CRV-45X



USER MANUAL

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1. INTRODUCTION

This Mini Vortex Mixer is available in two variants: Fixed Speed and Variable Speed. It comes with a powerful brushless DC motor and delivers speed up to 4500 RPM. With an orbital motion of 4.5 mm it provides thorough mixing and it can accommodate plastic tubes & vials up to a 30 mm diameter.

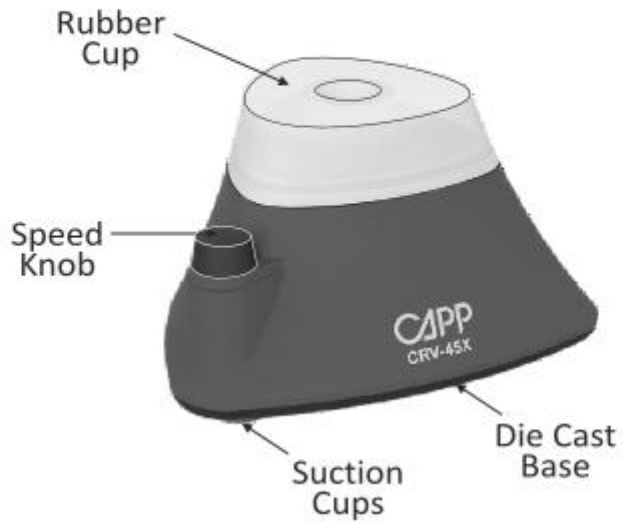
2. INTENDED USE

It is used in laboratories for the general mixing of applications in individual test tubes, up to a 30 mm diameter.

3. FEATURES

- Touch Operation – can handle plastic tubes of up to 30 mm in diameter
- Extremely small footprint
- 4.5mm orbital motion
- Suction cups for proper grip
- Die cast base for stable operation
- Low voltage power supply
- Suspension design for longer switch life
- Variable speed for gentle to vigorous mixing (Variable model)

4. STANDARD PART LISTING



5. SAFETY PRECAUTIONS

⚠ **Read the following safety instructions before using the mini vortex mixer for your safety & the safety of the equipment.**

1. Gently take the mini vortex mixer out of the packaging box and place it on a flat, stable, clean, non - slippery surface.
2. Do not lift or hold the device from the power cable.
3. This mini vortex mixer is to be used to mix material that the user knows will not react dangerously to any extra energy produced from mixing.
4. The mini vortex mixer should be used for the specified application only. It must not be operated in a hazardous or flammable environment and must not be used to mix explosive or highly reactive material.
5. Users should always use covered test tubes. Overfilling of liquid may cause the medium to splash out.
6. **Caution:** The equipment will restart, both in case of power interruption and in case of any fault or mechanical interruption. use carefully taking the sample used for mixing into account.

7.Always use tubes up to 30 mm in diameter for best result and product safety.

6. OPERATION

Operation starts automatically when the soft rubber cup is pressed down using the test tube (as shown in image) and stops once the test tube is removed. In the variable mini vortex mixer, rotate the speed knob to increase or decrease the speed between 2000 to 4500 RPM. Rotate clockwise to increase the speed and counter - clockwise to decrease the speed



7. TECHNICAL SPECIFICATIONS

Motor Type	BLDC
Type of movement	Orbital
Shaker diameter	4.5 mm
Tube diameter	Up to 30 mm
Maximum Speed	2000 - 4500 RPM
Speed Accuracy	± 5 %
Operation Type	Touch
Protection class according to DIN EN 60529	IP 43
Permissible ambient temperature	5 - 40 °C
Weight	0.55 Kg
Permissible relative moisture	<80%
Noise Level	<50 dB

Dimensions (L x W x H)	100 x 100 x 70 mm
Input Voltage	9V ⎓ 1.2A
Power Consumption	11 W

8. MAINTENANCE & CLEANING

1. While cleaning, the product must not be plugged into the power supply.
2. The entire unit should be wiped down periodically with a soft cloth. Excessive amount of liquid should be avoided. Motor should not come in contact with liquid.
3. After cleaning, ensure that all parts are dried before re-use.
4. Do not use the unit if it shows signs of mechanical or electrical damage. Do not use the equipment if the rubber cup or suction cup is damaged. In these cases, see warranty & contact manufacturing if applicable
5. The brushless motor in the mini vortex mixer doesn't require routine maintenance. Any required service should be performed by authorized, qualified personnel only.

9. TROUBLESHOOTING



Small bottom screw at the base of device pointed by an arrow.

Vortex Action	Problem	Solution
Partially Working (stops in between)	Small bottom screw might have loosened. Need to adjust	Tighten the small bottom screw (1/2 or 1 turns max)
Not working at all. (completely stopped)	Small bottom screw might have loosened. Need to tighten	Tighten the small bottom screw (1 or 2 turns max)
Continuously working (run without press)	Small bottom screw might have tightened. Need to loosen.	Loosen the small bottom screw (1 or 2 turns max)

Note: If after implementation of the required solution does not produce normal vortex action, contact service representative.

10. WARRANTY STATEMENT

This product is warranted to be free from defects in material and workmanship for a period of two (2) years from date of purchase. Your product will be duly repaired upon prompt notification in compliance with the following conditions :

- This warranty is valid only if the product is used for its intended purpose and within the guidelines specified in this 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 any incidental or consequential damages, commercial loss or any other damages from the use of this product.

- The warranty is invalidated by any non-factory modification, which will immediately terminate all liabilities on us for the products or

damages caused by its use. The customer shall be responsible for the product or use of products as well as any supervision required for safety. If requested the products must be returned to the distributor in well packed and insured manner and all shipping charges must be paid.

Note: 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. This warranty is given expressly in lieu of all other warranties, expressed or implied.

- The purchaser agrees that there is no warranty of merchantability or of fitness for any intended purpose and that there are no other remedies or warranties, expressed or implied, which extend beyond the description on the face of the agreement. This warranty is only applicable to the original purchaser.

Products received without proper authorization will not be processed for warranty or service. All items returned for service should be sent with postage prepaid in the original packaging or other suitable packaging, padded to avoid damage. We will not be responsible for damage incurred by improper packaging.

Note: This warranty is valid only if the warranty is registered with the supplier within 30 days from the date of purchase.

For your reference, make a note of the serial number, date of purchase and supplier here.	
Serial No.:	Purchase Date:
Supplier:	

11. PRODUCT DISPOSAL

In case the product is to be disposed of, the relevant legal regulations are to be observed.

Information on the disposal of electrical and electronic devices in the European Community

The disposal of electrical devices is regulated within the European Community by national regulations based on EU Directive 2012/19/EU on waste electrical and electronic equipment (WEEE). According to these regulations, any devices supplied after 13.06.05 in the business to business sphere, to which this product is assigned, may no longer be disposed off in municipal or domestic waste. They are marked with the following symbol to indicate this.



As disposal regulations within the EU may vary from country to country, please contact your supplier if necessary.

For your reference, make a note of the serial number, date of purchase and supplier here.	
Serial No.	Purchase Date
Supplier	

AHN Biotechnologie GmbH
Uthleber Weg 14
D-99734 Nordhausen
Germany

Phone: +49(0)3631/65242-0
Fax: +49(0)3631/65242-90

E-Mail: info@cappahn.com
www.capp.dk

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