

A photograph of a Clifton Unstirred Bath, a piece of laboratory equipment. The bath is white with a blue control panel. A glass Erlenmeyer flask containing a blue liquid is placed on the bath's surface. The bath has a digital display showing '10' and a red indicator light. The Clifton logo and 'UNSTIRRED BATH' are printed on the top left. The background is a solid blue color.

Clifton
UNSTIRRED BATH

CENTRIFUGES

MICRO NEO00
TARGA NEO10
INTERLOCKED NEO10
ANALOGUE NEO20
DIGITAL NEO30
DIGITAL REFRIGERATED NEO40

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.

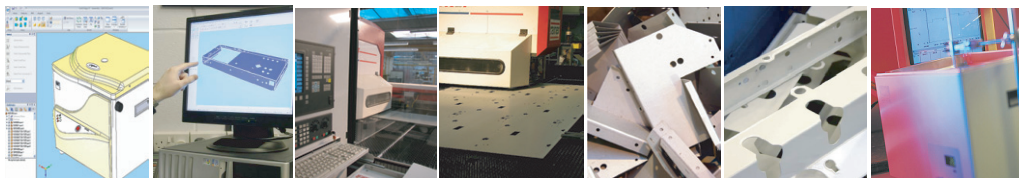
In addition Nickel-Electro manufactures a comprehensive range of laboratory consumables in a variety of materials including aluminium, stainless steel, nickel and zirconium. This complements the Clifton Range and provides our customers with a single source of many types of laboratory equipment.

Melvin Dickson

Managing Director



INVESTOR IN PEOPLE

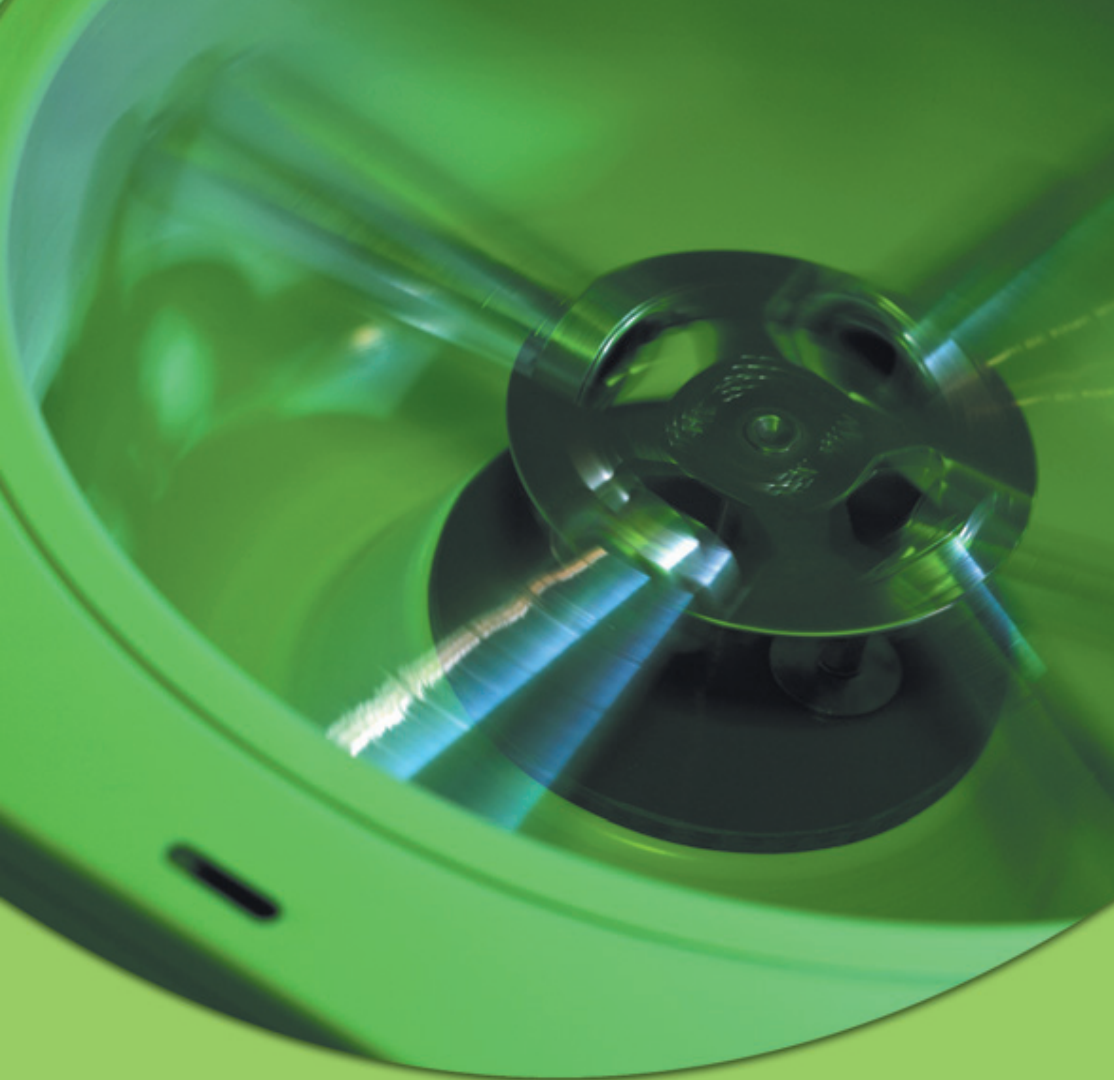


SOLID EDGE
VELOCITY SERIES

radan

rainer **k3**

Our partners Providing world class innovative manufacturing solutions



CENTRIFUGES

MICRO NEO00
TARGA NEO10
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CENTRIFUGES

NE000 series, Micro

A compact personal Micro Centrifuge designed for micro tubes or PCR strips for simple and quick spins.

Using reliable and proven motor technology providing a smooth and quiet operating compact micro centrifuge. With a small footprint and easy method of rotor removal for cleaning or fitting accessory rotors. It comes supplied with rotor as standard which accepts 0.5 and or 1.5ml micro tubes.



Features Include:

- Lid interlock whilst rotor is energised
- Quiet and smooth operation
- Speed control variable up to 8000rpm
- Dynamic braking
- Ideal for quick spin downs
- Easy to use
- Suitable for micro filter cell separations and HPLC samples
- Durable chassis
- Non slip feet for stability and safety

Cat. No.	NE 000G/I
Operation	Rotor activated on speed selection
Max speed	2000 - 8000rpm
Rotor type	Angle head - supplied
Tube Capacity	0.5 and 1.5ml micro tubes
Max number tubes	6 each size
Max RCF	4000g
Overall, dims	Lid closed 175w x 220d x 140hmm
	Lid open 175w x 220d x 320hmm
Voltage	230V

ACCESSORIES

ANGLE HEAD	
StockNo.	R000-1
Max speed	8000rpm
Tube capacity	1.5ml
Max number of tubes	12
Stock No.	R000-2
Max speed	8000rpm
Tube capacity	PCR strip
Max number	2 strips
Stock No.	200400SP
Tube capacity	1.5ml Microtube

CENTRIFUGES

NE010series,Targa

The Targa Centrifuge is designed specifically for the education market being a low cost, low energy product.

Constructed with a durable steel body for safety with four-place swing out rotor complete with removable buckets.



Features Include:

- Maintaining finger pressure on the push button operates the centrifuge and locks the lid in position
- The rotor can only be energised when the lid is correctly closed and locked
- A viewing window in the lid enables the rotor motion to be observed
- Releasing finger pressure de-energies the rotor
- Rotor energised warning indicator



- Easy wipe clean bowl with no crevices
- Rotor can be removed for easy cleaning

Cat.No	NE 010G
Operation	Rotor activated push button
Max speed	2800rpm
Rotor type	● Swing out
Tube Capacity	15ml
Max number tubes	4
Tube dims	ø17 x 100mm
	ø13 x 75mm with green adaptors
	ø10 x 75mm with grey adaptors
Max radius	130mm
Max RCF	1100g
Overall, dims	Lid closed 361w x 400d x 320hmm
	Lid open 361w x 415d x 720hmm
Rating	100W
Voltage	230V

● No accessory rotors available

ACCESSORY TUBES NEW 2010

NE 010G	
Stock No.	300900●
Size	16mm x 95mm
Tube capacity	10ml
Pack	20
Tube material	Polystyrene, clear
Stock No.	400900●
Size	16mm x 95mm
Tube capacity	10ml
Pack	20
Tube material	Polypropylene

● Tubes suitable for Rotor indicated.

CENTRIFUGES

NE010series, Interlock

This range consists of two models constructed with a steel body with four-place swing out rotor complete with removable aluminum buckets. Each version has safety interlock, which prevents the lid being opened until the rotor is at rest.

An additional safety feature ensures that in the case of power failure the lid remains in the locked position. The product can only be operated if the lid is correctly closed and locked in position.



Features Include:

- Control panel has a series of indicator lamps
 - for rotor on, lid locked and rotor run down



- Maintaining finger pressure on the push button operates the centrifuge and locks the lid in position
- Releasing finger pressure de-energies the rotor, but the lid remains locked until the rotor is at rest

Cat. No.	NE 010G/I
Operation	Rotor activated push button
Max speed	2800rpm
■ Rotor type	▲ Swing out - supplied
Tube Capacity	15ml
Max number tubes	4
Max Tube dims	ø17 x 105mm ø13 x 95mm with green adaptors ø10 x 95mm with grey adaptors
Max radius	135mm
Max RCF	1200g
Timer	-
Overall, dims	Lid closed 361w x 400d x 320hmm Lid open 361w x 415d x 720hmm
Rating	100W
Voltage	230V

Features Include:

- Control panel has a series of indicator lamps
 - for rotor on, lid locked and rotor run down



- Timer allows variable rotor operation up to 30 mins
 - push button activates timer, illuminated
 - lid remains locked until rotor is at rest



Cat. No.	NE 010GT/I
Operation	Timer
Max speed	2800rpm
■ Rotor type	▲ Swingout - supplied
Tube Capacity	15ml
Max number tubes	4
Max Tube dims	ø17 x 105mm ø13 x 95mm with green adaptors ø10 x 95mm with grey adaptors
Max radius	135mm
Max RCF	1200g
Timer	0 - 30mins
Overall, dims	Lid closed 361w x 400d x 320hmm Lid open 361w x 415d x 720hmm
Rating	100W
Voltage	230V

■ Accessory rotors - see page 8

ACCESSORY TUBES NEW 2010

NE 010G/I and NE 010GT/I

Stock No.	300705 ▲ ■
Size	16mm x 100mm
For Rotors	Swing out, R010-1, R010-2
Tube material	Polystyrene, clear
Stock No.	400705 ▲ ■
Size	16mm x 100mm
For Rotors	Swing out, R010-1, R010-2
Tube material	Polypropylene
Stock No.	307202 ▲ ■
Cap	Push on
Leakproof	Yes
Pack	20
Suitable for tubes	300705, 400705
Stock No.	429946 ■
Tube capacity	15ml Conical, capped
For Rotors	R010-1, R010-2
Tube material	Polypropylene
Stock No.	429926 ■
Tube capacity	50ml Conical, capped
For Rotors	R010-3
Tube material	Polypropylene

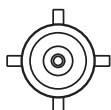
▲ Tubes suitable for Rotor indicated.

■ Tubes suitable for accessory Rotors - page 8.

ACCESSORY ROTORS

NE010G/I and NE 010GT/I

UNIVERSAL ROTOR - ANGLE HEAD



Rotor Cat. No. R010-1

Max speed 2800rpm

Tube capacity	15ml > 12ml	7ml	5ml	3ml
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Max number of tubes	4	4	4	4
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Tube adaptor Cat. No.	-	-	T010-1	T010-1
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Tube dims †	ø17x110mm	ø13x110mm	ø13x95mm	ø10x95mm
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Max radius	110mm	110mm	100mm	100mm
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Max RCF	1000g	1000g	880g	880g
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Adaptor	-	-	green	grey
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UNIVERSAL ROTOR - ANGLE HEAD



Rotor Cat. No. R010-2

Max speed 2800rpm

Tube capacity	15ml > 12ml	7ml	5ml	3ml
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Max number of tubes	8	8	8	8
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Tube adaptor Cat. No.	-	-	T010-1	T010-1
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Tube dims	ø17x110mm	ø13x110mm	ø13x95mm	ø10x95mm
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Max radius	123mm	123mm	115mm	115mm
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Max RCF	1100g	1100g	1000g	1000g
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Adaptor	-	-	green	grey
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UNIVERSAL ROTOR - SWING OUT



Rotor Cat. No. R010-3

Max speed 2800rpm

Tube capacity	50ml
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Max number of tubes	2
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Tube dims	ø30x120mm
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Max radius	135mm
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Max RCF	1200g
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† Maximum Tube Dimension for Capped or Uncapped Tubes

N.B. R010 series accessories not suitable for NE 010G

CENTRIFUGES

NE020 series, Interlock Analogue

This centrifuge is ideal for many broad applications and supplied with a fixed angle head rotor for test tubes.

Durable design with lid safety interlock.



Features Include :

- Variable rotor speed and timer settings using analogue dial.
- Selected rotor speed constantly monitored and maintained.
- Electronic timer
- Safety lid interlock
- Easy to use
 - set time and speed
 - push button to start or stop process
- Warning indicators for rotation and lid unlocked

Cat. No.	NE 020GT/I
Operation	Timer
Max speed	500 - 3500rpm
Rotor type	● Angle head - supplied
Timer	0 - 30mins, with HOLD
Tube capacity	15ml x 6 off max.
Max radius/RCF	120mm 1300g
Overall, dims	Lid closed 340w x 290d x 225hmm
Rating	100W
Voltage	230V, 50-60Hz

● No accessory rotors available.

ACCESSORY TUBES NEW 2010

NE 020GT/I

Stock No.	300705 ●
Size	16mm x 100mm
Tube capacity	10ml
Pack	20
Tube material	Polystyrene, clear
Stock No.	400705 ●
Size	16mm x 100mm
Tube capacity	10ml
Pack	20
Tube material	Polypropylene
Stock No.	307202
Cap	Push on
Leakproof	Yes
Pack	20
Suitable for tubes	300705, 400705

● Tubes suitable for Rotor indicated.

CENTRIFUGES

NE030 series, Interlock, Digital

Featuring a highly specified centrifuge which is suitable for daily use at an affordable price.

A bench top centrifuge with wipe clean control panel, touch pad controls and digital display, broad speed range and in-built safety monitoring system. Featuring "active lid cooling" making it suitable for biological separations and sampling which can suffer heat damage. The active cooling draws fresh air in from outside and expels warm air from the rotor assembly through the back of the lid. Supplied without a rotor, enabling the right head to be chosen for the application, from micro to conical tubes.

With safety features such as automatic rotor imbalance alarm and rotor recognition limiting the maximum permissible speed.

Easy to use with digital display of speed, acceleration, braking and time settings. In use the centrifuge has the added convenience of an audible alarm at the end of the timed period.



Features Include :

- Easy to read digital display
- Brake and acceleration control
- Touch button controls
- Speed and time setting
- Wipe clean chemical resistant control panel
- Active cooling system to reduce thermal shock
- Powder painted body providing a durable finish



ACCESSORY TUBES NEW 2010

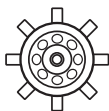
Stock No.	300705
Size	16mm x 100mm
For Rotors	R030-1, R030-2
Tube material	Polystyrene, clear
Stock No.	400705
Size	16mm x 100mm
For Rotors	R030-1, R030-2
Tube material	Polypropylene
Stock No.	307202
Cap	Push on
Suitable for Tubes	300705, 400705
Stock No.	429910
Size	15ml Conical tube, capped
For Rotors	R030-1, R030-2
Tube material	Polypropylene
Stock No.	200400SP
Tube capacity	1.5ml Microtube
For Rotor	R030-3

Cat. No.	NE 030GT/1
Operation	Timer
Max speed	500 - 13000rpm
Rotor type	Angle head
Timer	6 - 60mins
Braking/acceleration	1 - 9 levels
Overall, dims	Lid closed 275w x 330d x 240hmm
	Lid open 275w x 330d x 670hmm
Rating	400W
Voltage	230V, 50-60Hz

ACCESSORIES FUGES

NE030 series

UNIVERSAL ROTOR - ANGLE HEAD



Rotor Cat. No. R030-1

Tube angle 55°

Max speed 5000rpm

Tube capacity	15ml	12ml	10ml	7ml	5ml
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Max number of tubes	8	8	8	8	8
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Tube adaptor Cat. No.	-	-	T030-5	T030-1	T030-2
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Tube dims	ø17x120mm	ø17x100mm	ø17x100mm	ø17x100mm	ø17x75mm
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Max radius	100mm	100mm	100mm	98mm	85mm
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Max RCF	2800g	2800g	2800g	2740g	2375g
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UNIVERSAL ROTOR - ANGLE HEAD



Rotor Cat. No. R030-2

Tube angle 55°

Max speed 5000rpm

Tube capacity	15ml	12ml	10ml	7ml	5ml
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Max number of tubes	6	12	12	12	12
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Tube adaptor Cat. No.	-	-	T030-6	T030-3	T030-4
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Tube dims	ø16x120mm	ø16x100mm	ø16x100mm	ø12x100mm	ø12x75mm
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Max radius	100mm	100mm	100mm	98mm	85mm
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Max RCF	2800g	2800g	2800g	2740g	2375g
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HIGH SPEED ROTOR - ANGLE HEAD ROTOR



Rotor Cat. No. R030-3

Tube angle 45°

Max speed 13000rpm

Tube capacity	0.25ml	1.5ml	-	-
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Max number of tubes	24	24	-	-
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Tube dims	ø6x30mm	ø11x40mm	-	-
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Max radius	65mm	80mm	-	-
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Max RCF	12280g	15120g	-	-
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HIGH SPEED - HAEMATOCRIT ROTOR

Rotor Cat. No. R030-4

Max speed 13000rpm

Tube capacity 24 glass tubes

Tube dims ø1.2x75mm

Max radius 92mm

Max RCF 17380g



N.B. Rotors can be autoclaved

CENTRIFUGES

NE040 series, Refrigerated **NEW 2010**

This Refrigerated Centrifuge is suitable for use in medical, industrial and scientific applications using accessory angle head rotors for either tubes, microtubes, pcr tubes and haematocrit tubes.

The maximum rotational speed of 16,200 rpm produces a centrifugal force of 25,000g using a quiet brushless induction motor.

For safe running and use it features an electronic control with a wide number of programming options with built-in error detection preventing incorrect values from being accidentally entered. Up to 10 programs can be saved whilst last program run remains in memory for convenient re-use, even after power off.



Cat. No.	NE 040GTR
Operation	0-99min Timer and Cooling 0°C
Max speed	500 - 16200rpm
Rotor type	Angle head
Timer	0 - 99mins, with HOLD
Braking/acceleration	1 - 9 levels
Cooling control	-9°C to 40°C [20°C to 4°C in 20mins]
Overall, dims	Lid closed 282w x 665d x 360hmm
Rating	900W
Voltage	230V, 50-60Hz

Features Include :

- Easy to read digital display cooling temperature, rotor speed and time.
- Brake and acceleration control
- Touch pad and dial setting
- Speed setting either in RPM or RCF
- Refrigerated cooling system able to maintain 0°C even when rotor is running maximum speed.
- 'Fast cool' function 20°C to 4°C in 20 minutes
- 'Quick run' function, push and hold
- Quiet induction motor
- Automatic rotor recognition for safe running speeds
- Rotors can be autoclaved
- Powder painted body providing a durable finish
- Narrow/deep design maximises benchtop space.

ACCESSORY TUBES **NEW 2010**

Stock No.	300705
Size	16mm x 100mm
For Rotors	R030-6
Tube material	Polystyrene, clear
Stock No.	400705
Size	16mm x 100mm
For Rotors	R030-6
Tube material	Polypropylene
Stock No.	307202
Cap	Push on
Suitable for Tubes	300705, 400705
Stock No.	429910
Size	15ml Conical tube, capped
For Rotor	R040-6
Tube material	Polypropylene
Stock No.	200400SP
Tube capacity	1.5ml Microtube
For Rotor	R040-1, R040-2

ACCESSORIES FUGES

NE040 series, Refrigerated **NEW 2010**

HIGH SPEED - ANGLE HEAD ROTORS

Rotor Cat. No.	R040-1	R040-2
Max speed	16200rpm	14000rpm
Tube capacity	2.0ml	2.0ml
Max number of tubes	24	30
Acceleration	16 sec to max speed	15 sec to max speed
Braking	15 sec from max speed	14 sec from max speed
Max radius	86mm	98mm
Max RCF	25000g	21475g



Rotor Cat. No.	R040-5	R040-6
Max speed	5000rpm	5000rpm
Tube capacity	5ml ϕ 12x82mm	10ml ϕ 16x105mm
Max number of tubes	16	12
Acceleration	15 sec to max speed	15 sec to max speed
Braking	14 sec from max speed	14 sec from max speed
Max radius	105mm	115mm
Max RCF	2930g	3200g



HIGH SPEED - HAEMATOCRIT ROTOR WITH READER

Rotor Cat. No.	R040-3
Max speed	14000rpm
Tube capacity	24 glass tubes
Tube dims	ϕ 1.6x75mm
Max radius	92mm
Max RCF	20160g



HIGH SPEED - PCR ROTOR

Rotor Cat. No.	R040-4
Max speed	14000rpm
Tube capacity	6 x 8 PCR strips
Tube dims	-
Max radius	92mm
Max RCF	24000g



N.B. Rotors can be autoclaved

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.

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.

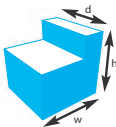
Temperature performance

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.

Key to Dimensions



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 tomorrow's 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.

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