

Mini Vortex Mixer

Instruction Manual

Catalogue Numbers

MINIVORTEX

Record the following for your records:

Model _____
Catalogue No. _____
Date of Delivery _____
Warranty Period _____
Serial No. _____
Invoice No. _____
Purchase Order No. _____

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Packing List

Upon receipt of the Mini Vortex Mixer, examine the exterior carton for damages. In the event of shipping damage, a claim must be filed with the transportation carrier within 7 days of receipt. Save all packaging for inspection by the carrier. Carefully unpack the unit and check for completeness. Included in the packing should be the following:

Mini Vortex Mixer

Power Adapter with 4 plugs (North America, Japan, EU, UK, and Australia)

Flexible Vortexer Caps

Packing List Checked by: _____

Date: _____

The packing lists should be referred to as soon as the units are received to ensure that all components have been included. The unit should be checked for damage when received. Save the original packaging until the unit has been shown to be operating properly.

Cleaver Scientific is liable for all missing or damaged parts / accessories within 7 days after customers have received this instrument package. Please contact Cleaver Scientific immediately regarding this issue. If no response within such period is received from the customer, Cleaver Scientific will no longer be liable for replacement/damaged parts.

Please contact your supplier if there are any problems or missing items.

Safety Information



When used correctly, these units pose no health risk. However, these units can deliver dangerous levels of electricity and are to be operated only by qualified personnel following the guidelines laid out in this instruction manual. Anyone intending to use this equipment should read the complete manual thoroughly.

These units comply with the following directives:

Safety Standards:

EN/IEC 61010-1 ed. 3.1, 2017

EN/IEC 61010-2-051 ed.3, 2015

UL Std. 61010-1 ed.3, 2012

UL Std. 61010-2-051 ed.3, 2015

CAN/CSA C22.2 No.61010-1-12 (R2017)

CAN/CSA C22.2 No.61010-2-051 (R2015)

2014/35/EU (Low Voltage Directive)

EMC Standards:

IEC 61326-1:2013 (IEC 61326-1:2012)

FCC Part 15, Subpart B: 2015

ICES-003, Issue 6

2012/19/EU (WEEE)

2011/65/EU RoHS2

Warnings

Before operating the mini vortex mixer unit for the first time, please read this instruction manual carefully. This manual contains important information, safeguards, and operating instructions.

1. Never use this product in any manner inconsistent with these instructions.
2. This product is intended to be used indoors only.
3. This product is intended for mixing aqueous solutions in suitable tube containers with cap properly installed.
4. Do not attempt to vortex materials with a density greater than 1.2 g/mL.
5. **Note on Vortexing:** use only approved containers with screw-tight lids or lockable lids to vortex fluids.
6. Check that the cap/lid of the container is completely secure before using unit to mix.
7. Observe general laboratory safety precautions and regulations when using this product.
8. Do not attempt to vortex explosive, flammable, or corrosive liquids.
9. Do not use if the unit is damaged.
10. Do not attempt to operate if the flexible vortexing cover is loose, missing, or damaged.
11. Do not use units that have not been correctly installed or repaired.
12. Do not attempt to disassemble or modify this product.
13. Do not move the unit while it is in operation.
14. Do not immerse the unit in water. Injury due to shock or fire may result.
15. Follow all precautions from the Material Safety Data Sheet (MSDS) for any reagent you use with this instrument.
16. Do not use caustic solvents or flammable liquids near this or other electrical equipment.
17. Do not operate in a hazardous, explosive or flammable environment.
18. Always work in a manner which endangers neither the user nor any other person.
19. If unit is malfunctioning or needs to be returned, please contact either the authorized dealer or Cleaver Scientific Ltd.

20. Only use original manufacturer's flexible vortexing cover or AC adapter.
21. Improper use of equipment will void the warranty.
22. Any attempt to disassemble unit will void warranty.
23. Store at room temperature in a dry area. Do not expose to sunlight, moisture, or extreme temperatures for prolonged periods of time.

Specifications

Dimensions	132 mm x 111 mm x 76 mm (LxWxH) 5.2 in x 4.4 in x 3.0 in (LxWxH)
Weight	1.9 lbs (.87 kg) not including power supply
Orbit, Speed	6.0 mm, approx 4,500 rpm
Tube Sizes	50 mL, 15 mL, 5 mL, 2 mL, 1ml
Electrical	Power Adapter rating Input: 100 - 240VAC 50/60Hz, 0.3A Output: 12VDC, 1000mA

Device comes with interchangeable plugs for the: UK, EU, North America, and Australia.

Mini Vortex Mixer:	Input: 12VDC Current under load (approx.): 0.65A Power under load (approx.): 7.8W
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Operating Conditions

Cleaver Vortex Mixer is designed to be safe under the following conditions:

- For indoor use only
- Altitude up to 2000 meters
- Temperature of 2°C to 40°C
- Maximum relative humidity: Non-condensing, 80% for temperatures up to 31°C decreasing linearly to 50% relative humidity at 40°C
- Main supply voltage fluctuations not to exceed 10% of the nominal voltage
- Installation Category II
- Pollution Degree 2

Warning

- If the unit is not used as recommended by the manufacturer the overall safety will be impaired
- Check MSDS, wear required Personal Protective Equipment, and observe all applicable local and national regulations before dispensing and disposing of hazardous samples.
- The laboratory procedure should ensure that no person or hazardous substances are present within a 2' (30cm) zone around the instrument when operating.

Introduction

The Mini Vortex Mixer instrument is designed for general laboratory use.

The Mini Vortex Mixer is a small tube mixing unit designed for laboratories in the bioscience, medical, and chemistry fields. This instruction manual cannot address all safety hazards. It is the responsibility of the user to consult and observe all health and safety precautions and to assess the instrument's suitability to perform the task.

Operating the Mini Vortex Mixer

1. Remove the contents from the package, examining them carefully for breakage, defects, or missing parts. Save the packaging.
2. Place Mini Vortex Mixer on a sturdy, stable, level surface near a grounded electrical outlet away from the edge of the counter and other moving equipment. The surface should be clean. Ensure that no person or hazardous substances are present within a 12" (30cm) zone around the instrument when operating. Make sure the power cord is clear of hot surfaces and other hazards.
3. Carefully fill container with fluids to no more than 75% of container's total volume. Note the level of the liquid which will rise to accommodate the spinning vortex of fluid when unit is powered. Be sure to leave sufficient room at the container top for this rise in fluid level.
4. Secure the container lid to the tube being used.
5. Place bottom cone of the tube into the cone-shaped pocket on top of the vortex unit.
6. Firmly hold only the top of the tube by the lid or cap and press down just hard enough to activate the orbital vortex action, pressing harder than necessary will only decrease the efficiency of the vortexing action.
7. Hold down tube as long as necessary to blend the mixture.

Warning!

Use only the power adapter delivered with the product. Use of other power adapters will void warranty.

Warning!

Do not use if cord or power supply is damaged.

Care and Maintenance

Warning: Disconnect the vortexer from power source before attempting any cleaning or maintenance procedures.

Cleaning

After each use, wipe down the mixer with a soft cloth. Wipe with cloth dampened with water and use with mild soap if needed. Do not immerse the unit or pour liquids over it as electrical shock may occur. Clean up any spills immediately taking the proper precautions.

Maintenance

The Mini Vortex Mixer is a maintenance free product. There are no user serviceable parts inside, only the rubber vortexing cap is replaceable.

Clean unit as often as is deemed necessary. Clean unit only when it is not plugged into an electrical outlet. The unit can be completely wiped using a damp cloth and a mild, non-corrosive detergent. Do not use any solvent on the unit that may attack plastic or rubber.

Ensure all parts are thoroughly dry prior to operation.

Do not immerse the unit or the power adapter.

Troubleshooting

Trouble	Possible Cause	Solution
Unit does not operate	<ul style="list-style-type: none">- Not properly plugged in- Pressure switch not being activated with enough force	<ul style="list-style-type: none">- Plug in unit- Verify correct position of tube, and press down hard enough to activate
Fluid in tube is not forming a visible vortex	<ul style="list-style-type: none">- Too much fluid in tube	<ul style="list-style-type: none">- Leave a minimum of 25% of open space in the vortex container
Flexible vortexing cover comes off	<ul style="list-style-type: none">- Cover not properly Installed- Cover is damaged	<ul style="list-style-type: none">- Snap cover back on- Check cover for damage. Replace with spare cover

Warranty

The Cleaver Scientific Ltd. Vortex have a warranty against manufacturing and material faults of 3 years from date of customer receipt.

If any defects occur during this warranty period, CSL will repair or replace the defective parts free of charge.

This warranty does not cover defects occurring by accident or misuse or defects caused by improper operation. The unit is designed for use only by trained laboratory personnel. Use by anyone else will void this warranty

Units where repair or modification has been performed by anyone other than CSL or an appointed distributor or representative are no longer under warranty from the time the unit was modified.

Units which have accessories or repaired parts not supplied by CSL or its associated distributors have invalidated warranty.

CSL cannot repair or replace free of charge units where the product is rendered inoperative because of: (a) wear occasioned by use; (b) negligence; (c) accident; (d) incorrect maintenance; (e) use under abnormal condition of temperature, dirt or corrosion or use with abrasive or corrosive materials.

If a problem does occur, then please contact your supplier or Cleaver Scientific Ltd:

Cleaver Scientific Ltd.

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