

Waxlectric light I + II

Nr. 2150 / 2151

Bedienungsanleitung

Instruction manual • Mode d'emploi

Istruzioni d'uso • Instrucciones para el servicio

Инструкция по эксплуатации

取扱説明書 • 사용 설명서



2011-08 21-6510 A

Made in Germany

Renfert

Ideas for dental technology

Seriennummer, Herstelldatum und Geräte-Version befinden sich auf dem Geräte-Typenschild.

Serial number and date of manufacturing are shown on the type plate of the unit.

Le numéro de série et la date de fabrication se trouvent sur la plaque signalétique de l'appareil.

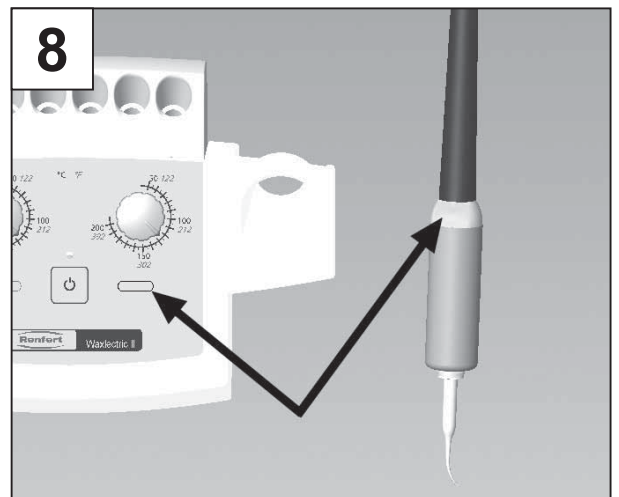
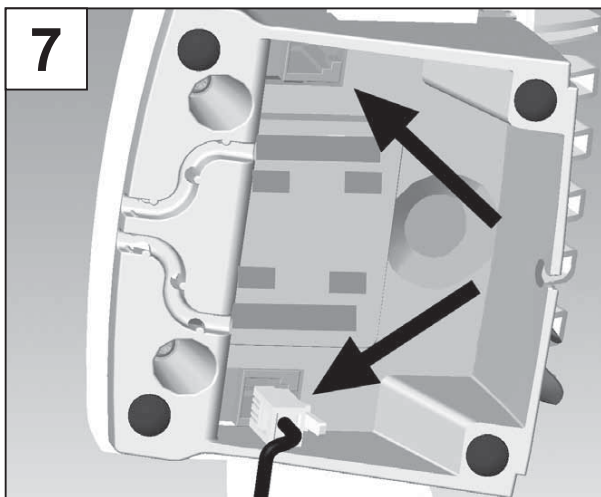
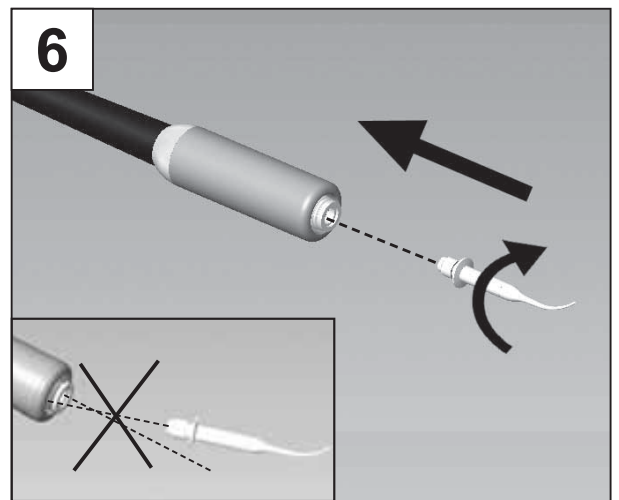
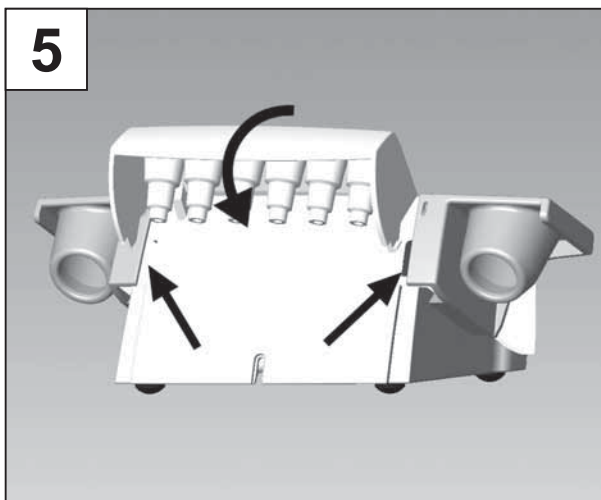
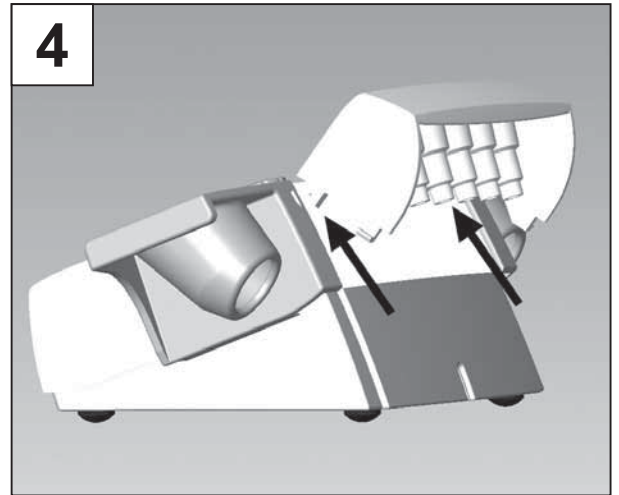
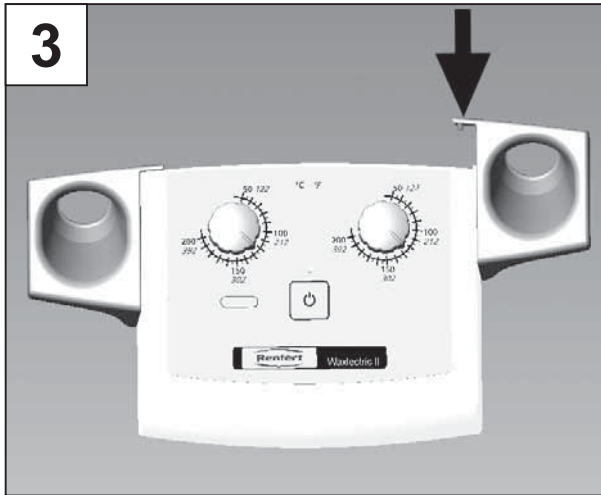
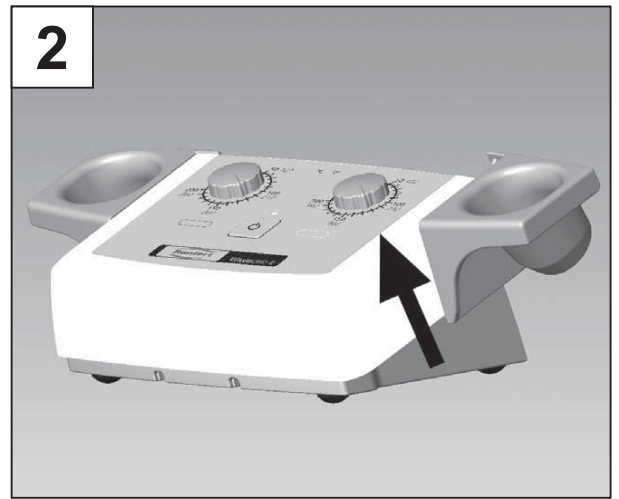
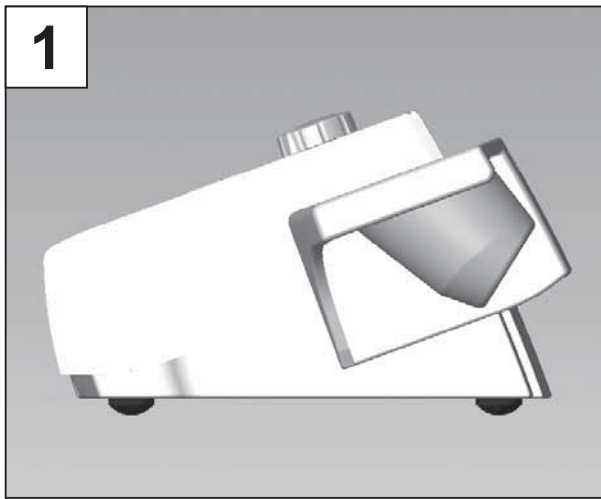
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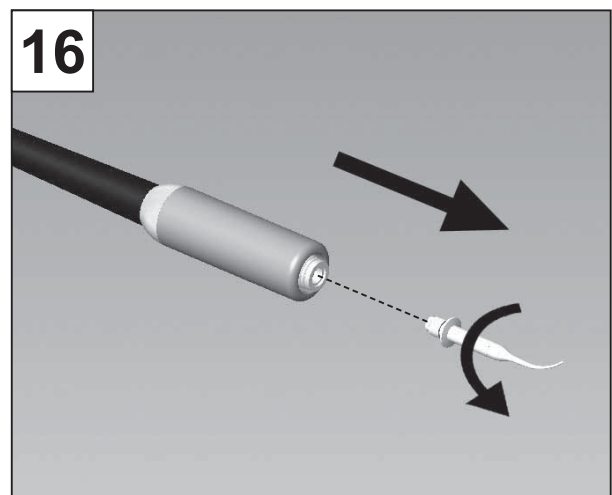
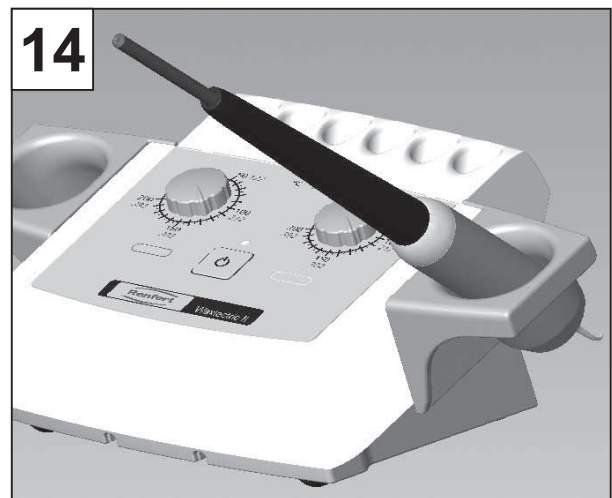
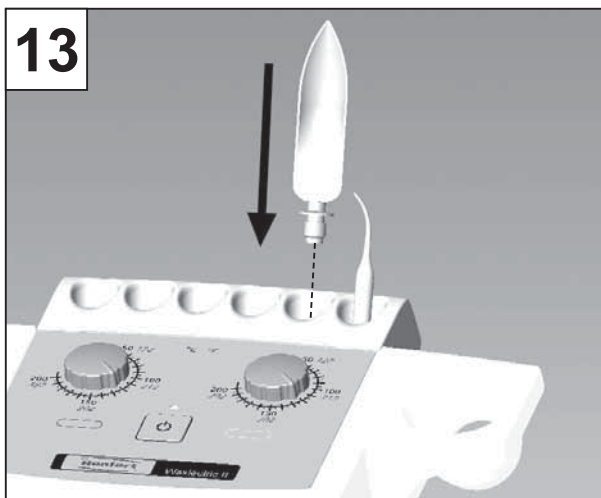
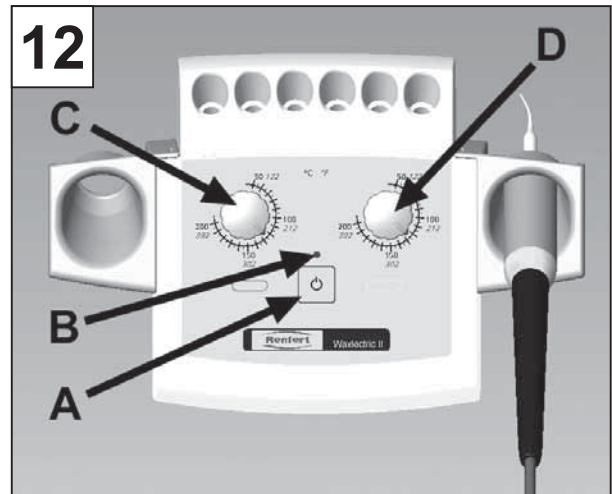
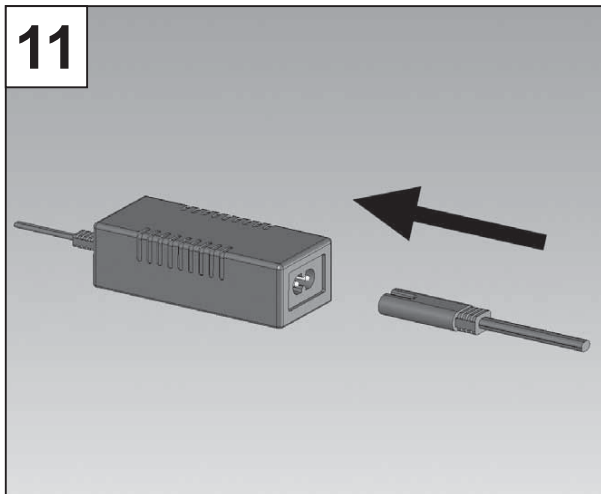
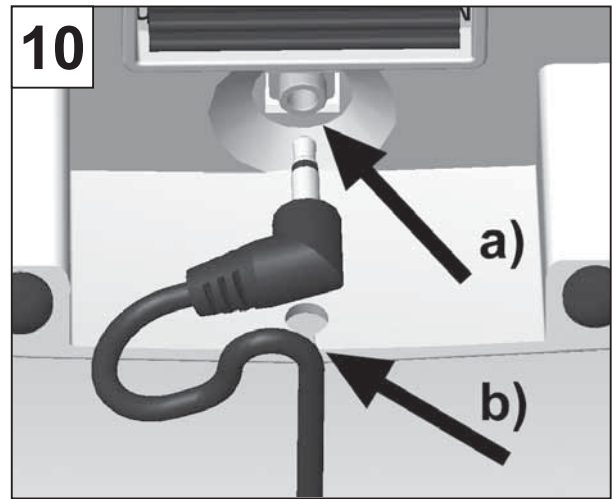
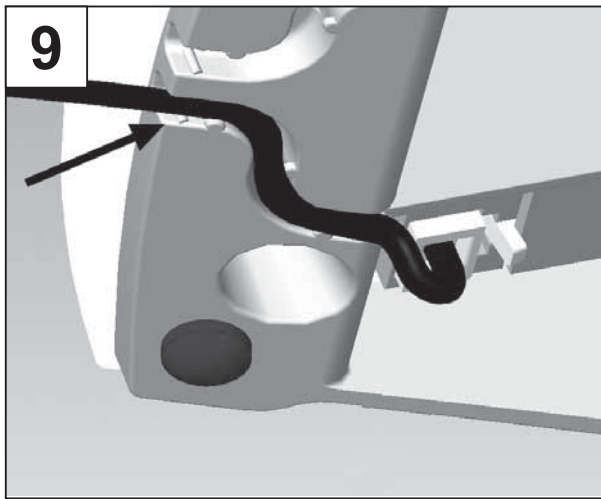
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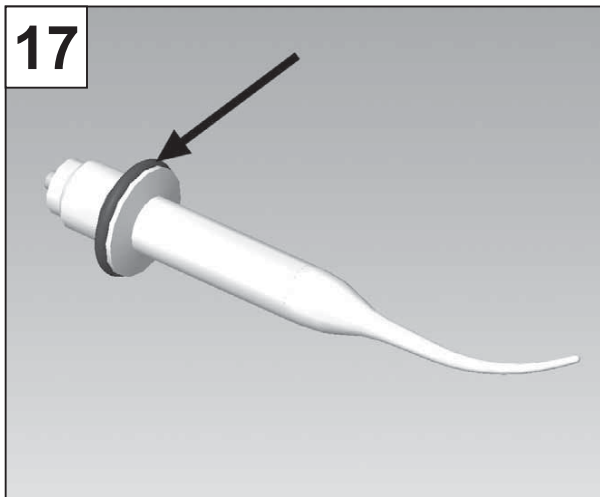
シリアル番号、製造日および装置のバージョンは装置の型番号ラベルに記載されています。

시리얼넘버, 제조일자 및 기기 버전은 기기의 명판에 표시되어 있습니다.

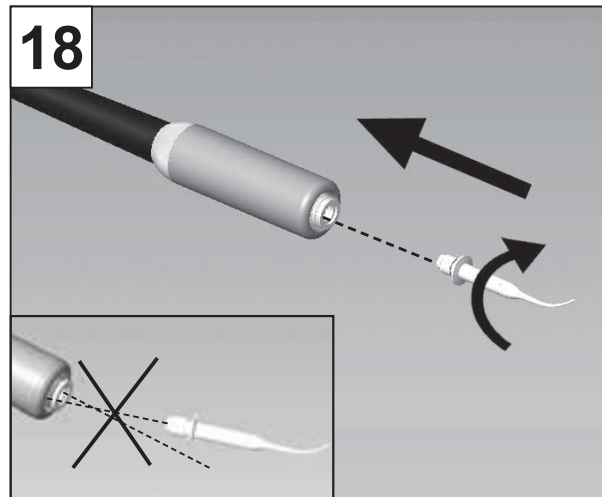




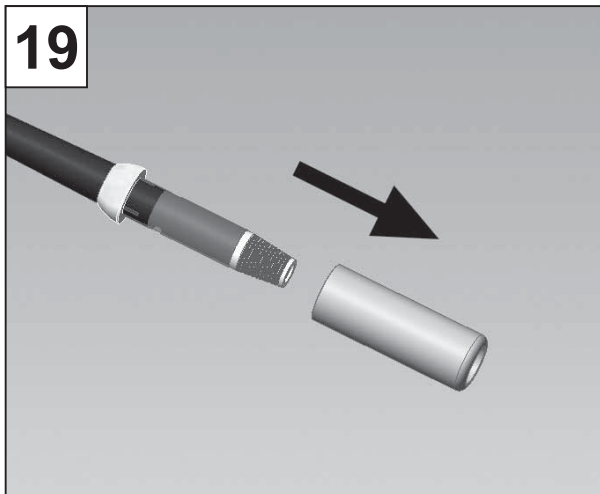
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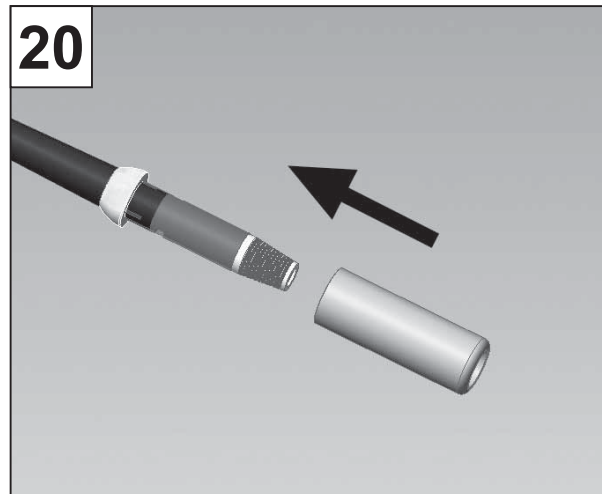
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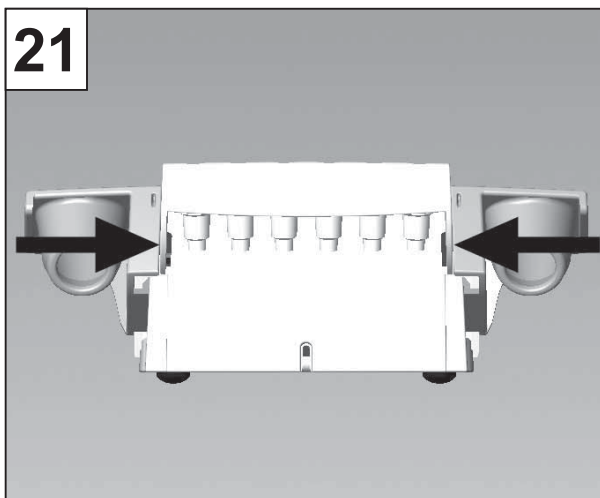
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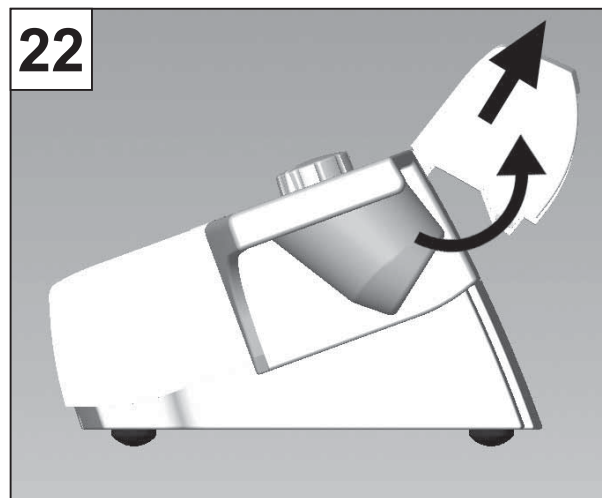
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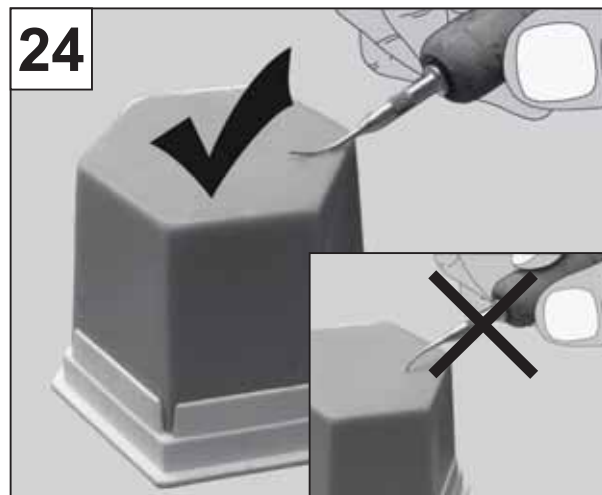
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Waxlectric light I + II

No. 2150 / 2151

ENGLISH

1. Introduction

We are pleased with your decision to purchase the *Waxlectric light I* or *Waxlectric light II*. This device sets a new standard with regard to functionality, performance and safety.



Please read the following operating instructions carefully and observe the information they contain in order to ensure a long and trouble-free service life.

- An external transformer supplies the wax knife with 12 V power. As a user, this increases your safety during your daily work with the *Waxlectric light*.
- The defining feature of the *Waxlectric light* is its heater which is located directly in the modelling tips. This allows the tips to react more rapidly to temperature changes. The knife's thermal dynamics are markedly improved by the highly heat conductive special alloy.
- The electric wax knife is extremely service friendly. The modelling tip surfaces are not finished and can therefore be easily reground as required. Should the heater develop a fault, only the tip need be replaced.



The wax knife no. 2155-0112, Large Wax Knife (refer to "Accessories") may NOT be reground or re-sharpened.

2. Application Area

The *Waxlectric light* is an electronically controlled wax knife, suitable for practically all modelling and waxing-up applications. It is available in either a one- or a two-channel version.

The operating temperature can be infinitely adjusted in 1°-increments from 50°C to 200°C [122°F to 392°F]. However, do not set the temperature too high, as some waxes are very sensitive to overheating.

2.1 Ambient Conditions

in Accordance with DIN EN 61010

The unit may only be operated:

- Indoors;
- Up to an altitude of 2,000 m above sea level;
- At an ambient temperature range between 5 - 40°C [41 - 104°F]
- At a maximum relative humidity of 80% at 31°C [87.8°F], dropping in a linear manner to 50% relative humidity at 40°C [104°F]*);
- With mains power where the voltage fluctuations do not exceed 10% of the nominal value;
- Under over-voltage category II conditions;
- Under contamination level 2 conditions.

*) Between 5 – 30°C [41 – 86°F], the unit can be operated at a relative humidity of up to 80%. At temperatures between 31 – 40°C [87.8 – 104°F], the humidity must decrease proportionally in order to ensure operational readiness (e.g., at 35°C [95°F] = 65% humidity; at 40°C [104°F] = 50% humidity). The unit may not be operated at temperatures above 40°C [104°F].

3. Hazard Information

3.1 Symbolology



Danger

This indicates a direct risk of injury.



Electrical current

This indicates a hazard due to electrical current.



Attention

Hot surfaces.



Attention

Failure to observe the associated information can result in damage to the unit.



Note

This provides the operator with useful information to make working with the unit easier.



Only intended for indoor use.



Observe the operating instructions.

3.2 Hazard Information

- The modelling tips can reach a maximum operating temperature of 200°C [392°F].
- While working the tip of the heating handle becomes very hot.
- Incorrect handling presents the risk of burns!
- When setting up and operating please pay attention that the cables do not encounter hot parts.
- NEVER place the handpiece on a flammable surface or cover it! Fire hazard!
- Do not put any combustible or flammable objects close to the unit.
- The wax knife is solely intended for working modelling waxes.
- NEVER hold the wax knife directly in an open flame (e.g., a Bunsen burner)!
- Processing other materials may result in hazards to the user!
- Only operate the equipment under supervision
- Only intended for indoor use. The unit is only designed for dry applications and may not be operated or stored outdoors or under wet conditions.
- Units exhibiting damaged connecting lines or other defects must be taken out of service immediately.
- Do not cover the transformer during operation.
- Protect the transformer against water and moisture.
- Unroll the transformer's connecting cord during operation (a rolled cord represents an overheating hazard in case of short circuits).
- Use only the OEM mains power supply unit!

3.3 Liability Exclusion

Renfert GmbH shall be absolved from all claims for damages or warranty if:

- The product is employed for any purposes other than those cited in the operating instructions;
- The product is altered in any way other than those alterations described in the operating instructions;
- The product is repaired by other than an authorized facility or if any but Renfert OEM parts are employed;
- The product continues to be employed, despite obvious safety faults or damage;
- The product is subjected to mechanical impacts or is dropped.

4. Installation / Startup

- If you have also ordered the quiver and tip holder you must mount them on the control unit:
 - Quiver:
Position the quiver on the side (Figure 1), then first move it up (Figure 2) and then towards the front (Figure 3) to lock it in place.
 - Tip holder:
Hook the retainer tabs of the tip holder into the openings on the back of the control unit (Figure 4), then tilt the holder down until it locks in place (Figure 5).
- Screw the desired modelling tip into the handpiece (Figure 6). Make sure the tip IS NOT skewed or cross-threaded!
- Connect the handpieces to the control unit (Figure 7). The connecting sockets are located on the underside of the control unit. On the 2-channel-models, make sure the handpieces are connected to the correct sockets. The handpieces are marked with coloured rings (red / yellow). The ring colours can also be found on the control unit's operating side (Figure 8).



The pins must audibly snap into the sockets.

- Feed the handpiece connecting cables through the guide rings towards the front of the unit (Figure 9).
- Connect the mains power supply unit to the control unit. The connecting socket is located on the underside of the control unit (Figure 10a). Feed the power cord out through the opening on the back of the unit (Figure 10b).
- Using the power cord provided, connect the transformer to the mains power supply (Figure 11).

! Use only the OEM mains power supply unit!

5. Operation

5.1 Operating Elements (Figure 12)

- A ON /OFF switch
- B LED indicator
- C Temperature adjustment, left channel
- D Temperature adjustment, right channel (Waxlectric light II only).

5.2 Switching the Unit ON / OFF

The unit is switched on and off at switch (A).

The LED (B) goes on once the unit is switched on.

5.3 Temperature Adjustment

The modelling tip temperature is adjusted with the aid of knobs C and D (Figure 12).

After a temperature adjustment, the modelling tip requires several seconds to reach the new temperature setting.

! NEVER attempt to heat the tips more rapidly by holding them in an open flame. This will destroy the tips.

i Please retighten the inserted modelling tip after heating up!

The employed heating elements have been specially tailored to the individual modelling tips.

i However, manufacturing tolerances may result in minor differences between the set temperature and the

actual temperature at the modelling tip.

5.4 Storing the Modelling Tips and Handpieces

You can safely leave unused modelling tips in the tip holder for storage (Figure 13).

During breaks, you can safely leave unused handpieces in the quiver (Figure 14).

! NEVER insert the handpieces into the tip holder (Figure 15). This can damage both the tip holder as well as the control unit.

! NEVER place the handpiece on a flammable surface or cover it! Fire hazard!

Tip holders and quiver are available as separate accessories (refer to “Accessories”).

Tips and Notes

- In order to reduce the risk of breaking the probes, dip them into the hard wax block with the rounded back section! The wax will melt more quickly and this allows to pick up a greater amount of wax (Figure 24).
- More rapid and efficient modelling (time savings of up to 30%!) can be achieved by pre-warming the wax in a Renfert Vario E. Wax can be processed more gently and cools more rapidly. This reduces shrinkage to a minimum.
- Because the tip insert surfaces are not finished, they can – starting from their basic shape – be ground, bent, or polished to suit your particular requirements.
- The handpiece cables can be guided through an appropriate retainer (eye, hook, etc.) to allow the handpieces to hang down from above the work area at the ideal height. This “cable / handpiece overhead suspension” permits significantly faster handpiece access / changeovers.
- By setting the temperature at approx. 50°C [122°F], you can use the slightly warmed Waxlectric blade to “shave” the wax crown edge onto the die while the wax is warm.

6. Cleaning / Maintenance



Never rinse the unit off with water!



Do not use steam to clean the unit! Hot steam penetrating the unit can damage it.

Use a soft, lint-free cloth to wipe the unit down from time-to-time.



Never use cleansers containing solvents!

Wipe the tips off after use; This will prevent wax from burning onto the tip and maintain the tip's optimal heat conducting properties.

6.1 Changing Tips



Burn hazard!

The modelling tips may be hot. Always allow the tips to cool before changing them.

- Unscrew the tip (Figure 16).
- Make sure the O-ring is properly seated (Figure 17).
- Insert the new tip, making sure it is straight, and hand-tighten it. Make sure the tip IS NOT skewed or cross-threaded (Figure 18).



Make sure the O-ring is properly seated (Figure 17), the O-ring provides a seal against the wax.

Modelling tips which are not being used can be safely and handily stored in the tip holder (Figure 13).

6.2 Cork Replacement

- Unscrew the tip (Figure 16).
- Pull the cork sleeve off towards the front (Figure 19).
- Install a new cork sleeve, making sure it is straight (Figure 20).
- Screw the tip back on (Figure 18).

6.3 Cleaning the Quiver and Tip Holder

The tip holder and quiver can be easily removed for cleaning.

- Tip holder:
Press gently from the side (Figure 21), then flip upwards and pull off towards the rear (Figure 22).
- Quiver:
Rotate the quiver downwards and towards the rear to remove it (Figure 23).

Refer to Chapter 4 for the tip holder and quiver installation instructions.

7. Spare Parts

Refer to the spares list at the end of this manual for numbers of wearing and replacement parts.

8. Disposal instructions for countries in the EU

To conserve and protect the environment, prevent environmental pollution and improve the recycling of raw materials, the European Commission adopted a directive that requires the manufacturer to accept the return of electrical and electronic units for proper disposal or recycling.

Within the European Union units with this symbol should not therefore be disposed of in unsorted domestic waste:



For more information regarding proper disposal please apply at your local authorities.

9. Warranty

Provided the unit is properly used and with the exception of components subject to normal wear, Renfert **warrants** the all components of the *Waxlectric light* for a **period of 3 years**. Warranty claims may only be made upon presentation of the original sales receipt from the authorized dealer. Components subject to natural wear (e.g., all tips, cork sleeves, etc.) are excluded from this

warranty. The warranty is voided in case of improper use; failure to observe the operating, cleaning, maintenance, and connection instructions; in case of independent repairs or repairs by unauthorized personnel; if spare parts from other manufacturers are employed, or in case of unusual influences or influences not in compliance with the utilization instructions. Warranty service shall not extend the original warranty.

10. Technical Specifications

Max. power consumption:

5 W (*Waxlectric light I*)

10 W (*Waxlectric light II*)

Min. operating temperature: 50°C [122°F]

Max. operating temperature: 200°C [392°F]

Supply voltage: 12 VDC

Transformer:

Input voltage: 100-240 VAC, 50/60 Hz

Output voltage: 12 VDC / 1A

11. Standard Delivery

- 1 Control unit
- 1 Handpiece (or 2 handpieces with the *Waxlectric light II*)
- 1 Modelling insert, No. 2155-0102 (for *Waxlectric light I*),
or 2 inserts, No. 2155-0101 + 2155-0103 (for *Waxlectric light II*)
- 1 Transformer
- 1 Operating instruction, with spare parts list

12. Delivery Versions

No. 2150-0000 *Waxlectric light I*, 230 V

No. 2150-1000 *Waxlectric light I*, 120 V

No. 2151-0000 *Waxlectric light II*, 230 V

No. 2151-1000 *Waxlectric light II*, 120 V

13. Accessories

No. 2151-1500 Kit of holders *Waxlectric*

No. 2155-0101 1 probe, small

No. 2155-0102 1 probe, medium

No. 2155-0103 1 probe, large

No. 2155-0104 1 blade, narrow

No. 2155-0105 1 blade, wide

No. 2155-0106 1 blade, chamfer

No. 2155-0107 1 Hollenback, horizontal

No. 2155-0108 1 Hollenback, vertical

No. 2155-0109 1 probe, mini, angled

No. 2155-0110 1 lance blade

No. 2155-0111 1 blade, beaver-tail

No. 2155-0112 1 large wax knife

2155

-0101 -0102 -0103 -0104 -0105 -0106 -0107 -0108 -0109 -0110 -0111 -0112



14. Troubleshooting

Error	Possible cause	Corrective action
LED B (Figure 12) fails to go on.	<ul style="list-style-type: none"> Control unit not switched on. Power supply interrupted. Plug not fully inserted in the control unit. Faulty control unit. Faulty transformer. Short circuit in the tip. 	<ul style="list-style-type: none"> Switch the control unit on at switch "A". Check the power supply and reconnect, as required. Push the plug in until it unmistakably locks in place. Have unit replaced by Service Department. Replace with spare (refer to the spare parts list). Clean the tip and handpiece (use compressed air). Replace the tip. Faulty heater handle --> Replace with spare (refer to the spare parts list).
Unit operating, but no temperature at the tip.	<ul style="list-style-type: none"> Tip not properly screwed in. Tip / handpiece contact contaminated. Faulty tip. Handpiece cable not properly plugged into the control unit. Plug on handpiece cable shows signs of corrosion. 	<ul style="list-style-type: none"> Hand tighten tip. Clean the contact (use compressed air). Replace the O-ring (refer to the spare parts list). Replace with a new tip (refer to Sec. 13 / "Accessories"). Fully insert the handpiece cable into the socket until the cable locks in place. Reinsert the plug, clean the contacts, if required.
The tip fails to reach the desired temperature.	<ul style="list-style-type: none"> Incorrect power supply to the tip because the OEM mains power supply unit is not being used. 	<ul style="list-style-type: none"> Use the OEM mains power supply unit.