



## user instructions

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### OPERATING AND SAFETY INSTRUCTIONS for

### VOLUMETRIC FLASK SHAKER

**Model: 099A LC1012050,100,250,500 2.0 amps, 120 volts, 50/60 Hz.**  
**099A LC1024050,100,250,500 240 volts, 50/60 Hz.**



## Introduction

The Large Capacity Mixer is designed to mix the contents of multiple volumetric flasks. Place the mixer on a sturdy bench that is clean and dust free. There are also holes on each end of the chassis for permanently mounting the mixer. Be sure the vibration absorbing feet are resting flat and not bent, or distorted when placing on the bench.

**\*\*Note:** When inserting glassware into clips, use extreme caution as flask may fracture upon violent entry.

**NOTE:** The knobs should always align to the back of the vortexer; perpendicular to the flats to the supports.

## Operation: Front Panel Features

1. *SPEED POSITION KNOB:* This allows adjustable speed of the vortexer drive plate from 0 to 2000 rpm.
2. *POWER SWITCH:* On/Off.
3. *PULSAR SWITCH:* On/Off.
4. *FREQUENCY KNOB:* When turned on, this turns off the motor for a brief moment and then back on. The rate of On-Off is adjustable by turning the knob. An increase in the clockwise direction increases the number of On-Off cycles. Pulse rate varies from 80 to 100 pulses per minute.

## Pulsing Feature:

The pulser knob can adjust the mixing action of a liquid and periodically interrupt it. This provides an upper and lower mix as well as vortexing.

Increasing the speed may tend to throw a few drops out of the tube if they are not capped. Tube volume should not exceed one half of the overall tube height.

The motor Speed Control Knob may be left at any setting. Larger diameter tubes, bottles, or flask require a slower speed than test tubes. Start the vortexing for these a minimum speed and increase until mixing occurs.

Prior approval must be obtained from Glas-Col before any products can be returned. Call Glas-Col for a Returned Goods Authorization Number and include this number on labels and shipping papers.

## Safety

This product has been designed for safe operation when in normal use. Please read the following Safety Information before operating the equipment.

Unless specifically designated otherwise, Glas-Col mixers are not intended for use with flammables or in hazardous areas.

Do not change or remove a vessel while still in motion.

Check the mixer before each operation. Damaged mixers should be removed from service immediately.

Do not place hand around drive plate edge during operation.

### **Specifications:**

Power:	LC1012050,100,250,500	120 vac +/-10%
		50 to 60Hz. +/- 5%
	LC1024050,100,250,500	240 vac +/-10%
		50 to 60Hz. +/- 5%

Ambient Temperature: 77° F/25° C +/-5° C

Operating Environment: 0 to 90% relative humidity  
32 to 100° F/0 to 37° C

### **Maintenance**

Glas-Col mixers do not require regularly scheduled maintenance. However, regular inspection is recommended. Glas-Col mixers should be protected from chemical spillage, mechanical damage and corrosive atmospheres so far as possible. Contamination, overheating and general misuse will greatly reduce the life of a mixer.

Replacement or different cartridge sizes are available for the Large Capacity Mixer. See the chart below for sizes available. For custom cartridge sizes consult the factory.

### **Limited Warranty**

Glas-Col warrants products of its manufacture to be free from defects in material and workmanship for one year and agrees to repair or replace without charge any products found defective upon examination at the factory. With proper care and operation, Glas-Col products will give long and efficient service. Chemical spillage, overheating, overloading and general misuse will greatly reduce the service life. Glas-Col is not responsible for damage to apparatus due to improper installation or through attempts to

operate the apparatus beyond its rated capacity, intentional or otherwise. Normally expendable parts are not covered by this warranty.

In the event of an incident due to a defective replacement component, Glas-Col will accept responsibility only if the component was defective from the outset. Glas-Col reserves the right to deny responsibility for the incident if the user fails to comply with any instructions provided by using spare parts which are not guaranteed.

**APART FROM SUCH WRITTEN STATEMENT OF WARRANTY, THERE ARE NO WARRANTIES, EXPRESSED, IMPLIED OR STATUTORY WHICH EXTEND BEYOND THE DESCRIPTION OF THE PRODUCTS ON THE FACE HEREOF.**

Glas-Col products are intended only for legal and legitimate purposes in commercial, laboratory and industrial settings.

Glas-Col reserves the right to make product refinements without prior notice.

## **Returns**

Call or fax Customer Service for a Return Goods Authorization (RGA) number before returning a Glas-Col product.

Reference the RGA number on the shipping box and on a written description of the problem.

A 20% restock charge of the net price is charged for all standard product returned to stock.

### **Glas-Col**

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