

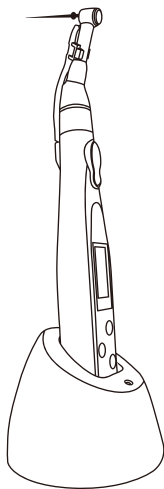
APPLEDENTAL

Endo Motor

MODEL: R-Smart Mini

Product User Manual

For Dental Use Only



Product Type:

Brand:

Model:

Producer Company:

Exporter Company:

Importer Company:

LED Chordless Endo Motor

DTS

R-Smart Mini, K028

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CONTENTS

1. General Introduction
2. Main Specifications
3. Component Names
4. Installation Setting
5. Main Directions For Use
6. Cleaning Sterilization
7. Trouble Shooting
8. Disposing Product
9. Warranty

Thank you for purchasing Endo Motor I .

1. General Introduction

Endo Motor I is an endodontic operation instrument
Endo motor function is a kind of endodontic micromotor to drive Ni-Ti instruments. It can assist the dentists to shape more standard root-canal in the press of root-canal treatment based on the micro-electron control technology. Endo motor I can held in hand to operate and cordless charging. This unit contributes to alieciate the dentist's working intensity.

Please read this Operation Manual carefully before use for operation instructions, care and maintenance. It is recommended to keep this Operation Manual for future reference.

Contra-indications

- In cases where a patient has been fitted with an implanted heart pacemaker (or other electrical equipment) and has been cautioned against use of small electrical appliances (such as electric shavers, hair dryers, etc,) it is recommended not to use Endo Motor I .
- This instrument should not be used for severe curved root canal preparation. Do not use Endo Motor I for implant or any other dentist procedure outside endodontics

Warnings

- For your own safety, please wear personal protective equipments (gloves, glasses, mask).
- Do not use this unit when it's' charging.
- Do not disassemble or alter the motor handpiece.
- If you should notice battery fluid leak, deformation of the motor handpiece casing or partial discoloring, immediately stop use and contact your dealer.
- If you will not use the product for long period of time, remove the battery to avoid fluid leak.
- The system may present the possibility of malfunction when used in the presence of electromagnetic interference wave. Do not install system in the vicinity of the device which emits magnetic waves.
- Do not use in the presence of flammable products.
- This motor is equipped with an electronic circuit to limit file breakage. Nevertheless, files may still break due to higher torque conditions or to fatigue resistance.

Precautions

- The appliance must only be used with the manufacturer's original accessories.
- Never use any other AC adapters.
- The RPM number indicates true instrument speed when the appropriate reduction rate is selected. Make sure the selected reduction matches the ratio of the contra angle handpiece.
- If the motor stops or runs too fast, discontinue use and call for assistance.
- After sterilization, make sure the motor has reached a temperature below 40°C before use.
- Do not introduce any oil into the micro motor.
- The system functions normally in the environment where the temperature is at 5-40°C (50-104°F), humidity at 10-85%RH, atmospheric pressure at 50-106kpa, and no moisture condensation in the Control Unit. Any use outside these limits may cause malfunction
- Do not use bent, damaged, deformed or non--ISO-injury due to its unexpected breaking or "flying off" conforming file. Using such a file may result in persona during rotation.
- 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 your dealer.
- Always clean the shank of the file to be installed. Allowing

dirt to enter the chuck could cause loss of concentricity and deterioration of chucking force.

- Before changing head or bur, turn off the power of the motor handpiece. Changing with the power kept on may cause unintended rotation by accidental touch of the ON/OFF button.
- Equipment not suitable for use in the presence of a flammable anesthetic mixture with air or with oxygen or nitrous oxide.

Notice

- Exercise sufficient care in using the product by giving patient safety first priority.
- Fully-charged rechargeable battery generally discharge gradually over time even the motor handpiece is not used. It is recommended to recharge the battery just before use.
- When the motor handpiece stops automatically by detecting a low battery voltage, turning on the power again after a while may not detect the low voltage immediately. This is not a failure, but due to battery characteristics. Since the voltage drop does not coincide with the remaining battery capacity, consider it only as a yardstick.
- When discarding the contra angle head and motor handpiece, dispose of them as medical waste.
- Users are responsible for operational control, maintenance and inspection.
- Store the system in place where temperature is at -10. 50°C (14-122°F), humidity at 10-85%RH, atmospheric pressure at 50-106Kpa, and the system is not subject to air with dust, sulfur or salinity.

Features

- This unit can be used in independent endodontic shaping.
- 9 different programs can be preset according to requirement of operator.
- When rotary file reaches preset torque, the file will automatically withdraw until removal of resistance.
- This unit is powered by rechargeable Lithium battery, in order to expand life span of battery. The unit will be turned off automatically in 8 minutes without any uses.
- Contra angle, file clip and lip hook can be 135°C autoclaved

2. Main Specifications

<Main Unit>

Battery Voltage	DC3.7V
Battery capacity	950mAh
Charging time	3 hours approx
Weight	500g
Packing size	188x90x85mm

<AC Adapter>

Rated input voltage	AC100-240V 50/60Hz
Output voltage	DC 5V/MICRO USB
Output current	1A

<Operation Conditions>

Environment temperature	+ 5°C ~ + 40°C
Relative humidity	10%-80%RH
Atmospheric pressure	50~106KPa

3. Component Names

Before use, please refer to the packaging labels.



- | | | |
|----------------|-----|-------|
| 1)Charger Base | --- | 1 pcs |
| 2)AC Adapter | --- | 1 pcs |
| 3)Main Unit | --- | 1 pcs |
| 4)Contra angle | --- | 1 pcs |
| 5)LED light | --- | 2pcs |
| 6)User manual | --- | 1 pcs |

4. Installation Setting

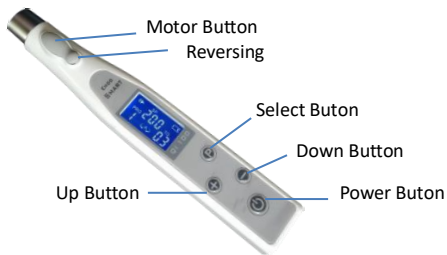
Installation of Contra angle

- (1)Connect endo file bracket to contra angle.
- (2)Confirm contra angle.
- (3)Connect together main unit and contra angle.

Notice




Please turn off this unit when connecting contra angle.






- (4)Make sure that endo file hold is securely connected with file





Setting

Picture	Description
	Power button Press power button for more than one second to turn on/off the power and OLED panel light.
ON/OFF	Motor button When the power is on, press ON/OFF button then the device start working. Press this key again, the device stop working
	Select button When motor is stop, press the Select button, to select the program of memory from PRG1 to PRG9. When motor is stop,press the select button more than 5 seconds to enter custom preset memory mode.Then, press the Select button about one second to change GR or TQ or Rotation Model setting with the UP/DOWN button.
	UP/DOWN button When motor is running or stop, press the UP/DOWN button to increase or reduce the speed. TO enter custom preset memory mode,Then, press the Select button about one second to change GR or TQ or Rotation Model setting with the UP/DOWN button.

Reversing	Reversing button Press this key one time ,the device can stop working. Continue to press this key, the device can enter Reverse working Model.
	Forward Model--Auto reversing If the load is removed after auto reverse rotation, it returns to the normal rotation again.
	Reverse Model Set the motor rotation to reverse
	AUTO Reciprocating Model The motor will run reciprocating. The speed is 300rpm.
	Reciprocating Model The motor will run reciprocating. The speed is 300rpm and the torque is uncontrolled.
PRG 1-9	For 16: Contra angle. Speed 140-550rpm. Torque 0.3-4Ncm
	Means low voltage. Charge immediately.

5. Main Directions For Use

(1)Preparation procedures

- 1.Please make sure that all accessories are securely connected (Refer to 4. Installation and Setting).
- 2.Recheck if rotary file has been securely connected.

(2)Charge (if batteries are used)

- 1.Securely insert plug of AC adapter into a power supply.
- 2.Internal microcomputer checks voltage of battery and starts charging,if necessary,If it starts charging,the blue LCD light of button mark. If charging finished, the blue LCD button mark is all

- There is no need to turn on the power.

(3)Endo motor functioning

1. Connect contra angle to the main unit.
2. Push the ON/OFF button to start the operation.

6. Cleaning & Sterilization

(1)Sterilization

1. Contra angle and rotary file can be high pressure autoclaved. Autoclave contra angle and rotary file after each use.
2. Don't autoclave any parts (the main unit and charging base) other than those that can be subjected to autoclave sterilization.
3. Autoclavable up to a max. 135°C. It's recommended to autoclave for 20 min at 121°C or 15 min at 132°C.

Notice: Use AR sprays to clean contra angle before the autoclave process. Please autoclave rotary file according to file manufacturer requirement.

Notice: Don't use any solvent such as benzine and thinner for sterilization.

(2)Cleaning

Wipe the main unit with neutral detergent if needed.

7.Trouble shooting

When trouble is found, check the following items again before asking repairs, If none of these are applicable or the trouble is not remedied even after action has been taken, a failure of this product is suspected. Contact your dealer.

Problems	Cause & Solution
Power hasn't been turned on.	The battery is empty. Charge the battery
	Pressing time isn't enough. Please long press the power button
	Power button is broken, contact your dealer
The battery can't be charged	The adapter hasn't been well connected Please recheck the connection.
	The adapter is broken. Contact your dealer
	The battery is broken. Contact your dealer.

8. Disposing product

Please consult with dealer from whom you purchased it about waster despoil.

9. Warranty

Manufacturer warrants its products to the original purchaser against defects in material and workmanship under normal practices of installation, use and servicing. File clip, lip hook are expendable components, and are not covered by this warranty. This unit is guaranteed for its designated use against original defects in materials and workmanship for a period of 12 months from date of purchasing.