

INSTRUCTION MANUAL

SERVA BlueShake 3D

(Cat. no. BS-3D)

SERVA
Electrophoresis

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Vers. 11/13

1 Basic Data

The SERVA BlueShake 3D is a three-dimensional rocking mixer of medium capacity for mixing a maximum volume of 5kg. This mixer is developed especially for gel applications, but it can be used to mix liquids in containers of your choice. The device is designed for indoor use. The SERVA BlueShake 3D can be integrated into an incubator for temperature sensitive applications.

1.1 Safety

The SERVA BlueShake 3D complies with the standards and directives mentioned in the applicable CE declaration.

Please take note of the following safety measures:



- Do only connect the instrument to an earthed mains power socket of 115 V - 230 V, 50 – 60 Hz.
- The objects to shake must be put on the tray in the most centered position possible.
- The installation surface of the instrument must be as even as possible and may not be slippery so that the instrument can fulfill the standard IN 61010-2-051
- If liquid gets into the instrument, immediately pull out the plug and contact our service department to ensure complete safety.
- Contact with highly flammable fluids must be avoided.
- The ventilation slots of the instrument may not be blocked to ensure proper ventilation at any time.
- If the mains cable is damaged, it should only be replaced by an equal one.

1.2 Important Information

This manual complies with the standards and directives mentioned in the EN DIN EN 61010-1 standard.



If the 3D Shaker is operated with a high shaking frequency, the vibrations of the instrument might be transmitted to the underground. Please do consider this when placing the instrument.

1.3 Environmental conditions

The ideal operation environment of the instrument is 80% relative air humidity and between +5°C - +65°C ambient air temperature. These values should neither be underrun nor exceeded.

2 First Steps

2.1 Setup

Before inserting the plug, take care that the voltage of the plug corresponds to the voltage of the instrument. The used power socket must be earthed (protective earth conductor contact). If these procedures are not followed, a safe operation cannot be guaranteed and/or the instrument may be damaged. Observe the ambient conditions (temperature, humidity, etc.) listed in the technical data. Plug the mains cable into the IEC socket on the back of the instrument and connect it with the 115 V- 230 V, 50-60 Hz via an earthed mains power socket.

3 Operation

3.1 Switching on

Press the main switch of the instrument.



After switching on the device, the LCD display will light up, the instrument will perform an auto check and the display will show the version of installed software.

Once the instrument is initialized, the display will show the following:

REAL: Actual speed and the elapsed time

SET: Programmed speed and time. In the middle of the row is indicated if the instrument is activated (ON) or not (Off).

3.2 Parameter setting

The cursor on the display initially is located in selected RPM. Press [MIN/RPM] to change the cursor from RPM (speed) to MIN (time).

By pressing the arrow keys [^] and [v], the desired values are adjusted. Note: If you press the arrow keys simultaneously in RPM cursor position, the instrument will be adjusted to its maximum available speed.

After pressing [START/STOP], the display will show (ON) and the instrument will initiate shaking in a soft and gradual way.

To stop shaking, touch [START/STOP] again. The display will now show (Off).

Note: You can adjust the speed of the instrument during running process by pressing [^] und [v].

***Safety system for motor protection:** If the instrument surpasses maximum motor power, it will be stopped and the message STOP is blinking on the display. Press the [START/STOP] in order to stop the instrument correctly. Once the overloading is eliminated, the instrument can be started again.

3.3 Operation with timer

At first, adjust the desired value of RPM with the [^] and [v] keys. Press the [MIN/RPM] button once to switch to the time setting and adjust the desired minutes with the [^] and [v] keys. Note: If you select "0" minutes, the instrument will operate continuously.

Press the [START/STOP] button. The display will show (ON) and the shaking will softly and gradually increase until the selected speed is reached.

The shaking will be stopped automatically after the time is elapsed.

3.4 Electrical failure

In case of an accidental cut off of the electrical supply, the instrument automatically turns off.

Note: Disconnect the instrument correctly by pushing [START/STOP] and switching the main switch off.

4 Troubleshooting

The display remains blank

Please check if the main switch is on. If it is on and voltage is present at the socket, check the micro-fuse and replace if required. (IEC 127-2/III, 250 V, 2 A time-lag). This fuse and a spare fuse are located in the IEC-bushing (in which the connection cable is plugged). The fuse box can be pulled out with a screwdriver.

5 Maintenance

5.1 Cleaning

Regularly clean the housing of the 3D Shaker.

Precautions for avoiding electric shock

Electronic devices can cause electric shocks in case of an operating error. Never try to repair electric parts. Never open the housing.



- Switch off the instrument and disconnect it from the power supply before starting with cleaning or disinfection works.
- Never let get liquids inside the housing (ventilation slit).
- Do not perform spray disinfection.
- Do only connect the instrument with the power supply if it is completely dry.

The repair service may only be performed by authorized staff trained by the manufacturer. A modification of the instrument is not permitted.

Caution when handling aggressive chemicals



Do not use aggressive chemicals e.g. strong and weak bases, strong acids, formaldehyde, acetone, halogenated hydrocarbons or phenol for cleaning the instrument and its accessories.

- In case of contamination with aggressive chemicals, clean the instrument with a neutral detergent immediately.
- Use neither corrosive detergents nor aggressive solvents or abrasive polishing agents.

Cleaning

1. Disconnect the instrument from the power supply before you start cleaning.
2. Clean all outer parts of the instrument with a mild detergent and a lint-free cloth.
3. Wipe off the detergent with distilled water.
4. Dry all cleaned parts.

Disinfection

1. Disconnect the instrument from the power supply before you start disinfecting.
2. Let the instrument cool down.
3. Clean the instrument as described above.
4. Select a disinfection method compliant to the applicable local legal regulations and directives.
5. Wipe off all outer parts of the instrument with the disinfectant and a lint-free cloth.




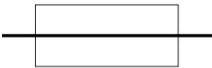
Decontamination before shipment

If you need to send the instrument back to us, decontaminate all parts. Document this in our Decontamination Certificate (Download on www.serva.de) and include it within the shipment.

6 Technical Data

Shaking frequency	5 - 50 rpm
Angle	+/- 4°
Max. Load	5 kg
Timer	0 – 120 min
Dimensions W x D x H	305 x 315 x 120 mm
Platform size	350 x 350 mm
Weight	7,7 kg
Power input	50 W
Electr. supply	115 V - 230 V, 50 - 60 Hz
Max. Relative humidity	80 %
Environmental Temperature range	5°C - 65°C

7 Explanations

	Caution! Risk of electric shock!
	Caution!
	Earth conductor
	Fuse



EC-Declaration of Conformity

We hereby certify that the following described machine in it's conception, construction and form is in accordance with all the relevant essential health and safety requirements of the EC EMC Directive 2004/108/EC (21st May 2007), the EC Low Voltage Directive 2006/95/EC (12th December 2006) and the EC Restriction of use of hazardous substances 2011/65/EC (08. Juni 2011) is adopting these directives.

This declaration is no longer valid if the machine is modified without our consent.

Authorized representative:

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Description of the machine:

Function: Orbital shaker
Type/model : SERVA BlueShake 3D

The agreement with further valid guidelines/regulations following for the product is explained:

- EN 61010-1:2010: Safety requirements for electrical equipment for measurement, control, and laboratory use - Part 1: General requirements
- EN 61326-1:2005: Electrical equipment for measurement, control and laboratory use - EMC requirements - Part 1: General requirements

Authorized person for the technical documentation:

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