

Clifton Roller Mixer MXS-10

Instruction Manual

Thank you

Thank you for purchasing a Clifton product.

This User Manual will assist you in the correct installation and operation of the Clifton Roller Mixer, as well as explain the safety requirements for its use.

Important: Please read the contents of this User Manual before unpacking and operating the product.

Unpacking and Checking

Once you have read these instructions in full and understand the installation and safety requirements including those for unpacking the carton, please carefully open the packing and slowly remove the product. Carefully inspect the condition of the product to ensure it has not been damaged in transit. Any damage should be reported immediately to the responsible carrier. If the product is damaged in any way, re-pack the product into the supplied packaging and notify the responsible carrier immediately.

Important: Do not operate the equipment if it has been damaged in any way. Any failures resulting through the use of a damaged product will not be covered by the product warranty.

Carton Contents

Ensure that you have received all items outlined below before proceeding. If you have not received all components in the supplied carton, please re-pack the carton and our Service Engineer at Nickel-Electro Limited, Oldmixon Crescent, Weston Super Mare, North Somerset BS24 9EB, United Kingdom.

- **Clifton Roller Mixer**
- **Power Supply with Lead**
- **User Manual**

Intended Use

This Tube Roller Mixer is intended for the purpose of agitating vessels containing liquid to create a rolling mixing action inside the vessel.

The Tube Roller Mixer is **not** intended to provide direct-contact between itself and an unprotected medical, food, biological item. In all cases the item should be enclosed in a suitable vessel as described below.

Suitable Articles For Use With This Tube Roller Mixer

- Plastic or glass laboratory test tubes that are sealed and rated to withstand the intended velocity of agitation.
- Plastic or glass laboratory sample vials or bottles that are sealed and rated to withstand the intended velocity of agitation.
- *An example of a suitable article would be a sealed laboratory tube filled with blood*

Unsuitable Articles For Use With This Tube Roller Mixer

- Any item where the article is not sealed or during mixing may result in its contents coming into contact with the Tube Roller Mixer or the Operator.
- Items weighing more than 1000 grams.
- *An example of an unsuitable article would be an open ended test tube filled with blood. The tube should be sealed with a suitable cap or stopper.*

Suitable Environments For The Tube Roller Mixer

The Tube Roller Mixer is intended for use in a clean laboratory environment only where adequate ventilation, a good power supply and provisions for routine cleaning are available. The Tube Roller Mixer should not be used outdoors or in dirty, dusty, humid or windy environments. The acceptable operating conditions are outlined further in this User Manual.

General Operation

- The Tube Roller Mixer is plugged into an appropriate power source. It is powered by an alternating current power supply with the appropriate receptacle, rated voltage and frequency for the country of its intended use. Further details on power requirements are outlined in this User Manual.
- A suitable article (as defined above) is placed onto the rollers
- The Tube Roller Mixer is operated via a top panel interface consisting of a power switch and a mixing speed control knob. These controls allow the operator to set a required rolling speed.
- The Tube Roller Mixer should be operated strictly in accordance with the Operating Procedures outlined further in this User Manual.

Operator Responsibility – Safety Considerations

When operated in strict accordance with this User Manual, plus routine cleaning and maintenance being carried out, the product shall provide safe operation for the operator. The operator should be aware of the following before installing and operating the product:

Conditions of Operation

***Note:** The term "Operator" referred to in this User Manual is the primary person who has been tasked to install, maintain and train in the usage of this equipment. Other personnel shall be referred to as "Users".

- The operator shall be aware that the protection provided by the equipment may be impaired if the equipment is used with accessories not provided or recommended by the manufacturer, is modified in any way or is used in a manner not specified by the manufacturer.
- The operator is responsible for ensuring all users of the product are qualified to do so, and are well versed in common safety concepts. The product should only be operated by an adult who has read and understood this User Manual provided in the appropriate language in its entirety.
- Any user must be informed by the responsible operator of any potential hazards that may arise through the use of this equipment in the course of their work, including any local environmental hazards not related directly to the Tube Roller Mixer. They should also be able to demonstrate that they understand any preventative safety measures in operation prior to operating the equipment.

- The operator shall agree to accept responsibility for the use of the equipment in accordance with this User Manual, and be fully aware that the equipment is designed for commercial use.
- It is assumed that the user and operator have had experience in a commercial environment, and had appropriate training in how to perform their work safely in accordance with any local operational health and safety regulations. The operator and all users should be well versed in local emergency procedures as per the workplace safety regulations in effect.
- Avoid any direct impact with any surface of the equipment, including the casing, disc and most importantly the control panel.
- **Important:** Do not use any sharp or pointed metal objects anywhere near the equipment, in particular the control panel.
- Avoid using the equipment near any other vibrating equipment or source of excessive vibration.
- Ensure the equipment is cleaned and maintained in accordance with this User Manual.
- Ensure that all original safety warning labels are in an adequate, legible condition and are firmly affixed to the equipment before using the product.
- Plug the equipment directly into a wall power outlet. Do not plug the equipment into a multi-socket adapter of any kind.
- The equipment is intended for operation in a controlled electromagnetic environment. Avoid the use of transmitting devices (e.g. cellular or mobile telephones) near the equipment whilst operating. A minimum distance of 2m from the product is recommended for any transmitting device.
- The equipment must only be installed and operated in well ventilated areas. The unit is not intended for use in explosive atmospheres or in confined spaces.
- The allowed operating environment must be between 0° Celsius and 60° Celsius ambient air temperature.
- The maximum allowed relative humidity of the operating environment is 80%.
- The equipment should not be stored in direct sunlight, near chemicals, or other contaminants.
- If any of these safety recommendations cannot be achieved or the equipment has been damaged in any way, the equipment should not be installed or operated.
- **Important:** If you have any concerns or questions relating to operator or user safety, please contact the Service Engineer at Nickel Electro before installing and operating the unit. Contact details are provided in this User Manual.

Safety Labels and Markings

The equipment is provided with safety caution labels. An explanation of each caution label is provided below. It is the responsibility of the operator and user to fully understand the meaning of these warning labels prior to operating the equipment.

Caution Labels



Colours: Black on a yellow background

Definition

The Clifton Roller Mixer has rolling tubes which should not be touched whilst they are moving. Keep all body parts away from the rollers whilst in operation. Always stop the rollers using the top panel speed control before adding or removing any items.

This label is fitted by the manufacturer and must not be removed under any circumstances.

Safety Warnings

Throughout this User Manual, specific warnings will be supplied which relate to the current operation being referred to. These warnings are supplied in addition to the main warning labels affixed to the product and the key points outlined in the section of this User Manual titled 'Operator Responsibility – Safety Considerations'.

A graphical symbol as pictured below will be used next to each warning with accompanying text; the danger level for each is described below:



CAUTION

Indicates a possibly highly dangerous situation which may result in serious injury or threat to life if the situation is not avoided.



CAUTION

Indicates a possibly harmful situation which may result in injury or damage to product or property if the situation is not avoided.

Safety Recommendations

The following safety recommendations must be followed to prevent damage or injury. In addition to these safety recommendations, it is assumed that the user and operator have had experience in a commercial environment, and had appropriate training in how to perform their work safely in accordance with any health and safety regulations. The operator and all users should be well versed in emergency procedures as per the workplace safety regulations in effect.



CAUTION

If the equipment is used in a manner not specified by the manufacturer, the protection provided by the equipment may be impaired.



CAUTION

A surge protected power outlet is strongly recommended as it provides some protection for the equipment in areas of poor electrical quality as well as providing some protection against lightning strikes. The equipment should be operated on a good, reliable supply of power at all times.

Note: The Clifton Roller Mixer should not be operated on the same electrical circuit as other high voltage household appliances such as fridges, clothes dryers, washing machines or other continuous operation high voltage devices. These types of devices can create power fluctuations that are undesirable for electrically sensitive equipment. Consult your workplace administrator or electrical maintenance staff if you are unsure.



- **ALWAYS** wear protective eyewear when working with the equipment.
- **ALWAYS** place the Roller Mixer on a strong, even, dry, flat, smooth surface to allow the rubber feet to hold the mixer securely.
- **ALWAYS** turn off power before moving the equipment to a new location.
- **ALWAYS** turn off the mains power supply at the outlet when the unit is not in operation.
- **ALWAYS** be careful of water or other liquids near the working area and ensure any spills cannot come in contact with the Roller Mixer control panel or mains power supply. Ensure benches are kept dry at all times.
- **ALWAYS** operate the Roller Mixer in a well ventilated area with adequate clearance around the Roller Mixer as indicated in case of spillage.
- **ALWAYS** use only the original mains power supply. Replacement non-genuine supplies may not be suitable.
- **ALWAYS** ensure the equipment is included in your electrical test and tag register.
- **NEVER** operate the equipment if the electrical PAT test tag is out of date.
- **NEVER** operate the equipment if you believe it is damaged in any way.
- **NEVER** operate the Tube Roller Mixer if the mains power supply is damaged in any way
- **NEVER** use any sharp or metal objects near the Roller Mixer control panel

Preparation & Installation

The Tube Roller Mixer should be installed and operated in strict accordance with the following instructions.



CAUTION

Be careful when lifting and observe health and safety requirements for lifting before unpacking the carton.

Unpacking and Installing

- Carefully remove all packaging material from the Roller Mixer, as well as the User Manual and any other supplied accessories.
- Carefully inspect the Roller Mixer, mains power supply and all packaging for any signs of damage. If any signs of damage are present, **do not** install or operate the equipment. Contact the supplier of your equipment if you have received a damaged product.
- Place the Roller Mixer in an upright position on a strong, even, flat, smooth surface.
- Ensure that there is a minimum unobstructed distance of 100mm between the left, right and rear panels of the Roller Mixer and any other object or wall.
- Ensure that there is a suitable mains power supply outlet within reach of the supplied mains power supply without placing any strain whatsoever on the lead or plug. The Roller Mixer should not be plugged into any double-adaptor, power board, or power point splitter of any kind but instead directly into a wall mounted power socket.
- Ensure that there is a minimum unobstructed distance of 500mm in front of the Roller Mixer to allow adequate room for the user to maintain a safe operating distance of 300mm.



CAUTION

The Tube Rollers Mixer is designed for the purpose of agitating vessels containing liquids.

The contents of these vessels is the sole responsibility of the user or operator, and the use of corrosive, flammable, combustible, hazardous, environmentally unsafe or otherwise dangerous materials within the container is done so at the risk and liability of the user or operator.

ALWAYS be 100% sure of the contents of your containers, the expected behavior once agitated and the applicable safety measures that should be employed when handling such substances.

ALWAYS ensure your containers are firmly sealed and there is no chance of the sample leaking onto the Roller Mixer or coming into contact with the Operator.

Using the Tube Roller Mixer

Choosing a Suitable Vessel

- The Roller Mixer should only be used with vessels that are sealed with an appropriate cap to prevent spillage whilst in use.

Connecting Power



CAUTION

A surge protected power outlet is strongly recommended as it provides some protection for the equipment in areas of poor electrical quality as well as providing some protection against lightning strikes. The equipment should be operated on a good, reliable supply of power at all times.

Note: The Roller Mixer should not be operated on the same electrical circuit as other high voltage household appliances such as fridges, clothes dryers, washing machines or other continuous operation high voltage devices. These types of devices can create power fluctuations that are undesirable for electrically sensitive equipment. Consult your workplace administrator or electrical maintenance staff if you are unsure.

IMPORTANT: Use of an incorrect power supply will void the product warranty and waive all manufacturer liability for any and all damage caused by such use. If you are unsure about the rating of your power supply, consult your workplace administrator or electrical maintenance staff to determine if your power supply is suitable for use with this product before connecting the power supply.



CAUTION

Regularly check the mains power supply condition over the life of the product, and do not operate the equipment if you suspect there is damage to any part of the equipment or the mains power supply.

- Insert the plug end of the mains power supply lead firmly into a properly rated, wall mounted power supply outlet.
- Insert the lead end of the power supply into the socket on the rear of the mixer.

If there are double-adapters or oversized DC power packs causing obstruction of the mains power supply plug, these should first be removed.

- Ensuring your hands are dry, switch on the power on the mains power supply outlet.

Adjusting The Mixing Control

The Roller Mixer features adjustable mixing speed control to deliver gentle agitation through to vigorous mixing.

To change the mixing speed

- Slowly turn the speed control knob clockwise to increase the speed, or anti-clockwise to decrease the speed.
- The speed may be adjusted during mixing to achieve the desired level of mixing inside the vessel.

Operating the Tube Roller Mixer



CAUTION

When working with glass tubes, flasks, bottles, breakable or other brittle or fragile articles it is important to wear appropriate safety eyewear and protective gloves to ensure operator safety. In addition, the Roller Mixer should be used in accordance with your operational health and safety policies.

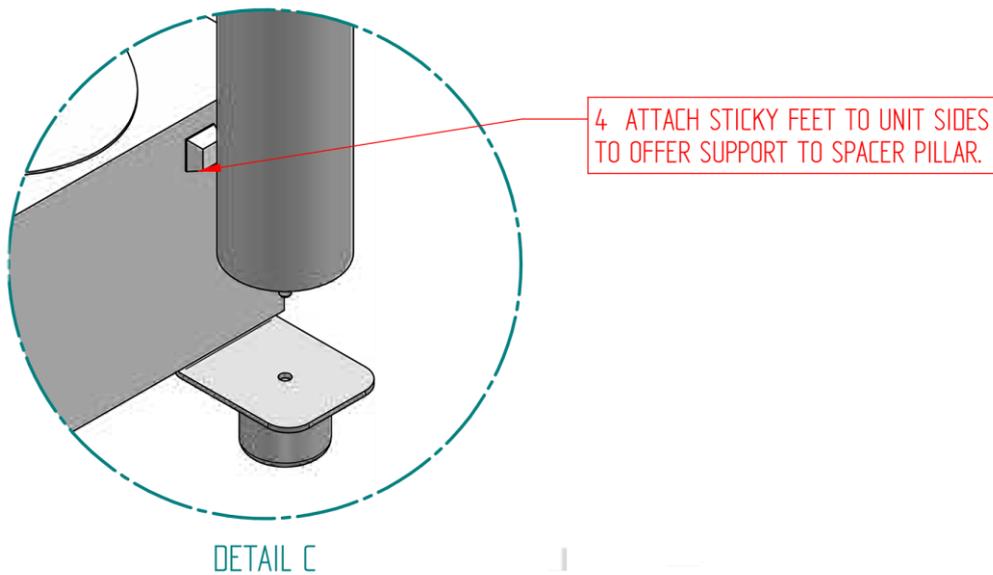
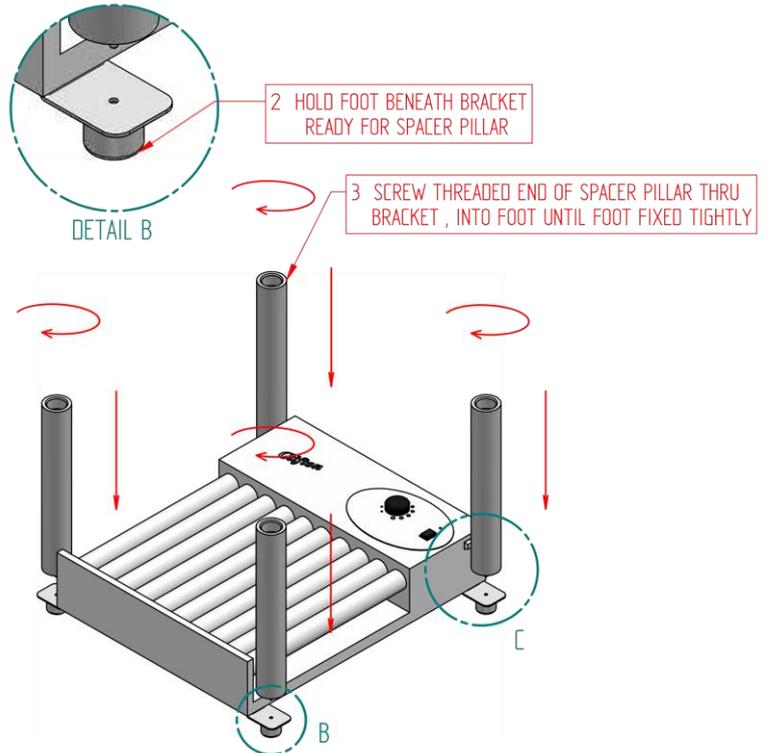
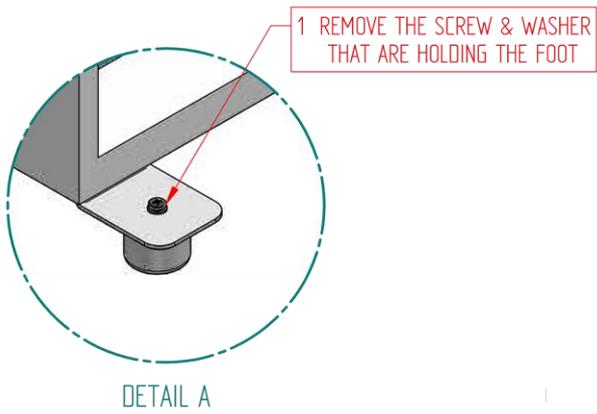
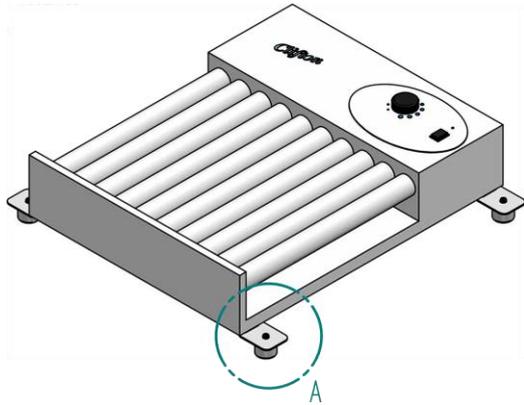
- Load your tubes or bottles onto the rollers
- Ensure that there are no obstructions which would prevent proper rotation of the samples.
- Switch on the power.
- Select the desired agitation speed. Refer to the section in this User Manual titled "Adjusting The Mixing Control" for instructions.
- The speed may be adjusted as desired.
- Once desired mixing has been achieved turn the speed dial anti-clockwise to slow the rollers.
- Remove the tubes or bottles once mixing is complete.
- If the mixer is no longer being used, switch the power to Off.

Storing & Relocating The Tube Roller Mixer

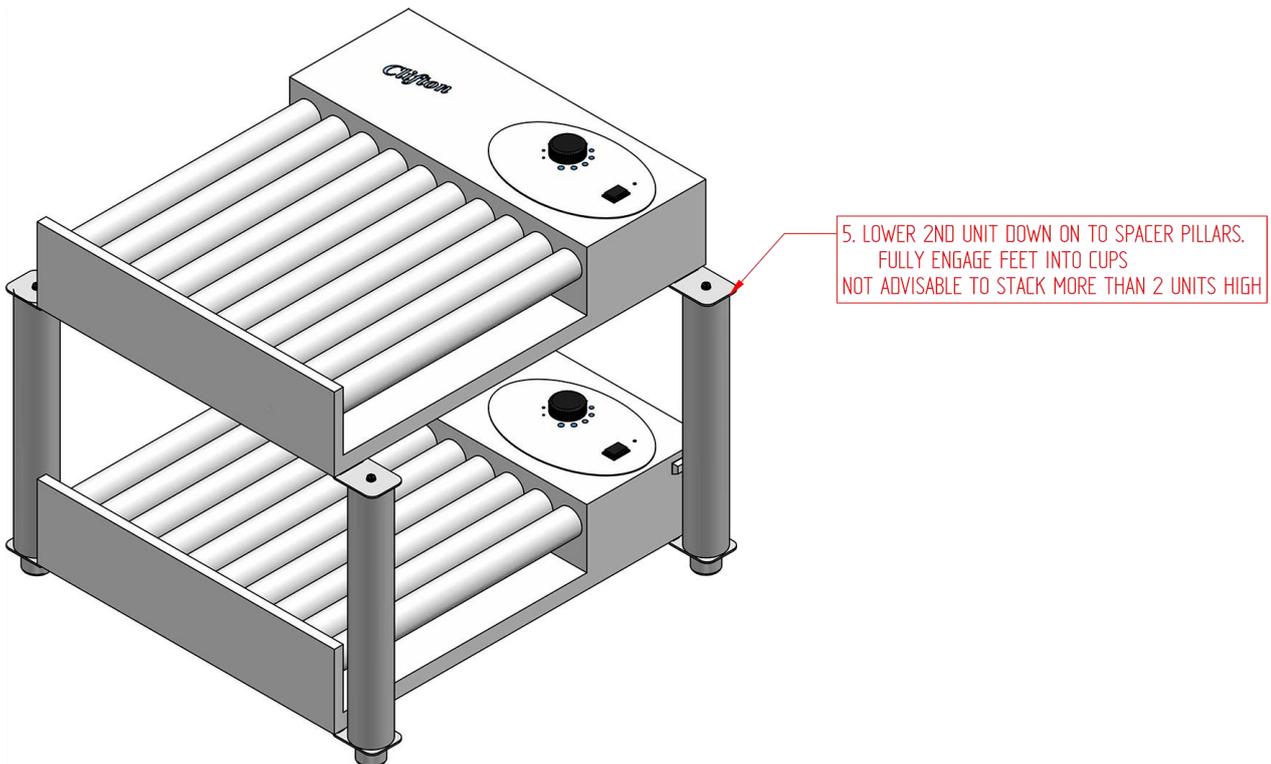
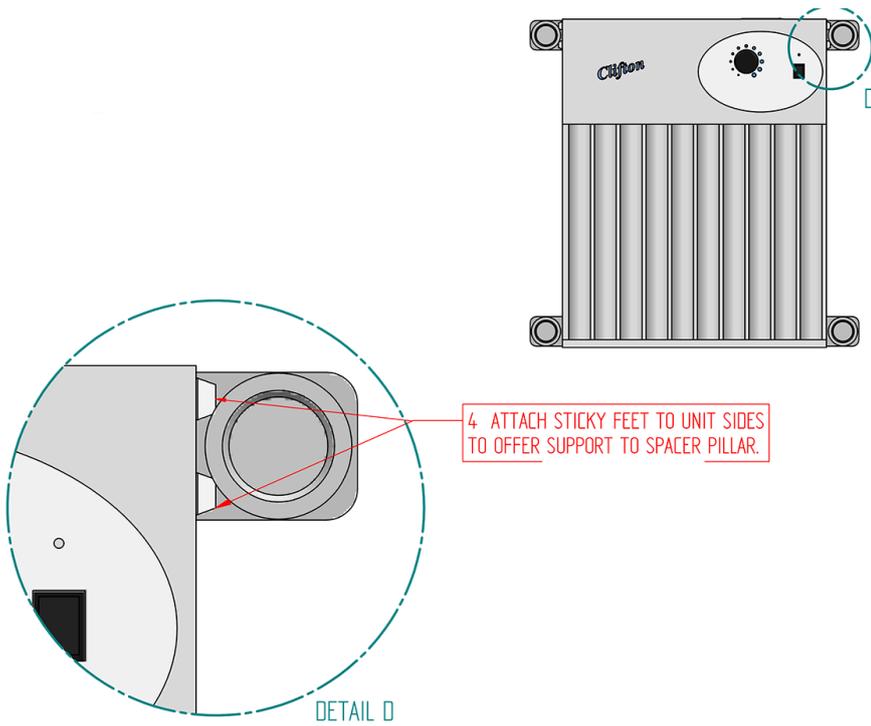
The Roller Mixer should be stored out of direct sunlight at an ambient temperature below 30° Celsius in a clean and dry location which meets the environmental conditions required as detailed in the technical specifications of this User Manual.

- Switch the power to "Off".
 - Unplug the equipment from the mains power supply outlet.
 - Ensure the Roller Mixer is clean and dry. If required, clean it according to the section of this User Manual titled "Routine Cleaning & Maintenance".
 - Relocate it to an appropriate storage location. Ensure the Roller Mixer is stored in a clean and dry location away from potential damage by accidental knocks and bumps.
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Accessory Stacking Kit – Installation Instructions



Accessory Stacking Kit – Installation Instructions



Routine Cleaning and Maintenance

To maintain the Roller Mixer in good, safe working order and ensure maximum product lifespan, regular cleaning and general maintenance is required. The Roller Mixer should be cleaned at least once every month for a unit being used on a daily basis, for infrequently used Roller Mixers a cleaning frequency of once every 3 months is recommended. On each occasion, the general maintenance routine should be employed following cleaning.

Cleaning The Roller Mixer



CAUTION

Do not use alcohol based cleaners or solvents on the Roller Mixer as these may break down certain components of it's construction, reducing it's life and potentially creating a hazardous situation. Use only a mild household detergent when cleaning the Roller Mixer.



CAUTION

If the Roller Mixer has been used with any dangerous, chemical or biological substances it should be decontaminated prior to cleaning. Decontaminate the Roller Mixer using a decontamination procedure appropriate to the contaminant, however in all cases ensure the following :

- No decontamination or cleaning agents are used which could cause a hazardous situation to arise as a result of a reaction with parts of the Roller Mixer or with any materials contained in it. For example, substances that may compromise the integrity or function of electrical insulation, electrical components or other components.
- Nickel Electro are consulted prior to decontamination or cleaning being undertaken if there is any doubt about the compatibility of decontamination or cleaning agents with parts of the Roller Mixer or with any materials contained in it.



CAUTION

When cleaning the unit, only use a damp sponge. Do not make any part of the control panel, any exposed control or receptacle or any part of the Roller Mixer excessively wet. If these receptacles and controls remain wet once electrical power is restored they can create a hazardous situation sufficient to cause serious injury or risk to life due to electrical shock. Always ensure the unit and in particular all controls and receptacles are completely dry before restoring electrical power.

- Unplug the equipment from the mains power supply outlet.
- Allow the Roller Mixer to air dry, or use a dry cloth to remove water from all surfaces.
- Using a mild detergent and damp sponge, clean the rollers and the top of the machine as well as the control panel, ensuring no water is allowed to get behind any switches or knobs.
- Wipe the underside of the rubber feet to ensure the mixer will remain securely in place during operation.
- Once the Roller Mixer is clean, use a soft dry cloth to dry all surfaces of the mixer paying particular attention to any controls or receptacles.
- Once cleaning has been completed, it may be re-installed and operated in accordance with this User Manual.

Maintenance

- Unplug the equipment from the mains power supply outlet.
- Under good light, carefully inspect the mains power supply and check for any signs of wear, over-extension or damage. If you believe the lead to be damaged in any way, contact your supplier.
- Carefully check to ensure all safety warning labels are affixed and in a good readable condition. Refer to the section in this User Manual titled "Safety Labels & Markings" for a table of factory-fitted warning labels. If any labels are missing, illegible or otherwise not functional, contact your supplier to obtain new replacement labels before operating the equipment.
- Ensure all controls and switches are good condition. If any are found to be loose or not operating correctly, have an authorized service technician repair the unit before operating it.



CAUTION

If any controls or switches are found to be loose or in poor condition, do not operate the equipment. Loose or damaged electrical controls and connections may create a hazardous situation sufficient to cause serious injury or risk to life. Refer the equipment to an authorized service technician for repair.

Technical Specifications

	MXS-10
Power requirements	12V DC (300mA or greater) plug pack tip POSITIVE
Motor	12 volt DC with gearbox
Speed Controller	Solid State Analogue
Speed Range	10 to 60 RPM Variable
Drive	Chain and sprockets
Roller size	30mm diameter x 300mm long
Roller type	Epoxy coated aluminium with stainless steel drive shaft
Roller capacity	1Kg each pair of rollers
Overall Dimensions	L500 X W400 X H120mm
Nett Weight	6.5 Kg
Environmental Conditions	<p>Suitable for use according to IEC 61010-1 standard as follows :</p> <ul style="list-style-type: none"> - Indoor use - Altitude up to 2,000m - Temperature 0° Celsius to 60° Celsius - Maximum relative humidity 80 % for temperatures up to 31° Celsius decreasing linearly to 50 % relative humidity at 40° Celsius - MAINS supply voltage fluctuations up to ±10 % of the nominal voltage <p>Over-voltage Category – II Pollution Degree – 2</p>

Disposal

At end of life, this equipment should be disposed of in an environmentally friendly way. This equipment cannot be disposed of with other general waste, but instead taken to your local or regional waste collection facility for recycling and/or suitable treatment procedure.

For more information about where you can drop off your waste equipment for recycling, please contact your local government office, your household waste disposal service or your nearest commercial recycling centre.

Nickel Electro Service Contact Information

	Contact Us
	<p>Nickel Electro Limited Oldmixon Crescent Weston Super Mare North Somerset BS22 7DG United Kingdom Telephone : +44 1934 626691 Fax : +44 1934 630300 Email: service@nickel-electro.co.uk</p>

Troubleshooting

The Roller Mixer provides a simple-to-operate user interface when used in conjunction with this User Manual.

If at any stage you experience abnormal operation (anything other than that described in this Operating Manual) this may indicate a fault condition. If the Tube Roller Mixer fails to operate, this may also indicate a fault condition.

Fault conditions must be referred to an authorized service technician immediately and the equipment should be unplugged from the mains power supply socket.

Make a written note of any abnormal operation and contact Nickel Electro using the contact details provided in the section of this User Manual titled "Nickel Electro Service Contact Information" if you believe your equipment is exhibiting a fault condition.

Warranty Conditions

1. Provided the terms of payment are duly complied with, Nickel Electro Ltd undertakes for a period of two years from the date of delivery of the product ("the Product") to the Customer to repair or replace any defects in the Product which arise under proper and normal conditions of use and which are due to faulty materials or workmanship. Nickel Electro Ltd may, at its own discretion, opt to give the Customer a full refund of the price paid for the Product instead of a repair or replacement.
2. Subject to paragraph 8, Nickel Electro Ltd accepts no liability where in its reasonable opinion the defect is due to: a) the Customer's failure to follow operating instructions, b) incorrect installation, c) fair wear and tear, d) 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, e) alterations or repairs being undertaken by a person(s) other than an authorised representative of Nickel Electro Ltd.
3. Any claim under this warranty must be in writing, and must give the serial number and description of the Product, order number and date of delivery.
4. Any Products or parts thereof, which may require repair or replacement, shall be repaired or replaced (at the discretion of Nickel Electro Ltd) at the premises 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. It is the Customer's own responsibility to pack the Products securely and to ensure that they are not damaged in transit. Any such products or parts will be redelivered by Nickel Electro Ltd to the Customer free within the United Kingdom. All faulty parts removed from the Product will become Nickel Electro Limited'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.
5. In the event of replacement of the Product with a new or reconditioned model, the replacement product will be covered by this warranty until two years after delivery of the original Product.
6. In no circumstances shall any of the Products be returned to Nickel Electro Ltd without its prior written consent. If any Products or parts thereof are returned unnecessarily all cost involved, including a charge for inspection, handling and the return carriage must be paid by the Customer.
7. This warranty does not affect the Customer's statutory rights.
8. Nothing in this warranty seeks to limit or exclude liability for a) death or personal injury arising out of Nickel-Electro's negligence, or b) any other liability that cannot be excluded or limited by law.

EC Declaration of Conformity

We herewith confirm the following products:

Clifton Roller Mixer MXS-10

Conforms with requirements outlined by the following European Directives:

Low Voltage Directive 2006/95/EEC

EMC Directive 2004/108 EEC

We confirm the declaration:

Nickel Electro Limited

Oldmixon Crescent

Weston Super Mare

North Somerset

BS24 9BL

United Kingdom

Conforms with the requirements of the 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.