

Cordless Endo Motor



iFine-II Usage Manual

Please read this Operation Manual carefully before use, and file for future reference

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Foreword

Thanks for using the cordless endo motor. For the sake of safety and efficient using of this product, please read this manual carefully.

This equipment meets the national standard: GB9706.1 -2007, medical electrical equipment Part 1 and general requirements for safety.

Protection against electrical shock: class II , type B
We'll take the responsibility for the product's safety, reliability and property under the following conditions:

1. Installation, commissioning and maintenance of the equipment should operate by professionals approved by our company or who gain national appropriate level qualifications.

2.This equipment should be operated by qualified or approved personnel. Operator should have specialized medical application skills, and work follow the manual.

3.The equipment can't be used in the environment with flammable anesthetic gases mixed with air or nitrous oxide.

This device is a dental instrument, besides dental treatment, please don't use it.

Our company reserves the right to modify the design, technology, accessories, manual and package content for this equipment. Please prevail in kind. If there is difference between pictures and object, please make the object as the standard.

Notice: Our Company won't take responsibility for the following case:

1. Faults and damage caused by maintenance without authorization.
2. Faults and damage due to any Refitting are unauthorized.
3. Faults and damage result from factor of other company's products.
4. Faults and damage result from using non specified spare parts when maintaining equipment.
5. Fault and damage because of failure to comply with the precautions and operation method described in the manual.
6. Faults and damage due to inappropriate environment for operation, such as the environment for supply, installation etc.
7. Faults and damage caused by earthquakes, floods, lightning and other irresistible factors.

1. Introduction

Cordless endo motor is a professional equipment for root canal treatment. It converts electrical energy into mechanical energy, and then controls the rotation and transmission through the motor. It uses micro motor to achieve the purpose of expanding the root canal in the root canal treatment. Cordless handpiece delivers freedom of movement.

Features

- 1) Lightweight, ergonomic design, easy to carry.
- 2) With 16:1 electric contra angle
- 3) It could store 9 programs. The parameter could be preset or modified according to actual operation. P1-P6 for endo treatment mode, P7 for polishing mode, P8 for taking the broken file mode, P9 for reciprocating mode.
- 4) The equipment will auto-reverse or auto reverse & stop, auto-stop according to different torque and resistance.
- 5) Use soft starting and stop, provide convenient operation and protect the file from broken when suffer instant impact.
- 6) Electric contra angle are autoclave sterilization up to 135℃.
- 7) Built-in recharging and high capacity battery not only brings convenience of replace battery, but also save the cost.
- 8) It will has an alarm when the battery is lower.

2. Range of application and contraindications

Cordless endo motor applies to stomatology. It use to expand the root canal in the root canal therapy such as pulp necrosis, chronic pulpitis, chronic apical periodontitis (incl. periapical granuloma, periapical abscess and periapical cyst), pulp-periodontal syndrome and for who has system disease which not suitable for teeth extraction but in need of treatment or keep offending teeth temporarily

Contraindications

It can't be used with high frequency surgical equipment.
Heart patients use it with cautious!

People who use implantable electronic devices like heart pacemaker are not suitable to use it without doctor's advice.

3. Technical parameter

Degree of protection against harmful into the liquid:

Common equipment (not anti-closed inlet device)

Operational Mode: Continuous operation

Main Unit

Battery Voltage:3.7Vdc

Battery capacity:1050mAh

Net weightabout :200g

Adapter

Adapter voltageAC:100~240V 50/60Hz

Output voltage:5Vdc

Output current:1A

4. Structure



Structure:

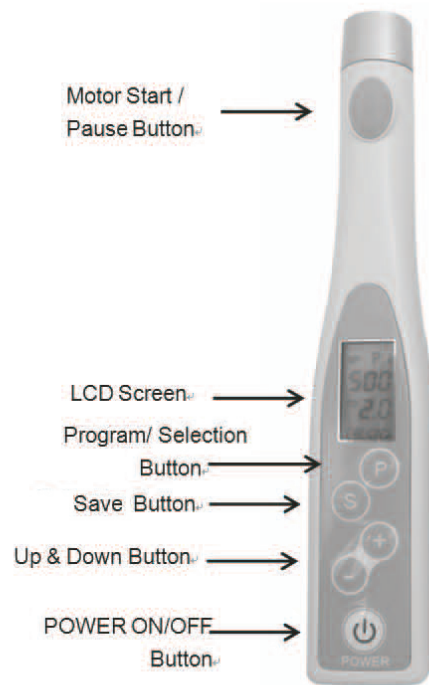
1. Electric contra angle 2. Main Unit 3. Charger base

Cordless endo motor is consist of motor, LCD screen, keypad, control circuit, charging circuit, plastic shell, lithium battery and accessories.

Speed: 120rpm-500rpm

Torque: 0.6N.cm-4.0N.cm

5. Operation panel introduction



POWER ON/OFF button

Power ON: Press the POWER ON/OFF button more than 2 second to turn on the equipment.

Power OFF: Press the POWER ON/OFF button again to turn off the equipment.

Motor Start / Pause button

After turn on the equipment, press down the key the motor start to work. Press it down again, the motor will stop.

Save button-- S

To change Speed, Torque and Auto-control mode setting.

Order of setting: Speed (SP) →Torque(TQ)

→Auto-control mode →Speed(SP)

When the motor is working, speed could be modified.

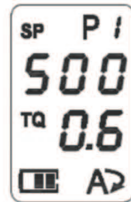
Program / Selection button-- P

Press "P" key to select the program number.

Press "P" key for a few seconds to save the current parameters.

Up to 3 following parameters can be set: Speed, Torque, and Auto-control setting. 9 programs could be memorized.

Program Code: P1-P9



P1-P6 for Endo Treatment Mode:

3 following parameters can be set: Speed, Torque, and Auto-control setting.

Speed: 120-500rpm

Torque: 0.6-4.0N.cm

Auto-control mode:

- (A) Auto-reverse
- A) Auto reverse & stop
-) Auto-stop

*After setting well, press P button for a few seconds, saving the parameters in the current program code.



P7 for Polishing Mode:

Speed: 120-500rpm

Torque: ---

Auto-control mode:) Forward

*After setting well, press P button for a few seconds, saving the parameters in the current program code.



P8 for taking the broken file Mode:

Making a platform on the fracture surface of broken file, choosing suitable microscopic drill, operating under the microscope and cutting under reverse mode.

Speed: 120-500rpm

Torque: ---

Auto-control mode: (Reverse

*After setting well, press P button for a few seconds, saving the parameters in the current program code.



P9 for Reciprocation Mode:

Under reciprocation Mode, just using one file for forming a root canal.

Speed: 160-300rpm

Torque: ---

Auto-control mode: () Reciprocation

(Forward:35°, Reverse:145°)

*After setting well, press P button for a few seconds, saving the parameters in the current program code.

Up & Down button (+ / -)

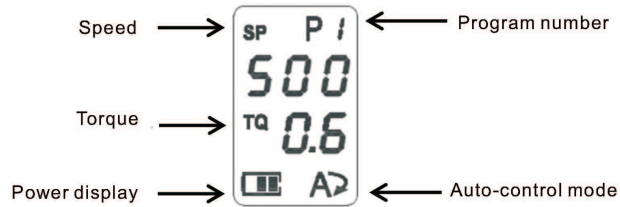
To modify parameter value of selected items

When item is selected (on flashing display), press "+/-" key could modify current parameters.

Standard configuration of this equipment is with 16:1 electric contra angle.

Following is reference for the range of some parameters. Please read it before use.

Speed(rpm)	Ratio	Torque(N.cm)
120-500	16:1	0.6-4.0



Auto-control mode

- (A) : Auto reverse (When resistance higher than torque, the equipment will auto-reverse. And auto-reverse again till the resistance lower than torque.)
- A) :Auto reverse & stop (When resistance higher than torque, the equipment will auto-reverse. And stop after resistance disappeared.)
-) :Auto stop (When resistance higher than torque, the motor will stop.)

Battery power display:



: Full battery



: 20%-80%



: <20%



: Low power, please charge it immediately

*Notice: It's normal that power display will change when meet resistance because of large power output.

6. Usage method

1) Charging

- a. Please connect the charging base with adapter. While charging, the charging indicator light will ON.
- b. Please put the main unit in the charging base, the operation panel should be outward, charging base is without other things, the light is on when you put it in correct, and you will hear one beep sound, the LCD screen shows "CHG", that means it's charging. If charging indicator light is flashing, please replace the main unit or connect the adapter again.
- c. After 2-3 hours, you will hear beep sound again, the LCD screen shows "FUL", that means charging is done.

2) Loading & Unloading Electric Contra Angle

When connect the electric contra angle with the main unit, locating pin of the electric contra angle should be placed in the locating slot of the main unit until you hear click sound. Please take off the electric contra angle in parallel and straight direction.

***Notice:** Please turn off the motor when loading or unloading the electric contra angle.

Loading & Unloading bur

Insert the bur, rotating the bur to find out the place which match the bur's semicircle place, and then push the bur in it until you hear click sound, don't need the press the push button. When you unloading the bur, press the push button, and then take it out.

***Notice:**

Please turn off the motor when loading or unloading the bur.

When loading the bur, please pull the bur several times to make sure it's fixed well before using it.

Please make sure the bur is clean, if the dirt things get into the head, it will lead to the bur vibration.

3) Operation

Long press the POWER ON/OFF button: Cordless Micro

Motor starts work

Press the Motor Start/Pause button: bur starts rotation

Press the Motor Start/Pause button again: bur stops rotation.

Long press Motor Start/Pause button: memorize the program.

4) After treatment

After treatment, press the Motor Starts/Pause button, bur stops working. Long press POWER ON/OFF button, machine turns off. Take off the electric contra angle from main unit, and then cover the motor cap.

If no operation about 5mins, power will auto turn off.

Last program settings can be memorized when the power turns on.

7. Cautions

- 1) Don't use damaged, winding or unqualified burs, it will cause accident if use.
- 2) Please comply with the bur speed by manufacturer appointed when using.
- 3) Don't put or use this product in the strong sunshine place or near high temperature place.
- 4) Please pay attention when put the main unit in the charging base, the operation panel should be outward, misdirection will damage the product or can't charge.
- 5) Don't put the lubricating oil in the main unit or don't put the main unit in autoclave sterilization.
- 6) Our product is not water-proof. Don't let water or liquid in it, to avoid short circuit, rusting or discoloring.
- 7) Don't drop the main unit and the charging base, put it in the flat safe place.
- 8) Please use the configured adapter when charging, don't use other adapter.
- 9) Please use the electric contra angle provided or approved by our factory, otherwise it maybe cause the misoperation.
- 10) Please don't use our product in the electromagnetic environment of strong magnetic field and strong electric field.

8. Troubleshooting

Problem	Reason & Solution
Doesn't work	No power, please charge it.
	Press the ON/OFF button in short time, please press the ON/OFF button more than 1 second.
	POWER ON/OFF button is broken, please contact with the dealer or manufacturer
No charging display	Doesn't connect well with adapter, please pull out and try it again.
	There are other things in the bottom of the machine or charging base, please clean it.
	Doesn't put the main unit in the right place of the charging base.

9. Maintenance

If not using for a long time, when you reuse it, please check it works normally and safely or not.

If not using for a long time, please make sure to charge it every month, in order to protect the working life of the battery.

From the purchasing date, the working life is about 5 years.

Please clean the surface of the main unit by soft cloth with neutral detergent, and then using wet cloth to clean it.

Notice: Don't use lacquer thinner or benzene for cleaning. Don't put the product under the blazing sun for a long time or near the flammability material, avoid battery explosion.

10. Sterilization

Please sterilization only for the electrical contra angle.

Autoclave Sterilization:

Using brush (don't use metal thing) to remove dirt on the surface, then cleaning it by soft cloth with alcohol.

The limited temperature of Autoclave sterilization is 135℃ (For example, 120℃ for 20 min, 132℃ for 15 min).

Please put it in a sterilization bag and keep it in clean place if not use.

Notice:

Please sterilization only for the electrical contra angle.

Because of the base layer of the autoclave is near the heat source, high temperature, so it would be better put it in the middle or top layer.

Strongly acidic water is strictly prohibited for use, also don't use sterilization liquid to washing, dipping, wipe the product.

11. Transportation and storage

Storage Condition: Temperature: 40℃~55℃;

Humidity: <80%;

Atmospheric pressure: 50KPa~106KPa.

Environmental conditions: Not near from fire equipment or flammability material

Transportation: Suitable for common mode of transportation, please handle with care.

12. Product List

Cordless Endo Motor Main Unit	1 PC
Charging Base	1 PC
Electrical Contra Angle(16:1)	1 PC
Adapter	1 PC
Cover	1 PC
Usage Manual	1 PC

13. After-sale service

It's 1 year warranty for the main unit and charging base of the cordless endo motor. After 1 year warranty, we will charge you the spare parts fee. 6 months warranty for the accessories, such as electrical contra angle, cover and so on. You may buy the spare parts from us if damage or use up.

Cordless Endo Motor Warranty Information

Customer Information	
Name	
Phone No.	
Address	
Sales Information	
Seller	
Phone No.	
Address	
Model No.	
Invoice No.	
Purchasing Date	
Stamp by Seller	

14. Maintenance record

Send back Date	Problem	Reason	Resend Date	Accendant	Remark
Solution :					

Send back Date	Problem	Reason	Resend Date	Accendant	Remark
Solution :					

Send back Date	Problem	Reason	Resend Date	Accendant	Remark
Solution :					

Send back Date	Problem	Reason	Resend Date	Accendant	Remark
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