

INSTRUCTION MANUAL

Models:

6775 – 120V US

6776 -- 230V EU

6777 -- 230V UK

6778 -- 100V JP



Warnings

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

- **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.
- **Not** explosion or spark proof.
- **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 Operating Conditions (Page # 2) since the protection provided by the equipment may be impaired.
- **Do not** turn speed knob counterclockwise from the “0” or off position.
- **Repair** should be performed only by qualified individuals.

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Operating Conditions

The Corning® LSE™ Vortex Mixer is designed to be safe under the following conditions:

- For indoor use only
- Altitude up to 2000 meters
- Ambient temperature of 4°C to 65°C
- Maximum relative humidity 80% for temperatures up to 31°C then decreasing linearly to 50% relative humidity at 40°C
- Main supply voltage fluctuations not to exceed $\pm 10\%$ of the nominal voltage
- Installation Category II
- Pollution Degree 2
- Position at least 30 cm from walls, 30 cm from ceilings and 30 cm between mixers if using multiple units

General Information

The Corning® LSE™ Vortex Mixer is a general purpose laboratory vortex mixer. Mixing speed is adjustable up to 3,000 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 “walking” across the bench, even at maximum speed.

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

Technical Specifications

Model	Catalog Number	Operating Mode	Power (Volts/Hz/ Amp)	Speed Range	Weight
LSE Vortex Mixer 120V	6775	Touch or Continuous	120V/60Hz/0.6	200-3400 rpm	6.0 lbs. 2.5 kg.
LSE Vortex Mixer 230V EU Plug	6776	Touch or Continuous	230V/50Hz/0.3	200-2850 rpm	6.0 lbs. 2.5 kg.
LSE Vortex Mixer 230V UK Plug	6777	Touch or Continuous	230V/50Hz/0.3	200-2850 rpm	6.0 lbs. 2.5 kg.

Unpacking the Corning LSE Vortex Mixer

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
Warranty card

If any of these items are missing, contact Corning Customer Service immediately at:

- 1.800.492.1110 (for toll-free calling within the U.S. and Canada)
- 1.978.442.2200 (outside the U.S.), or
- Contact your local Corning support office listed on the back cover of this manual.

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 no. label on the bottom.

Installation

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.

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

Operating the Corning® LSE™ Vortex Mixer

All operating controls are located on the front panel. The power switch, located on the left side of the panel, has three positions - TOUCH, OFF and ON. 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. When set to the ON position, the mixer will operate continuously until the switch is moved to either the OFF or TOUCH position.

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 3,400 rpm (2850 for 230V units) 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.

Preventative Maintenance



Warning: Disconnect Corning® LSE™ Vortex Mixer from 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 vortexer from the power source and then slowly pull the shaking head straight up and off the shaking post. The head may then be cleaned with a mild detergent. Be sure the head is thoroughly dry before replacing on the unit.

The motor and shaking mechanism in the Corning 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.

Service and Repair Information

If you have a question about the Corning LSE Vortex Mixer or have a service inquiry, contact Corning Customer Service immediately at:

- 1.800.492.1110 (for toll-free calling within the U.S. and Canada)
- 1.978.442.2200 (outside the U.S.), or
- Contact your local Corning support office listed in the back of this manual.

Before returning any unit for service, a Return Authorization (RA) number must first be obtained. Equipment sent in without prior authorization will be returned at the customer's expense. When returning a unit to Corning for service, it should be sent in the original packaging. If this is not possible, be sure that the unit is sufficiently packed. Any damage resulting from improper packaging is the responsibility of the customer. A written explanation should accompany the unit along with the RA number.

Optional Accessories

Several additional shaking heads are available for the Corning® LSE™ Vortex Mixer. To change heads, disconnect the vortexer from the power source and then remove the vortexing head by slowly peeling it straight upward off the post. An optional head can then be placed on the post and secured by applying firm pressure.

Optional shaking heads are as follows:

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 32x 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

Accessories may be ordered from your Corning dealer or directly from Corning.

Warranty Statement

Corning Incorporated (Corning) warrants that this product will be free from defects in material and workmanship for a period of two (2) years from 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's Customer Service at the following numbers: USA: 1-800-492-1110; Canada: 1-978-442-2200. For other regions of the world, please visit www.corning.com/lifesciences or see the included instruction manual for a list of World Wide Support Offices.

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 number, date of purchase and supplier here.

Serial No. _____ Date Purchased _____

Supplier _____

Declaration of Conformity



Corning Life Sciences hereby confirms that the product

Corning[®] LSE[™] Vortex Mixer

Is in accordance with the following directives and standards:

2006/95/EC	Low Voltage Directive
2004/108/EC	EMC Directive
98/37/EC	Machine Directive
2002/95/EC	RoHS
2006/96/EC	WEEE

EN 61010-1
EN 61010-2-020
EN 61326-1:2006



Quality Manager

This equipment has been tested and found to comply with the limits for a Class A digital device, pursuant to both Part 15 of the FCC Rules and the radio interference regulation of the Canadian Department of Communications. 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 and used in accordance with the instruction manual, many cause harmful interference to radio communications. Operation of this equipment in a residential area is likely to cause harmful interference which case the user will be required to correct the interface at his own expense.

Product Disposal



This symbol, if present on the product, indicates that the product was planned for use in a country complying with the Waste Electrical and Electronic Equipment EU Directive, 2002/96/ED. This symbol indicates that this equipment must not be disposed of with unsorted municipal waste. It is the product user's responsibility to correctly dispose of waste equipment by handing it over to an authorized facility for separate collection and recycling. It is the product user's responsibility to decontaminate waste equipment from biological, chemical, and/or radiological hazards prior to disposal.

Additional information pertaining to the disposal of Corning per the WEEE Directive can be obtained at www.corning.com/weee.

Please register your warranty online at
<http://www.corning.com/lifesciences/warranty>

CORNING

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