

A close-up photograph of a Clifton Unstirred Bath. A glass flask containing a blue liquid is placed inside the bath. A bright green light is visible inside the flask. The bath has a digital display showing '10' and a red indicator light. The Clifton logo and 'UNSTIRRED BATH' are printed on the side of the bath.

Clifton
UNSTIRRED BATH

UNSTIRRED BATHS

NE1B series BOILING BATHS

SHALLOWBATHS

TRIPLEBATHS

NE1 series THERMOSTATIC BATHS

NE2D series DIGITAL BATHS

NE3DT series DIGITAL AND TIMER BATHS

DUOBATHS

NE5 series SHAKERBATHS

SW series ULTRASONICBATHS

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



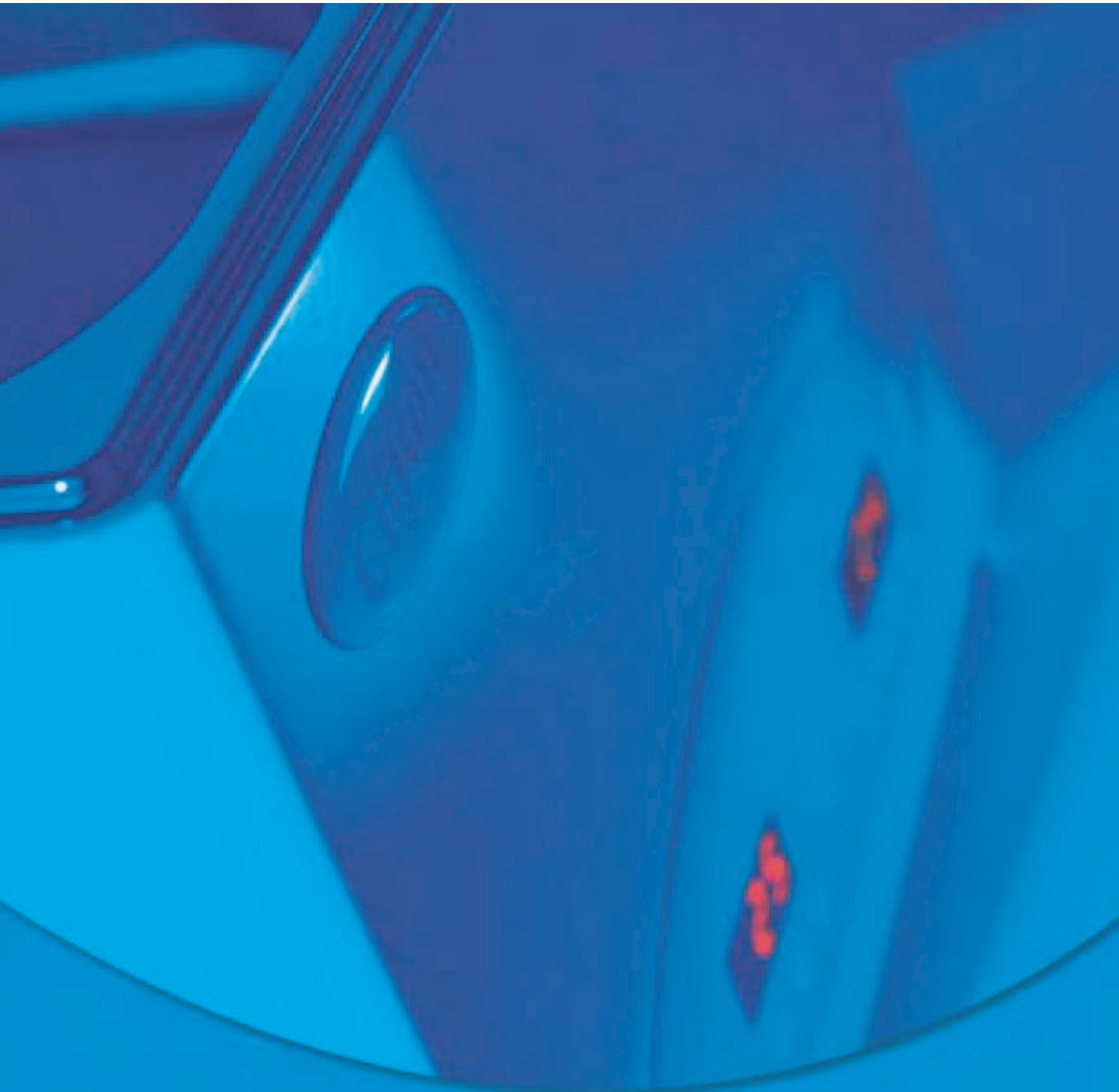
SOLID EDGE
VELOCITY SERIES

radan

rainer

k3

Our partners Providing world class innovative manufacturing solutions



SHAKER BATHS

NE5 series SHAKERBATHS
ACCESSORIES

BATHS

NE5-D series, Shaking

This range of Shaker water baths feature a deep drawn tank with rounded corners manufactured from stainless steel. Ideal for day-to-day use and can be easily cleaned. A reciprocating stainless steel trolley, which accepts a wide variety of accessory combinations for flasks, micro-titre plates or test tube racks.



Featuring advanced PID temperature control for precision, with set and actual temperatures displayed simultaneously. Featuring a highly accurate PT100 sensor with the added advantage of being immersed for direct measurement.

Designed and constructed for ease of use carrying a number of safety features for demanding continuous laboratory applications. Protecting your work the bath features auto setting High and Low Alarms, about set temperature. When the alarm is activated, heaters switch off, temperature details revert to a red warning display.

These Shaker baths can also be programmed with delay start, ramp and dwell at set temperature for timed period.

The NE5-28D has in addition to greater capacity, further refinements of an adjustable stroke length, access door and drain outlet.

Additionally an autotune facility allows the shaker bath to learn about applications and its environment.

Features actual temperature logging with set temperature.

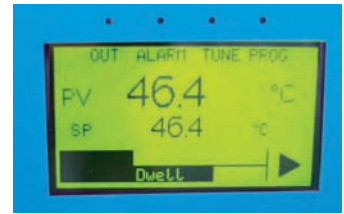
With continual diagnostics and a service screen for product support.

Every shaker bath is factory calibrated at a reference temperature for assurance.



Cat No.	NE5-10D
Temperature	
Set point display/resolution	Digital LCD / 0.1°C
Actual display/resolution	Digital LCD / 0.1°C
Range	(min 20°C) ambient +5°C to 99°C
Sensitivity @ 45°C	± 0.1°C
Uniformity @ 45°C	± 0.1°C
+4°C High alarm	Heating off, red indicator and display ¹⁰
-4°C Low alarm	Red indicator and display ¹⁰
Diagnostics	Continuous with messaging and service screen ¹¹
Timer option	
Display/resolution	Timer messaging/hh:mm:ss
Settings	00h:00m:01s upto 99h:99m:99s ^{13, 9, 12}
Timer options	Delay start/Ramp/Dwell timers ^{13, 9, 12}
Shaking	
Stroke length	Fixed 20mm
Speed	up to 380 strokes/min
Flask Tray size	175w x 270d mm
Flask immersion depth	50 - 120mm
Capacity, litres	10l
Internal dimensions	242w x 300d x 200h mm
General	
Overall dimensions	449w x 332d x 290h mm
Drain, outlet	No
Heater, Watts	800W
Safety	Thermal resetting cut-out ⁷
Voltage	230V

1. It is recommended that to **save energy** and to achieve optimum performance the bath should be covered with a Lid.
2. NE5-10D supplied with a Trolley and Perforated Tray for accessories to be affixed.
3. NE5-28D supplied with a Trolley, supplied without Perforated Tray SBF01804 for accessories to be affixed.
4. Painted body and controls features Antibacterial protection, hygienic coating which actively inhibits bacterial growth.



Operation mode

- * Temperature control only
- * Program options delay start ¹³, ramp timer ⁹ and dwell at set temperature with timer ¹².

NES-28D

Digital LCD / 0.1°C
Digital LCD / 0.1°C

(min 20°C) ambient +5°C to 99°C

±0.1°C

±0.1°C

Heating off, red indicator and display ¹⁰

Red indicator and display ¹⁰

Continuous with messaging and service screen ¹¹

Timer messaging/hh:mm:ss

00h:00m:01s upto 99h:99m:99s ¹³, ⁹, ¹²

Delay start/Ramp/Dwell timers ¹³, ⁹, ¹²

Variable up to 40mm
up to 380 strokes/min

175w x 385d mm

50-120mm

28l

500w x 300d x 200h mm

715w x 332d x 290h mm

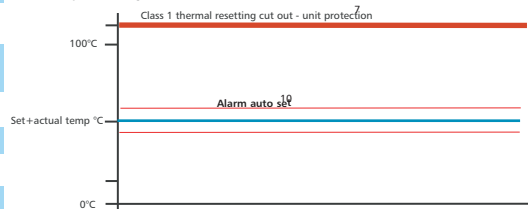
Yes

1000W

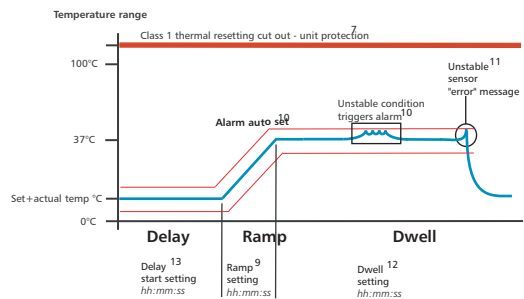
Thermal resetting cut-out ⁷

230V

Temperature control only



Timer options: delay start timer, ramp timer and dwell temperature with timer. And showing alarm and mess.

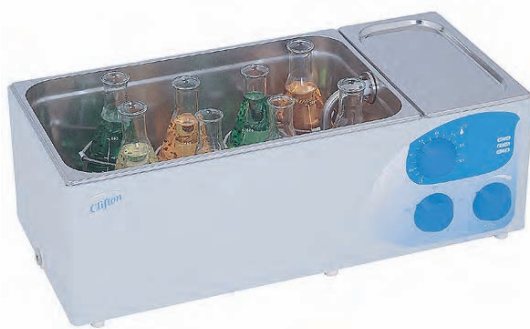


NE5 series, Shaking

Featuring electronic temperature and shaker speed control for sample incubation with a broad range of accessory clips and racks.

Designed for ease of use and intrinsically safe temperature control systems built in to the durable powder painted Clifton body. The bath uses a deep drawn pressing with rounded corners manufactured from stainless steel which produces the ideal environment for day-to-day use and can be easily cleaned. Inside the bath connected to shaker drive a reciprocating stainless trolley, accepts a wide variety of clip combinations of accessories for holding flasks, micro-titre plates or test tube racks. These can all be easily inter -changed and removed for cleaning purposes.

The heater and safety device are concealed beneath the tank allowing easy cleaning of full working area inside the bath.



Cat No.	NE5-28
Temperature	
Range	ambient +5 °C - 99°C
Sensitivity @ 45°C	± 0.2°C
Uniformity @ 45°C	± 0.1°C
Shaking	
Stroke length	Variable up to 40mm
Speed	up to 380 strokes/min
Flask Tray size	175w x 385d mm
Flask Immersion	50-120 mm
Capacity, litres	28l
Internal Dims	500w x 300d x 200h mm
General	
Overall Dims	715w x 332d x 290h mm
Drain, outlet	Yes
Heater, Watts	1000W
Safety	Self reset cut-out heater
Voltage	230V



1. It is recommended to **save energy** and to achieve optimum performance the bath should be covered with a Lid.
2. NE5-28 supplied with a Trolley to accommodate accessories.
3. Painted body and controls features Antibacterial protection, hygienic coating which actively inhibits bacterial growth.
4. Accessory glassware for illustration purposes only.

ACCESSORIES

NE5 Shaker series accessories

The NE5-28 and NE5-28D are supplied complete with a trolley platform to accommodate universal spring tray, flask clip trays and test tube rack trays.

For the NE5-10D flask clips and test tube racks can be mounted directly onto perforated reciprocating trolley, supplied.

Flask Trays for NE5-28 and NE5-28D

A perforated tray, complete with flask clips to suit common sizes of glass/polypropylene Erlenmeyer flasks. The tray simply drops onto the reciprocating trolley and locates snugly.

Cat. No.	Description
SFT0025	39 x 25ml flask clip tray
SFT0050	32 x 50ml flask clip tray
SFT0100	18 x 100ml flask clip tray
SFT0250	12 x 250 ml flask clip tray
SFT0500	8 x 500 ml flask clip tray
SFT1000	5 x 1000ml flask clip tray
SFT2000	2 x 2000ml flask clip tray
SFT9000	Universal spring tray - a multispring tray to accommodate a variety of sizes of vessel
STT004	Test tube rack tray with side clips - accommodates up to four racks from 687x series
SBF01804	The tray provides a platform onto which racks etc can be placed. Also can be substituted for reciprocating trolley, this allows it to be used as an unstirred bath.



Flask Clip Tray

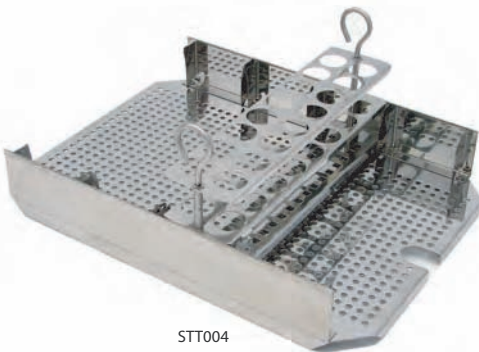


SFT9000

Test Tube Racks for NE5 series

For the NE5-10D these racks can be mounted directly onto perforated reciprocating trolley. For the NE5-28 and NE5-28D a Test tube rack tray with side clips is required, STT004.

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. 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.



STT004

1. Maximum 2 off Test Tube Racks can be fitted into the NE5-10D and fasten directly onto trolley.
2. Maximum 4 off Test Tube Racks can be fitted onto STT004 Test tube rack tray into the NE5-28 and NE5-28D.

BATHS ACCESSORIES

Lids for NE5 series

The use of a lid helps reduce evaporation and assists in keeping samples free from contamination and **saves energy**.

* Gable lids with a high profile allowing extended use of the bath area, right into edges of the tank

* Design ensures that all condensate goes back into bath.

* No drip points to contaminate samples.



Cat. No.	Description
SL1-8	Gabled lid, lift off, stainless steel for NE5-10D
GL1-8	Gabled lid, hinged, clear polycarbonate for NE5-10D
GL1-8AF	Gabled lid, lift off, clear polycarbonate for NE5-10D
SL1-22	Gabled lid, lift off, stainless steel for NE5-28 and NE5-28D
SL1-22H	Gabled lid, hinged, stainless steel for NE5-28 and NE5-28D
GL1-22	Gabled lid, hinged, clear polycarbonate NE5-28/NE5-28D
GL1-22AF	Gabled lid, hinged, clear polycarbonate NE5-28/NE5-28D



GL1-8



SL1-22

Separate Flask Clips for NE5 series

For personalised clip arrangement, clips are supplied with all necessary fixings to enable them to be attached to the selected perforated tray SBF01804 (NE5-28D and NE5-28) or SA01773 (NE5-10D).

It is possible to mix and match a variety of clips to suit different applications.

FC0025	25ml flask clip
FC0050	50ml flask clip
FC0100	100ml flask clip
FC0250	250ml flask clip
FC0500	500ml flask clip
FC1000	1000ml flask clip
FC2000	2000ml flask clip
FC2000/HD	2000ml flask clip - heavy duty
FC3000	3000ml flask clip
FC3000/HD	3000ml flask clip - heavy duty
FC3000FB	2.8l Fernbach flask clip
FC5000/HD	5000ml flask clip - heavy duty
M11	Microplate clip
SBF01804	Perforated tray for NE5-28 and NE5-28D
SA01773	Perforated tray for NE5-10D



SFT0050



M11

Miscellaneous for NE5 series

BX0953	Drain T ap
CAL	Calibration Record
BP0368	Spheres 1 pack NE5-10D, 2 packs NE5-28 or NE5-28D
LB-5.0	5 litres - Lab Bath 4590 - Heat transfer fluid 15°C to 90°C



BX0688

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 manufacturing and where it is produced compost, re-use or recycle.

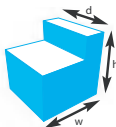
Anti-bacterial surfaces

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.

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



Engineered & Built in Great Britain



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 Clifton 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.

Digital controlled equipment is checked at one or two temperatures over its range against a UKAS calibrated reference device measuring actual and indicated temperatures. A sophisticated system then automatically enters any necessary temperature adjustments and only then is equipment released from the factory.

Quality System

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



Future Development

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



NICKEL - ELECTRO LTD.



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