



## NICKEL-ELECTRO Ltd.

Manufacturers 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: [clifton@nickel-electro.co.uk](mailto:clifton@nickel-electro.co.uk)  
[www.nickel-electro.co.uk](http://www.nickel-electro.co.uk)

Your local dealer is:



THE *Clifton* RANGE



NICKEL-ELECTRO Ltd.



## Welcome To 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 controlled 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.

We also operate an in-house toolmaking division, which guarantees flexibility in design, rapid production and the continuity of our manufacturing process.

Our commitment to all round high standards of product excellence and quality is demonstrated by our accreditation to ISO9002 since 1991.



# MIXERS

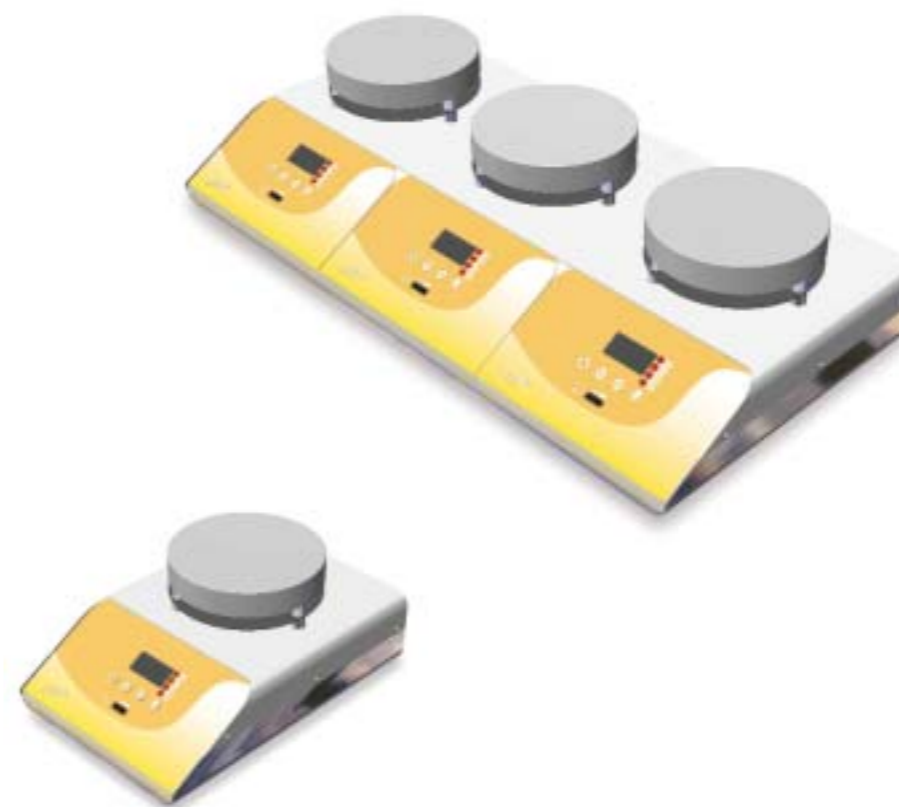
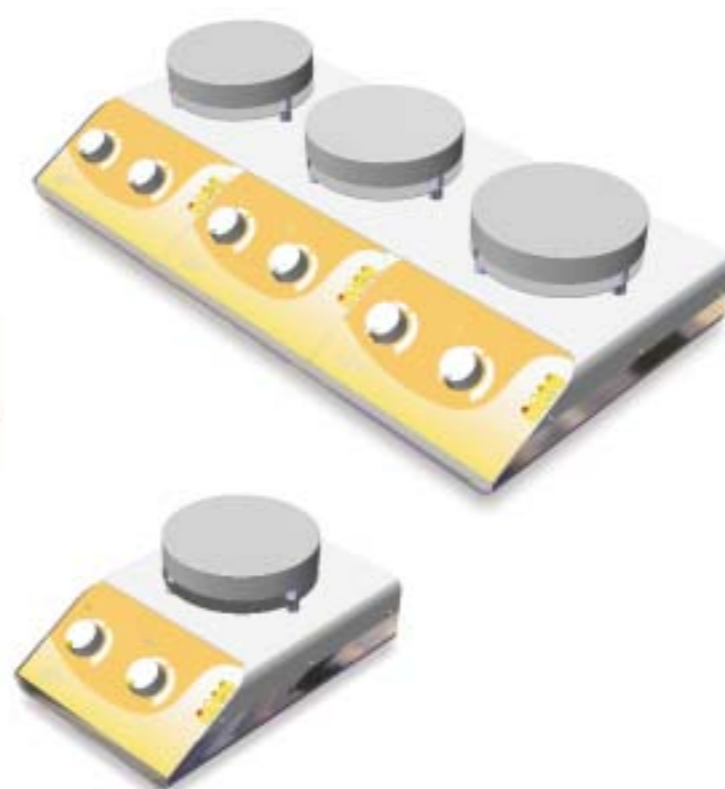
MAGNETIC STIRRERS  
ROCKING TABLE  
VORTEX MIXERS  
ROTARY MIXERS

# STIRRERS 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.	MSU-1	MSH-1	MSH-3	MSH-1D	MSH-3D
<b>Temperature</b>					
Display / resolution	analogue dial	analogue dial	analogue dial	digital LED / 1 °C	digital LED / 1 °C
Range	-	400 °C maximum	400 °C maximum	ambient +10 °C - 350 °C	ambient +10 °C - 350 °C
Control	-	electronic	electronic	PID	PID
Sensitivity @ 60 °C	-	-	-	±0.5 °C	±0.5 °C
Sensitivity probe @ 60 °C, water	-	-	-	±0.25 °C	±0.25 °C
Over temp. alarm	-	-	-	+4 °C warning message, heater cut off, indication	+4 °C warning message, heater cut off, indication
<b>Stirring</b>					
Speed	100 - 1500rpm	100 - 1500rpm	100 - 1500rpm	100 - 1500rpm	100 - 1500rpm
<b>Timer</b>					
Display / resolution	-	-	-	1 minute	1 minute
Settings	-	-	-	variable 0-999 minutes	variable 0-999 minutes
Time cycle	-	-	-	activated @ set point 2	activated @ set point 2
Cycle end	-	-	-	audible buzzer and "end" message	audible buzzer and "end" message
<b>General</b>					
Heater, Watts	-	400W	3 x 400W	400W	3 x 400W
Hotplate material	-	aluminium	aluminium	aluminium	aluminium
Hotplate, dims	-	140mm diameter	140mm diameter	140mm diameter	140mm diameter
Overall, dims	200w x 295d x 85hmm	200w x 295d x 135hmm	600w x 295d x 135hmm	200w x 295d x 135hmm	600w x 295d x 135hmm
Retort points ●	1	1	3	1	3
Voltage	230V	230V	230V	230V	230V

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

● Each position on the product (single or triple) accepts standard M10 retort rod.

■ Only available on MSH-1D and MSH-3D.

### 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
  - process - two temperature set points
- 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

#### MSU

- Easy to use
- Continuously adjustable speed control
- Quiet in use
- White stirring surface

## ACCESSORIES

### Cat. No. Description

RP-1 Retort point

EP-1 External Probe ■

# MIXERS

## 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 more advanced 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

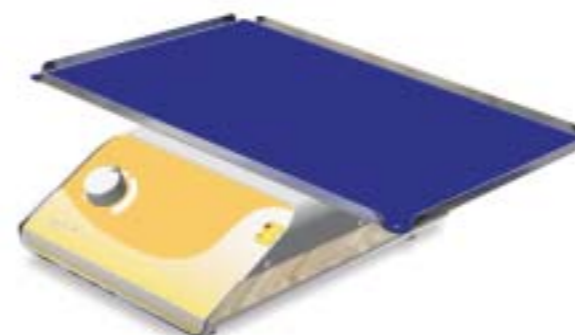
Available in two sizes with the following additional features:

- 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

# MIXERS

## RT series, Rocking Table

The Rocking Table provides a general shaking/mixing platform for glass and plastic laboratory ware; the product can either be used on a bench top or within an incubator up to 50°C.



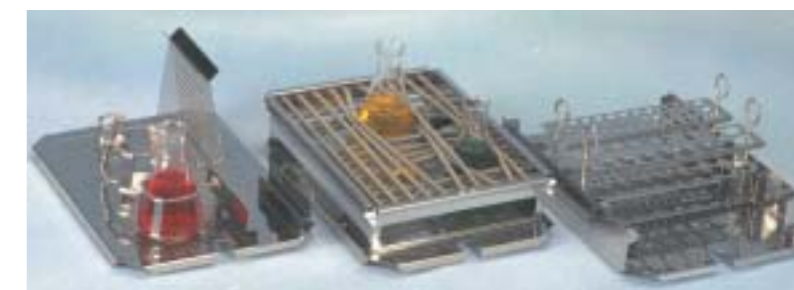
### Features Include:

- Single axis rocking
- Durable paint finished low profile outer case with power switch
- Variable electronic speed control with good 'low-end' control
- Anti-slip mat
- Quiet operation

Cat. No.	RT-1
Speed Range	5 to 50rpm
Inclination	6°
Dimensions of Tray	387w x 268d mm
Overall Dimension	387w x 295d x 100h mm
Voltage	230V, 50 - 60Hz

## ACCESSORIES

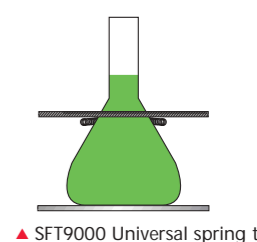
### RT series, Rocking Table



### Flask Trays

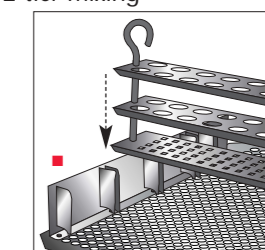
A perforated tray, complete with flask clips to suit common sizes of glass/polypropylene Erlenmeyer flasks. The tray simply drops onto the rocking table and locates snugly.

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



▲ SFT9000 Universal spring 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	■
STT008	Additional platform enabling 2 tier mixing	
SBF01804	Perforated tray	

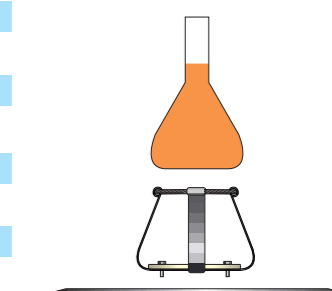


STT004 Test tube rack tray

### Separate Clips

With the SBF01804 perforated tray it is possible to 'mix and match' a variety of clips to suit different applications. Clips are supplied with all necessary fixings to enable them to be attached to the accessory tray.

Cat. No.	Description
FC0025	25ml flask clip
FC0050	50ml flask clip
FC0100	100ml flask clip
FC0250	250ml flask clip
FC0500	500ml flask clip
FC1000	1000ml flask clip
SBF01804	Perforated tray



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

# VORTEX MIXERS

## 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.



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

### 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

## ACCESSORIES for CM-1

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

# VORTEX MIXERS

## 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.

# ROTARY 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.

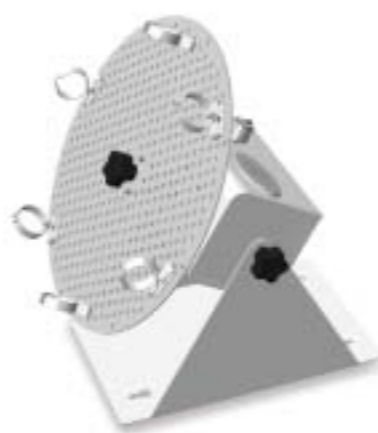
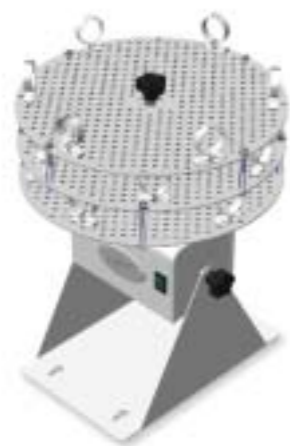
The angle of mixing is fully adjustable and suitable for continuous or intermittent mixing.

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

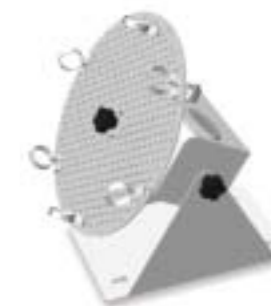


Cat. No.	RM-1	RM-2
Speed	30rpm	Variable 5-30rpm
Overall, dims	210w x 250d x 200h mm	210w x 250d x 200h mm
Voltage	230V	230V

## 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



### 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

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



### Flask Mixing - Pick 'n' Mix

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



### Tube Mixing - Pick 'n' Mix

RMD-1	Rotary mixer disc
TC0811	Clip for 8-11mm diameter tube
TC1517	Clip for 15-17mm diameter tube
TC2730	Clip for 27-30mm diameter tube



◆ Products shown with available accessories