



# Variable Speed Nutating Mixer

Model 201100

## *Operating Instructions*

# Contents

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# 1. Safety












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The following symbols mean:-



Caution: Read these operating instructions fully before use and pay particular attention to sections containing this symbol

## **Always observe the following safety precautions**

-  Use only as specified by the operating instructions, or the intrinsic protection may be impaired.
-  After transport or storage in humid conditions, dry out the unit before connecting it to the supply voltage.
-  As the unit is producing shaking or rotational movement, be aware of the surface that the unit will be placed upon. Always place unit on a solid, level work surface or laboratory bench.
-  Connect only to a power supply with a voltage corresponding to that on the external AC adapter label.
-  Ensure that the main switch and isolating device (power supply connector) are easily accessible during use.
-  Before moving, disconnect at the power supply socket.
-  If liquid is spilled inside the unit, disconnect it from the power supply and have it checked by a competent person.
-  It is the user's responsibility to carry out appropriate decontamination if hazardous material is spilt on or inside the equipment.
-  Before using any cleaning or decontamination method except those recommended by the manufacturer, user should check with the manufacturer that the proposed method will not damage the equipment.
-  Clean the unit only with a damp cloth, do not use chemical cleaning agents.
-  Always ensure proper balancing of vessels on platform prior to operation.

## 2. General Information

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The Boekel Scientific Variable Speed Nutating Mixer is designed to provide a gentle, low-foam mixing motion for uniform mixing of fluids in small collection tubes to larger centrifuge tubes. The speed is adjustable from 4-24 rpms and the mixing is achieved through the combination of orbital and rocking motion of the tray.

This device can be used in/for:

- Life Science Laboratories
- Blood Banks
- Liquid – Liquid Extractions
- Dissolving Samples
- Room Temperature Blots

# 3. Getting Started

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## 3.1 Unpacking

Remove packing materials carefully, and retain for future shipment or storage of the unit.

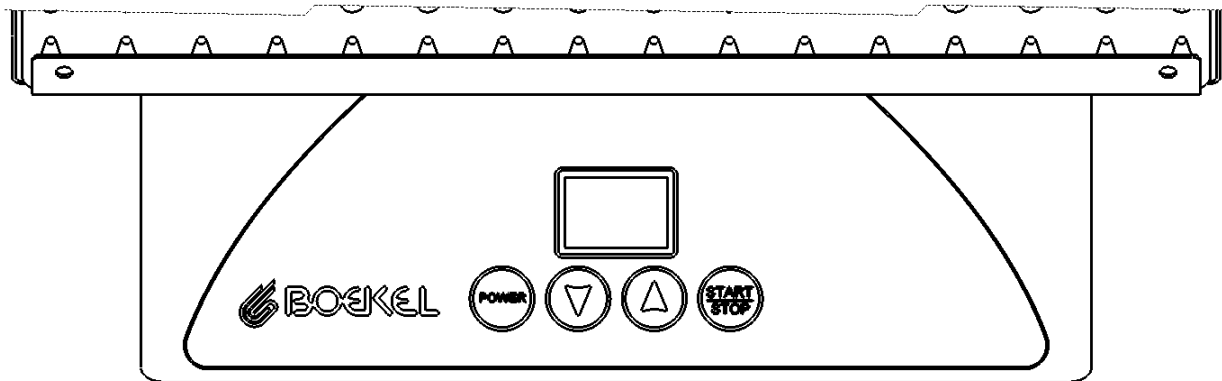
## 3.2 The Boekel Scientific Variable Speed Nutating mixer includes:

- Variable Speed Mixer.....1 piece
- External AC Adapter.....1 piece
- Dimpled mat.....1 piece
- Warranty Card.....1 copy
- Operating Instructions.....1 copy

# 4. Operation

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## Control Panel



- 4.1 Connect the Variable Speed Nutating Mixer to the AC/DC adapter and the adapter to the main power supply and the power cord to power supply outlet.
- 4.1.1 Place the Variable Speed Nutating Mixer on an appropriate flat surface such as a bench top. Be sure to provide adequate clearance around the unit to allow the tray to move freely through its motion.

Note: The Variable Speed Nutating Mixer can be placed in a cold room or in an incubator up to a maximum temperature of 40°C.

**Caution!** When moving the unit always carry the unit by the base, carrying the unit by the tray could result in damage to the unit.

- 4.2 Turn on the power by depressing the Power Button on the front of the control panel.
- 4.3 **Adjusting the Speed of the Mixer**
- 4.3.1 If you wish to increase the speed of the unit, press the arrow up key ▲ to toggle to the desired set speed.
- 4.3.3 If you wish to decrease the speed of the unit, press the arrow down key ▼ to toggle to the desired set speed.
- 4.4 Once the desired speed has been set, depress the Start/Stop button to start and stop the mixer. The Start/Stop button can be pushed at any time to stop the mixer.
- 4.6 The Boekel Scientific Variable Speed Nutating Mixer will retain the last set Speed value upon power off and power on.

# 5. Specifications

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- **The Boekel Scientific Variable Speed Nutating Mixer provides:**

- Digital Microprocessor Control.
- Cold Room and incubator compatibility.
- Adjustable speed provides gentle or vigorous mixing action.
- AC Adapter is UL, CSA, and CE approved
- 2 Year warranty

- **Speed range** .....Variable 4 to 24 rpm
- **Mixing Angle** .....Fixed at 20°
- **Platform Load Capacity**.....0.8 Kg (1.75lbs)
- **Dimensions (W x D x H)**.....18.7 cm x 12.5 cm x 13.7 cm (7.5 in. x 5 in. x 5.5 in.)
- **Tray Dimensions (W x D)**.....24.3 cm x 13.1 cm (9.75 in. x 5.25 in.)
- **Weight**.....1 kg (2.2 lbs)
- **Power**.....12 Volt DC, 1.25A via 100/240 Volt AC Adaptor

# 6. Warranty and Service

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## 6.1 Warranty

When used in laboratory conditions and according to these operating instructions, Boekel warrants this product to be free of defective material and workmanship for a period of two years from the date of manufacture. The liability of Boekel for any defective equipment during the warranty period shall be limited to the repair of such equipment or replacement thereof without charge for parts or labor.

Boekel Scientific's warranty provided here under shall be null and void and without further force or effect if there is any : (1) repair made to the product by a party other than Boekel Scientific, or its authorized service representative. (2) Misuse (including use inconsistent with written operating instructions for the product), mishandling, contamination, overheating, modifications or alteration of the product by any customer or third party. 3) Use of replacement parts that are obtained from a party who is not an authorized distributor of Boekel Scientific.

## 6.2 Service

A Boekel Scientific Returned Material Authorization (RMA) number provided by Boekel Scientific is required before any Boekel products are returned for any reason. Contact Boekel Customer Service at 1-800-336-6929 Extension 5. A Decontamination Certificate must be completed, signed by the user, and returned to Boekel Scientific prior to receiving the RMA number. Please be sure to mark the outside of the returned goods package with this RMA number to ensure prompt handling.

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