



Tube Rotator

SB2 & SB3

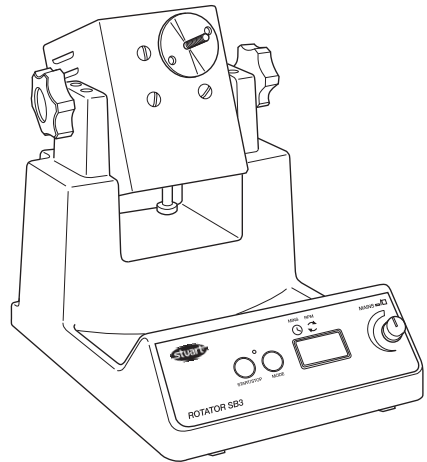
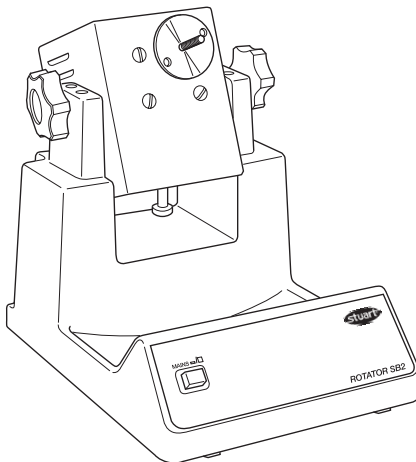
Instructions for use

Manuel d'utilisation

Istruzioni per l'uso

Instrucciones de funcionamiento

Bedienungsanweisung



Barloworld
Scientific

Figure 1: SB2 Fixed Speed model

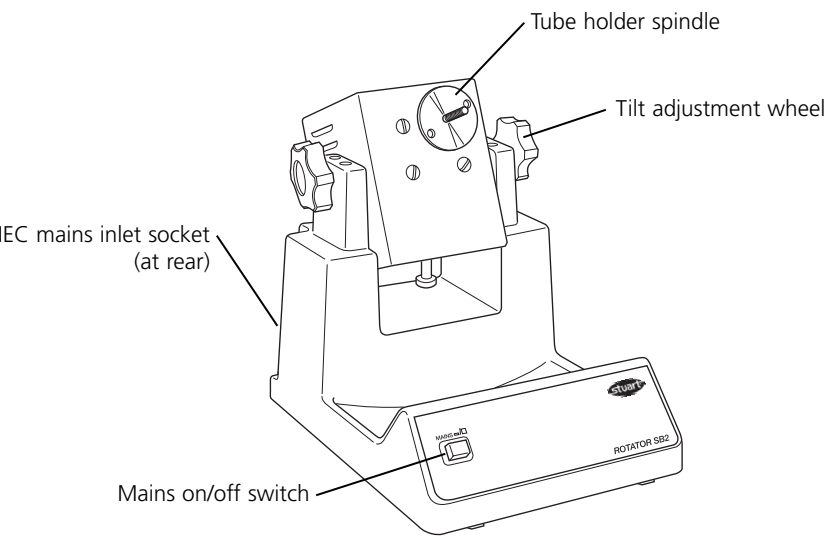
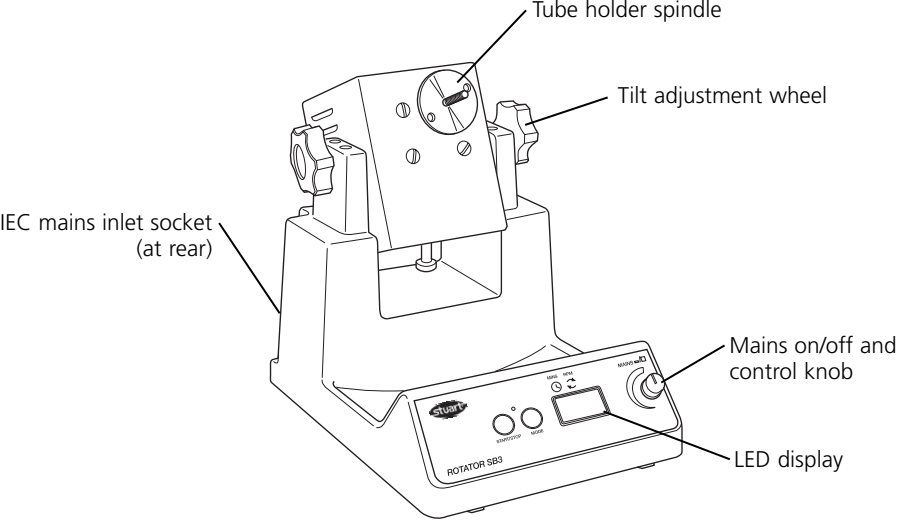


Figure 2: SB3 Variable Speed model



Thank you for purchasing this Barloworld Scientific product. To get the best performance from the equipment, and for your personal safety, please read these instructions carefully before use.

This equipment is designed to operate under the following conditions:-

- ❖ For indoor use only
- ❖ Use in a well ventilated area
- ❖ Ambient temperature range +4°C to +60°C
- ❖ Altitude to 2000m
- ❖ Relative humidity not exceeding 80%
- ❖ Mains supply fluctuations not exceeding 10%
- ❖ Overvoltage category II IEC60364-4-443
- ❖ Pollution degree 2 IEC664

If the equipment is not used in the manner described in this manual the protection provided by the equipment may be impaired.

Electrical installation



THIS EQUIPMENT MUST BE EARTHED

Before connection please ensure that the line supply corresponds to that stated on the rating label.

Power requirements:

Model	Wattage
SB2	50W
SB3	50W

There is an IEC socket at the rear of the instrument for connection to the mains supply, (see figure 1). The unit is supplied with two mains leads fitted with IEC plugs for connection to the instrument. One has a U.K. 3 pin plug and the other has a 2 pin "Shuko" plug for connection to the mains. Choose the lead appropriate for your electrical installation and discard the other.

Should neither lead be suitable, take the lead with the U.K. plug and replace the plug with a suitable alternative. See the enclosed instruction sheet for advice on how to carry out this procedure.

Should the mains lead require replacement a cable of 1mm² of harmonised code H05W-F connected to an IEC 320 plug should be used.

IF IN DOUBT CONSULT A QUALIFIED ELECTRICIAN

The mains lead should be connected to the instrument BEFORE connection to the mains supply.

General description

The SB2 and SB3 Rotators comprise of a motor unit fitted to a stable base with a swivel facility to tilt the angle of the unit from a vertical to a horizontal position. The rotator can be locked at any angle by a side hand wheel.

SB2: Rotates at a fixed speed of 20rpm

SB3: Speed of rotation is variable between 2 and 40rpm, an adjustable digital timer automatically stops rotation after the set time (1 to 9999 minutes, 1 second to 90 minutes or 1 minute to 9 hours).

There are three types of tube holder available giving end-over-end mixing.

These should be ordered separately:

SB3/1: Holds up to 46 x 1.5ml microcentrifuge tubes.

SB3/2: Holds up to 20 x test-tubes or blood tubes with a diameter from 9mm to 20mm.

SB3/3: Holds up to 12 x 50ml centrifuge tubes. If more capacity is required an adapter

(SB3/DUAL) is available, this allows 2 of the above tube holders to be used simultaneously.

There are three racks designed for gentle rotational mixing of culture tubes.

These should be ordered separately:

SB3/4: Holds up to 63 x 12mm diameter tubes.

SB3/5: Holds up to 63 x 16mm diameter tubes.

SB3/6: Holds up to 30 x 26mm diameter tubes.

Safety Advice Before Use

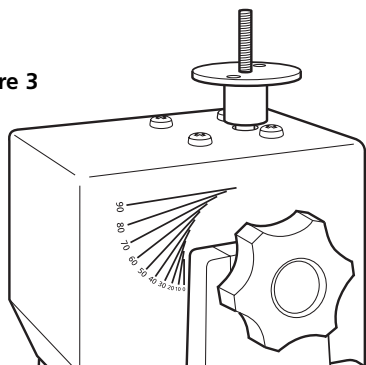
- ❖ The unit should be carried using both hands with fingers under each side frame.
- ❖ Do not stop rotation by hand.
- ❖ In the case of mains interruption, a fault or mechanical failure, the unit will continue to operate on removal of fault.
- ❖ Never move or carry the unit when in use or connected to the mains electricity supply.
- ❖ Ensure that the rotator disc is evenly balanced with tubes.
- ❖ Mechanical energy can lead to breakage of glass vessels. Use with care.
- ❖ Ensure that there is sufficient free space around the rotator so that it does not come into contact with anything during use.

Operation (see fig 1 & 2)

Unpack the rotator and the accessory tube holder(s). Assemble the apparatus on a firm level surface ensuring there is sufficient room for the disc to rotate.

N.B. Keep these instructions in a safe place.

Figure 3



Using the angle adjust (SB2 & SB3)

Loosen the right hand side adjustment wheel by turning it anticlockwise. Using the edge of the main body of the rotator as a guide, position the holder by lining up the desired angle marker parallel to the edge (see fig 3). Tighten the adjustment wheel clockwise to set the required angle.

SB2 Fixed speed version

Load the tube holder ensuring it is evenly balanced.

Switch the unit ON using the mains On/Off switch (see fig 1). The unit will rotate at a fixed speed of 20rpm. Once mixing is complete switch the unit OFF using the same switch and unload the tubes.

SB3 Variable speed version

Load the tube holder ensuring it is evenly balanced.

Switch the unit ON by pressing the control knob in (see fig 2). The red display will show present set speed (red dot in the display shows RPM is selected). This can be adjusted by turning the control knob. Once the correct speed is displayed press the start / stop button to begin rotating. Rotation can be halted at any time by pressing the start / stop button.

Using the timer (SB3 only)

In order to use the timer, halt rotation and press the mode button. The red dot on the display moves over to TIME. Select the desired count down time using the control knob. When the display shows the correct time in minutes, press the start / stop button to begin rotation.

During operation, rotation can be paused at any time by pressing the start / stop button. If this button is pressed again, rotation will start again and the timer will continue to count down. When the timer reaches zero, rotation will be automatically halted and an audible alert will sound. The display settings will revert back to the last values saved in the memory (see saving speed / time values section below).

To disable the timer and revert to continuous rotation, select - - - in the display in timer mode.

To switch the Rotator OFF completely, press the control knob in.

Saving speed / time values


In order to save a commonly used speed / time value, switch the unit ON by pressing the control knob in (see fig 2) and select both a speed value (2 to 40rpm) and a time value (either 1 to 999 minutes, 1 second to 90 minutes or 1 minute to

9 hours) to 999 minutes)., or continuous - - -) using the instruction given above. Then switch the unit OFF by pressing in the control knob. Wait 5 seconds and switch the unit back ON by pressing the control knob in. The inputted values are now saved in the memory. They can be altered at any time by following the same procedure.

Changing the timer unit

The unit timer is defaulted to minutes only (1 to 9999 minutes). To change to minutes and hours (1 minute to 9 hours, H is displayed in the left digit of the timer display), or to change to seconds and minutes (1 second to 90 minutes) turn the unit off using the control knob then switch the mains power off at the plug. Hold down both the start/stop button and the mode button whilst simultaneously switching the mains power back on. The display will temporarily show 88:88 then OFF. Using the control knob turn the unit on, the display will show nn:ss for minutes and seconds, H:nn for hours and minutes and nn for minutes, turn the control knob to select the desired timer unit and turn the unit off by the control knob, OFF will be displayed. When the unit is next used the timer will have been altered to the set unit.

Maintenance & servicing

 **WARNING:** Ensure the unit is disconnected from the mains electricity supply before attempting maintenance or servicing.

Periodically clean the instrument using a damp cloth and mild detergent solution. Do not use harsh or abrasive cleaning agents.

Any repairs or replacement of parts MUST be undertaken by suitably qualified personnel.

Technical specification

	SB2
Speed	Fixed - 20 rpm
Speed display	None
Timer	No
Dimensions (w x d x h)	200 x 270 x 240 mm
Weight	3.2 Kg
Electrical supply	230V / 50Hz, 50W

For a comprehensive list of parts required by service engineers conducting internal repairs and a service manual, please contact the Technical Service Department of Barloworld Scientific Ltd. quoting both the model and serial number.

Only spare parts supplied or specified by Barloworld Scientific Ltd. or its agents should be used. Fitting of non-approved parts may affect the performance and safety features designed into the instrument.

If in any doubt, please contact the Technical Service Department of Barloworld Scientific Ltd. or the point of sale.

Barloworld Scientific Ltd.
Stone, Staffordshire ST15 0SA
United Kingdom
Tel: +44 (0) 1785 812121
Fax: +44 (0) 1785 813748
e-mail equipment@barloworld-scientific.com
www.barloworld-scientific.com

Warranty

Barloworld Scientific Ltd warrants this instrument to be free from defects in material and workmanship, when used under normal laboratory conditions, for a period of **three (3)** years. In the event of a justified claim, Barloworld Scientific will replace any defective component or replace the unit free of charge.

This warranty does NOT apply if damage is caused by fire, accident, misuse, neglect, incorrect adjustment or repair, damage caused by incorrect installation, adaptation, modification, fitting of non approved parts or repair by unauthorised personnel.