SHALLOWBATH™
NE1-9

NE1 SERIES UNSTIRRED
THERMOSTATIC WATER BATHS

NE1-2.5	NE1-22
NE1-4	NE1-28
NE1-8	NE1-56
NE1-14	

NE1B SERIES BOILING BATHS
NE1B-14
NE1B-18W
NE1B-28

Clifton Range®

High quality products at affordable prices

Dear Customer

The Clifton Range® is part of Nickel-Electro Ltd a family firm based in Weston-Super-Mare which was incorporated as a limited company in 1941 but its roots can be traced back to 1935 when the business first started. Now in its 3rd generation of family members, the company prides itself on being a strongly established, independant British manufacturer.

Thank you for purchasing this piece of Clifton Range® 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 scolding.
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.

NE1 SERIES UNSTIRRED THERMOSTATIC BATHS AND SHALLOW BATHS

Minimum liquid level - 55mm/shelf fitted working depth 40mm
Maximum liquid level - 130mm/shelf fitted working depth 115mm

Suitable Liquids

Operating temperatures from ambient +5˚C to 99˚C, for general use we recommend:

- Distilled Water
- Heat Transfer Liquid (the LB range is formulated for temperatures from -45˚C to 90˚C and provides complete protection from freezing and algae growth and safeguards against corrosion)
- Virkon dissolved in distilled water has proven efficacy against bacteria (incl mycrobacteria), viruses, spores and fungi in a variety of independent tests using different protocols.
- Bath Armor - high thermal conductivity allows this material to replace heating/cooling fluids in water baths (see accessories for full range).

NE1B SERIES BOILING BATHS

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.

OPERATING INSTRUCTIONS

NE1B SERIES BOILING BATHS

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.

NE1 SERIES UNSTIRRED THERMOSTATIC AND SHALLOW BATHS

1. Ensure the stanless 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. Adjust the blue temperature knob to the desired setting. DO NOT OVERTURN THE KNOB PAST ITS STOP POINT. DOING SO MAY INVALIDATE YOUR WARRANTY.
5. Amber heater indicator will illuminate to show heater activity.
6. Allow the water temperature to stabilise in the bath, and take an actual temperature reading using a thermometer. Adjust the temperature controller accordingly.

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

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 Clifton Range® 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.

Bar Keepers Friend® can be used as a stainless steel cleanser to remove unsightly 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 three 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 and NE1 Series
Power Entry Module	EX0854	1	NE1B and NE1 Series
Thermostat	SA01171	1	NE1B and NE1 Series
Fuse 2.5A	EF0095	2	NE1-2.5 and NE1-4
Fuse 3A	EF0631	1	NE1-2.5 and NE1-4
Fuse 5A	EF0096	2	NE1-8 and NE1-9
Fuse 5A	EF0516	1	NE1-9
Fuse 6.3A	EF0094	2	NE1-14
Fuse 7A	EF0436	1	NE1-8 and NE1-14
Fuse 8A	EF0632	2	NE1-22 and NE1-28
Fuse 10A	EF0335	1	NE1-22 and NE1-28
Circuit Breaker 15A	EX0550	2	NE1-56
800W Matt Element	EE0859	1	All 8, 14 and 56L Baths
1500W Matt Element	EE0826	1	NE1B-28, NE1-22 and 28
2500W Matt Element	EE0122	1	NE1B-18
250W Matt Element	EE0725	1	NE1-2.5
400W Matt Element	EE0562	1	NE1-4

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

ACCESSORIES FOR THE NE1 SERIES UNSTIRRED AND SHALLOW BATHS

GRP Lids

GL1-4	Hinged Gable Lid to suit 2 and 4 Litre Unstirred Baths
GL1-8	Hinged Gable Lid to suit 8 Litre Unstirred Baths
GL1-14	Hinged Gable Lid to suit 5 and 14 Litre Unstirred Baths
GL1-22	Hinged Gable Lid to suit 9, 22 and 28 Litre Unstirred Baths
GL1-4AF	Lift Off Gable Lid to suit 2 and 4 Litre Unstirred Baths
GL1-8AF	Lift Off Gable Lid to suit 8 Litre Unstirred Baths
GL1-14AF	Lift Off Gable Lid to suit 5 and 14 Litre Unstirred Baths
GL1-22AF	Lift Off Gable Lid to suit 9, 22 and 28 Litre Unstirred Baths

Stainless Steel Lids

SL1-4	Gabled Lid to suit 2 and 4 Litre Unstirred Baths
SL1-8	Gabled Lid to suit 8 Litre Unstirred Baths
SL1-14	Gabled Lid to suit 5 and 14 Litre Unstirred Baths
SL1-14H	Hinged Gable Lid to suit 14 Litre Unstirred Baths
SL1-22	Gabled Lid to suit 9, 22 and 28 Litre Unstirred Baths
SL1-22H	Hinged Gable Lid to suit 22 and 28 Litre Unstirred Baths
SL1-56	Hinged Gable Lid to suit 56 Litre Unstirred Baths
SLR1-14	4 x 105mm Ringed Lid to suit 14 and 18 Litre Unstirred Baths
SLR2-14	6 x 83mm Ringed Lid to suit 14 and 18 Litre Unstirred Baths
SLR3-14	4 x 114.5mm Ringed Lid to suit 14 and 18 Litre Unstirred Baths
SLR1-22	6 x 105mm Ringed Lid to suit 28 Litre Unstirred Baths
SLR3-22	6 x 114.5mm Ringed Lid to suit 28 Litre Unstirred Baths
LD-14	Flat Lift Off Lid to suit 14 and 18 Litre Unstirred Baths
LD-22	Flat Lift Off Lid to suit 28 Litre Unstirred Baths

Stainless Steel Test Tube Racks

Dimensions: 270 x 70 x 138mm

Quantity Req: 2/4 Litre = 1 Rack, 8 Litre = 2 Racks, 5/14 Litre = 4 Racks, 9, 22 and 28 Litre = 6 Racks, 56 Litre = 12 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

Churchill Test Tube Racks

C18-4	28 Hole x 18m Diameter to suit 4 Litre Unstirred Baths
C18-8	44 Hole x 18mm Diameter to suit 8 Litre Unstirred Baths
C18-14	68 Hole x 18mm Diameter to suit 14 Litre Unstirred Baths
C25-4	28 Hole x 25mm Diameter to suit 4 Litre Unstirred Baths
C25-8	44 Hole x 25mm Diameter to suit 8 Litre Unstirred Baths
C25-14	68 Hole x 25mm Diameter to suit 14 Litre Unstirred Baths

Stainless Steel Wire Baskets

BSK-4	To suit 2 and 4 Litre Unstirred Baths
BSK-8	To suit 8 Litre Unstirred Baths
BSK-14	To suit 5 and 14 Litre Unstirred Baths
BSK-28	To suit 9, 22 and 28 Litre Unstirred Baths

Polypropylene Spheres

BP0368	Pack of 200

Thermometer

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

EC Declaration of Conformity

We herewith confirm the following product:

NE1B Series Boiling Baths
NE1 Series Unstirred Thermostatic Baths
NE1 Series ShallowBaths™

Conforms with the requirements outlined by the following European Directives:

Low Voltage Directive 2006/95/EEC
EMC Directive 2004/108/EEC

Conforms with the requirements of the following standards:

BS EN 61010:1
BS EN 61010:2.010
Safety requirements for electrical equipment for measurement, control and laboratory use

BS EN 61326
Electrical equipment for measurement control and laboratory use - EMC requirements

Designed and Manufactured in the UK by:
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NICKEL - ELECTRO LTD.
Manufacturers of the Clifton Range