

AGITADOR VORTEX DIGITAL CON SENSOR
DIGITAL VORTEX STIRRER WITH SENSOR
AGITATEUR NUMÉRIQUE À VORTEX AVEC CAPTEUR

Ref. | Code | Réf. LGB007 - Mod. 710



Este manual es parte inseparable del aparato por lo que debe estar disponible a todos los usuarios del equipo. Le recomendamos leer atentamente el presente manual y seguir rigurosamente los procedimientos de uso para obtener las máximas prestaciones y una mayor duración del mismo.

This manual should be available for all users of these equipments. To get the best results and a higher duration of this equipment it is advisable to read carefully this manual and follow the processes of use.

Ce manuel est une partie indissociable de l'appareil et doit être mis à la disposition de tous les utilisateurs de l'équipement. Nous vous recommandons de lire attentivement ce manuel et de suivre scrupuleusement les procédures d'utilisation afin d'obtenir des performances maximales et une plus longue durée de vie de l'appareil.

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ENVIRONMENT OF USE OF THE INSTRUMENT

To ensure the safety and correct continuous operation of the equipment, the following factors must be considered, as they may cause damage to the instrument:

- Exposure to chemical agents
- Environmental influences, including natural ultraviolet radiation
- Corrosion and wear of protective housing components and other safety elements.

Conditions of use and installation environment:

- Indoor use only
- Maximum operating altitude: ≤ 2000 m
- Operating ambient temperature range from $+5^{\circ}\text{C}$ to $+40^{\circ}\text{C}$
- Maximum relative humidity: $\leq 80\%$
- The power supply must comply with the model specified for the equipment and its main technical parameters
- The installation site must have adequate ventilation
- The equipment must be installed in an environment free from vibrations and draughts that could affect its performance
- The circulating air must not contain conductive dust, explosive gases or corrosive gases

General safety warnings

- Read the manual before using the equipment for the first time
- The equipment should only be operated by trained and authorised personnel
- Maintenance and repairs may only be carried out by authorised technical personnel
- It is prohibited to use the equipment with:
 - Flammable or explosive materials
 - Chemically reactive substances
 - Toxic or radioactive substances or pathogenic microorganisms

- Only use accessories approved by the manufacturer
- In the event of conditions not described in this manual, contact your supplier
- Perform regular inspections and maintenance to ensure safe operation

SAFETY PRECAUTIONS

- Do not connect or disconnect the power cord or operate the switch with wet hands
- Do not connect or disconnect the power cord while the equipment is in operation
- Do not perform cleaning or maintenance tasks while the equipment is switched on
- Do not perform agitation operations when the sample volume exceeds 70% of the tube capacity. The container must remain closed
- Do not install the equipment on unstable, mobile or vibrating surfaces
- Ensure that the supports and accessories are correctly installed before operation.
- Do not exceed the maximum load specified for the equipment.

PRODUCT DESCRIPTION

The LGB007 vortex mixer has been designed in accordance with advanced design concepts and manufacturing technologies and features a compact and robust structure, as well as simple and reliable operation. The equipment is suitable for fixing and mixing reagents, solutions and chemicals in laboratory applications.

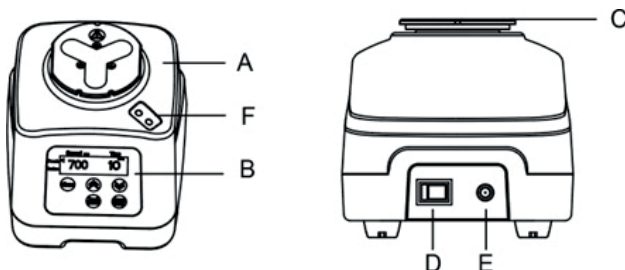
Technical parameters:

Code	LGB007
Model	710
Motor	DC24V/1.5A
Power	20 W
Operating mode	Contact: sensor detection/continuous
Maximum load	1 kg
Speed range	200-3000 rpm \pm 5%
Oscillation mode	Circumference
Circumference diameter	4.5 mm
Display	LCD
Sensor	IR
Timer range	1s-999min/countdown/contact timer
Dimensions	160 x 140 x 145 mm
Weight	2.8 kg
Noise level	\leq 48 dB (A)
Time to maximum speed	\leq 3 s
Braking time	\leq 3 s
Protection	IP20

INTRODUCTION TO THE FUNCTIONS AND APPEARANCE OF THE AGITATOR

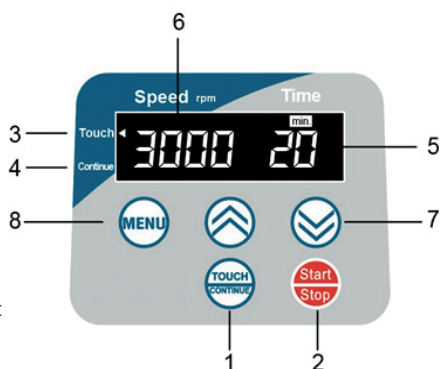
General appearance of the equipment:

- A. Main unit
- B. Control panel
- C. Fixing plate
- D. Power switch
- E. Power connector
- F. Photoelectric sensor



Display appearance:

1. Jog/continuous mode button: selection between momentary (jog) and continuous operation
2. Start/Stop: starts and stops the equipment in continuous mode
3. Jog mode indicator
4. Continuous mode indicator
5. Time display: display in minutes or seconds
6. Speed display: display in rpm
7. Adjustment buttons: for time or speed adjustment
8. Function selector: switches between time and speed settings



OPERATING INSTRUCTIONS

Note: Before using the equipment, check that it has not been damaged during transport.

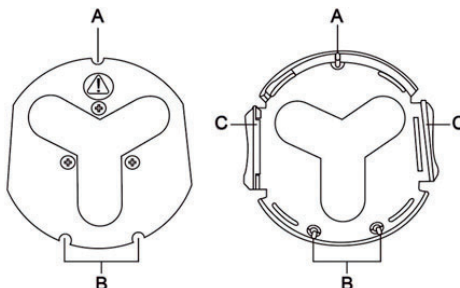
- Check that the equipment is clean, intact and free from visible damage
- Check that the oscillation system mounting plate is securely installed, with no play
- Ensure that the control panel controls are correctly aligned and secured
- Check that the shock-absorbing pad and accessories are in good condition and correctly installed.

If you detect any anomalies, do not use the equipment and contact your supplier. Do not carry out repairs without the intervention of qualified technical personnel.

Installation of supports and plate fixings:

A/B. Installation slot

C. Buckle



■ Place the equipment on a suitable, stable work surface. Connect the power supply, ensuring that the equipment is switched off, and select the appropriate bracket or plate accessory

■ To install the standard bracket, first secure one side and, using the elasticity of the material, place the opposite side on the oscillation system fixing plate.

■ To install the plate clamps, align the mounting slots with the corresponding guide and secure one side of the clamp to the fixing plate. Then press the buckle inwards until you hear a 'click', indicating correct installation. Check the fastening by gently pulling the clamp upwards.

On/Off:

■ Operate the power switch:

- Position 'I': equipment switched on
- Position 'O': turns the equipment off

Operation:

■ When the unit is switched on, the default operation is jog mode

■ Press the MENU button to select the speed; the speed display will flash. Adjust the value using the ▲ / ▼ buttons (see the accessories table for speed limits)

■ In jog mode, when the tube is brought close to the photoelectric sensor, the equipment starts automatically and stops when the tube is removed. The time is displayed as accumulated operating time

■ In continuous mode, set the desired speed and time and press Start/Stop. The equipment will operate according to the set parameters; the time will be displayed in countdown mode

■ When the programmed time has elapsed, the equipment will stop automatically, the display will show 'End' and an acoustic signal will be emitted

Maintenance:

■ Safety:




- Do not clean while the equipment is switched on or plugged in.
- Decontaminate properly if it has been in contact with hazardous substances
- Avoid organic solvents that may damage the bearings; prevent liquids from entering the shaft or bearings.

■ Accessories:

- Do not strike or use sharp objects
- Check periodically for cracks, corrosion or wear; discontinue use if damage is detected
- When removing clamps, lift vertically; do not shake sideways

- Cleaning:
 - Accessories: cloth or sponge with neutral detergent, rinse with distilled water, dry upside down
 - Equipment: soft cloth with neutral detergent, remove residue with damp cloth
- Serious problems:
 - Electrical faults, burning smell, broken accessories or strong vibrations require immediate contact with the manufacturer or authorised distributor
 - Repairs only by qualified personnel

LIST OF ACCESSORIES

NAME	CODE	SPEED	DESCRIPTION	APPEARANCE
Tube support	LGG030	Max 3000 rpm	For test tubes and small containers not exceeding Ø50 mm.	
Flask support	LGG031	Max 3000 rpm	For flasks or small containers not exceeding Ø85 mm	
Tue support	LGG032	Max 1500 rpm	For 1.5 mLx14 test tubes (Ø10 mm)	

TROUBLESHOOTING

Problem	Cause and solution
The equipment does not stir	<ol style="list-style-type: none"> 1. Check that the power outlet and connection are correct, and that the power outlet is receiving power 2. Is the power switch faulty? 3. If this possibility cannot be ruled out, contact your supplier
The appliance stopped suddenly	<ol style="list-style-type: none"> 1. Check the electrical connection 2. Check that the power adapter indicator is lit 3. If there is a burning smell, disconnect immediately and contact the supplier 4. Check that the supply voltage is within the range 100-250 V AC
Excessive vibration or noise	<ol style="list-style-type: none"> 1. Slight vibration may be normal due to critical speed 2. Check that the clamp is securely fastened 3. Check that the bracket is securely fastened 4. Check that the fixing plate oscillates smoothly; if there is resistance, contact your supplier
LCD indicator off when switched on	<ol style="list-style-type: none"> 1. Check the power connection 2. Check other indicators; if they are not working, contact your supplier 3. If the problem persists, contact your supplier
Time and/or speed change buttons do not respond	<ol style="list-style-type: none"> 1. Contact your supplier