

# Oribital and Linear Shaker

## Operating Instructions



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## Preface

Please read the user manual carefully before use, and follow all operating and safety instructions!

Technical specifications and outline are subject to change without prior notice

## Service

When help needed, you can always contact us for technical support.

Please provide the customer care representative with the following information:

- Serial number ( on the rear panel )
- Description of problem ( i.e., hardware or software )
- Your contact information

## Warranty

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claims under the warranty, please contact your local supplier or us directly

# 1. Safety Instructions



## Warning!

- Read the operating instructions carefully before use.
- Ensure that only trained staff works with the instrument.



## Protective ground contact!

- Ensure the socket must be grounded (protective ground contact) before use.
- When working wear personal safety guards to avoid the risk of:
  - Splashing liquids
  - Broken glass containers
- Follow the safety instructions, guidelines and accident prevention regulations.
- Do not touch the running, moving instrument care not rolling your fingers.
- Set up the instrument on a stable, clean, non-slip, dry and fireproof surface. Do not operate the operate the instrument in explosive atmospheres, with hazardous substances or under water.

- If the instrument does not run smoothly, please decrease the motor speed.
- Firmly secure the accessories and vessels in place to avoid damage or risk.
- Only process samples that will not react dangerously.
- Use the standard accessories listed in the "accessories" section, and follow the instructions to use accessories to ensure safety. Please switch off the power before assembly of accessories, confirm the instrument and accessories are intact before switching on each time.
- The voltage stated on the nameplate must correspond to the mains voltage.
- Do not cover the instrument during running.
- Keep the instrument away from the high magnetic field.

## 2. Inspection

### 2.1 Receiving Inspection

Unpack the instrument carefully and check for any damages which may happen during transport. If any damage happens, please contact us for technical support.

**Note:**

If there is any apparent damage to the system, please do not connect to the power line.

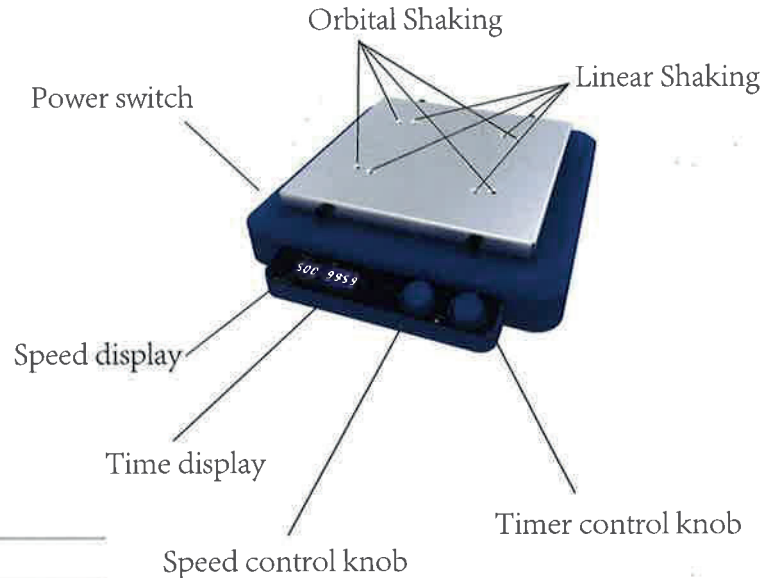
### 2.2 Listing of Items

Items	Qty
Main unit	1
Power cable	1
User manual	1
Rubber plug	4
Column(Linear)	4
Universal attachment with 4 bar	1

Table 1

### 3. Control and Display

#### 3.1 Control



Items	Descriptions
Speed control knob	Set target speed. Push down the knob to start/stop the shaking function.
Timer control knob	Set target time. Push down the knob to start/stop the shaking function.
Speed display	Display the set and real speed values.
Time display	Display the set and remain time values.
Power switch	Switch ON/OFF instrument.

Table 2

### 3.2 Display

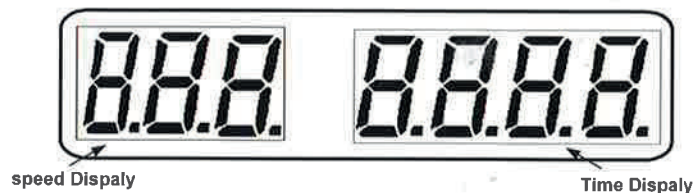


Figure 3

Display	Descriptions
<b>Er 1</b>	Means motor blocked .
<b>Er 2</b>	Means motor overspeed.
Display area	The displayed reading is for the set value when it flashes and for the actual value when it stops flashing

Table 3

## 4. Operation

ensure

- Place the instrument on a safe and stable platform the required operating voltage and power supply voltage matched, and the socket must be earthed reliably.
- Connect the power cable.
- Switch ON instrument.

- The instrument begins self-checking.
- When initialization is over, Digital displays the last running values of speed.
- Rotate the speed control knob to set target speed.  
Press the speed control knob to start shaking  
Press the speed control knob again to stop shaking
- Rotate the timer control knob to set target time.  
Press the timer control button to start shaking function at the set speed and time. During operation, motion can be stopped at any time by pressing the speed control knob or timer control knob. If the timer control knob is pressed again, the shaking function will start again and the timer will restart countdown. When the timer reaches zero, the unit will stop automatically and ring the alarm .


**Note:**

The speed value can be altered during shaking.

## 5. Faults

- When switched ON, the instrument does not work.
  - Check whether the power cable is connected.
  - Check whether the fuse is broken.
- Shaking suddenly stops.
  - Digital displays “Er 01”, indicate the failure of “motor blocked”.
  - Digital displays “Er 02”, indicate the failure of “motor overspeed”.
  - Pressing the speed control knob or timer control knob first to stop shaking, and then restart shaking with less load. If shaking cannot start, then repeat the process and gradually reduce load.

## 6. Maintenance and Cleaning

- Proper maintenance can keep the instrument working properly and lengthen its lifetime.
- Do not spray cleanser into the instrument when cleaning.
- Do not remove the power line when cleaning. Only use recommended cleansers:

Dyes	Isopropyl alcohol
Construction materials	Water containing tenside / Isopropyl alcohol
Cosmetics	Water containing tenside / Isopropyl alcohol
Foodstuffs	Water containing tenside
Fuels	Water containing tenside

- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method will not damage the instrument. Wear the proper protective gloves during cleaning of the instrument.



### Note:

- Electronic device cannot be clean with cleanser.
- If maintenance service required, the instrument must be cleaned first to avoid pollution of hazardous substances.
- If the instrument will not use for a long time, please switch it off and place it in a dry, cleans, room temperature and stable location.

## 7. Associated standards and regulations

Construction in accordance with the following safety standards:

EN 61010-1

UL 3101-1

CAN/CSA C22.2(1010-1)

EN 61010-2-10

Construction in accordance with the following EMC standards:

EN 61326-1

and used in accordance with the instruction manual, may cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference at his own expense.

Changes or modifications not expressly approved by the party responsible for compliance could void the user's authority to operate the equipment.

NOTE: This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to Part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference when the equipment is operated in a commercial environment. This equipment generates, uses, and can radiate radio frequency energy and, if not installed

## 8. Specifications

Items	Specifications
	Orbital and Linear Shaker
Model	VOS-21001
Shaking motion	Orbital / Linear
Motor type	Brushless DC motor
Max.load capacity with platform [kg]	7.5
Orbital diameter[mm]	10
Speed range [rpm]	30-500
Speed Display	Digital Display
Timer range	0-99Hr59Min
Timer Display	Digital Display
Operation type	Continuous/times operation
Permissible ambient temperature [°C]	5-40
Permissible relative humidity	80%

Items	Specifications
	Orbital and Linear shaker
Protection class acc.to DIN EN60529	IP21
Voltage [VAC]	100-240
Frequency [Hz]	50/60
Power	40
Weight [kg]	11
Dimensions [W×D×H]	450×400×1065

Table 4