NEUATION



iSWIX MV

PRODUCT USER MANUAL

TABLE OF CONTENTS

1. PRODUCT DESCRIPTION..... 1

Introduction

Intended Use

Features

2. TECHNICAL SPECIFICATIONS..... 2

ACCESSORIES

3. SAFETY PRECAUTIONS..... 2

4. INSTALLATION..... 3

LOCATION

CONNECTING THE POWER ADAPTOR

5. STANDARD PART LISTING..... 5

6. USER INTERFACE & DISPLAY..... 6

7. OPTION AL ATTACHMENTS &THEIR INSTALLMENT.. 7

8. OPERATION..... 9

CONNECTING THE POWER ADAPTOR

SETTING SPEED

SETTING TIME

PULSE MODE

PROGRAMMABLE PULSE MODE OPERATION

9. MAINTENANCE & CLEANING..... 11

10. TROUBLE SHOOTING..... 11

11. WARRANTY STATEMENT..... 12

12. PRODUCT DISPOSAL..... 13

1. PRODUCT DESCRIPTION

INTRODUCTION

This vortex mixer is designed for laboratory mixing. It assures the highest performance in terms of speed, reliability, precision and safety. The vortex mixer has a variable speed with digital control that allows low RPM start-up for gentle shaking and high speed mixing for vigorous vortexing of multiple samples.

INTENDED USE

This vortex mixer is a general laboratory vortex mixer. It is indented for application where vortexing of single or multiple tubes are required.

FEATURE

- Brushless DC motor for quiet operation and maintenance free long operation.
- Microprocessor controlled unit with digital display.
- Adjustable speed ranging from 300-2500 RPM with increment of 10 RPM and accuracy of +/-5% RPM with option of selecting Clockwise (CW) and Counterclockwise (CCW) motion.
- Long timer setting from 1 to 999 mins & infinite mode.
- Programmable Pulse with selection of variable time 30-99 seconds.
- Power Overload feature in which if the equipment consumes more power than its capacity, it automatically shuts down.
- Supplied with all four attachments

2. TECHNICAL SPECIFICATIONS

Motor	Brushless DC Motor
Orbital Diameter	4 mm
Speed	300-2500 RPM
Speed Accuracy	± 5%
Time	1 to 999 minute & infinite
Programmable Pulse Mode	Yes
Platform Size	295 x 200 mm
Dimensions (W x D x H)	400 x 249 x 440 mm
Weight	17.6 kg
IP Rating	IP21
Ambient Temperature	5-40°C
Permissible Relative Humidity	≤80%
Power Adapter Detail	Input: 100-240VAC, 50/60Hz Output: 24V ⎓ 3.0A
Power Consumpton	45 W
Altitude	Use upto an altitude of 2000 m above MSL
Pollution Degree	2
Environment	For indoor use only

ACCESSORIES

1. Pre-installed attachment, 2. Power adapter, Product user manual & warranty card

3. SAFETY PRECAUTIONS

Read all safety & usage information provided in this manual carefully before using the device.

1. Do not use the unit if it shows any sign of electrical or mechanical damage.
2. Do not use the vortex mixer in hazardous atmosphere or with hazardous material for which the unit is not designed.
3. Always used the vortex mixer on a level & stable surface for best

performance and maximum safety.

4. Do not the lift vortex mixer with the attachments

6. Clean the unit with a damp cloth using a mild detergent only. Do not use chemical cleaning agents.

7. If liquid is spilled on the unit, first disconnect unit from the external (main) power supply and then clean the unit with damp cloth.

8. Do not use accessories which are not recommended by the manufacturer as it may affect the performance.

9. The instrument is designed to be used in the laboratory environment.

10. Liquid spillage may harm the unit. Do not fill microtubes, microplates or flasks while they are attached to the vortex mixer.

11. Refer to the recommended maximum speed for specific attachments for safe usage. (Refer table on page: 7)

4. INSTALLATION

Open the box, open the inner packaging and gently take the vortex mixer out of the box. Before the first use, ensure that all the packaging is removed. The user manual and accessories should be kept near the unit for at least two years for warranty purposes.

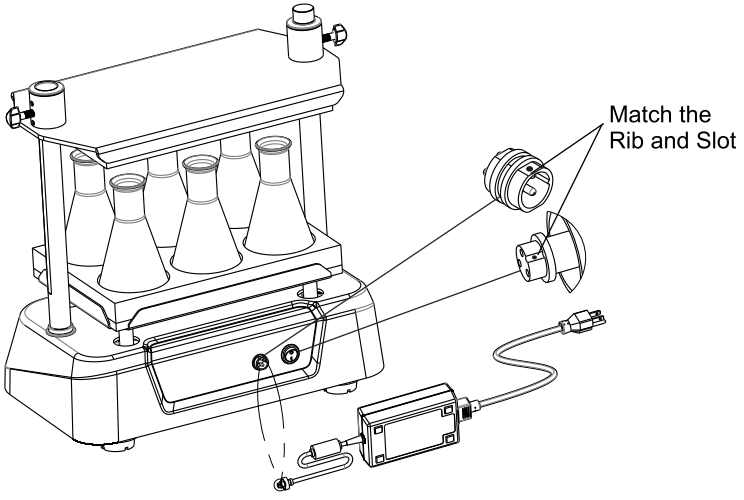
LOCATION

Take the unit out and place it on the leveled & stable surface near the grounded electrical outlet. The surface should be clean and free from dust to ensure that the feet grip the surface firmly. Keep a clearance of 10 cm on all sides of the unit for proper ventilation.

Keep the unit away from heat & direct sunlight to avoid sample temperature issues.

CONNECTING THE POWER ADAPTOR

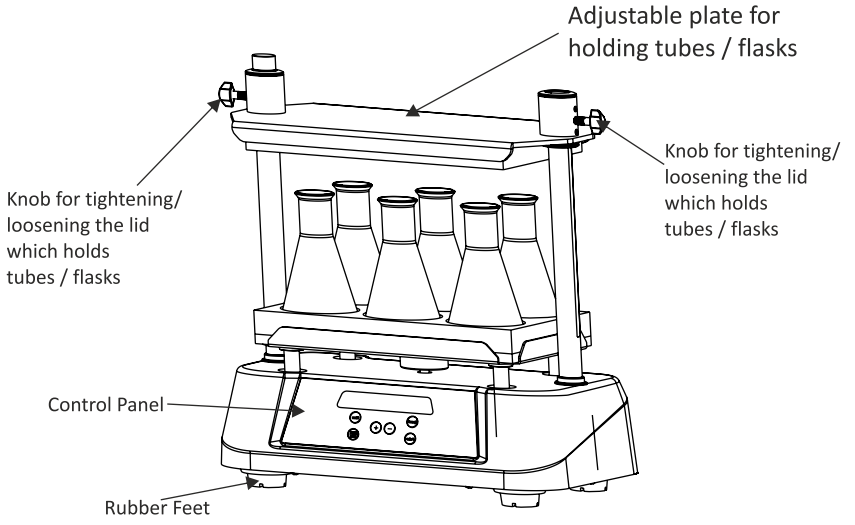
1. Connect one side of power adaptor to rear side of Vortex and other to supply as shown in the figure below.
2. Rotate clockwise the adaptor nut to tighten the adaptor with the centrifuge. Ensure the power switch is OFF while connecting the power adaptor.
3. The sticker on the body & jack are indicating the position of the rib on the jack. While fitting the adaptor to the unit-please match the sticker position as shown in the figure below & gently push it in.



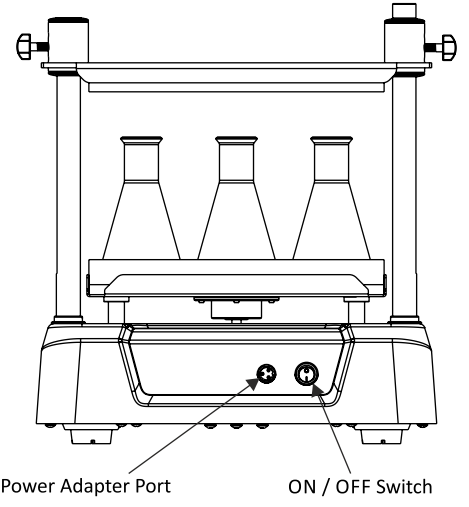
4. If matched correctly the plug will go in easily without much force (do not try to force the plug in if it is not matched properly). Once the plug is inserted into position, turn the loosened upper ring clockwise until it is tight to secure the fitment.

5. STANDARD PART LISTING

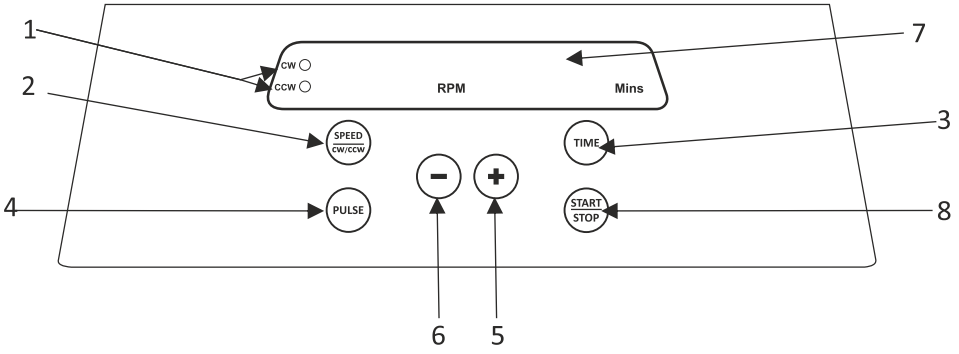
Front Side



Back Side



6. USER INTERFACE & DISPLAY



No.	Name/Symbol	Function
1	CW/CCW	LED shows the Clockwise motion and Counterclockwise motion
2	Speed	Press SPEED button to select speed by Increment / Decrement
3	Time	Press TIME button to select time by Increment / Decrement buttons
4	Pulse	Press PULSE button to activate pulse mode
5	+	Press this button to increase the values of parameters i.e., Speed, Time & Pulse
6	–	Press this button to decrease the values of parameters i.e., Speed, Time & Pulse
7	Display	The digital Display shows speed value, time value and pulse parameters
8	Start / Stop	Press “START / STOP” to start the operation or stop the ongoing operation

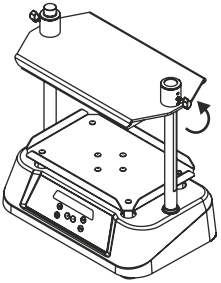
7. OPTIONAL ATTACHMENTS & THEIR INSTALLATION

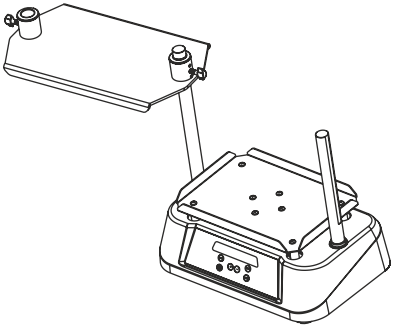
There are 4 optional attachments that comes with this high capacity Multi-tube vortexer and is supplied with any chosen one. Their details and compatibility with respect to RPM is mentioned below in the table.

Attachment Details	Capacity	Max. Recommended Speed	Max. Recommended Fill
7 ml tube foam	60 tubes	2500	Not more than 75%
15 ml tube foam	45 tubes	2500	
50 ml tube foam	18 tubes	2500	
250 ml flask foam	6 flasks	1200	

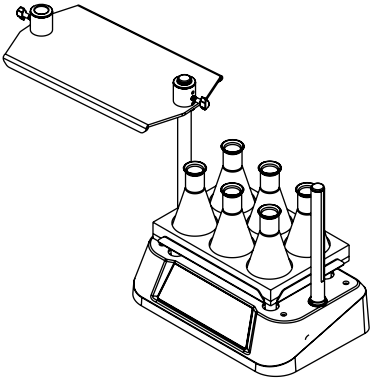
Procedure to install the foam attachment :

- Turn the knob in the counterclockwise direction to loosen the top lid. Once the lid is loose, lift the lid little upwards and rotate it by 180° as shown in the below figure

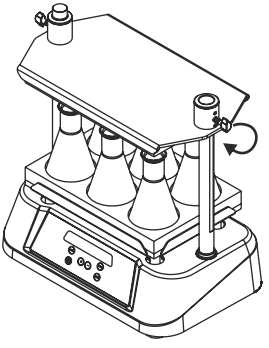




- Next, place the foam attachment on the base and subsequently place the tubes / flasks on the foam. Make sure to place the tubes / flasks evenly on the foam.



- Follow the exact reverse steps mentioned in Point 2 and Point 1 and make sure to firmly tight the knob. Double chek the knob on the both sides as shown in the below figure before starting the operation.

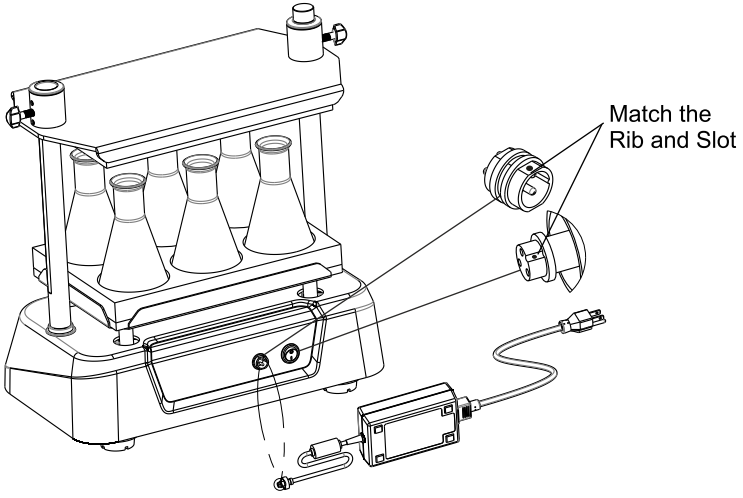


8. OPERATION

CONNECTING THE POWER ADAPTOR

After connecting the power adaptor, switch ON the power at the rear side of the Vortex mixer. Make sure to check the top lid is tightened firmly before use. If the lid isn't tightened firmly, it may damage the tubes / flasks during operation.

NOTE: *Maintain a gap of 3 seconds between turning off and turning on the instrument. DO NOT turn off and turn on the instrument instantly.*



Connect the power adaptor at the rear side of the vortex mixer as shown in the above image.

SETTING SPEED

Press 'Speed' to select speed value and then press 'Increment / Decrement' to set required speed. The speed for operation ranges from 300 RPM to 2500 RPM with incremental/decremental steps of 10 RPM.

User can also select the type of motion to be used in an operation (clockwise & counterclockwise) by simply pressing "SPEED" button which is indicated by LED button.

Speed values are saved after blinking 5 times.

SETTING TIME

Press “Time” to select time value and use increment or decrement button to set run time. Run time for operation can be set between 1 minute to 999 minutes with incremental/decremental step of 1 minute. It can also be set for continuous or infinite mode indicated by ‘][’ in time display. The value will be saved after 5 blinks. The Countdown timer will get activated as soon as the operation starts.

PULSE MODE

The pulse mode is used for intermittent shaking. Press “Pulse” to start pulse mode operation. In pulse mode, the vortexing direction will counter-clockwise direction for every 30 seconds which can be set from 30 to 99 seconds(programmable). Upon the selection of “PULSE”, pulse button will glow. Again press the “Pulse” button to STOP pulse operation.

PROGRAMMABLE PULSE MODE OPERATION

By default, the pulse mode cycle time is 30 seconds (i.e. 30 seconds anti-clockwise). With programmable pulse mode, user can modify cycle time from 30 secs to 99 secs. Long press the pulse button to select pulse mode cycle time. The time display will change to “S 30” where “30” means pulse cycle time in seconds - this indicates that user can now modify pulse cycle time. Then press “+” or “-” button to modify cycle time between 30 secs to 99 secs.e mode is shown by symbol ‘][’.

9. MAINTENANCE & CLEANING

- Always keep the vortex mixer & its accessories in a safe storage location and clean periodically with moist cloth. After cleaning, ensure that all parts are dry before re-use
- Ensure that while cleaning the unit is not plugged in.
- The brushless motor in the vortex mixer requires no routine maintenance. Any required service should be performed by authorized, qualified personnel only. Repairs performed by unauthorized personnel may void the warranty.
- Do not try to pull the vortex mixer with attached accessories.
- Do not try to rotate the attachments attached to modify the shaft body.
- Do not use the vortex mixer & its accessories in direct sunlight or under water.

10. TROUBLE SHOOTING

ERROR	PROBLEM	SOLUTION
No display	No main power connection.	Power check & proper Plug in of main cable at both ends.
	Power Failure.	Check the main fuse of lab.
	Improper connection.	Connect adapter properly.
Display error	Loose connection of display.	Contact service representative.
Error-52	Motor stuck.	Switch off vortex and switch on the vortex again.
Power tripping	Cable not fit properly.	Remove cable and connect properly.

ERROR	PROBLEM	SOLUTION
Last run memory not display	Switch on vortex immediately after switching off.	Maintain 3 sec gap between switch off and switch on.
System gets hung	Electronics error.	Switch off vortex and switch on the vortex again. If the error still show, contact service representative.

11. 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. This 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 buyer and its 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.

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.

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

All items returned for service should be set postage prepaid in the original packaging or other suitable carton, added to avoid damage.

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	

12. 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.

Accumax Lab Devices Private Limited

Plot No. 15, 16 & 32 GIDC Electronic Park SEZ, Sector 26, Gandhinagar, Gujarat, India - 382026.

Website: www.neuation.com

0205-00-0000-02-003-R3