



KS SERIES KOCH STEAM  
STERILIZERS  
KS1  
KS2  
KS3

*Clifton Range*<sup>®</sup>

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High quality products at affordable prices

Dear Customer

The Clifton Range® is part of Nickel-Electro Ltd a family firm based in Weston-Super-Mare which was incorporated as a limited company in 1941 but its roots can be traced back to 1935 when the business first started. Now in its 3rd generation of family members, the company prides itself on being a strongly established, independent British manufacturer.

Thank you for purchasing this piece of Clifton Range® temperature control equipment. To get the best performance from your equipment and for your own safety please read these instructions carefully before use.

## GENERAL NOTES

1. This product is designed for laboratory use only. Always follow good laboratory practice.
2. Fill the chamber prior to connection to electrical supply.
3. Use caution when topping up/draining the tank. If this product is not used in accordance with these instructions then basic safety protection may be affected.
4. The mains supply cord fitted to this product is heat resistant and should be replaced with an equivalent type by a qualified electrician.
5. Ensure that the power supply has a safety earth (ground) terminal.
6. Connect to a mains power supply with RCD protection if possible.
7. Ensure that the mains switch and power supply connector are accessible during use.
8. Before using any cleaning or decontamination method please refer to the Maintenance and Cleaning section to ensure the proposed method will not damage the unit.
9. Connect only to a power supply with the corresponding voltage to that specified on the rating label positioned on the rear of the unit. Ensure substances being heated present 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.
10. Use only liquids specified within this Instruction Manual within their specified temperature range.
11. Always drain before moving.
12. Always use the lid. Take care when lifting the lid as hot steam and vapours can cause scalding.



## LOCATION

The product must be placed on a smooth, level and sturdy work surface, preferably near a drain for emptying. Use in a ventilated room. Suitable for use in ambient temperatures 5°C to 40°C with a maximum humidity 80% (temperature 31°C) decreasing to 50% (temperature 40°C). Mains voltage fluctuations are not to exceed +/- 10% of the nominal supply.

## UNPACKING

Remove the product from its packaging and retain over the warranty period. Contents consist of:

- Sterilizer
- Lid
- Two stainless steel shelves
- Power lead
- Instruction manual

Place the shelves inside the sterilizer chamber. Fit the power lead into the socket at the rear.

## SAFETY



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

## POWER LEAD AND CONNECTION TO ELECTRICAL SUPPLY



Check the electrical supply is compatible with the rating label.  
**IF IN DOUBT CONSULT AN ELECTRICIAN. THE PRODUCT MUST BE EARTHED!**

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



## LIQUID LEVEL

Minimum and maximum water level is governed by the reservoir which maintains water level during boiling. Using standard laboratory tubing connect the outlet of the constant level to a regulated water supply. Adjust the water supply to provide a slow feed of water and maintain boiling and safe water level. The reservoir allows an easy to view indication of the water level in the sterilizer and should be 3/4 full.

## SUITABLE LIQUIDS

Depending on sterilization protocols either sterile water or tap water is suitable.

## OPERATING INSTRUCTIONS

1. Always ensure the koch sterilizer is filled with water to the correct level and maintained during use to produce sufficient steam during the sterilizing process.
2. Water level should be 3/4 full - check the reservoir as described above.
3. Ensure the lid is fitted to achieve and maintain boiling. The lid is designed to ensure condensation runs back into the chamber.
4. Switch the main electrical supply ON and allow the water to boil.
5. The unit is fitted with two removable shelves making for easy retrieval and ease of loading/unloading.
6. The lid is fitted with a 18mm diameter thermometer port. Use with care.



**ALWAYS ENSURE THE CHAMBER IS FILLED WITH WATER!!**

**PLEASE NOTE: ALL SURFACES ARE HOT DURING USE!!**

## FAULT CONDITION

A fault condition occurs when the sterilizer is allowed to boil dry. The sterilizer features a push to reset safety feature. An LED indicator illuminates displaying normal working operation and will not illuminate if in fault condition. Located on the rear of the unit, use a small sharp object to insert into the hole and push to reset. Allow to cool before refilling with water. Adding water while the unit is hot will cause spitting and steaming.



**ALWAYS CHECK THE RESERVOIR TO ENSURE ADEQUATE WATER LEVEL!!**



## CARE AND MAINTENANCE



Please ensure that the washing agent and sanitizing agent are BSI accredited and approved by the H&S department for use on laboratory equipment and stainless steel within your laboratory.

**DISCONNECT THE STERILIZER FROM THE POWER SUPPLY PRIOR TO CLEANING**

## BASIC CLEANING

The stainless steel chamber should provide years of valuable service and is resistant to chloride containing solutions but it is important to avoid high concentrations of halogens- particularly chloride. Halogen deposits may show as rust which can be cleaned off with nitric acid (10%) on a cloth. **WEAR PROTECTIVE EQUIPMENT!**

The Clifton Range® Koch sterilizer should be emptied at the end of each day, then for interior surfaces:

• WASH • RINSE • DRY •

Always empty the sterilizer using the reservoir - **DO NOT** tip the unit on its side to empty or damage may occur. Surfaces may remain hot for sometime after use. Depending on sterilization protocols either replenish with sterile water for irrigation from an unopened container or refill from a tap water supply.

## PORTABLE APPLIANCE TESTING

These tests should be conducted by a qualified person.



**DO NOT PAT** test the boiling bath unless it contains water.

**DO NOT Flash Test!!**



## WARRANTY TERMS AND CONDITIONS

1. Nickel Electro Ltd warrants to the Customer that the product purchased is free from defects in materials and workmanship.
2. Provided the terms of payment are duly complied with, Nickel Electro Ltd undertakes to remedy any original defects arising from faulty materials or workmanship, in any goods manufactured/supplied by Nickel Electro Ltd, which under proper and normal conditions of use, may develop within a period of three years from the date of delivery.
3. In the case of components which by their nature of application have an unpredictable life, this guarantee shall only be to the extent of the guarantee given by the manufacturers of these articles.
4. Nickel Electro Ltd will accept no liability, where in the opinion of the company the defect has been caused by damage due to the Customers failure to follow operating instructions, correct installation, wear and tear, or damage due to the use of spare parts other than those spare parts of Nickel Electro Ltd or which are recommended by Nickel Electro Ltd, the defect has been caused by alterations or repairs being undertaken by a person(s) other than an authorised representative of Nickel Electro Ltd.
5. Any damage claim must be in writing, and give the serial number and description of the goods, order number and date of delivery, and will not apply where any names or serial numbers or other information which may be attached to or inscribed upon the goods have been removed, covered up or defaced in any way.
6. Any goods or parts thereof, which may require repair or replacement, shall be repaired or replaced (at the discretion of Nickel Electro Ltd) at the works of Nickel Electro Ltd. The product to be repaired shall be delivered carriage paid back to Nickel Electro Ltd by the customer at the Customer's risk and expense. Any such goods or parts will be delivered by Nickel Electro Ltd to the Customer free within the United Kingdom but if required to be borne by the Customer. All faulty parts removed from the equipment will become Nickel Electro Ltd's property. Any other repairs or work by Nickel Electro Ltd will be carried out under the terms and conditions for specialist engineers currently in force.
7. In the event of replacement with a new or reconditioned model, the replacement unit will continue the warranty period of the original equipment.
8. If any goods or parts thereof are returned unnecessarily all cost involved, including a charge for inspection, handling and the return carriage must be paid by the sender. In no circumstances shall any of the goods be returned to Nickel Electro Ltd without its prior written consent.
9. Please retain the original packaging over the warranty period.

## NON WARRANTY INFORMATION

Spare parts shall be made available for a period of 3 years after a piece of equipment is discontinued.

KOCH STEAM STERILIZER - KS SERIES

CLIFTON RANGE® - 3 YEAR WARRANTY





### DECLARATION OF CONFORMITY

We herewith confirm the following product:  
KS Series Sterilisers

Conforms with the requirements outlined by the following European Directives:

Low Voltage Directive 2014/35/EU

EMC Directive 2014/30/EU

RoHS Directive 2012/65/EU

Conforms with the requirements outlined in the following United Kingdom Directives:

Electromagnetic Compatibility Regulations 2016

Electrical Equipment (Safety) Regulations 2016

RoHS Directive 2012/65/EU

Conforms with the requirements of the following standards:

BS EN 61010-1: 2010

BS EN 61010-2-010: 2014

BS EN 61326-1: 2013

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

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

Designed and manufactured in the United Kingdom by:



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FINAL INSPECTION AND ELECTRICAL SAFETY TEST REPORT

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**NICKEL - ELECTRO LTD.**  
Manufacturers of the Clifton Range