



N I C K E L - E L E C T R O L t d .

Manufacturers of laboratory, medical and clinical equipment.

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Your local dealer is:

A photograph of a Clifton Unstirred Bath, a piece of laboratory equipment. It is a white, rectangular unit with a large glass flask containing a blue liquid and a green magnetic stirrer bar. The flask is placed on a black base. The unit has a digital display showing '10' in red, an orange indicator light, and a control knob. The background is a solid blue color.

Clifton
UNSTIRRED BATH

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.

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

We carry out all manufacturing processes in our own factory to ensure that the highest standards of quality control are strictly adhered to and that lead times are closely monitored. This ensures a flexible and fast response to changing demands.

Our commitment to all round high standards of product excellence and quality is demonstrated by our accreditation to ISO9001.

Melvin Dickson

Managing Director



INVESTOR IN PEOPLE

Service Support

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.

In the UK, on-site repair work can also be undertaken depending on the nature of the problem. For more complex, time consuming repairs, loan units are often available. A full technical service is available to distributors and end-users of our equipment.

Dealer Training

We are keen to ensure that new and existing dealers are fully aware of our products and we can arrange for regular training at our premises or off-site.

Environmental Policy

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

- * being fully aware of all environmental legislation
- * following a policy of re-use, recycling and waste minimisation
- * designing products with minimum energy requirements.

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.

Quality System

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



Certificate No. Q09820

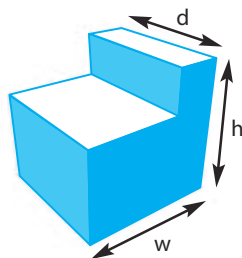
Our entire range carries a comprehensive 3-year warranty.

Whilst budget constraints are recognised, product quality will never be compromised by the need to be competitive.

Payment Process

We are able to process payments electronically and accept most major debit/credit cards.

Key to Dimensions

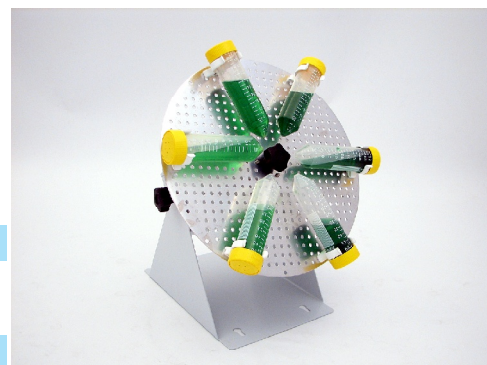


ACCESSORIES

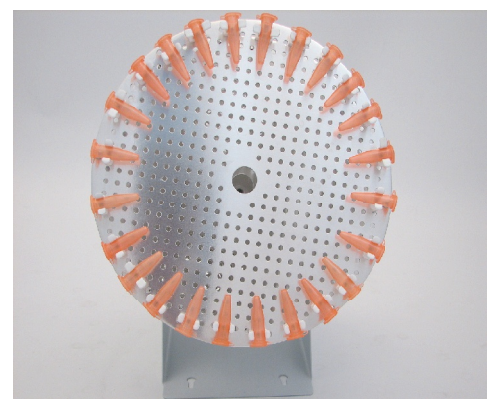
for RM series

End to End Mixing

Cat. No.	Description
RMD024	Disc complete with 24 clips for tube diameters 8-11mm
RMD012	Disc complete with 12 clips for tube diameters 15-17mm
RMD006	Disc complete with 6 clips for tube diameters 27-30mm



RMD006



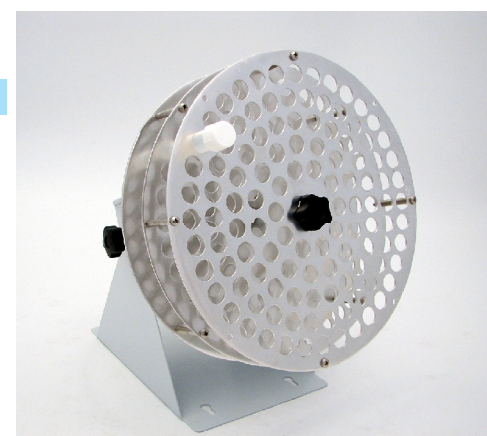
RMD024

End to End Mixing Carousel

RMD24-3	3 tier disc assembly complete with 24 clips for each disc - tube diameters 8-11mm
RMD012-3	3 tier disc assembly complete with 12 clips for each disc - tube diameters 15-17mm

Tumbling Mixing Carousel

RMD016	Carousel for tubes up to 16mm diameter
RMD025	Carousel for tubes up to 25mm diameter



RMD016

Flask Mixing

RMD -1	Rotary mixer disc
FC0025	25ml flask clip
FC0050	50ml flask clip
FC0100	100ml flask clip
FC0250	250ml flask clip



MIXERS

MAGNETIC STIRRERS

VORTEX MIXERS

ROTARY MIXERS

HOT PLATES

MS Series , Magnetic stirrers

This Clifton range of magnetic stirrers are robustly constructed for a long and durable life.

Unit consists of a low profile case with chemical resistant wipe clean sloping control panel which feature status indicators.



Cat No.	MSH-1	MSH-1S	MSH-1D	MSH-1SD
Temperature				
Display/resolution	analogue dial	analogue dial	digital LED / 1°C	
Range	400°C maximum	400°C maximum	ambient +10°C - 350°C	
Control	electronic	electronic	PID	PID
Sensitivity @ 60°C	-	-	±0.5°C	±0.5°C
Sensitivity probe	-	-	±0.25°C	±0.25°C
Over temp. alarm	-	-	+4°C warning message, heater cut off, indication	
Stirring				
Speed	100 - 1500rpm			
Timer				
Display/resolution	-	-	1 minute	1 minute
Settings	-	-	variable 0-999 minutes	
Time cycle	-	-	activated @ set point 2	
Cycle end	-	-	audible buzzer and "end" message	
General				
Heater, Watts	400W		400W	400W
Hotplate material	aluminium	stainless steel	aluminium	stainless steel
Hotplate, dims	140mm diameter			
Overall, dims	200w x 295d x 135hmm			
Retort points	1			
Voltage	230V			

1. All models supplied complete with PTFE stirring rods (1 x 20mm and 1 x 40mm) per stirring position.

2. Each stirring position accepts M10 retort rod.

3. EP2 overrides internal sensor for direct measurement and control stirred sample, only available on MSH-1D, MSH-1SD and MSH-3D.●

4. MSH-3D shown.■

5. Painted body features Anti-bacterial protection, a hygienic coating which actively inhibits bacterial growth.

MIXERS

RM Series

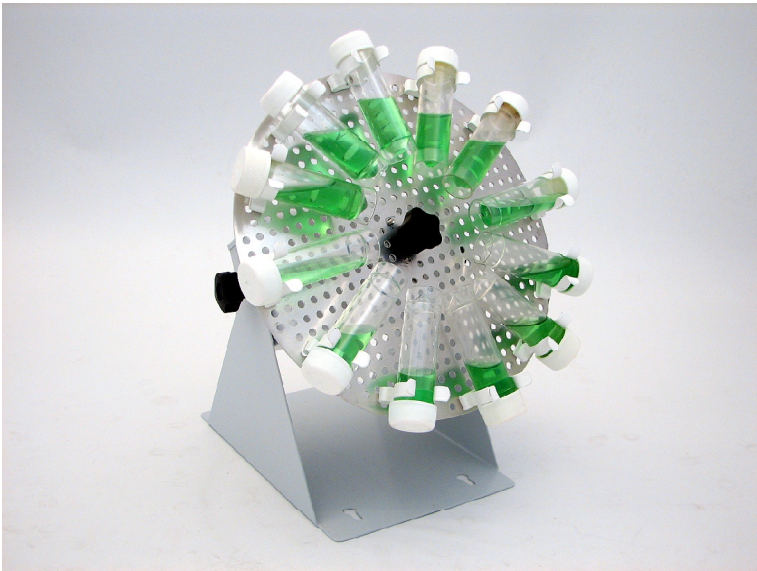
The Clifton range of tube rotators are available as fixed or variable speed models with a broad range of optional accessory heads available for mixing micro tubes, tubes or flasks.

The angle of mixing is fully adjustable and suitable for continuous or intermittent mixing.

Benchtop or wall mountable, saving space.

Features Include:

- * Angle of mixing head fully adjustable
 - vertical to horizontal
- * The range of accessories can also be autoclaved and allow for easy loading and tube removal



Cat. No .	RM-1	RM-2
Speed	30rpm	Variable 5-30rpm
Overall, dims	210w x 250d x 200h mm	210w x 250d x 200h mm
Voltage	230V	230V

RM-1 shown with RMD012 accessory.

VORTEXERS

CM Series, Cyclone +Vortex Mixer

The Cyclone+ is designed for tube, microplate, flask and microtube mixing using accessory platforms which can be quickly interchangeable.

Variable speed control, with the advantages of controlled mixing over a speed range.



Shown with accessory C5

Cat. No .	CM-2
Speed	200 - 2800rpm
Maximum Platform speed	200 - 1000rpm
Orbit	4mm
Overall, dims	150w x 175d x 150h
Rating, Watts	75W
Voltage	230V

Features Include:

- * Unique design accessory platform, which can be autoclaved.
- * Where accessory platforms are fitted the unit is designed to operate at lower speeds for gentle mixing reducing damage to cell structures.
- * Two modes of operation set for continuous running or press start operation suitable for use with accessory tube mixing cup.

ACCESSORIES for CM-2

Cat. No. Description



C1 Platform including 2 off 25ml flask clips



C2 Platform for skirted microplates. (48,96 or 154 well)



C3 Platform for 1.5ml microcentrifuge tubes x 20



C4 Mixing cup for single tube mixing



C5 Platform for 96 well unskirted microplates

Accessories shown with laboratory consumables for illustrate purposes.

Features Include:

MSH-D

- * Clearly visible LED display suiting all lighting conditions
 - time or temperature display
 - digital PID control
 - menu driven data entry
 - indicators heating, alarm, time and set point
 - settings retained in memory
- * Control options
 - temperature control only
 - temperature and time

- * Accessory probe overrides internal sensor
 - in liquid temperature control
- * Corrosion resistant stainless steel case

MSH

- * Indicators
 - stirring, heating, power and warning HOT condition
- * Easy to use
- * Electronic speed and temperature control
- * Corrosion resistant stainless steel case
- * Rapid warm up
- * Chemical resistant control panel
 - splash proof, wipe clean



MSH-3

MSH-3D ■

analogue dial

digital LED / 1°C

400°C maximum

ambient +10°C - 350°C

electronic

PID

-

±0.5°C

-

±0.25°C

-

+4°C warning message

100 - 1500rpm

100 - 1500rpm

-

1 minute

-

variable 0-999 minutes

-

activated @ set point 2

-

audible buzzer and "end" message

3 x 400W

aluminium

140mm diameter

600w x 295d x 135hmm

3

230V

A C C E S S O R I E S

Cat. No. Description

8614 Retort rod

SPB-1 Spillage bath



EP-2 External Probe ●

EPH-1 Probe holder

MAGNETIC STIRRERS

Cerastirs CH series, Ceramic Hob

These popular sized ceramic hotplate stirrers are designed for general laboratory requirements and are available in two styles - the basic Cerastir and electronic Cerastir ⁺.

Using a ceramic glass heating surface resistant to most chemicals, the plate can be precisely controlled using an energy regulator or in the case of the advanced Cerastir ⁺ range, an electronic controller. Smooth start up and changes in stirring speed ensure that the follower increases or decreases its mixing speed without detaching.

The low profile cases are thoughtfully designed to ensure that any spillage does not affect the operation of the unit. The casing is produced from a casting ensuring a long and robust life.

Features Include:

Cerastir range

- * Easy clean ceramic top and chemical resistant
- * Accurate heating control (ambient - 450°C)
- * Rapid warm up times
- * Smooth start stirring to maximum speed 2000rpm
- * Robust construction
- * Economically priced
- * Spillages run away from controls
- * Fixings for retort rod/scaffolding
- * PTFE coated stirring rod supplied

Cerastir ⁺ range

Available in two sizes with the following additional features:

- * Smooth start stirring with optical feedback for precise, controlled stirring
- * Electronic temperature control (ambient - 450°C)
- * Warning light if ceramic plate exceeds 55°C
- * Stirring speed 100-1200 rpm
- * PTFE coated stirring rod supplied



Series	CERASTIR CH-1	CERASTIR ⁺ CHS-1	CERASTIR ⁺ CHS-2
Cat. No.			
230V 50Hz version	CH-1E	CHS-1E	CHS-2E
110V 60Hz version	CH-1A	CHS-1A	CHS-2A
Heater, Watts	500W	500W	1200W
Max ceramic plate temp	450°C	450°C	450°C
Temp control	±5°C	±1°C	±1°C
Ceramic plate size	210 x 210mm	210 x 210mm	290 x 290mm
Heated area	150 x 150mm	150 x 150mm	200 x 200mm
Stirring speed	0 - 2000rpm	100 - 1200rpm	100 - 1200rpm
Overall size	225w x 340d x 85h mm	225w x 340d x 85h mm	305w x 410d x 85h mm

VORTEXERS

CM Series, Cyclone Vortex Mixer

For rapid and efficient mixing, the Cyclone is far superior to hand shaking. The Cyclone creates a vortex in the tube, which gives the highly effective mixing action.

Contamination from stirring rods and stoppers is eliminated and different samples may be subjected to the same degree of mixing, thus improving repeatability of results. Fitted with an automatic press start operation providing instant action the moment the tube is pressed into the rubber cup. This feature is particularly useful where repetitive mixing is undertaken.



Features Include:

- * Variable speed control, with the advantages of controlled mixing over a wide speed range
- * Operates at slow speed for gentle mixing necessary in many applications, where damage to cell structure is to be avoided.
- * May be set for continuous running at the chosen speed or on demand by inserting the tube into the cup
- * Skirted rubber cup prevents liquid entering the mixer casing
- * Will accept vessels up to 25mm diameter
- * Excellent stability is achieved through a combination of weight and non-slip feet

Cat. No .	CM-1
Speed	200 - 2800rpm
Orbit	7mm
Overall, dims	150w x 175d x 150h
Rating, W atts	75W
Voltage	230V, 50Hz

ACCESSORIES for CM-1

Cat. No.	Description
RSA-1/CM	Retort Stand Assembly
BP0373	Spare Rubber Cup