz
Weight	Host machine: 17.5Kg, Control box: 0.3Kg
Dimensions(W×D×H)	Host machine:360×300×96mm, Control box:90×160×26mm

Structure



Panel



1. LED display: display time and speed.
2. Speed indicator: means that the current display is the speed value.
3. Time indicator: means that the current display is the time value.
4. Alarm display light: give an alarm.
5. Run display light: the machine is in operation.
6. " [SPEED/TIME] "key: time and speed display switch.
7. " + "key: to add value, hold for 3secs to add rapidly.
8. " - "key: to minus value, hold for 3secs to decrease rapidly.
9. " [STOP] "key: to run or stop the machine.
10. " [POWER] "key: the power is on/off

Operation Instructions

Plug the instrument in an turn power switch on, until the LED indicators on and LED display.

Setting speed and time

Press "⊕" key or "⊖" key to enter setting mode. Press "⏸" key to switch speed setting and time setting, press "⊕" key or "⊖" key to change the value, keep it free on operation for 3 seconds, it will save current parameters and quit setting mode.

When the setting mode is completed, press "☑" key, working light is on.

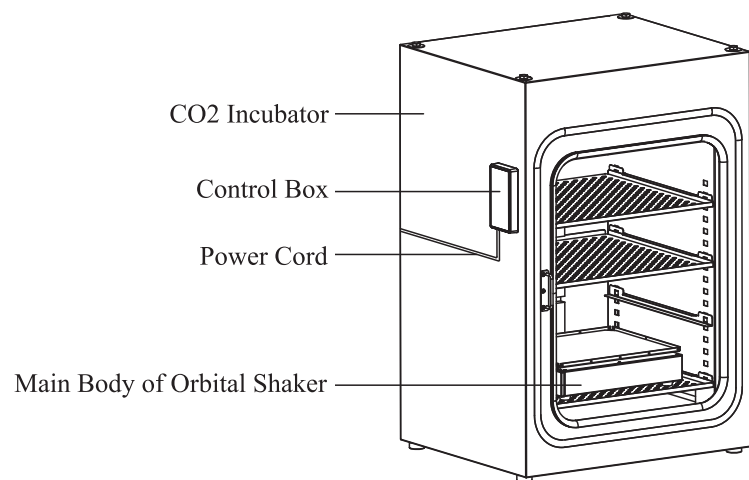
Check speed and time

When the instrument is working, press "⏸" key to switch between the speed and the time display.

Application

Application in CO2 Incubator

Place the main body of the shaker in the CO2 Incubator, and use the signal cable to connect the control box through the access port of the CO2 incubator.



Maintenance

For safe use, please follow directions below:

- Cut off the power before replacing fuse.
- Keep coating from volatile liquid, such as banana oil, petrol, etc.
- Keep sample from flowing into panel.
- Keep the unit clean always.

Troubleshooting

Find the issue in the table below, please refer to the solutions in the right. If it is not available, you can contact dealer or service department to solve it.

Description	Causes	Solution
Indicator off No reaction	Power disconnected	Connect the power
	Power supply cable failure	Replace power supply cable
	Switched off	Switch on
No rotating of plate	Position sensor failure	Contact agent
	Main-board failure	Contact agent
Big noise	The unit has been placed on uneven surface	Place the unit on leveling and sturdy surface
	Fascia loose	Fasten fascia
	Accessories loosen	Fasten accessories
Others	Keep record for maintenance	

Packing list

Description	Quantity	Description	Quantity
Orbital shaker	1	Screw (M4x10)	6
Control box	1	Power supply cable	2
Hold plate	1	Power adapter	1
Silicone rubber pad	1	User's Manual	1

WARRANTY CARD

Save this card carefully please. When you need service, contact the service company with card & invoice.

Warranty Card

User Name		Telephone	
Address			
Zip Code		E-mail	
Product Name		Model	
Serial number		Purchase Date	

- Warranty Scope:
 1. Warranty period is 24 Months from purchase date.
- Warranty is not valid under the following circumstances:
 1. Warranty term is expired.
 2. Damage due to improper use, maintenance or handling.
 3. Unmatched serial numbers, or modification of serial numbers.

Customer service hotline: **0510-68788698**
 User: the above information should be completed by the seller.

Maintenance records

The following should be completed by maintenance staff.

First	Name of service		Maintenance date	
	Address		Telephone	
	Maintenance sheet number		Maintenance staff signature	
Second	Name of service		Maintenance date	
	Address		Telephone	
	Maintenance sheet number		Maintenance staff signature	
Third	Name of service		Maintenance date	
	Address		Telephone	
	Maintenance sheet number		Maintenance staff signature	