



Clifton
UNSTIRRED BATH

BOILING BATHS

UNSTIRRED BATHS

DUOBATHS

SHAKING BATHS

ULTRASONIC BATHS

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



U L T R A S O N I C B A T H S

INDUSTRIAL BATHS

UNHEATED BATHS

HEATED BATHS

ULTRASONICS

SW series, industrial

A new range of industrial strength ultrasonic baths, sturdy construction and suitable for continuous operation.

Features Include:

- * Stainless steel construction.
- * High performance industrial strength ultrasonics with sweep function for perfect and even distribution of ultrasonic activity.
- * Auto-Degassing function useful for liquid changes in the tank, decarbonating and degassing HPLC solutions.
- * Ultrasonic Boost function for 25% more sonic power.
- * Quick and easy to use drain facility.
- * Heaters can safely run dry.
- * Temperature controlled ultrasonics – activity will start once set temperature is achieved.
- * Indication of time remaining.



Cat. No.	SW12H	SW30H	SW45H
Capacity, litres	12 l	28 l	45 l
Internal Dims	300w x 240d x 200h mm	505w x 300d x 200h mm	500w x 300d x 300h mm
Overall Dims	365w x 278d x 321h mm	568w x 340d x 321h mm	615w x 370d x 467h mm
Operating Frequency, kHz	37kHz	37kHz	37kHz
Sonics, Watts	200W	300W	400W
Timer	1, 2, 3, 4, 5, 10, 15, 20, 25, 30 mins and permanent on position		
Heater, Watts	800W	1200W	1600W
Voltage	230V	230V	230V

ACCESSORIES



BSK-12 Stainless steel wire Basket for SW12H

BSK-30 Stainless steel wire Basket for SW30H

BSK-45 Stainless steel wire Basket for SW45H

BSK-90 Stainless steel wire Basket for SW90H



LD-12 Flat moulded plastic Lid for SW12H

LD-30 Flat moulded plastic Lid for SW30H

LD-45 Flat stainless steel Lid for SW45H

LD-90 Flat stainless steel Lid for SW90H

★ A larger SW90H model is also available.

Cleaning concentrates

SW-C series features a wide selection of cleaning concentrates, L1 to L5 grade from acidic, neutral to alkaline.



ULTRASONICS

MU series, Unheated

These ultrasonic baths are suitable for sonochemistry, degassing and sample dissolution and cleaning of delicate or fragile components/glassware especially where there may be a risk of breakage as a result of manual cleaning.



MU-8	MU-14	MU-22
8l	14l	22l
300w x 240d x 150h mm	325w x 300d x 150h mm	500w x 300d x 150h mm
332w x 270d x 290h mm	361w x 332d x 290h mm	538w x 332d x 290h mm
30 - 40kHz	30 - 40kHz	30 - 40kHz
200W	200W	300W
Variable - 30 minutes	Variable - 30 minutes	Variable - 30 minutes
<65dBa @ 1m	<65dBa @ 1m	<70dBa @ 1m
230V	230V	230V

1. It is essential that either BSK series Baskets or SLU series Lids are used in order to prevent items from touching bottom or sides of the tank - see accessories.
2. Intermittant use only, no permanent on setting.

DU series, Heated

These heated ultrasonic baths are suitable for sonochemistry, degassing and sample dissolution and cleaning of delicate or fragile components/glassware especially where there may be a risk of breakage as a result of manual cleaning. The addition of heaters on this range ensures that optimum operating temperature for maximum ultrasonic efficiency is reached rapidly.



Using high performance piezoelectric disc transducers to ensure, consistent ultrasonic activity throughout the tank liquid ideal for laboratory routines. The activity is called cavitation - this is created by pressure waves which causes bubbles to form and collapse resulting in an intense scrubbing action.

Wipe clean controls feature bold 2 digit LED display of actual temperature, adjusting temperature and time and activating sonics



Cat. No.	DU-4	DU-8
Capacity, litres	4l	8l
Internal Dims	300w x 150d x 150h mm	300w x 240d x 150h mm
Overall Dims	332w x 185d x 290h mm	332w x 270d x 290h mm
Operating Frequency, kHz	30 - 40kHz	30 - 40kHz
Noise Level	<65dBa @ 1m	<65dBa @ 1m
Sonics, Watts	150W	200W
Heater, Watts	200W	200W
Timer	Variable - 30 minutes	Variable - 30 minutes
Voltage	230V	230V

1. It is recommended that to minimise evaporation and act as dust covers preventing contamination whilst the bath is left overnight the bath should be covered with LD series Lid - see accessories.
2. It is essential that either BSK series Baskets or SLU series Lids are used in order to prevent items from touching bottom or sides of the tank - see accessories.
3. Intermittant use only, no "permanent on" setting.

Features Include:

- * Temperature
 - range: ambient +5°C - 69°C
 - digital LED display
 - overtemperature alarm
- * Timer
 - variable 0-30 minutes
 - electronic run back timer
 - audible buzzer at end of timed period
- * Heating element, safety cut-out, liquid and temperature sensors
 - concealed providing a totally clear clutter free working area
 - easy to clean
 - corrosion resistant stainless steel working environment
- * Side lifting handles
 - for ease of transportation
- * Low liquid level audible alarm
- * Constant tuning ultrasonics for optimum working
 - eliminates need for frequency sweeping
- * Noise levels reduced
 - insulating gasket between vibrating and static surfaces reducing ultrasonic shrill to a vigorous hum
 - at key points inside bath insulation used to dampen noise levels
 - using disc transducers rather than pillars for quieter operation
- * Drain outlet fitted to 22 litre.
 - accessory tap can be fitted for convenient use



DU-14

DU-22

14l

22l

325w x 300d x 150h mm

500w x 300d x 150h mm

361w x 332d x 290h mm

538w x 332d x 290h mm

30 - 40kHz

30 - 40kHz

<65dBa @ 1m

<70dBa @ 1m

200W

300W

200W

600W

Variable - 30 minutes

Variable - 30 minutes

230V

230V

MU and DU series Ultrasonic Baths

FLAT LIDS

Minimise evaporation and act as dust covers whilst bath is left overnight for example

Cat No.	Description
LD-4	Flat lid, stainless steel, for 4 litre baths
LD-8	Flat lid, stainless steel, for 8 litre baths
LD-14	Flat lid, stainless steel, for 14 litre baths
LD-22	Flat lid, stainless steel, for 22 litre baths

STAINLESS STEEL FLAT LIDS FOR BEAKERS

Convenient method for locating beakers into ultrasonic activity separating their content from bath liquid. Ultrasonic activity is transmitted through beaker wall into its contents.

SLU1-4	Beaker lid, stainless steel, for 4 litre baths 2 x 105mm holes suitable for 800ml glass or 1250ml stainless steel beakers
SLU1-8	Beaker lid, stainless steel, for 8 litre baths 4 x 83mm holes suitable for 400ml glass or 700ml stainless steel beakers
SLU1-14	Beaker lid, stainless steel, for 14 litre baths 4 x 105mm holes suitable for 800ml glass or 1250ml stainless steel beakers
SLU1-22	Beaker lid, stainless steel, for 22 litre baths 6 x 105mm holes suitable for 800ml glass or 1250ml stainless steel beakers

STAINLESS STEEL BASKETS

We recommend that baskets are used to prevent items touching the bottom or sides of tank. Convenient lifting handles enable contents to be removed without immersing your hands.

BSK-4	Basket, stainless steel, for 4 litre baths
BSK-8	Basket, stainless steel, for 8 litre baths
BSK-14	Basket, stainless steel, for 14 litre baths
BSK-22	Basket, stainless steel, for 22 litre baths

MISCELLANEOUS

BX0953	Drain Tap for 22 litre baths
BX0613	Ultraclear Cleaning Solution 1 litre
204	700ml Stainless Steel Beaker 76mm dia x 165mm
205	1250ml Stainless Steel Beaker 100mm dia x 165mm
BX0616	Draining Syphon

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.
- * Packing the Clifton range in EPI approved plastic bags, which are degradable or biodegradable.
- * Being fully aware of environmental legislation.

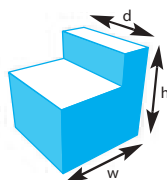
Anti-bacterial surfaces

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 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 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 ISO9001:2000 environment and all products are CE compliant.



Certificate No. Q09820

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.

Manufacturers of the Clifton Range.

Manufacturers of the Metalware Range.

Manufacturers of laboratory, medical and clinical equipment.

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