


BRASSELER USA
 DENTAL INSTRUMENTATION

HygienePro™

Cordless Handpiece





OM-ER225E 001

Thank you for purchasing the Hygiene Pro Cordless.

This product is a cordless handpiece used mainly for polishing teeth (professional mechanical tooth cleaning [PMTCC]). Read this Operation Manual carefully before use for operation instructions, care and maintenance. Keep this Operation Manual for future reference.

Cautions for handling and operation

- Read these safety cautions thoroughly before use and operate the product properly.
- These indicators are to allow you to use the product safely and prevent danger and harm to you and others. These are classified by degree of danger, damage and seriousness. All indicators concern safety, be sure to follow them.

Classification	Degree of Danger or Damage and Seriousness
 DANGER	Explains an instruction where death or serious injury may occur.
 WARNING	Explains an instruction where bodily injury or damage to device may occur.
 CAUTION	Explains an instruction where possibility for minor to medium bodily injury or damage to device may exist.
 NOTICE	Explains an instruction that should be observed for safety reasons.

DANGER

- This product is designed specifically for use with rechargeable batteries. Do not use manganese or alkaline batteries. Using and charging these by error may cause a fluid leak or explosion.
- Always replace both batteries with the same type at the same time. Using batteries of different-types or an exhausted battery with a fully charged one may cause a fluid leak or explosion.

WARNING

- Do not handle the power cord with a wet hand. Doing so may result in an electric shock.
- Do not spill water or a chemical solution onto or into the motor handpiece or battery charger. Doing so may result in fire or electric shock due to a short-circuit or breakage due to rust formation.
- Do not disassemble or alter the motor handpiece.
- Do not drop the motor handpiece or battery charger. Place the battery charger on a flat and stable place.
- Should the battery fluid leak and get into your eyes, immediately wash eyes thoroughly with clean water and see your doctor. Failure to do so may result in loss of sight.
- Should the battery fluid leak and adhere to skin or clothing, immediately wash the exposed skin thoroughly with clean water and completely wash away the fluid. Failure to do so may result in skin trouble.
- If you should notice a battery fluid leak within the motor handpiece, deformation of the motor-handpiece casing or partial discoloring, immediately stop use and contact Brasseler USA.
- If the product will not be used for a long period of time, remove the batteries to avoid fluid leak.

CAUTION

- Exercise sufficient care in using the product by giving patient safety first priority
- The product is to be used for only dental treatment by qualified personnel.
- Use commercially available batteries recommended by Brasseler USA.
Read carefully the instruction manual by the battery manufacturer before use.
- Do not use a bent, damaged, deformed or non-ISO-conforming bur, as this may result in personal injury due to its sudden breaking or flying off during rotation.
- Do not use or leave the product in a high-temperature environment such as under strong direct sunlight, in a car under a blazing sun, by a fire, or near a stove.
- Check the product before use by rotating it, paying attention to looseness, vibration, noise and temperature (heat generation). If any abnormal condition is found even slightly at that time, immediately stop use and contact Brasseler USA.
- Always clean the shank of the bur before installing. Allowing dirt to enter the chuck could cause loss of concentricity and deterioration of chucking force.
- Before changing the head or bur, turn off the power of the motor handpiece.
Changing with the power on may cause unintended rotation by accidental touching of the ON/OFF switch.
- When inserting the motor handpiece into the battery charger, position the handpiece correctly. Pushing it into the charger forcibly in the incorrect position may cause damage.
- Be careful not to drop conductive parts such as wires and safety pins into the charging terminal area of the battery charger.
- Before inserting the motor handpiece into the battery charger, wipe it clean. If the charging terminal area becomes dirty, rust formation may prevent charging, or result in short-circuit.
- Do not lubricate the motor handpiece.
- Do not heat sterilize the motor handpiece. Do not autoclave.

NOTICE

- The motor handpiece is designed with the commercially available AAA nickel metal hydride batteries (rechargeable). Ni-Cad batteries can also be used, but the charging time and operating time become significantly shorter since the charging current differs.
- The motor handpiece consumes electricity very slightly even when the power is off. In addition, fully-charged rechargeable batteries, in general, discharge gradually over time even though it is not used. It is recommended to recharge the batteries just before use.
- When the motor handpiece automatically stops by detecting a low battery voltage, leaving it for a while and turning on the power again may not detect the low voltage immediately. This is not a failure, but is due to battery characteristics. Since the voltage drop does not coincide with the remaining battery capacity, consider it only as a yardstick.
- Recharge rechargeable batteries after they deplete as much as possible. Repeated short-time use and subsequent recharging may shorten their operating time due to a "memory effect." Batteries may recover after repeating complete discharge and full charge a few times.
- If you do not use the product for a long period of time, remove the batteries from the motor handpiece.

1. Features

- Compact body.
- Operable continuously for approx. one hour at rated load. (Dependent upon conditions.)
- Operation panel values are memorized.
- Normal operation of the motor handpiece includes pressing the switch turns on the handpiece and re-pressing the switch turns it off. In addition, temporary operation is available : pressing and holding the switch turns on the handpiece and releasing the switch turns it off.
- The motor handpiece softly starts.
- Energy savings. The power of the motor handpiece automatically turns off after 10 minutes of non-use. (Auto power-off function)
- The battery lamp indicates low battery voltage.
- The built in feedback circuit keeps the rotation at a constant speed even when a load is applied to the motor handpiece changes.
- The contra heads provided for this product are all autoclavable at 135°C (excluding the motor handpiece).

2. Specifications

<Battery Charger>

Model	NE140
Input Voltage	AC120V 10% 50/60 Hz
Input Power	5VA
Output	DC4V
Charging Time	Approx. 90 min

<Motor Handpiece>

Model	HP10M
Input Voltage	DC2.4V 20%
Input Power	0.3 VA

The diagram illustrates the components of the Hygienix Pro ultrasonic scaler system. The central component is the **Battery charger**, a rectangular unit with a control panel featuring a power button and a status indicator. To the left is the **Motor handpiece**, a long, slender tool with a control switch and a scale. Below the handpiece is the **Contra head**, a small, cylindrical attachment. To the right of the charger is the **Power cord**, a coiled cable. Below the power cord is the **F-type spray nozzle**, a small, cylindrical component. To the right of the spray nozzle is the **Motor cap**, a small, conical cap.

Fig. 1

◆ Operation Panel Details

This section describes the names and functions of each switch and lamp on the motor handpiece operation panel. For more detailed operations of the motor handpiece, refer to the "Operating Motor Handpiece" in 4. (2).

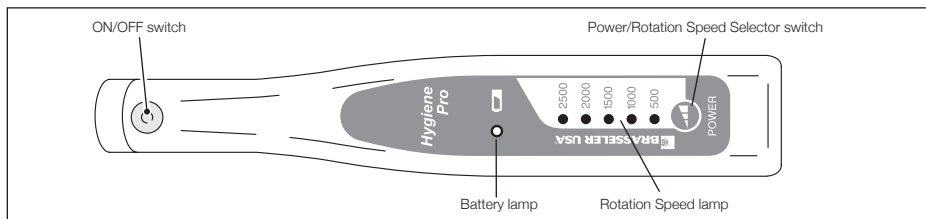


Fig. 2

• ON/OFF switch

Pressing this switch, when the power is on, rotates the motor handpiece, and re-pressing the switch stops the handpiece. (Normal rotation operation) Pressing and holding the switch for approx. one second or longer rotates the motor handpiece and releasing the switch stops the handpiece. (Temporary rotation operation)

• Power/Rotation Speed Selector switch

Pressing and holding the power switch for 1 second or longer, when the power is off, turns on the power, and re-pressing and holding the switch for 2 seconds or longer turns off the power. In addition, by pressing the switch, when the power is on, the rotation speed can be selected.

• Battery lamp

This lamp lights when the battery charger is connected, and flashes when the battery voltage lowers. It also flashes when an error occurs. (Refer to "10. OPERATION PANEL DISPLAY")

• Rotation Speed lamp

It lights the set value of the lamp at the present rotation speed. It flashes slowly while the motor handpiece rotates. When two lamps light simultaneously, it means that the rotation speed is between the two lit values. If one minute passes under a non-operational condition after the rotation of the motor handpiece stops, the lamp for the presently set values begins to flash slowly.

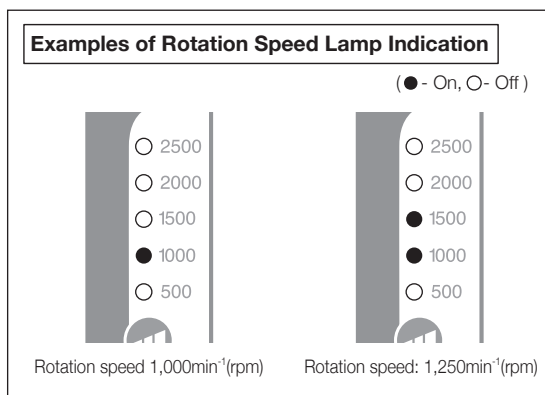


Fig. 3

4. OPERATION PROCEDURES

(1) Charging Batteries

- 1) Insert the power cord jack into the inlet at the back of the battery charger. (Fig. 4)
- 2) Insert the power cord plug into the outlet of the correct voltage.
- 3) Turn on the power switch. At this time, check that the power lamp lights. (Fig. 5)

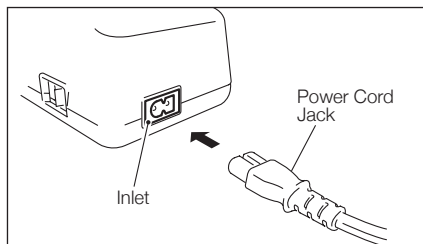


Fig. 4

Caution

If the power lamp or charge lamp flashes, turn on the power switch once again. If they still flash, contact Brasseler USA.

- 4) Remove the contra head from the motor handpiece and mount the motor cap onto it. (Refer to "7. MOTOR CAP") Insert the motor handpiece into the battery charger with the operation panel facing frontward. If the motor handpiece power is on, it will be turned off automatically when inserted into the battery charger. Charging starts with the charge lamp turned on. The battery lamp of the motor handpiece lights. (Fig. 6)
- 5) Charge at full capacity is completed, when the charge lamp goes out. (The battery lamp remains to lighted.) If the motor handpiece is inserted into the battery charger with the power on, the motor handpiece will be automatically powered on when removed from the charger.

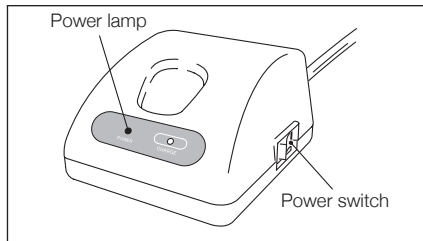


Fig. 5

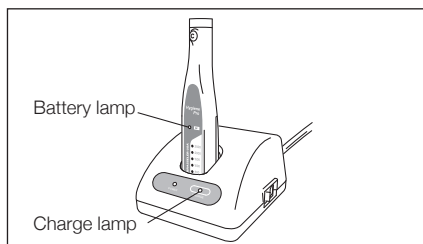


Fig. 6

Caution

- Connect to AC120V power supply only. Voltage variation within $\pm 10\%$ is permissible. Voltage beyond this range may result in damage.
- Never use the battery charger for anything other than the motor handpiece of the Hygiene Pro Cordless.
- The charging normally takes approx. 90 minutes, but it depends on battery conditions, battery freshness, ambient temperature, etc. Older batteries are especially prone to significantly shorter charging and operating times.
- Batteries may slightly heat up during charging, but this is not a failure. If the handpiece is inserted or removed into/from the charger at short intervals, (approx. 5 minutes) charging cannot be properly completed and by touching the battery part you may feel heat. We recommend that you charge batteries for as long a cycle as possible.
- If the motor handpiece is placed on the charger, it will not automatically power on if left on the charger for more than 3 hours.
- The power of the motor handpiece should not be turned on immediately after removing from the charger, wait approx. 2 seconds or longer with the power off.

Notice

- Battery could be fully charged even if charge lamp does not light, depending on the remaining amount of the battery charge.
- When the handpiece is inserted onto the charger after it is not used for long with the battery inserted, the handpiece sometimes could not be charged. Try to put in and take out from the charger repeatedly, and the handpiece will start to be charged.

(2) Operating Motor Handpiece

- 1) Mount the contra head to the motor handpiece.
(Refer to "Changing Contra Head" in 4. (3).)
- 2) Press and hold the Power/Rotation Speed Selector switch for 1 second or longer to turn on the power.
- 3) To set the rotation speed, press the Power/Rotation Speed Selector switch.
(Every time you press the switch, lighting for the Rotation Speed lamp advances.)
- 4) Pressing the ON/OFF switch begins motor handpiece rotation and re-pressing it stops the handpiece. (Normal rotation operation) Pressing and holding this switch for approx. 1 second or longer rotates the motor handpiece while continuing to press it, and releasing the switch stops the handpiece. (Temporary rotation operation)
- 5) Turn off the power by pressing and holding the Power/Rotation Speed Selector switch for 2 seconds or longer.

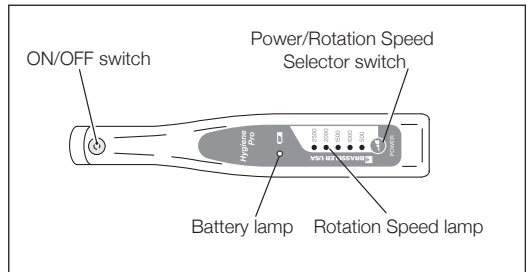


Fig. 7

Notice

If the Battery lamp flashes at no load during rotation, this means that the battery is at a low voltage. Recharge the batteries. If the lamp flashes at a load that exceeds the limit, reduce the load.

● Emergency Stop Function

Hygiene Pro is not equipped with an emergency stop function to prevent overloading. The motor handpiece does not stop immediately, and doing so may shorten battery life or damage the motor handpiece. Do not intentionally stall the motor handpiece for a prolonged period of time.

● Auto Power Off Function

When the power is on and the motor handpiece is not in operation for more than 10 minutes, the power automatically turns off. However, the power does not turn off while the motor handpiece is in motion. Under this condition, the power will only turn off when the batteries are drained to a certain low voltage level.

(3) Changing Contra Head

The contra head can be connected with the motor handpiece at 6 adjustable head positions. Align the positioning pins of the contra head with the positioning slots of the motor handpiece and insert the head until they click. When removing the contra head, pull it straight out. (Fig. 8)

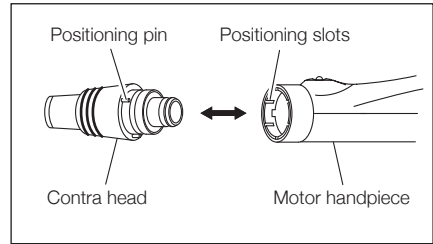


Fig. 8

! Caution

Make certain that the contra head is securely assembled to the motor handpiece.

5. Cleaning

(1) Lubricating Contra Head

Lubricate the contra head only.

Lubricate it before each autoclaving or at least once a day, using spray lubricant.

Screw the F type spray nozzle onto the spray nozzle by approx. 10 turns. Insert the F type spray nozzle into the rear part of the contra head and lubricate the head for 2-3 seconds. (Fig. 9)

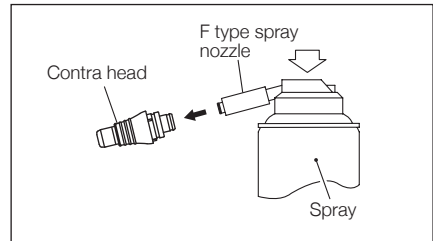


Fig. 9

(2) Cleaning Motor Handpiece

When the motor handpiece becomes dirty, wipe it off with a cotton cloth moistened with rubbing alcohol.

! Caution

- Do not lubricate the motor handpiece.
- Before mounting the lubricated contra head to the motor handpiece, wipe off extra oil. Stand on its end or lean it in the proper direction for draining. Mount it after excess oil has been completely drained.
- Hold the contra head securely to prevent it from flying off by the pressure of the spray.
- Hold the spray upright.
- When cleaning the motor handpiece, do not use any solvent such as benzene or thinner.

6. Sterilization

Sterilize the contra head only. For sterilization, we recommend the autoclave sterilization method. Sterilization is required first time you use and after each patient as noted below.

Autoclaving

- 1) Brush the dirt off the surface of the contra head, and wipe it off with a cotton cloth moistened with rubbing alcohol. Do not use metal brush.
- 2) Lubricate the head with spray. (Refer to the "5. (1) Lubricating Contra Head.")
- 3) Insert the head into an autoclave pouch and seal it.
- 4) Autoclavable up to max. 275°F (135°C).
ex.) Autoclave for 20 min. at 250°F (121°C), or 15 min. at 270°F (132°C).
- 5) Keep the handpiece in the autoclave pouch to keep it clean until you use it.

Caution

- Do not heat sterilize the motor handpiece .
- Skip dry cycles as the temperature could exceed 275°F (135°C).
- Since the lowermost tray inside the chamber of the autoclave is close to a heater and the temperature in that place may locally exceed 275°F (135°C), place the head on the central or upper tray.

7. Motor Cap

When the contra head is removed from the motor handpiece for battery charging, lubrication, or sterilization, mount the motor cap onto the motor handpiece to prevent debris from entering. (Fig. 10)

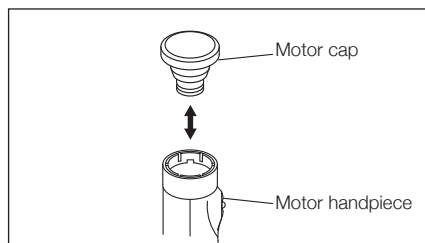


Fig. 10

8. Safety System

The motor handpiece monitors the temperature of the batteries. If the batteries become abnormally hot, this system will automatically stop the motor handpiece. In such a case, wait until the motor handpiece cools. If this safety system occurs repeatedly, either the batteries or motor handpiece is not in the normal operating condition, contact Brasseler USA

9. Changing Batteries

The motor handpiece uses rechargeable batteries. They can be recharged approximately 300-500 times, depending on the use conditions of the motor handpiece. If the operating time becomes shorter or the rotation speed becomes slower, the "memory effect" described in "⚠ NOTICE" may be applicable, or the life of the batteries could be exhausted. In such a case, ask Brasseler USA to replace the batteries or replace them with new ones by yourself. (Refer to the "S Changing Batteries.") When replacing them by yourself, be sure to observe the following "⚠ CAUTIONS ON CHANGING BATTERIES." Please note that BRASSELER USA shall not be liable for any malfunction or failure resulting from your not following the "⚠ CAUTIONS ON CHANGING BATTERIES."

Cautions on Changing Batteries

- Do not open any part other than the battery cover.
- Use batteries designated for this motor handpiece.
- Designated Batteries : AAA (marking may be different)
nickel metal hydride batteries, 600-700 mAh, nominal 1.2V
(Or Ni-Cad batteries, 200-300 mAh, nominal 1.2V. However, please take note that the operating time shortens because of their capacity.)
- Do not use non-charging type batteries such as alkaline batteries and manganese batteries. Charging with these batteries may cause fluid leaks, explosion or chlorine gas generation.
- Should the battery fluid leak and get into your eyes, immediately wash thoroughly in clean water and see your doctor.
- Should the battery fluid leak and adhere to skin or clothing, immediately wash the exposed skin thoroughly with clean water and completely wash away the fluid. Failure to do so may result in a skin disorder.
- Always replace two batteries of the same type by the same manufacturer at the same time. Using batteries of different-types, an exhausted battery with a fully charged one, or a new battery with an old one may cause a fluid leak or explosion.
- Do not work with wet hands. To do so may result in rust formation on battery terminals or moisture intrusion inside, and could cause failure of the product.

Changing Batteries

Small screwdrivers are required
(Phillips, flathead).

- 1) Turn off the power of the motor handpiece.
- 2) Remove the rubber cover from the battery cover with a thin flathead screwdriver.
(Fig. 11)
- 3) Remove the screw fixing the battery cover with a Phillips screwdriver.
(Fig. 12)
- 4) Remove the battery cover by sliding it toward the charging terminal.
(Fig. 13)
- 5) Remove old batteries.
- 6) Insert new batteries according to the polarity marking in the battery box. A mix-up between the plus and minus sides will not allow operation of the handpiece.
- 7) Attach the battery cover.
- 8) Tighten the screw with a Phillips screwdriver. Do not overtighten it.
- 9) Insert the rubber cover back into the screw hole of the battery cover in the originally inserted direction.

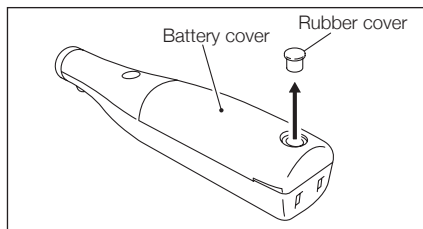


Fig. 11

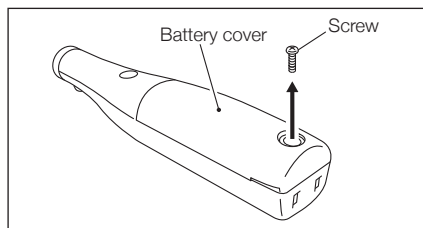


Fig. 12

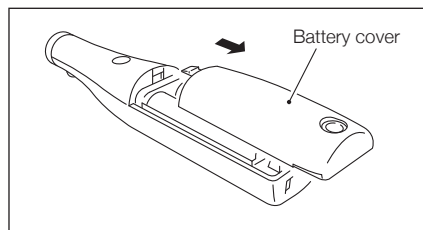


Fig. 13

Changing of batteries is now completed.
Charge them fully before use.


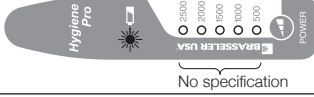
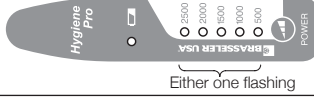
Caution

- Do not misplace the rubber cover and screw.
- The used nickel metal hydride batteries are recyclable, but their disposal may sometimes not be permitted by local laws.






10. Operation Panel Display

When any abnormal condition occurs in the motor handpiece, the operation panel displays it to allow you to locate the troubles.

<Normal Display>

Lighting Display (●On, ○Off, ✨Flashing)	Reason	Remedy
<p>Low Battery Voltage A</p> 	The battery voltage dropped below the discharge completion voltage. (Battery drain)	Recharge the batteries.
<p>Low Battery Voltage B</p> 	The battery voltage dropped below the voltage near discharge completion. (Temporary voltage dropped due to battery drain or heavy loading)	Recharge the batteries, or remove the heavy load.
<p>Power Save Mode</p> 	Non-operational condition continued for 1 minute or longer when the rotation of the motor handpiece stopped.	Press any switch.

<Error Display>

Lighting Display (●On, ○Off, ✨Flashing)	Reason	Remedy
<p>Abnormal Battery Temperature</p> 	Abnormal temperature at the battery chamber. (Battery short circuit, over discharge, etc.)	If the lamps flash after the handpiece has been left for a while, Contact Brasseler USA.
<p>Abnormal Motor Voltage A</p> 	Abnormal motor voltage.	The circuit is damaged. Contact Brasseler USA
<p>Abnormal Motor Voltage B</p> 		
<p>Internal Memory Error A</p> 	Abnormal internal memory.	The internal memory is damaged. Contact Brasseler USA.
<p>Internal Memory Error B</p> 		

11. Troubleshooting

When trouble is found, please check the following again before contacting Brasseler USA. If none of these is applicable or the trouble is not remedied even after action has been taken, a failure of this product is suspected. Contact your Brasseler USA.

Trouble	Probable Cause and Check	Solution
The motor handpiece power does not turn on.	Batteries have fully discharged. (Has the handpiece been left with batteries inserted for a long time?)	Recharge the batteries.
	Abnormal batteries. (Have the battery parts become hot?)	Cool the handpiece for a while and turn on the power.
	No batteries are inserted.	Insert batteries.
	The internal fuse has burnt.	Contact Brasseler USA.
When the power of the motor handpiece is turned on, the battery lamp lights.	Low batteries.	Recharge the batteries.
The motor handpiece does not rotate. The operation panel does not light.	Power is not turned on.	Turn on the power.
The force of the motor handpiece is weaker than normal.	The batteries have become weak. (Is the battery lamp flashing?)	Recharge the batteries.
The maximum rotation speed of the motor handpiece is low.	The batteries have become weak. (Is the battery lamp flashing?)	Recharge the batteries.
The battery charger does not work. (The charge lamp does not light.)	The batteries of the motor handpiece have fully discharged. (Has the handpiece been left with batteries inserted for a long time?)	Insert and remove the motor handpiece into/from the battery charger several times.
	The power of the battery charger is turned on?	Turn on the power of the battery charger.
	Is the power cord plug inserted into the outlet?	Insert the power cord plug into the outlet.
	Is the power cord jack inserted into the inlet of the battery charger?	Insert the power cord jack into the inlet of the battery charger.
The battery charger does not work. (The charge lamp lights but goes out soon.)	Is the motor handpiece inserted into the battery charger in the correct orientation?	Insert the motor handpiece into the battery charger in the correct orientation.
	Has the motor handpiece part near the batteries become hot?	If the motor handpiece part near the batteries has become hot, the batteries have been fully charged.
The battery does not charge. (All three charge lamps or the power lamp blink.)	The batteries of the motor handpiece have fully discharged. (Has the handpiece been left with batteries inserted for a long time?)	Insert and remove the motor handpiece into/from the battery charger several times. When the power lamp of the charger flashes, turn on the power switch again.
	Are such single-use batteries as alkaline or manganese cells used?	Replace with the specified battery (nickel-metal hydrogen battery 600-700 mAh 1.2V nominal).
	The charging terminal area of the battery charger has short-circuited.	Clean the charging terminal area of the battery charger. When the power lamp of the battery charger flashes, turn on the power switch again.

6. Warranty

Brasseler USA warrants the handpiece against defects in manufacturing, workmanship and materials. Brasseler USA reserves the right to analyze and determine the cause of any problem. Warranty is voided should the handpiece not be used in accordance with this manual.

By Your Side
in Dentistry



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