

Operation Manual



BVMX-103

Vortex Mixer

Thank you very much for Choosing Biolab products. Please read the "Operating Instructions" and "Warranty" before operating this unit to assure proper operation.

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Preface:

Welcome to the "Vortex Mixers (Adjustable and Fixed Speed Models) User Manual". Users should read this manual carefully, follow the instructions and procedures, and beware of all the cautions.

Warranty:

This instrument is warranted to be free from defects in materials and workmanship under normal use and service, for a period of 24 months from the date of invoice. The warranty is extended only to the original purchaser. It shall not apply to any product or parts which have been damaged on account of improper installation, improper connections, misuse, accident or abnormal conditions of operation.

For claims under the warranty please contact your local

dealer. You may also send the instrument direct to our works, enclosing the invoice copy and by giving reasons for the claim. You would be solely liable for freight costs.

01 Safety Instructions

Warning!

Read the operating instructions carefully before use.

Ensure that only trained staff use the instrument.

Protective ground contact

Make sure that socket is earthed (protective ground contact) before use.

When work : wear the personal guard to avoid the risk

from

- Splashing of liquids.
- Mechanical vibration may leads to glass breakage.
- Being trapped of parts of the body, hair or pieces of clothing in the moving parts.
- During manual manipulation:
 - Keep medium vessels vertical as much as possible.
 - Mix the medium in the minimum pressure required.
 - Use attachment supplied when mixing a mass of different medium.
- Set up the instrument in a spacious area on an stable,

clean, non-slip, dry and fireproof surface. Do not operate the instrument in explosive atmospheres, with hazardous

- Put the speed control knob to the lowest position. Gradually increase the speed, reduce the speed if :
The medium splashes out of the vessel because of too high speed.
- The instrument is not running smoothly or moves on the stage.
- Safe operation is only guaranteed with the accessories described in the "Accessories" chapter.
- Accessories must be securely attached to the instrument and can not come off by themselves.
- Check the instrument and accessories before hand for damage each time you use them. Do not use damaged components.
- Place a vessel at the centre of the mixing head and spread out others uniformly.
- A sharp edged vessel can wear-out the mixing head.
- Always disconnect the plug before fitting accessories.
- The instrument may heat up when in use.
- The operating voltage required on the label and voltage supply network must match.
- Protect the instrument and accessories from bumps and impacts.
- The instrument may only be opened by qualified and trained technician only.

02 Proper Use

The instrument is designed for mixing liquids in schools, laboratories or factories. This device is not suitable for use in residential areas or other areas that may cause danger to the user or instrument as mentioned.

03 Inspection

3.1 Receiving Inspection

Unpack the equipment carefully and check for any damages which may have arisen during transport. If it happens, please contact manufacturer for technical support.

⚠️Note:

If there is any apparent damage to the system, please do not plug it into the power line.

3.2 Listing of Items

The BVMX-103 includes the following items:

Items	Qty
Main unit	1
User Manual	1

Table 1:

Please retain all packing materials. Additional shipping charges will be assessed if packing is unavailable for the system warranty service.

04 Trial run

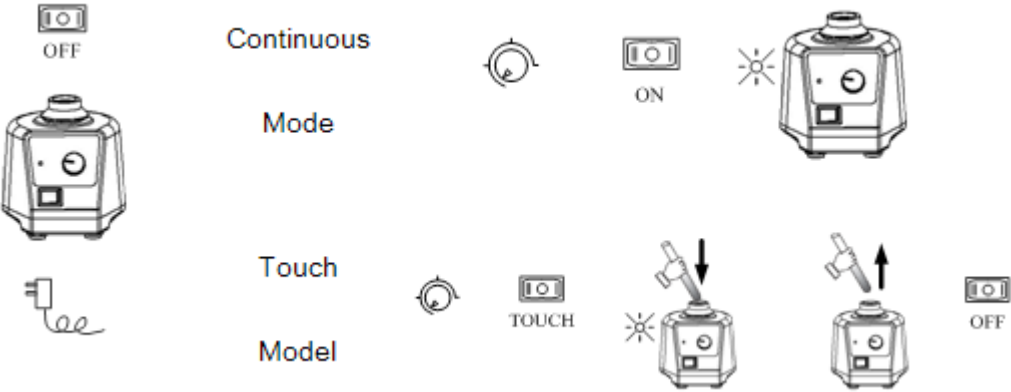


Figure1:

⚠️Note:

Ensure that the two-direction switch must be in the middle (off state) before powering on.

05 Operation



Figure 2:

5.1 Continuous operating:

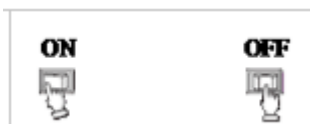


Figure 3:

Ensure the speed control knob to the lowest position. Put the instrument on the stable and safe place and plug in the main power.

Push the two-direction switch leftward to ON and power LED is lit. Then the instrument begins to work.

Turn the speed control knob to set the rated speed.

Ensure the speed control knob to the lowest position Put the instrument on the stable and safe place and plug in the main power.

Push the two-direction switch rightward to the touch mode.

Turn the speed control knob to set the rated speed.

If a test tube is pressed into the mixing head vertically, the instrument will begin to work and the power LED will be lit.

Push the two-direction switch leftward gently and the instrument is turned off

5.2 Touch operating:



Figure 4:

Ensure the speed control knob to the lowest position Put the instrument on the stable and safe place and plug in the main power.

Push the two-direction switch rightward to the touch mode.

Turn the speed control knob to set the rated speed.

If a test tube is pressed into the mixing head vertically, the instrument will begin to work and the power LED will be lit.

Push the two-direction switch leftward gently and the instrument is turned off.

 Note:

Place vessels such as a test tube as vertical as possible into the centre of the mixing head in order to mixing smoothly.

Adjust the speed control knob slowly in order to have the instrument work smoothly.

06 Maintenance and cleaning

Proper maintenance can keep instruments working in a good state and lengthen its life time.

- Be careful not spray the cleanser into the instrument when cleaning.
- Unplug the power line when cleaning.

Only use cleanser that we advised as below:

Dyes	isopropyl alcohol
Construction materials	water containing tenside / isopropyl alcohol
Cosmetics	water containing tenside / isopropyl alcohol
Foodstuffs	water containing tenside
Fuels	water containing tenside

Table 2:

For materials which are not listed, please request information from manufacturer.

- Before using other method for cleaning or decontamination, the user must ascertain with the manufacturer that this method does not destroy the instrument.
- Wear the proper protective gloves during cleaning of the instruments.

NOTE:

- Electrical instruments may not be placed in the cleansing agent for the purpose of cleaning.
- The instrument is a sophisticated electronic products, avoiding severe shake in work and transportation
- The instrument must be cleaned and put it into the initial packaging carton before sending to service for repair, avoiding the contamination of hazardous.
- Switch OFF the instrument and put it in the dry, clean, stable place at room temperature in long-term disuse.

07 Technical data

Items	Parameters
Voltage [VAC]	220-230 / 110-120
Frequency [Hz]	50 / 60
Power [W]	60
Shaking movement	orbital
Orbital diameter [mm]	4
Motor type	Shaded-pole motor
Motor rating input [W]	58
Motor rating output [W]	10
Permissible ON time	100% power 30mins
Speed range [rpm]	0-2500
Speed display	Scale
Run type	Continuous/touch operation
Dimensions (mm)	127×130×160
Weight [kg]	3.5
Permitted ambient temperature[°C]	5-40
Permitted relative humidity	80%
Protection class acc. to DIN 60529	IP21

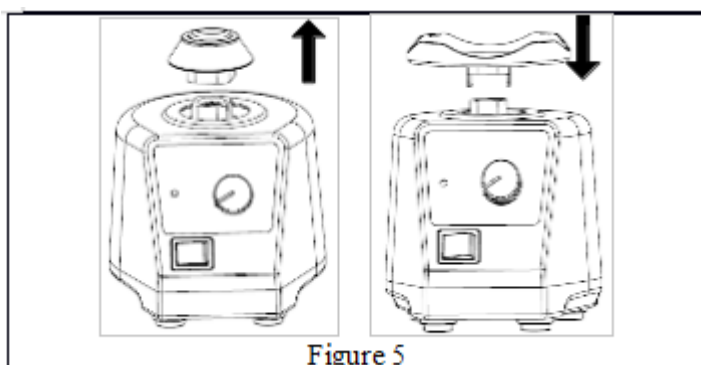
Table 3:

08 Accessories

Accessory Code	Name	Description
BX-103933	For $\lt; \text{Ø}30\text{mm}$ tubes and small vessels	For $\lt; \text{Ø}30\text{mm}$ tubes and small vessels
BX-103934	Tube holding rod	Used with BX-103936 to BX-10394
BX-103935	Universal top plate	100mm plate attachment, free of Rubber vacuum suction foot (BX-103942, 4pcs)
BX-103936	Tube adapter	For 48 holes test tubes, $\text{Ø}6\text{mm}$, used with BX-103935/BX-103934
BX-103937	Tube adapter	For 15 holes test tubes, $\text{Ø}10\text{mm}$, used with BX-103935/BX-103934
BX-103938	Tube adapter	For 12 holes test tubes, $\text{Ø}12\text{mm}$, used with BX-103935/BX-103934
BX-103939	Tube adapter	For 8 holes test tubes, $\text{Ø}16\text{mm}$, used with BX-103935/BX-103934
BX-103940	Tube adapter	For 8 holes test tubes, $\text{Ø}20\text{mm}$, used with BX-103935/BX-103934
BX-103941	Platform pad	For $\lt; \text{Ø}99\text{mm}$ tubes and small vessels
BX-103942	Rubber vacuum suction foot with screw	Rubber vacuum suction foot with screw, 1pc

Table 4:


Changing Attachments:





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