



Electric Dermatome

Professional Skin Graft Device

CFDA FSC FDA ISO

— Safety and Simple Use !



Model: MT-Q1 , MT-Q1s



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Electric Dermatome

Professional Skin Graft Device — Safety and Simple Use !

▲ Strong Power:

Speed cutting ,it can reach 4500-6500R/Min;
Smooth cutting action,virtually effort
less cutting even during excision of eschar.

▲ Mechanized cutting:

Compared with manual cutting,mechanized cutting
that consistently produces clean,uniform grafts,
increase surgery efficiency,reduce pain of patients.

▲ Precise Galibration:

- * Thickness: 0-0.75mm in 0.05mm increments.
- * MT-Q1 Width: 1in.(2.5cm),1.5in.(3.8cm),1.65in(4.2cm),
2in.(5.1cm),3in.(7.6cm),4in.(10.2cm) for choice
- * MT-Q1s Width: 1in.(2.5cm), 2in.(5.1cm),3.15in.(8.0cm)
for choice

(Special size can be customized)

▲ Easy Operation, Safe and Reliable:

- * Blade can be quickly and safely inserted.Select
the proper width plate,and connect the handpiece
to the power supply.
- * Removable cord design, easy to operate the handpiece.
- * Handle with safe contact switch, start and stop at
any time, reduce the risk of surgery.

▲ Low Maintenance:

- * Smooth head design facilitates easy and thorough cleaning.
No lubrication required.Avoid accumulation of pollutants.
- * Various sterilization methods are applicable,
such as gravity displacement steam sterilization or low
temperature plasma sterilization,etc.

Blade Installation



Width Control



Thickness Adjust



Contact Switch



Removable Cord



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Electric Dermatome

(Model:MT-Q1)

Operation Manual



A. Review

Please read this manual carefully and completely before use. The Electric Dermatome (Model: MT-Q1) has proven their excellence and precision in numerous clinical procedures.

Weight: 0.85 kg

Length: 250 mm

Height: 100 mm

Width: 250 mm

Voltage: 100-240v

Power: 150 va;

Frequency: 50 -60Hz

Power output: 14.5V DC, 4.5A

Protection level: I level

Anti-shock type: BF type

Anti-shock type	I
Protection against electric shock	BF type application part
Anti-liquid grade	IPX0
Operating mode	continue to operate
Maximum operating ambient temperature	31°C

B. Statements

This manual is intended only as a reference for the operation, maintenance and repair of the Electric Dermatome (Model:MT-Q1). Others have no right to disclose the contents of this manual to others.

This manual contains proprietary materials protected by copyright law. Copyright, no part of this manual may be photocopied, copied or translated into other languages without the written consent of the company.

The company makes no warranty of any kind with regard to this material, including (but not limited to) the implied warranties of merchantability and fitness for a particular purpose. The company is not liable for any errors contained in this material or for incidental or consequential damages resulting from the furnishing, actual performance or use of this manual.

The contents of the manual may be changed without notice.

Manufacturer's responsibility

The company is only responsible for the safety, reliability and performance of the instrument under the following conditions:

- Assembly operations, expansion, re-adjustment, improvement and repair are carried out by personnel approved by the company;
- The relevant electrical equipment complies with relevant standards;
- The instrument is used in accordance with the operating instructions.

 note 

This instrument cannot be used at home.

C. Description

1 scope of application:

A thin layer is removed from a healthy part of the body during a skin grafting operation.

2 product performance, structural composition:

Electric Dermatome (Model:MT-Q1) consists of power supply, handpiece, width plates, power cord, connection cord, screwdriver, disposable dermatome blades, and autoclave case.

3 contraindications:

Systemic disease intolerance to surgery; wounds have a large number of tendons, bone tissues, nerves, blood vessels and others exposed.

4 introduction:

The Electric Dermatome (Model: MT-Q1) is a surgical skin graft device. The thickness of the skin graft

is taken from 0-0.75 mm in 0.05 mm increment.

There are 4 sizes width plates:25 mm(1 inch), 51 mm(2 inches), 76 mm (3 inches), 102 mm(4 inches).

Two stainless steel screws secure the width plate of the corresponding width below the handpiece. The tool holder of the above width can be easily tightened or removed by the screwdriver. The connection cord length is approximately 3.1 meters. Handpieces is light that makes it easy to hold and control with either hand.

D. Using steps

- The Electric Dermatome (Model: MT-Q1) should be cleaned and sterilized before use. Do not immerse it in water or detergent.(See introduction for cleaning and sterilization).
- Observe the precautions for aseptic handling established by the hospital.
- Insert the connector plug of the Dermatome Handpiece into the socket corresponding to the power supply, and plug the external power cord into the corresponding socket of the power supply.
- The switch on the front of the main unit is in the off (O[off]) position before the power is turned on.The safety lock is in a safe position. Power is turned on through the power outlet connector located on the back .
- Turn on the switch on the front of the main unit's power supply at the “on[i]” position, and the switch will start to illuminate. Press the switch button fully and activate the unit when the safety lock is in the on position. Return the safety lock to the switch in the "off[o]" position without using the instrument.
- When performing the setting operation, visually check for damage/wear. If found, do not use the device and contact the manufacturer in time.

Installation of Dermatome Blade

A new sterile blade should be used for each operation.

- a. Place the switch button in the off "o[o]" position. Place the Electric Dermatome in the safe position and slide the safety lock on the switch button to the safe position.
- b. Select the width plate of the appropriate width and use a screwdriver to loosen the screws on the width plate about 2 turns. Do not remove the screws from the Dermatome Handpiece.
- c. Place a new blade in the Handpiece slot. To replace the blade, remove the old blade before

inserting the new blade.

d. The drive pins and the openings in the blades are paired with each other.

Note: The indication "Insert With This Side Up".

e. There is no need to lubricate the blade because the blade back seal is self-lubricating plastic.

f. Choose the width plate of the right width to meet the cutting needs. Place the width of the width plate over the blade and tighten the screws. Do not over tighten. Make sure that the printed side of the width of the width plate faces outward.

Cut the skin graft

a. The skin should be prepared in a conventional manner.

b. There is no need to lubricate the skin; however, the use of sterile mineral oil to lubricate the donor site can make the electric area knife move more smoothly.

c. Set the lever adjustment knob to point to the desired thickness. The factory calibration is generally 0.05mm by default. Do not insert any instruments between the blade and the lever, as this may damage the blade or cause cracks, thus enabling the cutting ability. decline. And it may affect the accuracy of picking.

d. Place the hand piece at an angle of 30 to 50 degrees above the donor site.

e. In order for to operate smoothly, firstly, lift the switch button lever and slide the safety lock from the safe position toward the hose connection. You should be able to see the word ON. For best results, it is recommended to take the dermatome at full speed. To ensure full speed is reached, the switch control button should be fully depressed and the safety lock in the ON position.

f. Turn the switch button on to start cutting. Guide the part forward by gently pressing down to ensure that the cutting edge is always in close contact with the donor site.

Two methods of removing the skin graft from the device:

Method 1:

The cut skin graft is accumulated in the storage bag of the handpiece. The handpiece is lifted from the donor site to end the cutting of the skin graft. The recovery switch button is placed in the safe position and the skin graft is carefully removed.

Method 2:

When the skin graft appears in the storage bag, gently lift the skin with tweezers. Do not stretch or pull the grafted skin as this may result in irregular edges and uneven cuts. Lift the handpiece from the donor site to introduce the cutting of the transplanted skin. The recovery switch button is placed in the safe position.

Note: Do not operate the Electric Dermatome (Model:MT-Q1) for a long time without cutting.

Turn off the power switch of the main unit and unplug the main unit. Remove the used blade and place it in a container made by the hospital. Restore the instrument and Width Plate to the established toolbox and send it for cleaning.

Remove of Dermatome Blade

a. Loosen the screws of the Width Plate. Do not remove the screws.

b. Hold both sides of the Width Plate and lift it up and remove it. Do not lift the Width Plate forward as this will cause contact with the blade and may cause injury.

c. Carefully lift the blade from one side to remove it.

d. Place the used blade in a hospital-specified treatment unit and dispose it.

E. Warnings and precautions

Warning caveat

- In order to use the device safely and continuously, the instructions listed must be read. The instructions listed in this manual are not a substitute for medical procedures already in progress.
- In order to ensure the normal use of this device, it must be installed and debugged by our professional installation and commissioning engineers.
- Before operating this device, the operator must read this manual and follow the instructions carefully.
- The use environment of this device should meet the requirements in the manual. The non-conforming use environment will result in unstable performance of the device, shortened service life and serious damage.
- We are not responsible for any damage or loss caused by incorrect operation of the contents of the manual and the damage or loss caused by the installation, commissioning, repair, modification, etc. of our installation and commissioning engineers.
- Do not disassemble the casing by yourself.
- You may not disclose, copy or reproduce all or part of this User's Guide to a third party without written permission.
- The items described in this instruction manual may be subject to change without prior notice.
- In order to prevent possible damage to the equipment and to yourself or others, please read through the following safety precautions before using this equipment. Keep these safety instructions in a place that is easily accessible to anyone who uses this product.
- Environment and dehumidification.
- Do not immerse the handpiece into water and other liquids.
- We can not guarantee that the device can be used in the presence of flammable substances such as oxygen or nitrous oxide.
- We can not guarantee that the device can be used in spaces with strong magnetic fields (including but not limited to MRI).
- When the device is transported or stored, the ambient temperature may not be used beyond the limits mentioned in the manual.
- Do not use a device when the control section does not work as described in the manual. Please return it to the factory for repair immediately.
- When connect the power cord to the output connector, use only the cord supplied by the company. Please follow the product specifications for maintenance.
- When running the device, make sure that all cords are fully inserted into the correct interface.
- (It is not recommended to disassemble it. Otherwise, the inside of the product may be damaged. When the equipment fails, only the professional technician from the company can repair the product. When the product is damaged due to falling or other accidents, it is sent back to the company for repair.)

- The device must be monitored by a trained operator. Even experienced operators must carefully read all the instructions.
- All users of the device must ensure that the instrument is used within the scope of local policies or national regulations.
- The device cannot be used with other implantable or external electronic stimulation devices.

Precautions

- Visually inspect the equipment for damage and wear.
- Carefully inspect the power cord for cracks or insulation failures caused by overuse or mishandling.
- Check for possible scratches, nicks, or burrs caused by overuse or mishandling.

Note: Continued use is prohibited if it is found to be damaged or worn that may affect the function of the device.

F. Service

The company's obligations under this warranty do not include freight, other charges, and are not responsible for direct, indirect or eventual damage or delay caused by improper use, replacement of parts that not authorized by our company .

This device is not intended for use in the following categories: abnormal use; unmaintained or damaged device; replacement or damage to the original serial number or manufacturing mark of our company.

The company reserves the right to modify the device specifications without prior notice.

The company makes no warranty of any kind with regard to this material, including (but not limited to) the implied warranties of merchantability and fitness for a particular purpose.

G. cleaning and sterilization

The main body of the Electric Dermatome (MT-Q1) and its accessories should keep the main unit and accessories clean. If there is pollution, it should be cleaned first and then sterilized.

In order to avoid long-term damage to the product, we recommend that the hospital's regulations consider that the product should be sterilized or that the main unit and accessories should be sterilized according to the following rules: 1. Cleaning and sterilization frequency: clean and sterilize once a month, 2 Sterilization method: **Low temperature plasma sterilization (H₂ O₂) (we suggest more because it can prolong the motor life)** & gravity displacement steam sterilization are both available. (**Attention: Handpiece, width plates, screwdriver and connection cord need be sterilized, but power supply and power cord need not be sterilized before use; if choosing steam sterilization, the set parameters we suggest: sterilization temperature 121°C (it can't be higher than 130°C), pressure 102.9Kpa, sterilization time 20min, dry cooling time at least 8 minutes; if choosing low temperature plasma sterilization (H₂ O₂), the set parameters we suggest: sterilization temperature 50±5°C, sterilization time 25-28min, H₂ O₂ concentration 58-60%**)

⚠ After the infected population or suspected infected population is used, the part of the patient's contact should be disinfected.

⚠ Do not immerse the device in liquid when cleaning and sterilizing. Do not allow liquid to flow into the detector's connection socket and case to prevent damage to the main unit.

clean

1. The host power must be turned off before cleaning the handpiece.
2. Soak a soft, lint-free cloth with mild soapy water or a non-corrosive, diluted detergent.
3. Carefully hold the device. If it falls or is damaged accidentally, return it to the company for repair, do not continue to use.

4. Never contact the device with any chemical solution. Some solutions can corrode metals and precision moving parts and can also weaken internal lubricants.

5. Never put the handpiece in the ultrasonic cleaner. Ultrasonic cleaning removes bearing grease and causes the device to run poorly.

⚠ During the cleaning process, simply wipe the outer circumference of the connection socket without wiping the inside of it. Remove the cleaner after cleaning and do not leave the cleaner on the surface.

⚠ Clean the main unit power supply should use non-erosion cleaner.

⚠ Most detergents must be diluted before they can be used.

⚠ Do not use abrasive materials for cleaning.

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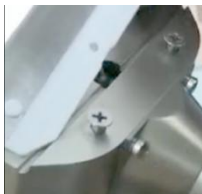
Electric Dermatome (MT-Q1)

Simple Operation Guidance

- Connect two cords: point to point connect handpiece with power supply, power supply with power (as shown in Picture 1).
- Install the blade: A. Set the switch button on power supply in (off) position; b. Use screwdriver to loosen the two screws on handpiece for about 2 turns, but be careful not to tear them down; C. align the small hole in the center of the blade with the driving sheath in the middle of the driving hole, and be careful not to touch the sharp edge of blade with hands; D. pay attention to the orientation of the blade, and the English indication "INSERT WITH THIS SIDE UP" on the white holder is facing up (as shown in Picture 2).
- Install the width plate : according to the demand of clinical surgery, choose the right size width plate, cover it on the blade, pay attention left the side with letters "MT" upward, use the screwdriver screw down the screws (as shown in Picture 3).
- Adjust the thickness: There is a thickness adjustment pointer on the left side of the handpiece. Please move the pointer to the desired position (usually at 0.25mm). After use, there is no need to set it to 0mm (as shown in Picture 4).
- Power on: finally, press the (on) button, open the power supply, lift the touch point switch on handpiece, move the black plastic head to back by thumb (as shown in Picture 5), press the handpiece switch, gently push forward the handpiece for harvesting skin graft at 30–50° (as shown in Picture 6).



Picture 1



Picture 2



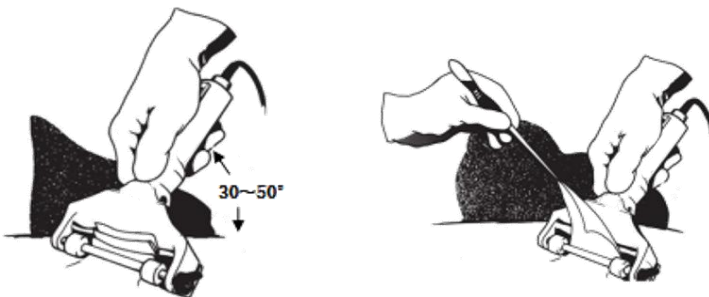
Picture 3



Picture 4



Picture 5



Picture 6

Cleaning and Maintenance Guidance

1. After surgery, turn off the power supply and the button of the handpiece, remove the plug at first, then remove the power cord and connection cord; Loosen the two screws on the width plate but do not remove them, hold both sides of the width plate and lift it up at first to remove it; Then take out the used blade, the blade is for single use only, process it after use according to disposable medical waste treatment method; Width plate can be reused, it needs to be cleaned after use.

2. Cleaning and sterilization of handpiece, width plates, screwdrivers and connection cord:

- The handpiece, width plates, screwdriver should be cleaned within 30 minutes after use, when cleaning the handpiece, head should be tilted down, it can't be scrubbed violently (as shown in Picture 7), operator can use a soft brush with neutral PH cleaner scrub it. If need, use a neutral pH enzyme solution before scrubbing with stain remover. Gently clean them with soft brush, pay particular attention to any crevices and areas that are difficult to clean until all visible dirt is removed. Special attention: **there is a driving hole on the reverse side of handpiece (as shown in the red frame area in Picture 8), it's important to remember that water shouldn't be entered the hole!**

- Use disposable water absorbent fabric without depilation to wipe the handpiece, width plates, screwdriver, use air gun to blow the parts, especially the driving hole.

- **We suggest low temperature plasma sterilization (it can prolong the motor life), if use gravity displacement steam sterilization, put the handpiece, width plates, screwdriver and connection cord in autoclave sterilizer, the set parameters we suggest: sterilization temperature 121°C (it can't be higher than 130°C), pressure 102.9Kpa, sterilization time 20min, dry cooling time at least 8 minutes; if use low temperature plasma sterilization, the set parameters we suggest: sterilization temperature $50 \pm 5^\circ\text{C}$, sterilization time 25-28min, H_2 O_2 concentration 58-60%.**

- Special attention: Operator must use one sterilization method always, change sterilization method will seriously damage the motor.

Attention

- Handpiece, width plates, screwdriver and connection cord need be sterilized, **but power supply and power cord need not be sterilized** before use.

- Please use a new blade each time. The edge is sharp, do not touch it directly (as shown in the red frame area in Picture 9).

- Before switching on the power, make sure the handpiece button is in the (OFF [O]) position. Power must be turned off before cleaning the handpiece.

- Don't use automatic decontamination cleaner, ultrasonic cleaner; Do not use detergents containing chlorine or chloride as active ingredients or saline solution.

- Never soak the handpiece or power supply in any chemical solution, forbid liquid flowing in. Do not use abrasive materials for cleaning.

- Don't lubricate the electric dermatome because it may cause damage to motor.

- **Hold the grids area of the metal sleeves at both ends of the connection cord with fingers, insert and pull it out gently (as shown in the red frame area in Picture 10).**

- Store all parts in dry environment at room temperature after use.



Picture 7



Picture 8



Picture 9



Picture 10