Operations Manual

Item BV1010 & BV1010-E

Benchmark

Safety Warnings and Guidelines

Do not attempt to operate this instrument before reading the Manual.

1. Important:

The operation, maintenance and repair of the Instrument should comply with the basic guidelines and warnings listed below. Failure to comply can result in damage to the instrument or personal injury.

Before using the device, read the Manual carefully. These units are designed for use in laboratory environments. The device must be used by skilled personnel with the appropriate training.

The operator should not open or repair the Instrument by without the proper training. Opening the instrument will result in voiding the warranty. In the event that service is requires, please contact your local distributor.

Before powering in, always ensure that the voltage used is in accordance to the voltage listed on the serial number label.

Power off and unplug the machine in response to any of the following:

- **Liquid has spilled inside the machine**
- **Abnormal heat or smoking occurs**
- **The function has obviously changed**

2. The maintenance of Instrument

The platform and clamp should be cleaned regularly with a soft dipped in alcohol.

Contents

Chapter 1 Introduction

The BenchMixer XL is designed for mechanical and chemical cell lysis, mixing suspensions, and general sample agitation. This vortex mixer gives a distinctly different motion than shaking a sample. With vortexing, greater shearing forces are placed on materials in the bottom of a tube, thus promoting either disruption or solubility.

The BenchMixer XL vortex mixer is an instrument designed to provide vigorous mixing. With a wide variety of tube holders, this instrument is useful for higher throughput mixing of samples.

Chapter 2: Specifications

1. Operating conditions:

Ambient temperature： **4°C to 45°C**
Relative humidity: **≤70%**
Electrical： **AC100-240V 1.5A**

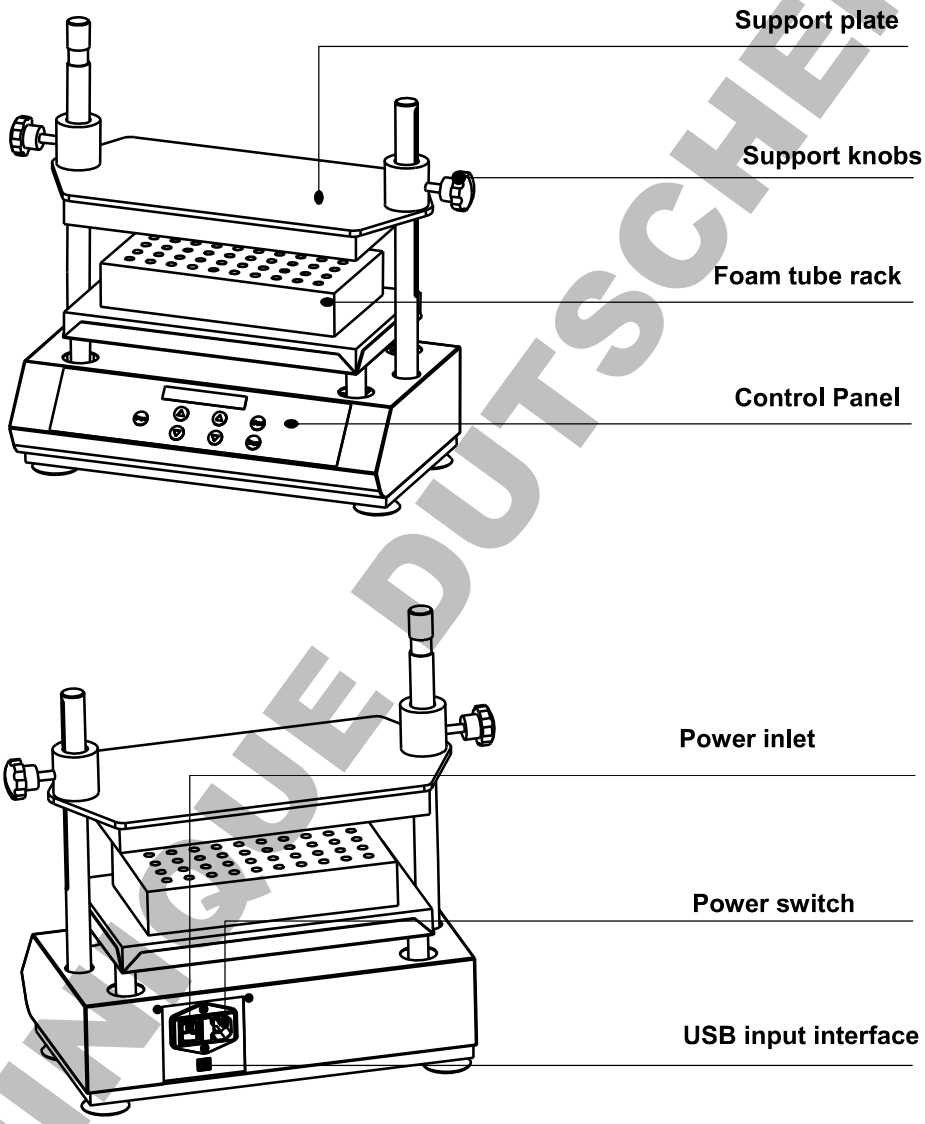
2. Technical Data:

Model / Parameter	BV1010
Speed	500 to2500rpm
Orbit	3 mm
Time setting	1min ~ 99h59min
Max. load	4.5kg
Input power	60W
Outer dimension(mm)	426×250×480
Weight(kg)	14.5

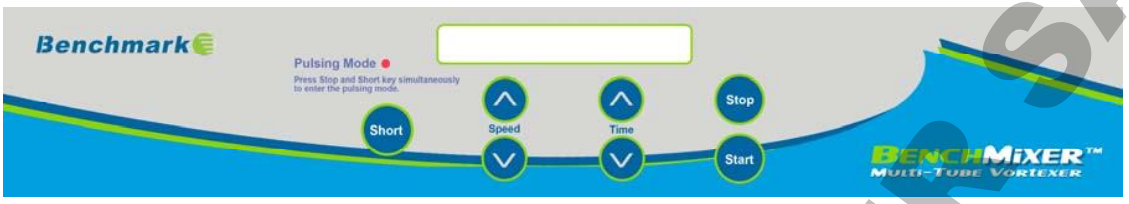
Chapter 3: Initial Setup

This chapter introduces the BenchMixer XL and the necessary preparations prior to the first use. Please read this chapter carefully before operating the mixer.

1. Structure Description



2. Control Panel



Short: The short key activates the mixer for the length of time in which it is pressed. It is mainly used for short mixing cycles.

Start: Press to begin operation.

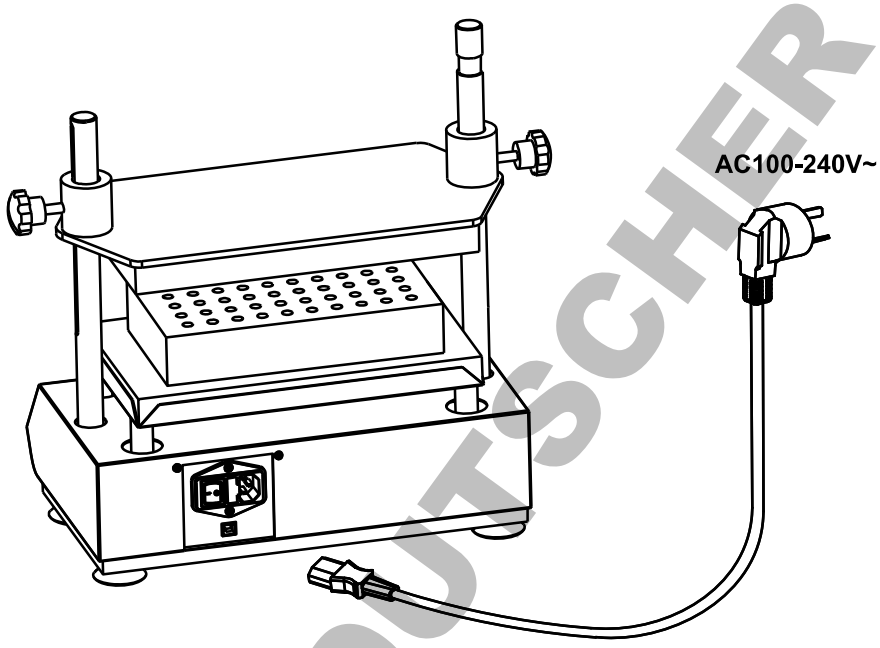
Stop: Press to stop a mixing

Up: Press to increase speed or time

Down: Press to decrease speed or time

3. Power On:

Place the Instrument on a level bench or table. Plug one end of the cord into the inlet at the rear side of the machine, and the other end into an outlet providing 100-240V.



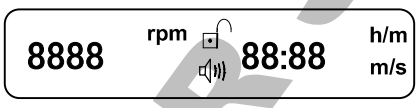
4. Available Foam Racks:

Type	Parameter	Tube Capacity	Dimension (mm)
BV1010-1520	10mm	50	245X132X45
BV1010-12	12mm	50	245X132X45
BV1010-13	13mm	50	245X132X45
BV1010-150	16mm/15ml	50	245X132X45
BV1010-25	25mm	15	245X132X45
BV10-10-500	50ml	15	245X132X45
BV1010-00	Replacement tray pad set	/	305X178.5X25

Chapter 4: Operation Guide

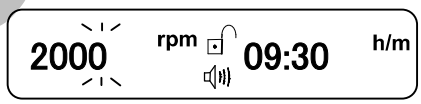
1. Shaking speed and timing setting

a) **When the instrument powers on, display screen will show "8" across each digit.**

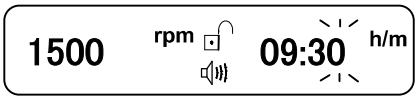


b) **After about 2 seconds, the time display window shows 9:30 as the default set time. The speed display window shows 2000 as the default set speed.**

c) **Press the "△" or "▽" key, to increase or decrease the desired set speed. (To adjust the speed setting more quickly, hold the up or down keys for 2+ seconds).**

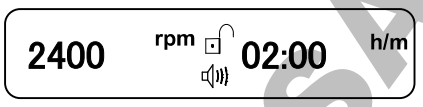


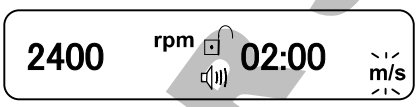
d) **Press the "△" or "▽" key, to increase or decrease the desired set time. (To adjust the time setting more quickly, hold the up or down keys for 2+ seconds).**



2. Additional Control Panel Settings:

a) <u>Adjusting the Time mode</u>: Press time's "△" key and "▽" key simultaneously to switch time unit from h/m to m/s, the display flashes three times, then saves automatically. (Repeat above to swicth back to h/m).





b) <u>Key Lock:</u> Press speed's "△" key and time's "△" key simultaneously to activate the key lock funtion. The key lock prevents any adjustment of speed and time. (To exit key lock, repeat the steps above.)

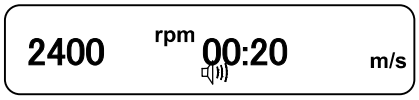
c) <u>Volume Adjustment / Mute:</u> Press speed's "▽" key and time's "▽" key simultaneously to adjust the volume of the instrument.

3.) Pulsing mode

a) Press "Stop" and "Short" key simultaneously to activate the pulsing mode, the red LED illuminates.

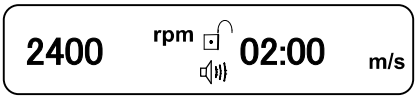
b) Press Speed's / Time's "△" key and "▽" key to set the pulsing speed and time. In pulsing mode, the max. timer time is 99min59sec.

c) EX: Set the pulsing time to 20 seconds, then press "Start" key to run, it will pulse-on for 20 seconds and off in 1 second intervals.



d) Press "stop" key to stop.

e) Press "Stop" and "Short" key simultaneously again to quit the pulsing mode.



Chapter 5: Failure analysis and trouble-shooting

No.	Problem	Cause	Remedy
1	No display	No power	Check the connection of power
		Switch Failure	Exchange the switch
		Others	Contact your distributor
2	Excessive vibration	Unbalanced samples	Place the mixing samples symmetrically
3	The actual speed is different from the displayed speed	Failure in control board	Contact your distributor
4	"ERR" in the display	Shaking speed error	Contact your distributor
5	Failure of key function	Failure in control board	Contact your distributor

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