

OPERATING INSTRUCTIONS

TEMPERATURE CONTROL

- ⇒ Set the waterbath on a firm and flat surface
- ⇒ Fill the bath with clean water to the desired level, (at least cover the element).
- ⇒ Plug into a properly grounded mains outlet.
- ⇒ Press the power switch on the front panel to turn the unit on.
- ⇒ Select the temperature required using the UP/Down arrows.
- ⇒ Once set the display will show actual bath temperature

The element indicator will remain on until just before the set temperature is reached, at which point it will begin to alternate on and off, signifying that proportional control is in operation.

Various factors will influence the amount of time it takes for the bath temperature to stabilise but generally 30 minutes should be allowed where critical control is important.

CAUTION !

An insufficient water level (the heating element needs to be covered) will cause the safety switch to cut power to the unit.

If the cut out switch operates:

- ⇒ Turn off the power and put sufficient water in the bath to at least cover the element.
- ⇒ Push in the reset button located under the waterbath behind the control panel.
- ⇒ Top up the tank to the desired level and turn on the power, the waterbath should continue to operate normally, if not seek technical assistance.

NOTE:

The difference between ambient and water temperature has the most influence on control stability.

Use of a lid over the bath will not only prevent water loss through evaporation, but will greatly improve control stability.

MAINTENANCE:

The water tank is made of stainless steel, and is designed for use with clean tap water.

Regular cleaning with a mild detergent and a fresh water rinse will be sufficient to maintain the tank in as new condition.

Use of a harsh chemical cleaners can introduce corrosive agents and their use should be avoided.

SHAKER UNIT

- ⇒ Set the waterbath on a firm and flat surface
- ⇒ Plug into a properly grounded mains outlet.
- ⇒ Load the platform and secure (optional racks available if required).
- ⇒ Adjust the stroke if required (see below).
- ⇒ Press the upper power switch on the front panel to turn the unit on.
- ⇒ Select the speed required.

Slow acceleration is incorporated in the speed controller to prevent splashing and spillage of samples.

The control circuit incorporates a safety feature which will disable the motor drive if the shaker platform becomes jammed for any reason. If this happens, push the shaker drive power switch off then on again to reset.

To adjust the stroke:

- ⇒ Press the drive switch to off then remove the 2 screws holding the drive cover in place.
- ⇒ Remove the thumbscrew and re-locate to the desired position, 4 positions are available for 20,27,33 or 40mm of travel, make sure that the spacer is in position under the bearing.
- ⇒ Tighten the thumbscrew.
- ⇒ Replace the drive cover and retaining screws.

To remove the platform from the bath undo the 2 thumbscrews that secure it to the drive assembly.

Do not operate the drive with the platform disconnected.

Specifications:

Power requirements:	240VAC/1560 watts
Platform drive:	Brushless AC motor driving a cam and pushrod assy with adjustable stroke.
Speed control:	20-200 strokes per minute.
Control type:	PID Control with LCD Display
Capacity:	Bath 20 litres, platform size 330 x 310mm
Temperature Sensor:	Thermistor
Temperature range:	Ambient+5° to 100°C min 0°C
Control stability:	± 0.5
Safety:	Manual reset over temperature cut out

SERVICE

Should the unit fail to operate correctly, any service work should be carried out by a qualified technician.

Unauthorised tampering will invalidate the manufacturer's guarantee

PRODUCT WARRANTY

Ratek equipment is covered by a 12 month parts and labour warranty effective from the date of purchase.

This warranty covers the repair or replacement of any parts or components found to be defective, subject to the service options listed below.

This warranty excludes any defect resulting from misuse, neglect, accidental damage, improper voltage, or any alteration which affects the performance of the equipment.

- Does not extend to any costs associated with delivery, damage, or loss incurred during transport.
- Is in addition to any Statutory regulations and provisions implied by the Trade Practices Act and any relevant State or Federal Government obligations.

For warranty service the following options are available:

- Contact the supplier from where the equipment was purchased to arrange for service.
- Return the equipment direct to Ratek Instruments, 60 Wadhurst Drive, Boronia, Vic 3155.

Warranty repairs not returned to Ratek can be undertaken by authorised service personnel but are limited to a parts only warranty.

Note: Proof of purchase is required for all warranty repairs.



OPERATING INSTRUCTIONS FOR SWB20D SHAKING WATERBATH



FOR ADDITIONAL INFORMATION / TECHNICAL SUPPORT
TEL: 61 3 98872161
FAX: 61 3 98872163
EMAIL: sales@ratek.com.au