
# STIRRED BATHS

| | |
|---|---|
| THERMOSTATIC | NE4-T |
| DIGITAL | NE4-D |
| DIGITAL CLEAR TANKS | NE4-D/CT |
| DEEP CHAMBER | NE4-25D |
| IMMERSION COOLERS | DC |

# CIRCULATING BATHS

| | |
|---|---|
| DIGITAL | NE4-P |
| DIGITAL | NE4-HT |
| CHILLOBATHS | NE7 |

THE *Clifton* RANGE

NICKEL-ELECTRO Ltd.

# Welcome to the *Clifton* range from Nickel-Electro

Nickel-Electro is a wholly independent, family owned company, based in the South West of England. We design and manufacture the well known Clifton Range of temperature control equipment and instrumentation, which includes unstirred, stirred, shaking baths, digital hotplates and the innovative Duobaths. Trading since 1941, continued investment and development has established Nickel-Electro as a leading manufacturer of laboratory instrumentation.

Our extensive design and production facilities feature state of the art 3D design, computerised punching and forming, powder painting and electrical and electronic assembly all fully supported by an integrated ERP manufacturing system, managing and coordinating the business within an ISO9001 environment. The complete manufacturing solution on one site, controlling the entire production process, a guarantee of quality.

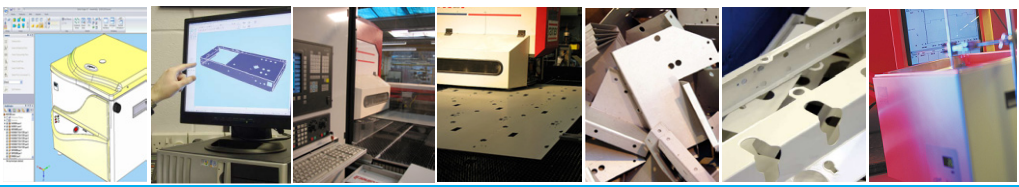
Recognised as an 'Investor in People' our staff offer you high levels of skill and experience, having many years of service in the business. We believe in combining cutting edge technology with traditional skills and values and take pride in being a high quality precision UK manufacturer.

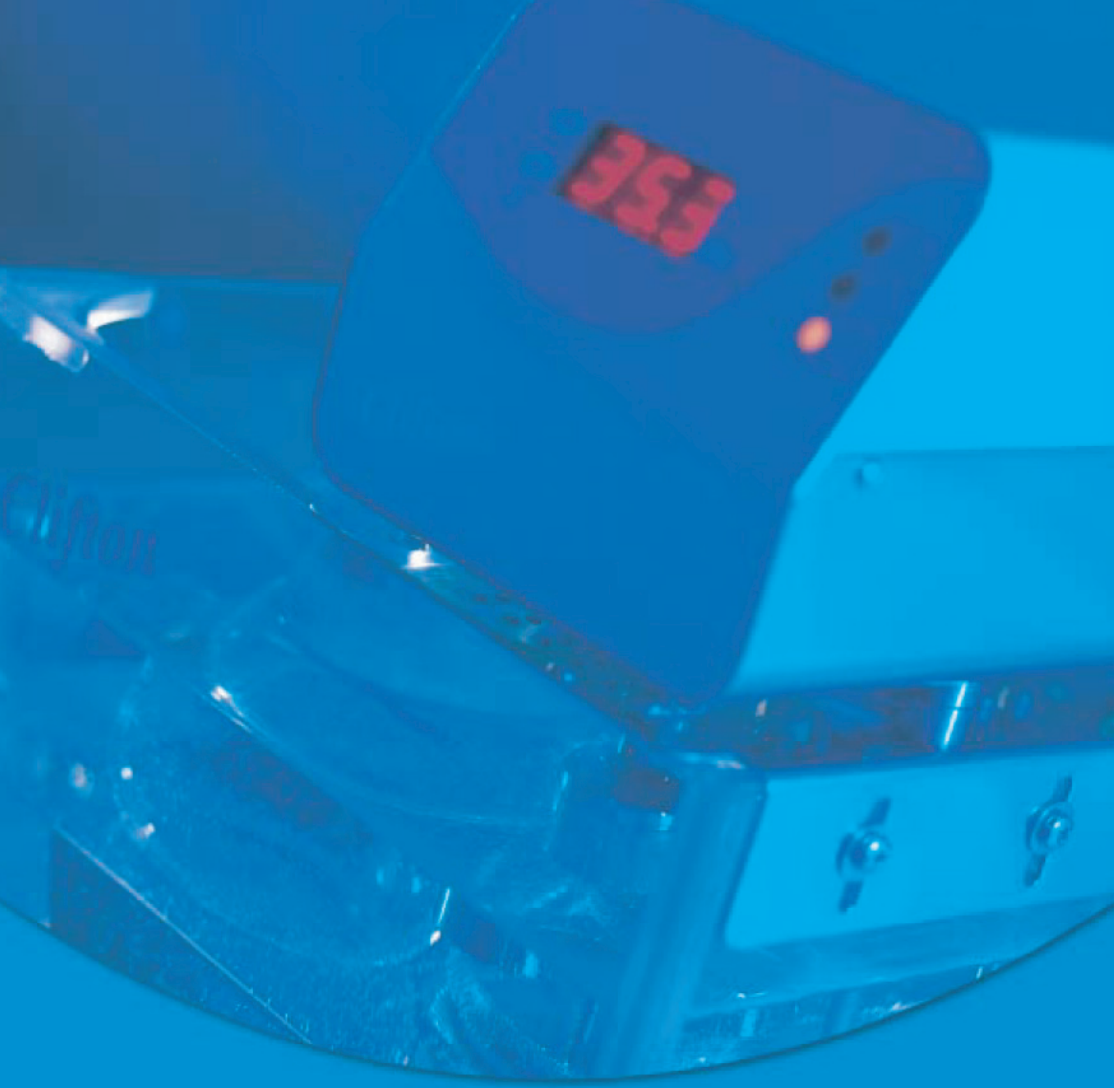
In addition Nickel-Electro manufactures a comprehensive range of laboratory consumables in a variety of materials including aluminium, stainless steel, nickel and zirconium. This complements the Clifton Range and provides our customers with a single source of many types of laboratory equipment.

Melvin Dickson

Managing Director

INVESTOR IN PEOPLE





# STIRRED BATHS

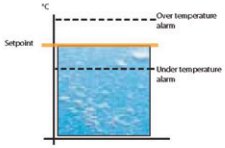
| | |
|---|---|
| THERMOSTATIC | NE4-T |
| DIGITAL | NE4-D |
| DIGITAL CLEAR TANKS | NE4-D/CT |
| DEEP CHAMBER | NE4-25D |
| IMMERSION COOLERS | DC |

# CIRCULATING BATHS

| | |
|---|---|
| DIGITAL | NE4-P |
| DIGITAL | NE4-HT |
| CHILLOBATHS | NE7 |

# STIRRED BATHS

## NE4-D series, digital PID control

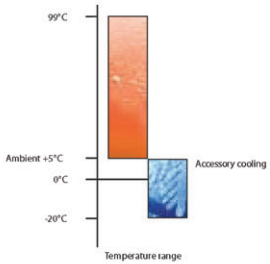

Auto set temperature alarms

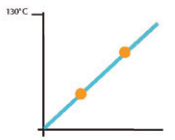
Stirred Clifton water baths are designed for immersion of flasks/bottles/racks in a highly stable temperature environment throughout the water bath. Available in a wide range of sizes suiting a variety of applications.

This range of digital PID controlled Thermostirrers, housed in a durable corrosion resistant stainless steel body. Immersed components are corrosion resistant. The Thermostirrer features a safety cut-out float switch, illuminated on/off switch, heater, mains and over-temperature indications. The Thermostirrer is supplied with a stainless steel mounting bridge to fit the selected tank. Each bath consists of a 304 spec stainless steel tank contained within a sturdy outer case with chemical resistant anti-bacterial paint finish and is complete with a stainless steel shelf, all designed for good temperature stability.

| Cat No | NE4-8D | NE4-14D |
|---|---|---|
| Capacity , litres | 8 l | 14 l |
| Working dims | 129w x 298d x 150h mm | 219w x 298d x 150h mm |
| Overall dims | 271w x 332d x 170h mm | 361w x 332d x 170h mm |
| Heater, W atts | 1250W | 1250W |
| Over temp. alarm | +4°C, warning message, heater cut off, indicator. | +4°C, warning message, heater cut off, indicator. |
| Voltage | 230V | 230V |

1. The Thermostirrer is available separately as NE4-D which can be mounted on a suitable vessel using accessory NE4-MB mount bracket - See page 13.
2. For operation at temperatures below ambient an accessory cooling system DC1-300 or more powerful DC2-300 for larger tanks or rapid cooling - See page 14.
3. Above 60° C or below room temperatures it is recommended that to achieve optimum performance the bath should be covered with lid or spheres - page 13.
4. Painted body and splash proof controls feature Anti-bacterial protection, a hygenic coating which actively inhibits bacterial growth.
5. If using accessory racks please use SL4 lids.
6. A larger size of water bath is available (NE4-38D, NE5-56D).




Factory pre-set two point calibration on every unit.

## Features Include:

* Sensitivity ±0.1°C.
* Uniformity ±0.01°C.
* Temperature range: ambient +5°C - 99°C.
* Accessory cooling: ambient to -20°C.
* Clear 3 digit display: 0.1°C (-20 - 99°C).
* Precision control
  - In normal use 'Adaptive PID'.
  - Changeable conditions or liquids
* Powerful stirring within tank
  - Excellent temperature control.
* Durable in use
  - Bath body zinc coated steel, for corrosion protection, powder coated exterior with a chemical resistant anti-bacterial paint.
  - Stainless steel tank, corrosion resistant and easy to clean, crevice free.
  - Thermostirrer body corrosion resistant stainless steel, with splash proof controls.
* Safety cut-out float switch
  - Low liquid level protection
* Removable stainless steel shelf supplied
* Auto setting Under and Over temperature alarm
* Timer
  - Variable, 00hrs.01mins - 99hrs.59mins



| NE4-22D | NE4-28D |
|---|---|
| 22 l | 28 l |
| 395w x 298d x 150h mm | 395w x 298d x 200h mm |
| 537w x 332d x 170h mm | 537w x 332d x 240h mm |
| 1250W | 1250W |
| +4°C, warning message, heater cut off, indicator. | +4°C, warning message, heater cut off, indicator. |
| 230V | 230V |

# ACCESSORIES

## NE4 series of stirred water baths

### LIDS

| Cat. No. | Description |
|---|---|
| SL4-8 | Gabled lid, stainless steel, for 8 litre baths |
| SL4-14 | Gabled lid, stainless steel, for 14 litre baths |
| SL4-22 | Gabled lid, stainless steel, for 22 and 28 litre baths |
| SL4-38 | Gabled lid, stainless steel, for 38 litre baths |
| LD4-8 | Flat lid, 8 litre baths. |
| LD4-14 | Flat lid, 14 litre baths. |
| LD4-22 | Flat lid, 22/28 litre baths. |
| LD4-38 | Flat lid, 38 litre baths. |

### RAISED SHELVES

Allows immersion depth of samples to be varied.

| | | | |
|---|---|---|---|
| RS4-14 | For 14 litre baths. | RS4-38 | For 38 litre baths. |
| RS4-22 | For 22/28 litre baths. | | |

### RACKS

| | |
|---|---|
| 6870 | Test tube rack, stainless steel, 26 holes x 17mm dia |
| 6871 | Test tube rack, stainless steel, 16 holes x 26mm dia |
| 6872 | Test tube rack, stainless steel, 36 holes x 13mm dia<br>also suitable for 1.5ml microtubes |
| 6873 | Test tube rack, stainless steel, 18 holes x 19mm dia |
| 6900 | Test tube rack, stainless steel, 12 holes x 32mm dia |

| Max number of racks per bath | | | | | |
|---|---|---|---|---|---|
| Bath size | 8 litre | 14 litre | 22/28 litre | 38 litre | 56 litre |
| No. racks | 1 | 2 | 5 | 7 | 10 |

### INSULATED HOSES

| | |
|---|---|
| HS-1 | Push fit and lock insulated hose 1m length x 6mm dia |
| HS-2 | Push fit and lock insulated hose 2m length x 6mm dia |

### MISCELLANEOUS

| | |
|---|---|
| TC-1 | Thermometer clip with bent stem spirit filled thermometer . Scale: 0 -100°C. |
| NE4-CC | Cooling coil - water fed - background cooling. |
| DC1-300 | Immersion cooler: operates to -20°C See page 14 |
| DC2-300 | Immersion cooler: more powerful cooling to -20°C |
| BX0616 | Draining syphon |
| NE4-MB | Mounting bracket allows controllers to be mounted on a suitable separate vessel. Max tank wall thickness 30mm. |

| | |
|---|---|
| CAL | Calibration Record |

### SPHERES, POLYPROPYLENE

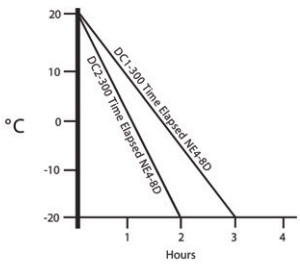
Provides a floating lid on water baths to minimise evaporation and allows easy immersion/removal of flasks etc (maximum temperature 100°C). Number of packs required providing a single layer:

| Bath size | No. of packs | Bath size | No. of packs |
|---|---|---|---|
| 8/14 litre | 1 Pack | 56 litre | 8 Packs |
| 22/28 litre | 2 Packs | 38 litre | 5 Packs |

| | | |
|---|---|---|
| Cat. No. | BP0368 | Pk qty 200 |

# IMMERSION COOLER

This refrigeration cooler has no temperature control, as it is designed to be used in conjunction with a stirred or circulating water bath, where its immersion coil is specially designed to fit into rear access hole behind the Thermostirrer without sacrificing the working area. The immersion cooler runs continuously with the bath providing temperature control.




## Features Include:

* Stainless steel immersion coil - corrosion resistant
* Replaces wasteful use of cold water cooling

| Cat No | DC1-300 | DC2-300 |
|---|---|---|
| Length of hose | 900mm | |
| Diameter cooling coil | 65mm | |
| Overall dims mm | 345w<br>445d<br>265h | 345w<br>465d<br>315h |
| Cooling capacity W | | |
| +10°C | 800 W | 1400 W |
| 0°C | 580 W | 1000 W |
| -10°C | 400 W | 700 W |
| -20°C | 250 W | 450 W |
| Refrigerant | R134a | |
| Voltage | 230V | |

## Service Support

At Nickel-Electro our customers can rely on good service throughout the life of their equipment and even give you the opportunity to download operating instructions that you may have mislaid.

Our service engineers are fully trained in the assembly and use of all Clifton instrumentation. Products can be returned to our comprehensively equipped service centre where a fast and efficient turnaround is guaranteed.

A full technical service is available.

We are keen to ensure that new and existing distributors are fully aware of our products. We can arrange training if requested.

## Environmental Policy

We recognise our responsibility towards the environment and strive to ensure that all aspects of the business and its products have the least harmful effect on the environment by:

* Designing products for long durable working life supported with comprehensive backup of spares.
* Designing equipment using mainly metal based structures for easy conversion, recycling at the end of product life.
* Designing equipment to reduce energy consumption during their working life.
* Minimising waste in manufacuring and where it is produced compost, re-use or recycle.
* Packing the Clifton range in EPI approved plastic bags, which are degradable or biodegradable.
* Being fully aware of environmental legislation.

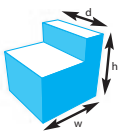
## Anti-bacterial surfaces

Anti-bacterial finishes inhibit the growth of bacteria. It has been tested by independent specialist test houses such as the Law Laboratories (in the UK) using internationally recognized test methods and proven to be effective versus a wide range of bacteria species including Escherichia coli and Staphylococcus aureus (MRSA).

Hygienic coatings are part of a controlled approach to cleaner facilities. Within its formulation an active ingredient with proven anti-bacterial properties is bound into the coating. The efficacy of the finish applied to the Clifton range is maintained over its lifetime, as the anti-bacterial agent is integral within the paint or control panel.

In a busy laboratory environment, this finish effectively limits everyday bacteria transfer from operator to equipment and then on to other operators. This is one less source of contamination, contributing to essential clean working practices.

## Key to Dimensions




## Safety and product marking

Clifton range laboratory equipment carries CE mark indicating that it meets the requirements of applicable European Directives.

The Clifton range meets International Standards BS EN 61010-1, Safety requirements for electrical and electronic equipment for measurement, control and laboratory use.

Equipment used for heating additionally meets BS EN 61010-2-010 Particular requirements for laboratory equipment for the heating of materials.

Equipment used for mixing additionally meets BS EN 61010-2-051 Particular requirements for laboratory equipment for mixing and stirring.

Centrifuges meet requirements BS EN 61010-2-020 Particular requirements for laboratory centrifuges.

The Cliton range meets International Standards BS EN 61326-1 Electrical equipment for measurement, control and laboratory use - EMC Requirements both A and B classes.


Every piece of Clifton equipment has a unique serial number, recorded on our database with its manufacturing inspection data. Every item is electrically tested for safety, and a copy of test certificate enclosed in the instruction book.

## Temperature performance

We pride ourselves on assuring that Clifton range performs to the highest level. All Clifton temperature controlled equipment undergoes temperature calibration, in controlled conditions, to thoroughly test its performance before release to you.

Analogue controlled equipment is checked at one temperature over its working range against a UKAS calibrated reference device. We adjust the equipment to reference temperature and check its operating sensitivity is within specification.

Digital controlled equipment is checked at two temperatures over its working range against a UKAS calibrated reference device.

## Quality System

Our products are designed, developed and manufactured in a tightly controlled ISO9001:2008 environment and all products are CE compliant.

Certificate No. Q09820

## Future Development

We have a policy of ongoing product development to ensure that tomorrows laboratory is equipped with innovative, well-designed and reliable equipment.

# NICKEL-ELECTRO LTD

**Manufacturer of the Clifton Range.**
**Manufacturer of the Metalware Range.**
**Manufacturer of laboratory, medical and clinical equipment.**

Oldmixon Crescent, Weston-super-Mare,
North Somerset, BS24 9BL, United Kingdom.

Tel: +44 (0)1934 626691
Fax: +44 (0)1934 630300

Email: sales@nickel-electro.co.uk
www.nickelelectro.co.uk


Your local distributor:


June 2010 Printed in UK by Polycrown.com