Corning® LSE™ Vortex Mixer

Instruction Manual

Catalog Number:
6774



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1.0 Overview

The Corning® LSE™ Vortex Mixer is a general purpose laboratory vortex mixer. Mixing speed is adjustable up to 3,500 rpm. A three-position switch allows the mixer to be operated continuously or by touch activation. The heavy metal base and rubber feet prevent the unit from moving across the bench, even at maximum speed.

Read this manual thoroughly before attempting to operate the LSE Vortex Mixer. All persons operating this piece of equipment should review the Safety Precautions section of this manual.

2.0 Safety Precautions

The following precautions should be taken when operating or working near the Corning LSE Vortex Mixer:



CAUTION: A pinch point exists between the cup head and enclosure.

- Always wear safety glasses and other appropriate protection when operating this equipment.
- Never operate the unit without a shaking head securely attached.
- Shake hazardous samples in appropriate containment vessels.
- Do not stir volatile materials.
- Do not immerse the unit for cleaning.
- Do not modify or substitute the grounded power plug. Use only power cords supplied by the manufacturer. Use only properly grounded outlets to avoid shock hazard.
- Do not modify the unit electrically or mechanically as personal injury or product damage may occur.
- Do not use the device in a caustic or explosive atmosphere.
- Not for industrial use. These units are designed for use in laboratory environments by persons knowledgeable in safe laboratory practices.
- Do not use equipment in a manner other than stated in this manual since the protection provided by the equipment may be impaired.
- Do not turn the speed knob counterclockwise from the “0” or Off position.
- Repair should be performed only by qualified individuals.

3.0 Technical Specifications

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

Electrical Requirements	AC 100-240V, 50/60Hz, 1.5A Input: 24V, 16W
Operating Mode	Touch or continuous
Speed Range	200 to 3,500 rpm
Weight	4.0 lbs. (1.8 kg)
Accuracy	± 150 rpm at maximum speed
Ambient Temperature	4°C to 40°C
Operating Conditions	Ambient humidity of ≤80% at 31°C, decreasing linearly to 50% relative humidity at 40°C
Protection Class	IP 21

The LSE Vortex Mixer is designed to be safe at least when operated under the following conditions:

- Indoor use
- Pollution Degree 2
- Altitude up to 2,000 meters
- Installation Category II

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 vortex mixer is operated in a commercial environment. The equipment generates, uses, and can radiate radio frequency energy and, if not installed and used in accordance with the user manual, may cause harmful interference to radio communications. Operation of equipment in a residential area is likely to cause harmful interference in which case the user will be required to correct the interference.

CAUTION: This equipment is not intended for use in residential environments and may not provide adequate protection to radio reception in such environments.

This ISM device complies with Canadian ICES-001.

Cet appareil ISM est conforme à la norme NMB-001 du Canada.

4.0 Installation

4.1 Unpacking

Upon receipt of the Corning® LSE™ Vortex Mixer, examine the exterior carton for damages. In the event of shipping damage, a claim must be filed with the transportation carrier within 10 days of receipt. Save all packaging for inspection by the carrier.

Carefully unpack the unit and check for completeness. Included in the carton should be the following:

- Vortex mixer with cup head
- Instruction manual

If any of these items are missing, contact Corning Customer Service.

Save the original packaging until the unit has been shown to be operating properly.

Verify that the unit is rated for the proper voltage by checking electrical/serial number label on the bottom.

4.2 Selecting the Location

Locate the mixer on a level, stable surface near a grounded electrical outlet. The surface should be clean and free of dust to ensure that the feet grip the surface firmly. Allow sufficient clearance on all sides of the unit for proper ventilation. Position at least 30 cm from walls, 30 cm from ceilings, and 30 cm between mixers if using multiple units.

With the power switch in the Off position, plug the power cord into a grounded receptacle.

5.0 Operating Instructions

All operating controls are located on the front panel. The power switch, located on the left side of the panel, has three positions: On, Off, and Touch. When set to the On position, the mixer will operate continuously until the switch is moved to either the Off or Touch position. When set to the Touch position, the mixer is activated by depressing the mixing head. When pressure is released from the mixing head, operation will stop.

The Speed control, located on the right side of the panel, is continuously adjustable. Oscillating speed increases at a nonuniform rate to a maximum of 3,500 rpm as the knob is turned clockwise. Before turning on the mixer, set the speed control to the minimum.

To begin operation, move the power switch to either the Touch or On position, and turn the Speed control to the desired setting. If the power switch is in the On position, the shaking head will begin moving immediately. If the power switch is in the Touch position, operation will begin when an object is placed on the shaking head and slight pressure is applied to depress the head. Shaking will cease when the object is removed and pressure released.

6.0 Maintenance



WARNING: Disconnect the LSE Vortex Mixer from the power source before attempting any cleaning or maintenance procedures.

After each use, wipe down the mixer with a soft cloth. Do not immerse the unit or pour liquids over it as electrical shock may occur. Clean up any spills immediately, taking the proper precautions. If required, the shaking head may be removed. First, disconnect the mixer from the power source and then slowly pull the shaking head straight up and off of the shaking post. The head may then be cleaned with a mild detergent. Be sure the head is thoroughly dry before replacing it on the unit.

The motor and shaking mechanism in the LSE Vortex Mixer requires no routine maintenance or lubrication. To ensure a long life for the mixer, it should be used in a dry, non-corrosive environment.

7.0 Accessories (sold separately)

Cat. No.	Description
480100	Optional head, 3 inch, for processing larger numbers of tubes
480101	Optional head for 24 x 1.5/2.0 mL tubes, 24 x 0.5 mL tubes, and 32 x 0.2 mL tubes (or 4 tube strips)
480102	Optional head for 1 microplate or 64 x 0.2 mL tubes or 8 x 0.2 mL tube strips
480103	Optional head for 8 x 15 mL and 8 x 12/13 mm diameter tubes
480104	Optional head attachment for 6 x 50 mL tubes
480105	Optional head for 12 x 1.5/2.0 mL tubes, held horizontally
480106	Optional head for 4 x 15 mL tubes, held horizontally
480107	Optional head for 2 x 50 mL tubes, held horizontally

Instructions for using accessories.

1. Turn the power Off, and rotate the speed knob to the minimum.
2. Hold the unit down, and lift the mixing head.
3. Apply the desired optional accessory, and load it in a balanced manner.
4. Turn on the unit.
5. Slowly rotate the speed knob clockwise until the desired mixing level is achieved.
   NOTE: If the unit starts to move across the bench, reduce speed accordingly.

8.0 Limited Warranty

Corning Incorporated (Corning) warrants that this product will be free from defects in material and workmanship for a period of two (2) years from the date of purchase. CORNING DISCLAIMS ALL OTHER WARRANTIES WHETHER EXPRESSED OR IMPLIED, INCLUDING ANY IMPLIED WARRANTIES OF MERCHANTABILITY OR OF FITNESS FOR A PARTICULAR PURPOSE. Corning's sole obligation shall be to repair or replace, at its option, any product or part thereof that proves defective in material or workmanship within the warranty period, provided the purchaser notifies Corning of any such defect. Corning is not liable for any incidental or consequential damages, commercial loss or any other damages from the use of this product.

This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in the supplied 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 motor brushes, fuses, light bulbs, batteries or damage to paint or finish. Claims for transit damage should be filed with the transportation carrier.

In the event this product fails within the specified period of time because of a defect in material or workmanship, contact Corning Customer Service at: USA/Canada 1.800.492.1110, outside the U.S. +1.978.442.2200, visit **www.corning.com/lifesciences**, or contact your local support office.

Corning's Customer Service team will help arrange local service where available or coordinate a return authorization number and shipping instructions. Products received without proper authorization will be returned. All items returned for service should be sent postage prepaid in the original packaging or other suitable carton, padded to avoid damage. Corning will not be responsible for damage incurred by improper packaging. Corning may elect for onsite service for larger equipment.

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. You may have other rights which vary from state to state.

No individual may accept for, or on behalf of Corning, any other obligation of liability, or extend the period of this warranty.

For your reference, make a note of the serial and model number, date of purchase, and supplier here.

Serial No. _____ Date Purchased _____

Model No. _____ Supplier _____

9.0 Equipment Disposal



According to Directive 2012/19/EU of the European Parliament and of the Council of 4 July 2012 on waste electrical and electronic equipment (WEEE), this product is marked with the crossed-out wheeled bin and must not be disposed of with domestic waste.

Consequently, the buyer shall follow the instructions for reuse and recycling of waste electronic and electrical equipment (WEEE) provided with the products and available at **www.corning.com/weee**.

How to Purchase: For specific availability in your region and purchasing options, terms and conditions of sale, customer/product support, and certificates, visit **www.corning.com/how-to-buy**.

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