



Digital Vortexer

Instruction Manual

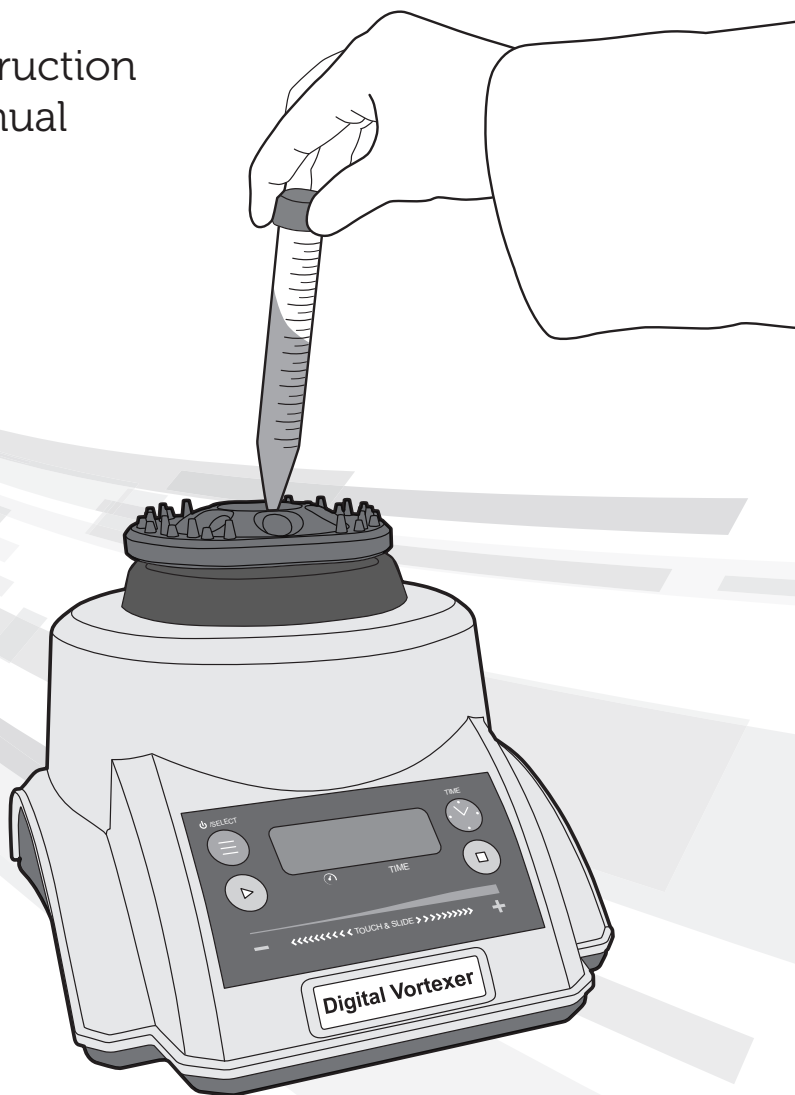


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Safety Precautions

This vortex unit is intended for use as a general-purpose laboratory instrument for the mixing together or agitating different compounds for laboratory purposes. This vortex unit is intended to be operated by laboratory personnel.

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 the task.

Caution!

Before starting the device for the first time, please read this instruction manual carefully. This manual contains important information, safeguards, and operating instructions.

1. Always completely inspect the device including the rotor for damage (broken or cracked housing and base, loose fasteners, damage from solvents, etc.) before connecting the power cord and before each use. Do not use this device if any damage is found.
2. Do not attempt to disassemble any part of the centrifuge.
3. Never use this product in any manner inconsistent with these instructions.
4. This product is intended to be used indoors only.
5. Use only the power adapter and grounded (earthed) power cords delivered with the product, use of other power adapters and grounded power cords will void the warranty. Only plug the power cable into properly grounded (earthed) electrical sockets.
6. This vortex unit is intended for conical bottom tubes, by pressing the tube to the various vortex pockets to vortex/agitate the tube contents.
7. Observe general laboratory safety precautions and regulations when using this product.
8. Do not move unit while it is operating.
9. Do not immerse the product in water. Injury due to shock or fire may result.
10. Do not ever vortex anything without a securely fastened lid.
11. Follow all precautions from the Material Safety Data Sheet (MSDS) for any reagent you use with this instrument.

12. Do not use solvent or flammable liquids near this or other electrical equipment.
13. Do not vortex flammable, explosive, or corrosive materials.
14. Do not operate in a hazardous or flammable environment.
15. Do not use any solvent on the unit that may attack plastic or cause cracks in the rotors or corrode metal parts in the rotors.
16. Always work in a manner which endangers neither the user nor any other person.
17. Should the instrument fail to work to specification, immediately stop using it. Clean and troubleshoot the instrument according to the instructions under "Trouble Shooting" before any further use of the instrument. Contact an authorized dealer or the manufacturer if trouble persists.
18. Do not attempt to stop a running unit manually. Doing so can cause the unit to fail and will void the warranty.
19. Only use original manufacturer's parts, AC adapters any other spare parts.
20. Repairs are to be performed by trained and authorized service personnel only. Contact Heathrow Scientific® LLC.
21. Opening the instrument housing or improper use of the instrument voids the warranty. If there is a failure during the warranty period, contact Heathrow Scientific® LLC for warranty service.
22. Do not attempt to use units that have not been correctly installed or repaired.
23. Do not attempt to disassemble or modify this product.
24. Store at room temperature in a dry area. Do not expose to sunlight, moisture, or extreme temperatures for prolonged periods of time.
25. Caution: Exposure to certain chemicals can damage unit causing corrosion, crazing, and cracking of housing.
26. Always operate the unit on a level surface for best performance and maximum safety.

Warning!

If the unit is not used as recommended by the manufacturer, the overall safety will be impaired.

Warning!

Check MSDS, wear required Personal Protective Equipment, and observe all applicable local and national regulations before dispensing and disposing of hazardous sample.

Warning!

The laboratory procedure should ensure that no person or hazardous substances are present within a 24" zone around the device when operating.

Warning!

Do not perform maintenance or service without first completely.

Warning!

Do not use the unit in a hazardous atmosphere or with hazardous materials for which the unit was not designed. Also, the user should be aware that the protection provided by the equipment may be impaired when used incorrectly.

Warning!

ONLY use power cords and power adapter supplied with unit!

Warning!

Do not remove conical tube bottom from vortex pocket while running, tube can fly off out of control.

Technical Data

Supplied Equipment (Spare part item numbers):

Note: consumables (tubes, reagents, etc.) to be used within their expiration date and are NOT INCLUDED with this product.

- Digital Vortexer
- Digital Vortexer Replacement Silicone Cap (120924)
- Universal AC power adapter with 4 plugs (120922)

Environmental Ratings:

Note: For Indoor use

Altitude: Up to 2,000 m, Atmospheric Pressure: 80kPa – 107kPa

Operating Temperature: 2°C to 40°C

Maximum Relative Humidity:

80% RH up to 31°C decreasing linearly to 50% RH at 40°C

Environmental Storage and Transport Conditions:

Storage temperature: -20°C – 55°C

Atmospheric pressure: 80kPa – 107kPa Relative humidity: ≤ 80% RH noncondensing

Precipitation: both unpacked vortexer and vortexer in original packaging must be protected from precipitation

Dimensions: 201 mm x 155 mm x 142 mm (7.9”L x 6.1”W x 5.6”H)

Weight: 2.40 kg (5.2 lbs.)

Capacities: Unit was designed for any conical bottom tubes up to 50 mL. Larger tubes with conical bottoms can be used for mixing compounds with a maximum suggested time of 30 seconds.

Weight Limit of Sample: Do not exceed 500 grams / 1.1lbs. Intermittent operation force: Press down on the Vortex plate with approx. 900 grams / 2 pounds of force to activate the intermittent operation. Applying excessive force can damage the Vortexer.

Speed Range and Maximum Time for Operating Modes:

Continuous mode:

RPM: RPM selection will range from 600 – 2,600 at increments of 200 (per the touch slide control).

Time: total run time limited to 50 hours.

Intermittent mode:

RPM: RPM selection will range from 600 – 3,600 at increments of 200 (per the touch slide control).

Time: total run time limited to 1 minute.

Speed Range:

Intermittent: 600 RPM – 3,600 RPM

Continuous: 600 RPM – 2,600 RPM

Electrical:

Power Adapter rating:

Input: 100 – 240VAC, 1.2A, 50/60Hz

Output: 12VDC, 3.0A, 36.0W



Power Unit rating:


Input: 12VDC

Current (under load): Approx. 2A Power: Approx. 20W

Warning!

When plugging the power adapter into any outlet/socket. Only use grounded (earthed) electrical outlets/sockets.

Compliance Guidelines:

 This mark is the confirmation that the unit conforms to the EU guidelines and has been tested according to the following EU Declaration of Conformity.



Conforms to:

Safety Standards and Directives:

EN/IEC 61010-1:2010 + A1:2019

EN/IEC 61010-2-051:2021/A11:2021

UL Std. 61010-1, 3rd Ed., Rev. July 19, 2019

2022 UL Std. 61010-2-051: 4th Ed., June 27, 2019

CAN/CSA C22.2 No. 61010-1-12 (R2022)

CAN/CSA C22.2 No.61010-2-051:2021/A11:2021

2014/35/EU (Low Voltage Directive)

2012/19/EU (WEEE)

2015/863/EU (RoHS)

EMC Standards:

EN/IEC 61326-1:2021

FCC Part 15, Subpart B: 2015

ICES-003, Issue 7 October 2020



This product has been tested to the requirements of CAN/CSA C22.2 No. 61010-1 3rd edition, including Amendment 1, or a later version of the same standard incorporating the same level of testing requirements.

EC Declaration Of Conformity

Manufacturer: Heathrow Scientific® LLC, 620 Lakeview Parkway, Vernon Hills, IL 60061 USA
European Contact: Emergo, Europe, Princessegracht 20, 2514AP, The Hague, The Netherlands
Product: Digital Vortexer
Product Model No(s): 120805, 120806, and 1208XX (XX = "00 – 04" or "07 – 50")

This unit has been constructed and conforms to the following:

EMC Standards and Directives:

EN/IEC 61326-1:2021
FCC Part 15, Subpart B: 2015
ICES-003, Issue 7 October 2020

2014/35/EU (Low Voltage Directive)
2012/19/EU (WEEE)
RoHS (EU 2015/863)

Safety Standards and Directives:

EN/IEC 61010-1:2010 + A1:2019
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CAN/CSA C22.2 No.61010-2-051:2021/A11:2021

Signed:



Gary Kamees
Title: Vice President Product Development/Manufacturing
Location: Vernon Hills, IL
Date of Issue: March 2024



Note: Changes or modifications to the product not expressly approved by the manufacturer could void the user's authority to operate the equipment.

UKCA Declaration Of Conformity

Manufacturer: Heathrow Scientific® LLC, 620 Lakeview Parkway, Vernon Hills, IL 60061 USA

European Contact: Emergo Consulting (UK) Ltd., Compass House, Viston Park Histon, Cambridge CB24 9BZ

Product: Digital Vortexer

Product Model No(s): 120805, 120806, and 1208XX (XX = "00 – 04" or "07 – 50")

This unit has been constructed and conforms to the following:

Directives and Regulations:

Electrical Equipment (Safety) Regulations 2016

The Restriction of the Use of Certain Hazardous Substances in Electrical and Electronic Equipment Regulations 2012

The Electromagnetic Compatibility Regulations 2016

EMC Standards and Directives:

EN/IEC 61326-1:2021

FCC Part 15, Subpart B: 2015

ICES-003, Issue 7 October 2020

Safety Standards:

EN/IEC 61010-1:2010 + A1:2019

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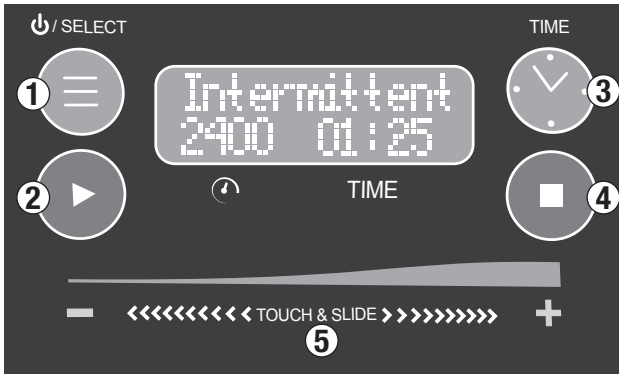
Location: Vernon Hills, IL

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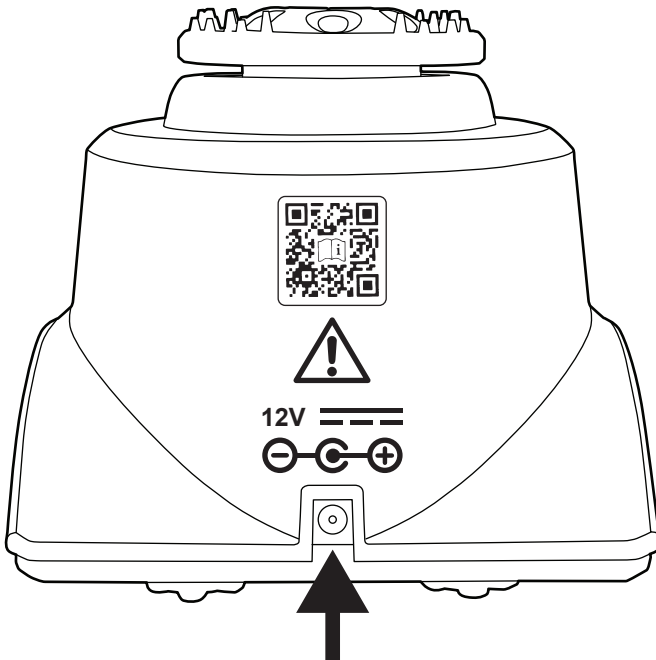
Display



1. Power and Select
2. Play Button (used to start unit)
3. Time Control
4. Stop
5. Touch & Slide to increase or decrease current selection

Electric Plug Location

Plug power cord in bottom center of unit as shown below.



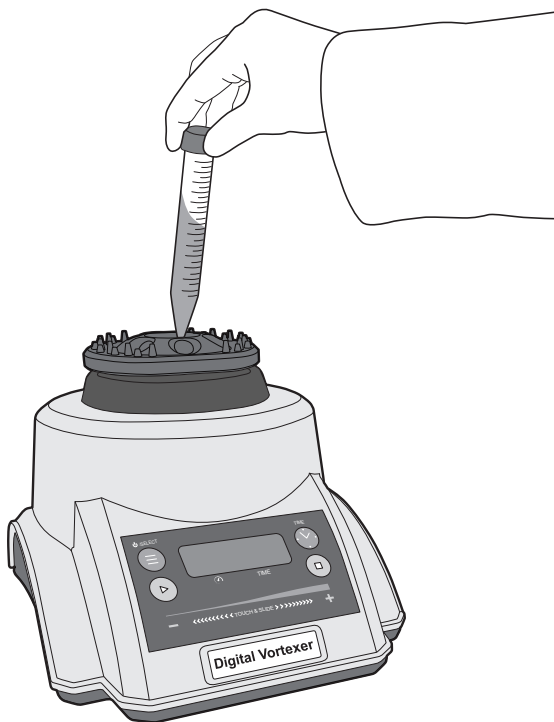
Operation

1. Remove the contents from the package examining them carefully for breakage, defects or missing parts.
2. Place the product on a clean sturdy, level surface at least 12" (30 cm) away from the edge of the counter and other moving equipment. Make sure the AC power adapter and cords are clear of hot surfaces and other hazards. Ensure no person or hazardous substances are within a 24" zone around the product.
3. Make sure the product has ventilation and is not encased in any material that will limit airflow. An overheating situation could occur.
4. Position product so that it is easy to disconnect from mains outlet.
5. Plug the DC cord into the rear of the unit and the AC cord an approved outlet.
6. **ONLY** use Heathrow supplied power cord and adapter.
7. **Do not** unplug unit is in motion.

Prior to every use:

- Inspect unit for cracks, missing pieces, and or any damage that would result in an impaired performance and notify manufacturer BEFORE use.
- Make sure the power switch on the rear of the unit is set to "O" which stands for "OFF".

Operating Instructions



1. Make sure unit is on acceptable work surface and connect to power, unit will produce an audible beep when it is connected to power.
2. Display will show program mode, speed in rpm, and time.
3. For continuous mode press Play and the unit will turn on.
4. Turn unit on with power button, hold power button for a moment to turn on (audible beep).
5. Once mode is chosen, RPM display will flash. To set speed use Touch & Slide to desired number.
6. If time control is desired press time control button. Number value will flash when ready to set, use Touch & Slide to enter number. Timer has two setting modes: in seconds "s" or in minutes "m". "s" displayed / Minutes & Seconds setting: max is 59 minutes : 59 seconds "m" displayed / Hours & Minutes setting: max is 50 hours : 00 minutes
7. For intermittent mode a tube must be pressed into the vortex pocket to activate the unit, unit will run until time runs out or tube is removed from vortex pocket.
8. Turn unit off same way it is turned on.

Troubleshooting

Trouble	Resolution
No power present	<ul style="list-style-type: none">- Verify that the proper AC input power cord is securely plugged into the power adapter.- Verify that the proper AC input power cord is fully plugged into a powered wall outlet. A blue indicator light will illuminate on the power adapter indicating that it has power.- Verify that the round low voltage output cable of the AC adapter is plugged into the device.- Verify that the power switch on the rear of the device is turned on.
Unit or display is not operating normally	<ul style="list-style-type: none">- Turn off the unit, wait 1 minute to allow the internal components to discharge and reset, and then turn power on.

Maintenance

Vortex unit is normally maintenance-free. Clean unit only when it is not plugged into an electrical outlet. When necessary, the housing and rotor can be wiped using a damp cloth and a mild, non-corrosive detergent.

Warning!

Do not use any solvent on the unit that may attack plastic or cause cracks in the rotor. Ensure the rotor is protected from corrosion and mechanical damage. The rotor must be cleaned with a neutral cleaning liquid.

If **hazardous** material is spilled on the unit and or leaked into the unit, do not run the device unless it is safe to do so.

Warranty

IN NO EVENT WILL HEATHROW SCIENTIFIC® LLC'S OBLIGATION UNDER THIS WARRANTY EXCEED THE PRICE OF THE PRODUCT.

Limited Warranty

Heathrow Scientific® LLC warrants that your Vortex Unit will be free from defects in workmanship and material for five years from the date of purchase.

If you believe that there is a defect in the product, you must, during the warranty period, notify Heathrow Scientific® LLC, provide proof of purchase, and return the product to Heathrow Scientific® LLC with a Return Authorization form. To obtain a Return Authorization form, please call 1-847-816-5070. If Heathrow Scientific® LLC is properly notified and, after inspection, confirms that there is a defect and the warranty period has not expired, Heathrow Scientific® LLC will repair, modify, or replace the product, at its sole option, at no charge.

OTHER THAN THIS LIMITED WARRANTY, HEATHROW SCIENTIFIC® LLC MAKES NO WARRANTIES, EXPRESS OR IMPLIED, WITH RESPECT TO THE QUALITY OR PERFORMANCE OF THE PRODUCT, INCLUDING BUT NOT LIMITED TO THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR PARTICULAR PURPOSE WHICH ARE HEREBY DISCLAIMED AND EXCLUDED. HEATHROW SCIENTIFIC® LLC WILL IN NO EVENT BE LIABLE FOR ANY LOSS OF USE, LOSS OF PROFITS, CONSEQUENTIAL, SPECIAL, EXEMPLARY OR PUNITIVE DAMAGES.

THIS WARRANTY DOES NOT COVER:

- ANY DEFECT OR DAMAGE CAUSED BY IMPROPER OR UNREASONABLE USE OF THE PRODUCT. (THE PRODUCT IS DESIGNED FOR USE ONLY BY TRAINED LABORATORY TECHNICIANS. USE BY ANYONE ELSE WILL VOID THIS WARRANTY.)
- ANY PRODUCT THAT HAS BEEN, IN HEATHROW SCIENTIFIC® LLC'S SOLE JUDGEMENT, TAMPERED WITH, ALTERED, OR REPAIRED BY ANYONE OTHER THAN HEATHROW SCIENTIFIC® LLC.
- ANY PRODUCT THAT IS INOPERATIVE BECAUSE OF: (a) WEAR OCCASIONED BY USE, (b) NEGLIGENCE, (c) ACCIDENT, (d) INCORRECT MAINTENANCE, OR (e) USE UNDER ABNORMAL CONDITIONS OF TEMPERATURE, DIRT OR CORROSION, OR USE WITH ABRASIVE OR CORROSIVE MATERIALS.
- ACCESSORY PARTS, SUCH AS RUBBER AND PLASTIC PARTS THAT ARE DAMAGED BY LIQUIDS OR MISUSE.

Return for Repair

Important:

Transporting hazardous materials without a permit is a violation of federal law.

Heathrow Scientific® LLC will not accept any product return that is not appropriately cleaned and decontaminated. In the unlikely event of repair, or when damage to the unit necessitates return, contact Heathrow Scientific® LLC, obtain return authorization, and complete a Heathrow decontamination form BEFORE sending your product for service.

Disposal Responsibilities

Important:

The equipment you purchased may contain hazardous substances that could impact the environment. Per regulations on electronic devices in the European Community, you must use the appropriate disposal systems to avoid exposure of these substances to the environment. The disposal systems will reuse or recycle hazardous materials from your equipment responsibly.

The crossed-out wheeled bin symbol invites you to use those systems.



If you need more information on the collection, reuse and recycling systems, please contact your local or regional waste administration. You can also contact us for more information on the environmental performance of our products.

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02/2024
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