

# THE *Clifton* RANGE

Hotplates  
Analogue HP Series  
Digital HP-D Series



HOT SURFACES !

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## About this Manual

This user Manual contains instructions which must be followed in order that the product is operated correctly.

## General Notes

1. Always follow good laboratory practice by ensuring substances being heated there is no risk of a hazard (explosion, implosion or release of toxic or flammable gases) or that these have been addressed. **When heating substances where liberation of gases occurs suitable extraction should be used.**
2. Do not block ventilation slots during use and follow installation instructions.
3. The HP range are classified as Class 0 (IEC519 - Self resetting cut out) with regards to overtemperature protection.
4. The mains supply cord fitted to this products is a heat resistant type and should be replaced by an equivalent type.
5. It is recommended the units are connected to the mains supply with RCD protection.
6. Before using any cleaning or decontamination method except those recommended, check with your distributor that the proposed method will not damage the equipment.
7. If the alarm indicator is illuminated the Hotplate temperature may be above the set temperature.
8. Never touch the uppermost parts of the hotplate. **Always regard as HOT and warn others!**
9. If this product is not used in accordance with these instructions, then basic safety protection afforded by the water bath may be affected.

## Amendments

|          |           |      |  |
|----------|-----------|------|--|
| Issue 2  | September | 1991 | Initial issue instruction book   |
| Issue 3  | January   | 1992 | HP1-3 installation no UK plug  |
| Issue 4  | June      | 1994 | New format HP2 and PHHP added  |
| Issue 5  | January   | 1996 | CE approved  |
| Issue 6  | May       | 1996 | Address update   |
| Issue 7  | August    | 1996 | Update page 2 Protective earth conductor   |
| Issue 8  | September | 1999 | F to T   |
| Issue 9  | August    | 2001 | HP1-1D added, book layout  |
| Issue 10 | January   | 2007 | Revised layout, inclusion of disinfectant notes, anti-bacterial paint finish   |
| Issue 11 | May       | 2008 | 2008 update to the range: antibacterial paint, update on internal ventilation, flashing hot indicator analogue version and new controls. |
| Issue 12 | August    | 2008 | Spares and service diagrams.   |
| Issue 13 | July      | 2010 | 2010 model K30.  |

## Symbols



### **HOT SURFACES**

Paragraphs marked by this symbol indicate that a potential hazard to your personal safety exists from heated surfaces or other appendages on the outside or inside of the equipment.



### **CAUTION**

This icon accompanies text and/or other international symbols dealing with potential damage to equipment. When present, it indicates that there is a potential danger of equipment damage may occur if information stated within the "CAUTION" paragraph is not adhered to or procedures are executed incorrectly.



### **PROTECTIVE EARTH OR GROUND TERMINAL**

Protective earth conductor terminal.

## Location

The product must be placed on a smooth, level and sturdy work surface in a ventilated environment.



The HP range of Hotplates should be used in modern fume cupboards where plenty of air circulation exists.

Use with a minimum distance all round of 200mm from walls or other items.

Ventilation: Product safety requirements for such products are designed around allowing air circulation between hot heating surface and the case, its controls and electrical components fitted inside. This is in order user touchable areas and electrical components are not exposed to extreme temperatures. We cannot therefore guarantee these units if they have been used in environments of corrosive gases.

## Power Lead and Connection to Electrical Supply



Before connecting the product to the electrical supply, check the information on the rating label is compatible. **IF IN DOUBT CONSULT AN ELECTRICIAN. THE PRODUCT MUST BE EARTHED!**

Where the mains supply or plug connection differs refer to local regulations or qualified electrician.

**Do not touch any electrical contacts or open any closure panels. RISK OF ELECTRICAL SHOCK!**

## General Safety Reminders When Using Hotplates



1. The HP range are Class 0 (IEC519 - Part 2) with reference to over temperature condition. These hotplates are designed that if the temperature control system fails in use the heating plate will not exceed its maximum temperature.

2. Do not pour liquids directly onto the heating plate.

3. Ensure all personnel in the vicinity of the unit are aware that the heating plate is HOT at all times - even after use and turning the unit OFF.

4. **WARNING:** Always regard the top surface of the Hotplate as HOT at all times. In free air a hob surface temperature 350°C can be achieved.

5. **DO NOT** leave heating ON when not in use.

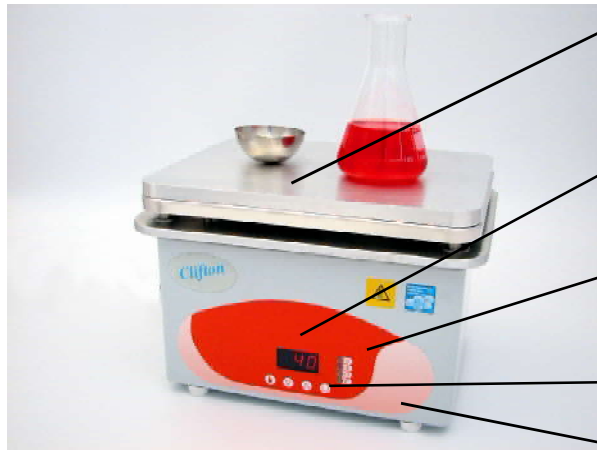
6. Many solutions heated will fume/explode/release toxic or flammable gases - follow appropriate SAFETY precautions.



Hotplates  
Digital HP1-D Series

## HP1-D Digital Hotplate

### Front View



Hob, heating plate, aluminium.

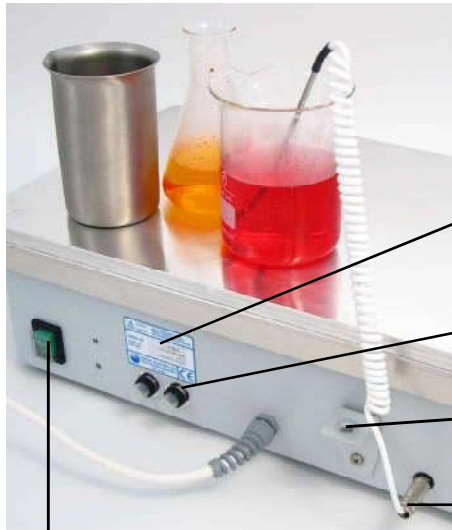
Red LED display of actual or set hob temperature or time.

Indicators: heating, temperature alarm, timer and set temperature.

Keyboard: function, up and down arrow adjustment, run buttons.

Splash proof controls, all over smooth wipe clean surfaces.

### Rear View



Serial number and electrical supply details.

Minature circuit breakers x 2.

Retort point bracket

Accessory probe - 2010 - no longer available.

Mains power switch "I" ON, "O" OFF.

## Controls



### Key Pad Description



#### **FUNCTION**

- Press once "SP1" is displayed, temperature setting.
- Press twice "t" is displayed, timer setting.



#### **DOWN ARROW**

- Used to decrease a value. Hold continuously to scroll.
- When pressed for more than 1.5 seconds, "SP1" is displayed.



#### **UP ARROW**

- Used to increase a value. Hold continuously to scroll.



#### **RUN**

- When pressed for more than 1.5 seconds will activate/deactivate timer function.
- Used to turn off buzzer.

### LED Indicators



#### **HEATING INDICATOR**

When LED is illuminated Hotplate is heating.



#### **OVER AND UNDER TEMPERATURE ALARM INDICATOR**

LED is illuminated when bath temperature is either 10°C above or 10°C below set temperature.



#### **TIMER INDICATOR**

- Continuous illumination indicates timer is set.
- Flashing illumination indicates timer is running back/counting down.



#### **SET TEMPERATURE INDICATOR**

- Continuous illumination indicates set point is shown on display.

## Temperature Control of Hotplate

Switching ON and OFF: Switching ON - the unit may be turned ON (I) at the mains switch located at the rear. When ON (I) the switch is illuminated and the unit performs a self test where all the segments of the LED display illuminate.

Switching OFF: the unit may be turned OFF (O) at the mains switch located at the rear. All current temperature and time values remain in memory.

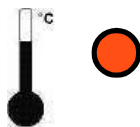
The Clifton HP-D range features an advanced PID temperature controller that can be used in either of the following ways to control hob temperature:

- temperature control.
- temperature control and timer.

### Setting Temperature



1. Press and hold the down arrow for more than 1.5 seconds to display "SP1" the set temperature.



The 'set temperature' indicator will illuminate.

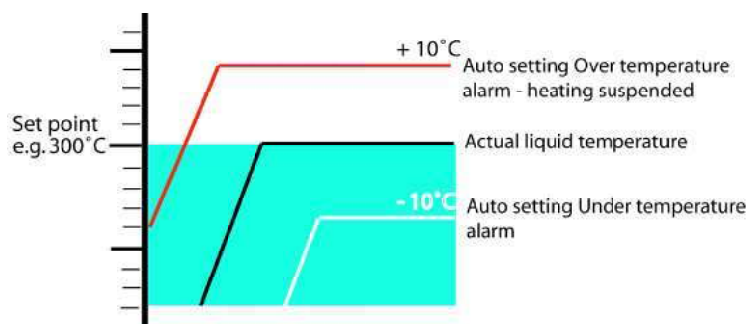


2. Use up and down arrow keys to select required temperature.

3. After setting temperature the display flashes between "SP1" and set temperature and will automatically revert to show actual hotplate temperature. The hotplate features an over or under temperature alarm which is automatically set 10°C above and 10°C below set temperature. If the actual hotplate temperature rises beyond this value then the alarm is activated and heating suspended.



Hotplate is now set and will heat and control at set temperature.



Temperature Control



## Setting Time



1. Press FUNCTION button until "t" appears on the display. It will then alternate between showing "t" and time - displayed as hh.mm.



2. Press either up or down arrow to select desired number of minutes.  
- Minimum time setting is 0 hours and 01 minutes - displayed as 00.01  
- Maximum time setting is 9 hours and 59 minutes - displayed as 99.59



3. Once desired time is entered press FUNCTION button to save setting. Display reverts to actual hotplate temperature.

## Under Temperature Alarm - Automatically Set

The under temperature alarm is automatically set 4°C below either 'Set Point 1' or 'Set Point 2'. When in alarm condition the 'over and under temperature' alarm indicator illuminates and actual bath temperature is shown. Once water temperature has risen above alarm setting then indicator clears and actual bath temperature is displayed.



**Always investigate the cause of the Under Temperature Alarm.**

## Over Temperature Alarm - Automatically Set

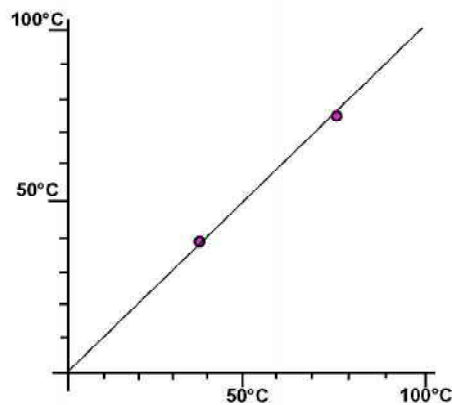
The over temperature alarm is automatically set 4°C above either 'Set Point 1' or 'Set Point 2'. When in alarm condition the 'over and under temperature' alarm indicator illuminates and actual bath temperature is shown. All heating is switched off. Once water temperature has fallen below alarm setting then indicator clears and actual bath temperature is displayed.



**Always investigate the cause of the Over Temperature Alarm.**

## Explanation of Temperature Control Terms

### Temperature Calibration



Verify the performance of the temperature control system digital display units undergo a factory calibration procedure which calculates the temperature values over the operating range of the equipment from 2 reference calibration points.

### Accuracy

We do not provide, claim or assure any form of accuracy. Accuracy is defined as "the ability of a measurement to match the actual value of the quantity being measured". For accuracy we recommend using a calibrated reference probe at the actual set point temperature and where necessary, adjust the set point accordingly.

### Sensitivity

For an explanation of sensitivity, the PID temperature control system measures and displays the actual temperature of the hotplate and then compares it with the 'set point' temperature. It automatically calculates and adjusts the required quantity of heat into the hotplate to make the measured temperature equal to the set temperature. As with any process there is a time delay between measuring the temperature and the heat entering the hotplate, which causes minor fluctuations in the temperature of the hotplate.

There are heat losses from the surface of the hotplate which can cause temperature losses. These losses and heat distribution produce small fluctuations in temperature across the hotplate. These small temperature fluctuations at any one point are defined as "sensitivity" and vary between an upper and lower limit, however occasionally a larger variation can be observed. Sensitivity as stated in DIN 58966 is the temperature difference between the upper and lower temperature level over 100 cycles after removing the largest 25% of readings.

We determine sensitivity by recording the actual upper and lower temperatures of the hotplate using temperature loggers and is stated as plus or minus one half of the measured value.

### Uniformity

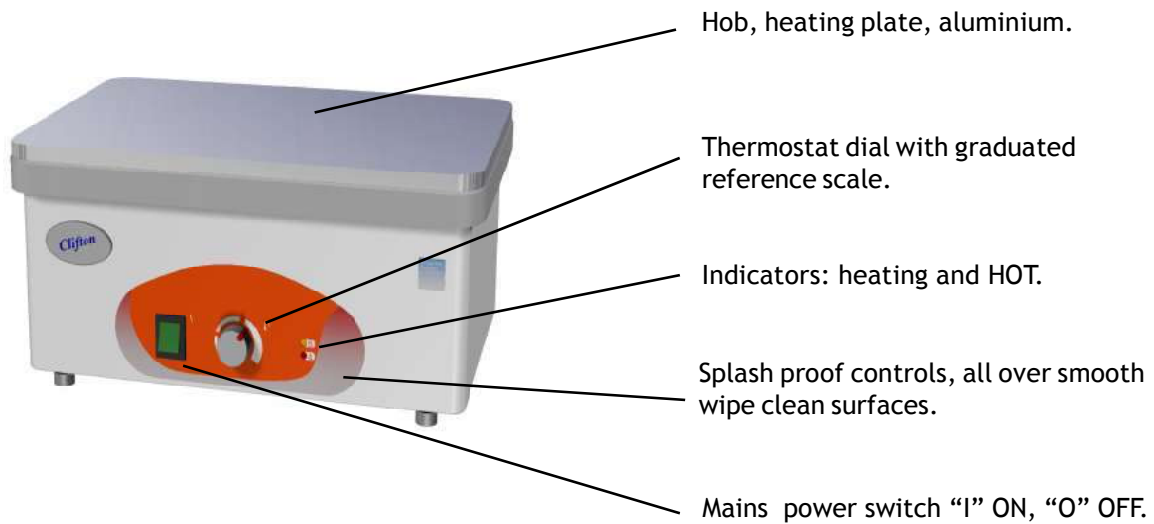
Uniformity is calculated by measuring the temperature in opposing ends of the hotplate and is the difference between the mean temperatures at these two points and stated as plus or minus half this value.



Hotplates  
Analogue HP1 Series

## HP1 Analogue Thermostatic Hotplate

### Front View



### Temperature Control

The Clifton HP range features thermostatic temperature controller for:

- easy to use temperature control.

### Operating Instructions

1. Switch the unit on using the mains switch located on the front of the hotplate.



2. Adjust the temperature using the control dial located on the front of the hotplate.



3. Amber heater indicator neon will illuminate to indicate heater activity.



4. HOT warning indicator will illuminate when the hob temperature exceeds 70° C.

## Cleaning

### General

The Hotplate top should be wiped clean with damp cloth soaked in a non-abrasive cleanser/cleaning solution to remove debris and contamination. The Hotplate will operate better if clean and last considerably longer.



**Important - please follow these instructions to avoid possible damage to the unit, otherwise affecting its performance and warranty. Always disconnect the product from the electrical supply before cleaning and allow the unit to cool down to ambient room temperature.**

**The product MUST NOT be decontaminated by steam sterilization.**

### Cleaning External Painted Surfaces featuring “Anti-bacterial Paint Finish”

The hotplate should be cleaned at regular intervals wiping external surfaces with a cloth or sponge soaked in warm soapy water with a mild detergent. All surfaces should be cleaned using a soft cloth or sponge.



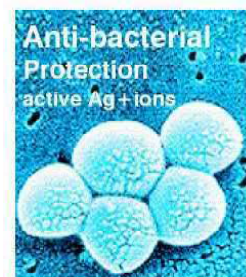
**Do not under any circumstances use strong solvents or solutions containing Chlorinated Hydrocarbons, Esters, Ketones or abrasive cleaners or polish on the paint finish otherwise it damages the built in anti-bacterial properties.**

All painted surfaces on Clifton range products features an “Anti-bacterial paint finish” identified with this authenticating logo on the unit.

This “Anti-bacterial paint finish” inhibits 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).

We recognise hygienic coatings are part of a controlled approach to a cleaner working environment. Within its formulation an active ingredient with proven anti-bacterial properties is bound into the paint finish. The efficacy of the paint finish applied to the Clifton range is maintained over its lifetime, as the anti-bacterial agent is integral within the paint.

In a laboratory environment it makes this one less source of contamination, contributing to essential clean working practices. A benefit of such a paint finish can lead to a reduction in cleaning schedules because surfaces are more protected and improves protection between cleaning. Unlike detergents “Anti-bacterial paint finish” does not offer an instantaneous action, but is intended for long-term general protection against bacterial growth.



Moisture on the painted surface is necessary for the bacterium to absorb the agent and be affected by it. The coating is therefore less active in very dry conditions, but dependent upon relative humidity, moisture in the atmosphere maintains activity. Areas where moisture is trapped are also areas that normally are difficult to clean and where bacteria proliferate but these areas are most active for the anti-bacterial coating improving the defence against bacterial growth.

## Decontamination of Equipment

Clifton laboratory equipment can be decontaminated after spillage or contact with potentially HIV and Hepatitis infected blood samples during analysis using following recommended rapid disinfectants.

### Virucidal Disinfectant

We recommend Virkon tablets for the safe and rapid disinfection of equipment in a wide variety of situations available from your distributor or contact Day-Impex Ltd. for more details. Telephone: 44+(0)1787 223232 or <http://www.day-impex.co.uk>

The ultimate high level surface disinfectant, dissolve VIRKON in water, providing a safe working solution with a faint lemon odor. It has proven efficacy against bacteria (including mycobacteria), viruses, spores and fungi in a variety of independent tests using different protocols. Presents no serious long term health risks to staff - obviating the need for costly ventilation equipment and health monitoring. Also provides high level disinfection of laboratory equipment and instruments where autoclaving is neither practical nor necessary. For more detailed information relating to how Virkon should be used with access to test reports [www.relyon.dupont.com](http://www.relyon.dupont.com)



*Is Virkon solution corrosive? Virkon solution requires only 10 minutes contact time to be effective so long-term exposure is not necessary and therefore will not corrode most materials. Care should be taken with Stainless steel water bath tanks, these surfaces should not be affected however, it is important that generally you do not leave Virkon solution in contact with metal surfaces "FOR LONGER THAN IS NECESSARY".*

Virkon is Registered in accordance with the requirements of the Medical Devices Directive, (93/42/EEC) as a Medical Device.

### Disinfectant/Sterilant

We recommend PeraSafe a powder product for the safe and rapid chemical sterilant of equipment in a wide variety of situations available from your distributor or contact Day-Impex Ltd for more details. Telephone: 44+(0)1787 223232 or <http://www.day-impex.co.uk>

PeraSafe has a proven safety profile for end-users with none of the undesirable properties of skin sensitisation, toxic fumes or unpleasant odours that are associated with aldehyde solutions.

Leading UK and USA microbiologists have proven PeraSafe to be active against viruses, mycobacteria and fungi. It is microbiologically superior to glutaraldehyde, destroying sporing bacteria in one minute. It has also been independently proven that PeraSafe sterilises in just 10 minutes.



For more detailed information relating to how PeraSafe should be used with access to test reports [www.relyon.dupont.com](http://www.relyon.dupont.com)

### 3 Year Warranty

Our service engineers are fully trained in the assembly, calibration and servicing of all Clifton instrumentation. Products can be returned to our comprehensively equipped service centre where a fast and efficient turnaround is guaranteed: Service Department, Nickel Electro Limited, Oldmixon Crescent, Weston-super-Mare, North Somerset BS24 9BL, UK. Tel +44 (0)1934 626691 Fax +44 (0)1934 630300.

### Out of Warranty

Our Service Department has comprehensive stock of chargeable spare parts maintaining working life of equipment or units can be returned for quotation before repairs are undertaken.

### End of Life



This symbol indicates that this product should not be disposed of with your waste. Instead, dispose waste electrical equipment by handing it over to a designated collection point for the recycling of waste electrical and electronic equipment. The separate collection and recycling of your waste equipment at the time of disposal will help to conserve natural resources and ensure that it is recycled in a manner that protects human health and the environment. For more information about where you can drop off your waste equipment for recycling, in UK please contact Service Department, rest Europe contact your Distributor. Health & Safety, unless in receipt of a Decontamination Notice or Report the unit cannot be returned or accepted for disposal. Clifton electrical and electronic equipment has been designed for recycling and takes into account the dismantling and recovery its components and materials. Clifton products are easily recycled with majority of the product constructed from stainless or mild steels, which can readily be re-used or recycled.

**In excess of 94% of this product range can be easily re-cycled economically.**

### Portable Appliance Testing

When conducting testing ensure it is completed by a qualified person.



**The product MUST NOT be Flash tested !**

### Accessories for HP1-D and HP1 Series

#### Sandbath Kits

- SB1-1 Sand Bath Kit to suit HP1-1 and HP1-1D Hotplates
- SB1-2 Sand Bath Kit to suit HP1-2 and HP1-2D Hotplates
- SB1-3 Sand Bath Kit to suit HP1-3 Hotplate

#### Miscellaneous

- 8614 10 x 500mm Aluminium Retort Rod

### Retort Point

A retort point bracket is supplied. The unit features two threaded holes on the rear of the unit to accept the point. This can then be used to support a retort rod - see accessories.

Spares and Service Diagrams

3rd ANGLE PROJECTION
DO NOT SCALE
REMOVE ALL SHARP CORNERS AND EDGES LUS
ALL DIMENSIONS IN mm
IF IN DOUBT ASK

**HP1-2 DRAWN**

**HP1-1**

| Item | DESCRIPTION                            | QTY | PART NO.         |
|------|--|-----|------------------|
| 1    | 1 PLACE HUB                            | 1   | NH40791          |
| 2    | SHEET - MEDIUM HOTPLATE                | 2   | SF62060          |
| 3    | OVER TEMP CUTOFF BULB                  | 1   | 1788T 0F S201659 |
| 4    | COOLING FIN HP-1                       | 1   | SF62476          |
| 5    | WHITE RUBBER FOOT                      | 4   | SF62465          |
| 6    | THERMOSTAT STAND OFF PLATE - HOTPLATES | 1   | SF63011          |
| 7    | PINK POINTER                           | 1   | RK022            |
| 8    | GREY CONTROL KNOB                      | 1   | RK079            |
| 9    | ILLUMINATED SWITCH                     | 1   | ES3024           |
| 10   | AMBER NEON                             | 1   | EU027            |
| 11   | RED NEON                               | 1   | EU028            |
| 12   | BULB HOLDER                            | 1   | SF64720          |
| 13   | THERMOSTAT SA                          | 1   | S20169           |
| 14   | CEA CIRCUIT BREAKER                    | 2   | ES065            |
| 15   | BODY ASSEMBLY                          | 1   | S20381           |
| 16   | CABLE GLAND                            | 1   | EV0428           |
| 17   | COVER PLATE                            | 1   | SF63984          |
| 18   | 1000W/230V CLAMP ON ELEMENT            | 1   | EE039            |

**HP1-2**

| Item | DESCRIPTION                            | QTY | PART NO.         |
|------|--|-----|------------------|
| 1    | 2 PLACE HUB                            | 1   | NH40791          |
| 2    | SHEET - MEDIUM HOTPLATE                | 2   | SF62060          |
| 3    | OVER TEMP CUTOFF BULB                  | 1   | 1788T 0F S201659 |
| 4    | COOLING FIN HP-2                       | 1   | SF62467          |
| 5    | WHITE RUBBER FOOT                      | 4   | SF62465          |
| 6    | THERMOSTAT STAND OFF PLATE - HOTPLATES | 1   | SF63011          |
| 7    | PINK POINTER                           | 1   | RK022            |
| 8    | GREY CONTROL KNOB                      | 1   | RK079            |
| 9    | ILLUMINATED SWITCH                     | 1   | ES3024           |
| 10   | AMBER NEON                             | 1   | EU027            |
| 11   | RED NEON                               | 1   | EU028            |
| 12   | BULB HOLDER                            | 1   | SF64720          |
| 13   | THERMOSTAT SA                          | 1   | S20169           |
| 14   | CEA CIRCUIT BREAKER                    | 2   | ES065            |
| 15   | BODY ASSEMBLY                          | 1   | S20381           |
| 16   | CABLE GLAND                            | 1   | EV0428           |
| 17   | COVER PLATE                            | 1   | SF63984          |
| 18   | 1000W/230V CLAMP ON ELEMENT            | 2   | EE039            |

**HP1-1 & HP1-2 SERVICEABLE PARTS LIST**

DESCRIPTION: HP1-1 & HP1-2 SERVICEABLE PARTS LIST

MATERIAL: SEE PARTS LIST

FINISH: \_\_\_\_\_

TOLERANCES LUS: HOLE DIA. +0.2 mm, HOLE CHS. +/- 0.25 mm, GENERAL +/- 0.50 mm

BEND ALLOWANCE LUS = \_\_\_\_\_  
 BRAKE PRESS BLADE USED LUS = \_\_\_\_\_  
 BRAKE PRESS V USED LUS = \_\_\_\_\_

1000W/230V CLAMP ON ELEMENT (18)

2 PLACE HUB (1)

SHEET - MEDIUM HOTPLATE (2)

OVER TEMP CUTOFF BULB (3)

COOLING FIN HP-2 (4)

WHITE RUBBER FOOT (5)

THERMOSTAT STAND OFF PLATE - HOTPLATES (6)

PINK POINTER (7)

GREY CONTROL KNOB (8)

ILLUMINATED SWITCH (9)

AMBER NEON (10)

RED NEON (11)

BULB HOLDER (12)

THERMOSTAT SA (13)

CEA CIRCUIT BREAKER (14)

BODY ASSEMBLY (15)

CABLE GLAND (16)

COVER PLATE (17)

**NICKEL ELECTRO LTD.**

Manufacturers of Laboratory Heating and Cooling Equipment

1000 Walsby Road, Walsby, Leicestershire, LE12 7LQ, UK

01530 810000

DRAWN: MLC

DATE: 8/10/2007

SCALE: NTS

DRG NO. \_\_\_\_\_

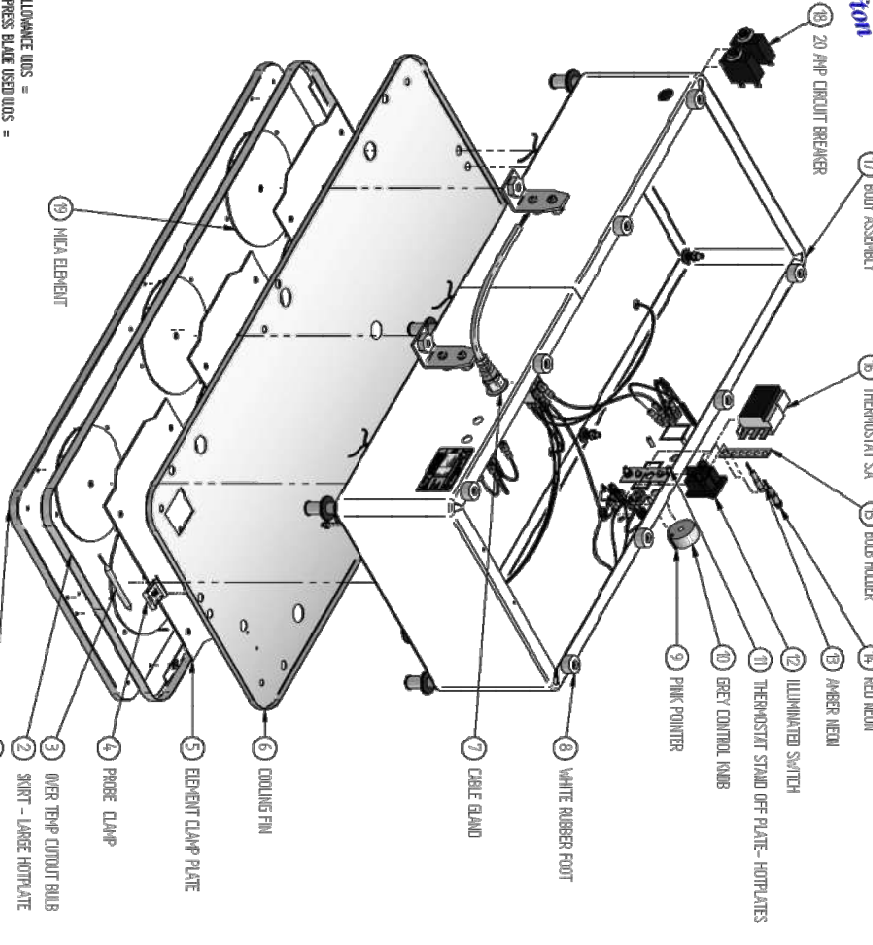
SHEET 1 OF 1

TABLE DRAWING



Spares and Service Diagrams

3rd ANGLE PROJECTION
DO NOT SCALE
REMOVE ALL SHARP CORNERS AND EDGES US10
ALL DIMENSIONS IN mm
IF IN DOUBT ASK



17 BODY / ASSEMBLY

18 20 AMP CIRCUIT BREAKER

19 NICKEL ELEMENT

1 THERMOSTAT SA

2 BULB HOLDER

3 RED NEON

4 AMBER NEON

5 ILLUMINATED SWITCH

6 THERMOSTAT STRAND OFF PLATE- HOTPLATES

7 GREY CONTROL KNUB

8 PINK POINTER

9 WHITE RUBBER FOOT

10 CABLE GLAND

11 COOLING FIN

12 ELEMENT CLAMP PLATE

13 PROBE CLAMP

14 OVER TEMP CUTOFF BULB

15 SHIRT - LARGE HOTPLATE

16 TIP PLATE - LE LARGE HOTPLATE

| Item | DESCRIPTION                            | QTY | PART NO.          |
|------|--|-----|-------------------|
| 1    | TOP PLATE - LE LARGE HOTPLATE          | 1   | PA40659           |
| 2    | SHIRT - LARGE HOTPLATE                 | 2   | SHR2065           |
| 3    | OVER TEMP CUTOFF BULB                  | 1   | ( PART OF SA0169) |
| 4    | PROBE CLAMP                            | 1   | SPR0910           |
| 5    | ELEMENT CLAMP PLATE                    | 3   | SPR0544           |
| 6    | COOLING FIN                            | 1   | SPR04788          |
| 7    | CABLE GLAND                            | 1   | EV0428            |
| 8    | WHITE RUBBER FOOT                      | 8   | BR0245            |
| 9    | PINK POINTER                           | 1   | BR0024            |
| 10   | GREY CONTROL KNUB                      | 1   | BR0793            |
| 11   | THERMOSTAT STRAND OFF PLATE- HOTPLATES | 1   | SPR0911           |
| 12   | ILLUMINATED SWITCH                     | 1   | ES0241            |
| 13   | AMBER NEON                             | 1   | EL0277            |
| 14   | RED NEON                               | 1   | EL0278            |
| 15   | BULB HOLDER                            | 1   | SPR0420           |
| 16   | THERMOSTAT SA                          | 1   | SA0169            |
| 17   | BODY ASSEMBLY                          | 1   | SA0164            |
| 18   | 20 AMP CIRCUIT BREAKER                 | 2   | ED0659            |
| 19   | NICKEL ELEMENT                         | 6   | ED0963            |

BRAND ALLOWANCE IUS =

BRAKE PRESS BLADE USED IUS =

BRAKE PRESS V USED IUS =

**DESCRIPTION** HP1-3 GENERAL ASSEMBLY SERVICEABLE PARTS

**MATERIAL** SEE PARTS LIST


**FINISH**

**TOLERANCES IUS**

HOLE DIA +0.2 mm

HOLE CTRS +/-0.25 mm

GENERAL +/-0.50 mm



**NICKEL ELECTRO LTD**  
Manufacturers of Industrial and Commercial Heating Equipment

|       |            |         |            |     |      |
|-------|------------|---------|------------|-----|------|
| DRN   | MJC        | 7       | 30/07/2008 | SWT | MJC  |
| DATE  | 19/09/2008 | ISSUE   | DATE       | MOD | SIG  |
| SCALE | NTS        | DRG No. | SHEET      | 1   | OF 1 |

|         |       |
|---------|-------|
| DRG No. | HP1-3 |
|---------|-------|







## EC Declaration of Conformity

We herewith confirm the following product

### HP Hotplate Range

Conforms with the requirements outlined by following European Directives.

**Low Voltage Directive (73/23/EEC)**  
**EMC Directive (89/336/EEC)**

We confirm the declaration



#### NICKEL-ELECTRO LIMITED

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Conforms with the requirements of following Standards

**BS EN 61010:1**

**BS EN 61010:2.010**

Safety requirements for electrical equipment for measurement, control and laboratory use.

**BS EN 61326**

Electrical equipment for measurement control and laboratory use - EMC requirements.

Nickel-Electro Ltd is also registered ISO9001  
reference No. Q09820



Certificate No. Q09820