NE1BD SERIES DIGITAL BOILING BATHS
NE1BD-14
NE1BD-28
NE1BD-18W

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Dear Customer

Thank you for purchasing this piece of temperature control equipment. To get the best performance from your equipment and for your own safety please read these instructions carefully before use.

GENERAL NOTES

1. This product is designed for laboratory use only. Always follow good laboratory practice.
2. Fill the tank prior to connection to electrical supply.
3. Use caution when topping up/draining the tank. If this product is not used in accordance with these instructions then basic safety protection may be affected.
4. The mains supply cord fitted to this product is heat resistant and should be replaced with an equivalent type by a qualified electrician.
5. Ensure that the power supply has a safety earth (ground) terminal.
6. Ensure that the mains switch and power supply connector are accessible during use.
7. Before using any cleaning or decontamination method please refer to the Maintenance and Cleaning section to ensure the proposed method will not damage the unit.
8. Connect only to a power supply with the corresponding voltage to that specified on the rating label positioned on the rear of the unit.
9. Do not block ventilation slots during use and always follow installation instructions.
10. Ensure substances being heated present no risk of a hazard (explosion, implosion or release of toxic or flammable gases) or that these have been addressed. When heating substances where liberation of gases occurs suitable extraction should be used.
11. Use only liquids specified within this Instruction Manual within their specified temperature range.
12. Drain before moving the bath.
13. We recommend using a lid above 60˚C. Take care when lifting the lid as steam and hot vapours can cause scalding.
14. Use a thermometer to check the temperature - do not touch the liquid.

LOCATION

The product must be placed on a smooth, level and sturdy work surface, preferably near a drain for emptying. Use in a ventilated room. Suitable for use in ambient temperatures 5°C to 40°C with a maximum humidity 80% (temperature 31°C) decreasing to 50% (temperature 40°C).

DO NOT block or restrict ventilation slots. DO NOT place directly next to hot heat surfaces. ENSURE that there is sufficient space around the product to allow it to provide optimum temperature control.

UNPACKING

Remove the product from its packaging and retain over the warranty period. Contents consist of:

- Bath
- Stainless steel false base
- Power lead
- Instruction manual

Place the false base into the bath, with the legs facing down. Fit the power lead into the socket at the rear.

SAFETY

Do not touch any electrical contacts or open any closure panels.
RISK OF ELECTRIC SHOCK!!

POWER LEAD AND CONNECTION TO ELECTRICAL SUPPLY

Check the electrical supply is compatible with the rating label.
IF IN DOUBT CONSULT AN ELECTRICIAN. THE PRODUCT MUST BE EARTHED!
Where the mains supply or plug connection differs refer to local regulations or consult an electrician.

LIQUID LEVEL AND SUITABLE LIQUIDS

Always ensure the product is disconnected from the electrical supply before filling and emptying.

Minimum and maximum water level are governed by the constant level which maintains water level during boiling. Using standard laboratory tubing, connect the bottom outlet of the constant level to a regulated water supply/tap and adjust to supply a slow feed of water while maintaining boiling and this will automatically maintain a safe water level. The side outlet acts as an overflow to a sink or drain.

Suitable Liquids

Normal tap water is suitable since a maintained water supply is required.

Low Liquid Level

The bath features a low liquid level alarm. If liquid level drops below the recommended limit the red neon will light and heating will stop. To reset top up the liquid carefully as spitting may occur.

OPERATING INSTRUCTIONS

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1. Ensure the stainless steel false base is fitted and fill the bath with water following Liquid Level Instructions. SWITCHING THE BATH ON WHEN DRY WILL DAMAGE THE HEATER AND MAY INVALIDATE YOUR WARRANTY.
2. Connect the mains power lead to an electrical supply.
3. Turn the bath on using the green mains power switch located on the front.
4. Amber heater indicator will illuminate to show heater activity.
5. Adjust the blue knob to control the degree of boil from gentle to simmer to vigorous boil.
6. Allow the water temperature to stabilise in the bath, and take an actual temperature reading using a thermometer.

DO NOT STAND VESSELS DIRECTLY ONTO THE BATH BASE. ALWAYS USE FALSE BASE/SHELF OTHERWISE DAMAGE MAY OCCUR TO THE HEATERS.

OPERATING INSTRUCTIONS

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To programme set point

Up Arrow: To increase set point value

Down Arrow: To decrease set point value

Minimum set temperature: 80˚C
Maximum set temperature: 105˚C

1. Press the P key. Display will alternate between SP (set point) and the set value.
2. Use the UP and DOWN ARROW keys to adjust the value to the required temperature.
3. Press the P key to save and exit. Alternatively the value will be saved and the programme exited if no key is pressed for 15 seconds.
4. Display will return to normal indicating actual temperature.

CARE AND MAINTENANCE

Please ensure that the washing agent and sanitizing agent are BSI accredited and approved by the H&S department for use on laboratory equipment and stainless steel within your laboratory.

DISCONNECT THE BATH FROM THE POWER SUPPLY PRIOR TO CLEANING

BASIC CLEANING

The stainless steel crevice free tank should provide years of valuable service and is resistant to chloride containing solutions but it is important to avoid high concentrations of halogens- particularly chloride. Halogen deposits may show as rust which can be cleaned off with nitric acid (10%) on a cloth. WEAR PROTECTIVE EQUIPMENT!

The water bath should be emptied at the end of each day, then for interior surfaces:

• WASH • RINSE • DRY •

Drain Outlet: Please ensure that the above cleaning process includes the outlet on the base of the tank, paying particular attention to flushing the outlet and tap thoroughly.

Scale Build Up: In hard water areas limescale can build up and reduce the efficiency of the water bath. Cleaning at the end of each day can prevent this but periodically it may be necessary to descale the bath. Add 1 litre of vinegar to the normal capacity of water and heat for 1 hour to 50˚C.

Occasionally small spots may occur in the bath which resemble rust. These are usually small ferrous particles which have oxidised. Using a stainless steel cleanser such as Bar Keepers Friend® will remove these marks aswell as mineral deposits.

EXTERIOR ANTI BACTERIAL PAINTED SURFACES

The water bath should be cleaned at regular intervals by wiping external surfaces with a cloth or sponge soaked in warm water with a mild detergent. DO NOT USE STRONG SOLVENTS OR SOLUTIONS CONTAINING CHLORINATED HYDROCARBONS, ESTERS, KETONES OR ABRASIVE CLEANERS AS THIS MAY DAMAGE THE BUILT IN ANTI BACTERIAL PROPERTIES.

The “anti-bacterial” paint finish inhibits the growth of bacteria. It has been tested by independant specialist houses using internationally recognised test methods and proven to be effective against a wide range if bacteria including Escherichia Coli and Staphylococcus Aureus (MRSA).

We recognise hygenic coatings are part of a controlled approach to a cleaner working environment. Within the paint formulation is an active ingredient with proven anti-bacterial properties which is maintained throughout its life span. In a laboratory environment this is one less source of contamination. Unlike detergents the anti-bacterial paint finish does not offer an instantaneous action, but is intended for long term general protection against bacterial growth.

Moisture on the painted surface is neccessary for the bacterium to absorb the agent and be affected by it. The coating is therefore less active in very dry conditions although moisture in the atmosphere will maintain some activity. Areas where moisture is trapped are difficult to clean and allow bacteria to proliferate but these areas are most active for the anti-bacterial coating improving defence against bacterial growth.

DECONTAMINATION OF EQUIPMENT

Clifton laboratory equipment can be decontaminated after spillage or contact with HIV or hepatitus infected blood samples by using rapid disinfectants.

We recommend VIRKON tablets for the safe and rapid disinfection of equipment. Please follow the User Instructions carefully. Virkon solution only requires 10 minutes contact time to be effective. Care should be taken with stainless steel tanks and it is important that virkon solution is not left in contact with metal surfaces “for longer than is neccessary”.

We recommend PERASAFE powder for the safe and rapid chemical sterilant of equipment. Please follow the User Instructions carefully.

Please contact your distributor or Day-Impex Ltd for further information relating to these products.

WARRANTY TERMS AND CONDITIONS

1. Nickel Electro Ltd warrants to the Customer that the product purchased is free from defects in materials and workmanship.
2. Provided the terms of payment are duly complied with, Nickel Electro Ltd undertakes to remedy any original defects arising from faulty materials or workmanship, in any goods manufactured/supplied by Nickel Electro Ltd, which under proper and normal conditions of use, may develop within a period of two years from the date of delivery.
3. In the case of components which by their nature of application have an unpredictable life, this guarantee shall only be to the extend of the guarantee given by the manufacturers of these articles.
4. Nickel Electro Ltd will accept no liability, where in the opinion of the company the defect has been caused by damage due to the Customers failure to follow operating instructions, correct installation, wear and tear, or damage due to the use of spare parts other than those spare parts of Nickel Electro Ltd or which are recommended by Nickel Electro Ltd, the defect has been caused by alterations or repairs being undertaken by a person(s) other than an authorised representative of Nickel Electro Ltd.
5. Any damage claim must be in writing, and give the serial number and description of the goods, order number and date of delivery, and will not apply where any names or serial numbers or other information which may be attached to or inscribed upon the goods have been removed, covered up or defaced in any way.
6. Any goods or parts thereof, which may require repair or replacement, shall be repaired or replaced (at the discretion of Nickel Electro Ltd) at the works of Nickel Electro Ltd. The product to be repaired shall be delivered carriage paid back to Nickel Electro Ltd by the customer at the Customer's risk and expense. Any such goods or parts will be delivered by Nickel Electro Ltd to the Customer free within the United Kingdom but if required to be borne by the Customer. All faulty parts removed from the equipment will become Nickel Electro Ltd's property. Any other repairs or work by Nickel Electro Ltd will be carried out under the terms and conditions for specialist engineers currently in force.
7. In the event of replacement with a new or reconditioned model, the replacement unit will continue the warranty period of the original equipment.
8. If any goods or parts thereof are returned unnecessarily all cost involved, including a charge for inspection, handling and the return carriage must be paid by the sender. In no circumstances shall any of the goods be returned to Nickel Electro Ltd without its prior written consent.
9. Please retain the original packaging over the warranty period.

NON WARRANTY INFORMATION

Spare parts shall be made available for a period of 3 years after a piece of equipment is discontinued.

Common Spare Parts

Description	Part Number	Quantity	Where Used:
Switch Blk/Grn 16A	ES0241	1	NE1B Series
Power Entry Module	EX0854	1	NE1B Series
Thermostat	SA01171	1	NE1B Series
800W Matt Element	EE0859	1	NE1B-14
2500W Matt Element	EE0122	1	NE1B-18W and NE1B-28

PORTABLE APPLIANCE TESTING

These tests should be conducted by a qualified person.

DO NOT PAT test the waterbath unless it contains water.

DO NOT Flash Test!!

ACCESSORIES FOR THE NE1B SERIES BOILING BATHS

Stainless Steel Lids

SL1-14H/SS	Hinged Gabled Lid to suit 14 and 18 Litre Boiling Baths
SL1-14	Gabled Lid to suit 14 and 18 Litre Boiling Baths
SL1-22SS	Gabled Lid to suit 28 Litre Boiling Baths
SLR1-14	4 x 105mm Ringed Lid to suit 14 and 18 Litre Boiling Baths
SLR2-14	6 x 83mm Ringed Lid to suit 14 and 18 Litre Boiling Baths
SLR3-14	4 x 114.5mm Ringed Lid to suit 14 and 18 Litre Boiling Baths
SLR1-22	6 x 105mm Ringed Lid to suit 28 Litre Boiling Baths
SLR3-22	6 x 114.5mm Ringed Lid to suit 28 Litre Boiling Baths
LD-14	Flat Lift Off Lid to suit 14 and 18 Litre Boiling Baths
LD-22	Flat Lift Off Lid to suit 28 Litre Boiling Baths

Stainless Steel Test Tube Racks

Dimensions: 270 x 70 x 138mm

Quantity Req: 14 and 18 Litre = 4 Racks, 28 Litre = 6 Racks

6870	26 Hole x 17mm Diameter
6871	16 Hole x 26mm Diameter
6872	36 Hole x 13mm Diameter
6873	18 Hole x 19mm Diameter/suitable for 1.5ml Microtubes
6875	50 Hole x 32mm Diameter/suitable for 50ml Falcon Tubes Dimensions: 260 x 290 x 170mm
6900	12 Hole x 32mm Diameter

Stainless Steel Wire Baskets

BSK-14	To suit 14 and 18 Litre Boiling Baths
BSK-28	To suit 28 Litre Boiling Baths

Raise and Lower Sterilizing Tray

ST-1	To suit 18 Litre Boiling Bath
SA01409	Guide rail assemblies for ST-1

Polypropylene Spheres

BP0368	Pack of 200

Thermometer

TC-1	Thermometer Clip complete with Spirit Filled Bent Stem Thermometer

DECLARATION OF CONFORMITY	
We herewith confirm the following product: NE1B Series Boiling Baths NE1BD Series Digital Boiling Baths	
Conforms with the requirements outlined by the following European Directives:	Conforms with the requirements outlined in the following United Kingdom Directives:
Low Voltage Directive 2014/35/EU	Electromagnetic Compatibility Regulations 2016
EMC Directive 2014/30/EU	Electrical Equipment (Safety) Regulations 2016
RoHS Directive 2012/65/EU	RoHS Directive 2012/65/EU

Conforms with the requirements of the following standards:	
BS EN 61010-1: 2010	Safety requirements for electrical equipment for measurement, control and laboratory use
BS EN 61010-2-010: 2014	
BS EN 61326-1: 2013	Electrical equipment for measurement, control and laboratory use - EMC requirements

Designed and manufactured in the United Kingdom by:
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FINAL INSPECTION AND ELECTRICAL SAFETY TEST REPORT

BX1093 Issue 2: February 2022