CE 0123

Dental Electric Motor Instruction Manual

Please carefully read the instruction before.

Thank you for purchasing M2 Pro Dental electric motor Produced by Guilin Woodpecker Medical Instrument Co., Ltd. To ensure the correct use of the device, we suggest that you carefully read the instruction on the use of installation, operation, maintenance and inspection before. For your convenience, it is recommended that you place this manual where you can get it at any time.

ZMN-SM-741 V1.2- 20221027

Guilin Woodpecker Medical Instrument Co.,Ltd.

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Guilin Woodpecker Medical Instrument Co., Ltd is a Professional manufacturer researching, developing, and Producing dental Products. Woodpecker owns a sound quality control system and four brands, Woodpecker, DTE, DBA and RTA. Its main Products include Ultrasonic Scaler, Curing light, Apex locator, Ultrasurgery, Endo Motor, Dental electric Motor, etc.

1. Introduction

Dental electric motor is for driving dental handpieces for dental surgery. Mainly used for dental aesthetics restoration, crown breaking, open marrow preparation, deburring, polishing and other aspects of power.This device needs to be used on a comprehensive dental treatment device, which should meet the requirements of the relevant local standards for medical devices. The sub-assembly is intended to be installed in dental comprehensive treatment device which supplies 24VAC 50/60Hz 100VA power output. If the treatment device is connected to SUPPLY MAINS, configurations of insulation across SUPPLY MAINS and 24VAC output shall comply with the 2MOPs requirements of IEC 60601-1, IEC 60601-1-2 or IEC 62368-1 for insulation co-ordination.Anybody connecting this sub-assembly to medical electrical equipment is responsible that the dental treatment device complies with the requirements as mentioned above. If in doubt, consult your local representative or the technical service department.

1.1 Precautions before operation

⚠ Dangers:

1. To prevent electric shock, do not use a wet hand to pull the power cord, and please prevent the water from entering the control circuit.
2. Keep away from explosives and flammable materials. Do not use this dental electric motor for patients who are anesthetized with nitrous oxide.
3. The device can not be used in MRI environment.

⚠ Warnings:

(1) This dental electric motor may malfunction when used in an environment where electromagnetic interference occurs. This dental electric motor cannot be installed near the device that releases the magnetic wave. When using an ultrasonic vibrating device or an electrode knife in the vicinity, turn off the switch on the dental electric motor control panel.
(2) M2 Pro requires special precautions for EMC and needs to be installed and put into use according to the EMC environment.
(3) Device with electromagnetic transmitting will affect the normal operation

of M2 Pro. Please do not run both devices at the same time.
(4) Do not use it in operating rooms that contain a mixture of potentially flammable gases.
(5) To avoid possible injury or damage to the dental electric motor, make sure that the motor handpiece (hereinafter referred to as the motor) is completely stopped when changing the contra-angle. (And the contra angle should be replaced by the pedal controller.)
(6) A severe impact, such as a drop from high position, can result in damage to the dental electric motor.
(7) Do not try to disassemble the controlling penal or motor.
(8) After use, please immediately clean, lubricate and disinfect the dental handpiece (hereinafter referred to as the handpiece).
(9) Do not lubricate the motor. The lubricant can cause overheating and damage the motor.
(10) Do not use a solution with dissolving ability to clean the control panel.
(11) After each operation, turn off the power supply.
(12) APPLIED PART: The contra-angle.
(13) Any serious incident that has occurred in relation to the device should be reported to manufacturer and the competent authority of the Member State in which the user and/or patient is established.
(14) The ratio displayed on the interface of the main unit is the speed ratio of the contra-angle handpiece, please select the contra-angle handpiece with the corresponding speed ratio.

1.2 Intended use

Electrical drive including media supply for dental handpieces in the field of preventative dentistry, conservative dentistry for tasks such as the preparation of cavities and Prosthodontics for tasks such as the preparation of crown.

1.3 Intended user and patient

(1) Intended user: Professional dentists
(2) Intended patient: Patients who need dental treatment Procedure for the removal of decayed matter, cavity and crown preparations, and removal of fillings and surface finishing of tooth and restoration surfaces.

1.4 Specification and model

M2 Pro

1.5 Contraindication

(1) Hemophilia patients are Prohibited;
(2) Patients or doctors with cardiac pacemakers are Prohibited;
(3) Patients with heart disease and children should use it with caution;
(4) Patients with oral and maxillofacial infections, incurable oral mucosal diseases, periapical diseases, gingival diseases, periodontal diseases, oral

tumors, etc. should be used with caution;
(5) Allergic constitution and drug allergy history are Prohibited;
(6) People with mental disorders should use it with caution;
(7) Patients with severe systemic infectious or systemic diseases, such as heart, liver, kidney, hematopoietic system, digestive system and endocrine system, should be used with caution;
(8) Pregnant women or lactating women and women of childbearing age who have recently had family planning should be used with caution.

1.6 Safety requirements

Guilin Woodpecker Medical Instrument Co., Ltd. will not be responsible for any direct or indirect damage and loss under the following conditions:
If the device is used for any purpose outside the scope of use not mentioned.
If the operator does not use the device according to the Procedures and requirements specified in the instruction manual.
• If the wiring system of the room where the device is used does not meet the apPropriate standards and apPropriate requirements.
• If the device is assembled, operated and repaired without the authorization of Woodpecker.
• If the device is located or stored in an environment that does not meet the requirements mentioned in the technical requirements section of the specification.

2. Basic Technical Parameters

2.1 Specification parameter

Power input of drive module: 24V~ 50Hz/60Hz 100VA
Motor speed range: 2000-40000r/min
Motor torque: not less than 1N·cm
Spray water source: Water flow > 50ml/min (water pressure: 2 bar~5 bar)
Spray air source: air flow > 1.5L/min (air pressure (2.5 bar~5 bar)
Cooling air flow: air flow <40L/min (recommended working pressure is 2.5-5 bar)

2.2 Operation environment

2.2.1 The environmental temperature is: +5℃ ~ +40℃
2.2.2 Relative humidity: 30% ~ 75%
2.2.3 Atmospheric pressure: 70kPa ~ 106kPa

2.3 Safety classification

2.3.1 Classified according to the degree of Protection against liquid ingress: ordinary device (IPX0), not waterProof.
2.3.2 Classification according to operation mode: Intermittent operation

device (continuous operation for 3min, need to stop for 2min).

2.3.3 Classification of safety levels when used with flammable anesthetic gases mixed with air or with oxygen or nitrous oxide: Device that cannot be used with flammable anesthetic gases mixed with air or with oxygen or nitrous oxide.

3. Product performance structure and composition

3.1 Safety requirements during installation

⚠ Danger: Device is installed on the premise that the installation meets appropriate standards and related electrical safety requirements.

⚠ Danger: Never install the device in a place where there is an explosion danger, and do not operate in an area where flammable gases (narcotic mixture, oxygen, etc.) exist.

⚠ Danger: Installation site should avoid impact on device and splashing of water or other liquids.

⚠ Danger: Do not install the device near or above the heat source, but must install it in a place with sufficient air circulation around it, leaving enough space around it, especially the exhaust fan and back position.

Warning: Do not place components directly under sunlight or ultraviolet light sources.

Warning: The device can be handled, but it must be handled with great care.

Warning: Before connecting the wire to the device, make sure that the connection is dry. If necessary, blow dry with an air gun.

3.2 Please refer to the packing list for the device configuration.

The Product structure and composition are as follows: by driving module, display, motor, tail circuit, solenoid valve, etc.

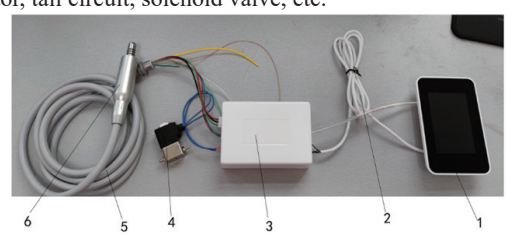


Figure 1 Structure composition diagram

1: Display; 2: Connecting line; 3. Drive module; 4: Solenoid valve; 5: Tail circuit; 6: Motor;

3.3 Installation instructions

3.3.1 Motor connection

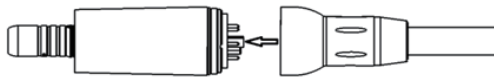


Figure 2 Schematic diagram of motor connection

After the motor and tail circuit holes are aligned, screw the motor into the tail circuit connector to ensure tight connection and no excessive gap between the motor and tail circuit connector.

3.3.2 Pipeline connection:

When connecting lines, make sure that there are no air or water leaks in the lines.

(1) Pipeline connection of tail circuit:

1. Yellow air pipe: Connected with dental chair atomization gas;
2. Transparent water pipe: Connected with dental chair waterway;
3. Green air pipe: Connected with dental chair driving air;
4. Motor control line;
5. LED control line.

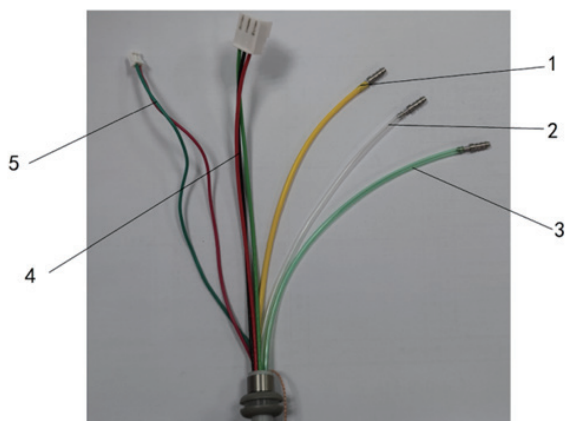


Figure 3 Schematic diagram of the tail circuit pipeline

(2) Connection of tee joints:

The air inlet of the tee joint is connected to the driving air of the dental chair, one of the air outlets is connected to the tail circuit to obtain the green tube, and the other air outlet is connected to the air interface of the driving module.

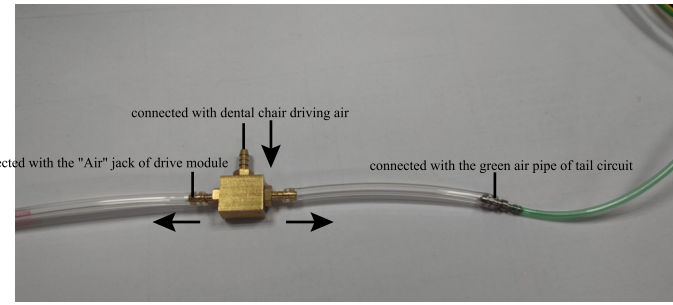


Figure 4 Schematic diagram of tee joint

(3) Connection of solenoid valve:

The two-core cable of the solenoid valve is connected to the "OUTPUT DC 24V" interface of the drive module, the input interface is connected to the waterway of the dental chair, and the output interface is connected to the transparent water pipe of the tail circuit.

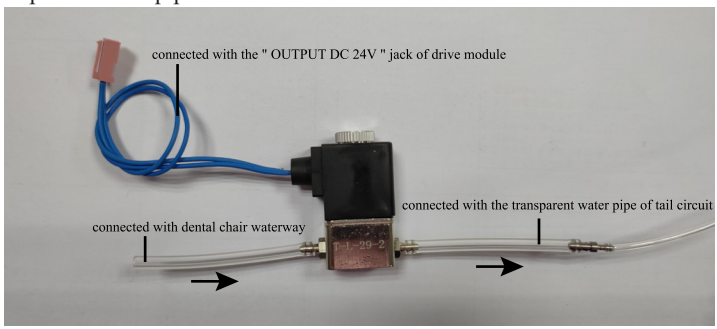


Figure 5 Schematic diagram of solenoid valve connection

3.3.3 Connection of drive module:

The interfaces are explained as follows:

1. MOTOR: Three-core motor control line connected with tail circuit;
2. LED: two-core LED control line interface connected with tail circuit;
3. OUTPUT DC 24V: Two-core cable connecting solenoid valve;
4. DISPLAYER: the control line connected to the display;
5. AIR: Connect the foot control air inlet pipe of the dental chair with the tee joint;
6. INPUT AC 24V: Connect the AC 24V power interface of dental chair;

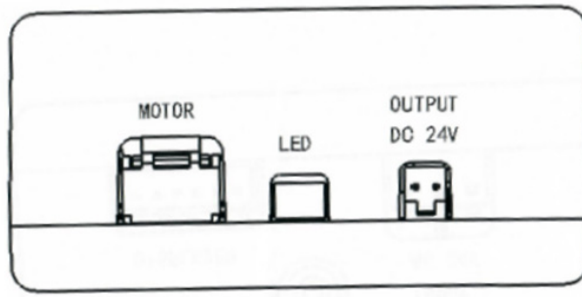


Figure 6 Schematic diagram of electric drive module connection

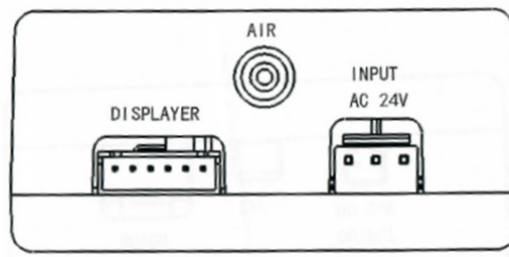


Figure 7 Schematic diagram of electric drive module connection

4. Host Interface

4.1 Main control interface

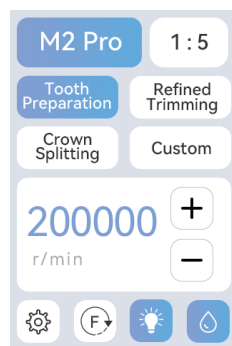


Figure 8

4.2 interface of setting

Figure 9

4.3 Air Pressure Calibration interface

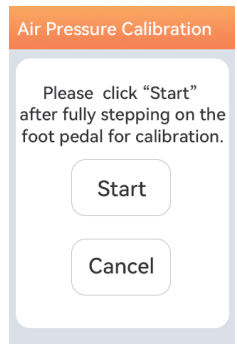


Figure 10

Enter the setting interface, click the calibration mode touch key, enter the air pressure calibration interface, click "Start", and the interface as shown in Figure 10 will pop up. Step on the foot to the end until 100% is displayed, and then release the foot to successfully calibrate.

4.4 Restore factory settings interface

Figure 11

Enter the settings interface, click the touch key to restore factory settings, enter the factory reset interface to confirm, click OK, the interface shown in Figure 11 will pop up, when you select "OK", restore the original factory settings parameters, when you select "Cancel", do not restore Factory settings.

5. Function and Operation

5.1 Install the Product correctly according to the Product installation steps, and the operator is facing the device screen.

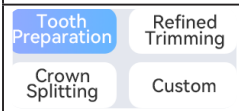
5.2 After the drive module is powered on, the display lights up and enters the main control interface (as shown in Figure 8).

5.3 The operation control of the electric motor is controlled by the pedal of the dental chair.

5.4 Before using the device for the first time, make sure the air pressure has been calibrated.(as shown in Figure 10)

5.5 Icon function description:

Icons	Name	Function
M2 Pro	Product model	Only display, no other function
1 : 5	Speed ratio selection	Choose to use the rotating speed ratio of bent mobile phone (16:1/1:1/1:4.2/1:5)
+	Speed adjustment	Accelerate
−	Speed adjustment	Decelerate
⚙	Setting	Enter the setting interface

	Positive and reverse adjustment	Control the forward and reverse rotation of the motor
	Light	Turn on/off the motor LED
	Internal water supply mode: Mode selection	Select the preset operation mode
	Internal water supply mode: Waterway switch	Control the opening and closing of waterways
	Restore factory settings	The system is restored to the factory setting state
	Calibration mode	Enter the pressure calibration interface

5.6 Basic function adjustment of main control interface

Figure 12

5.6.1 Key 1: Speed ratio selection; Touch the key "1" to select the speed ratio.

5.6.2 Key2 :Mode selection: You can store different speeds and ratios in these four modes, and it is automatically saved,the color of the button will deepen after selection.

5.6.3Key 3: Speed adjustment; Touch the key "3" to adjust the speed of the motor, and adjust the speed to accelerate and decelerate through the "+, -" touch keys of the speed.

5.6.4 Key 4: Touch the Key "4" to enter the setting control interface.

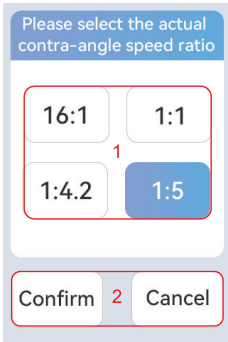
5.6.5 Key 5: Forward and reverse adjustment; Touch the key "5" to adjust the speed of forward and reverse rotation and switch each other.

5.6.6 Key 6: Touch the Key "6" to control the lighting/turning off of motor

LED lights.

5.6.7 Key 7: Touch the Key "7" to control the water on or off.

5.7 Basic function adjustment of speed ratio interface



5.7.1 Key 1: speed ratio; Touch the key to choice the speed ratio you want, the color of the button will deepen after selection.

5.7.2 Key 2 : Confirm or cancel.

5.8 Basic function adjustment of setting interface

Figure 13

5.8.1 Key 1: Touch the Key "1" , restore factory design;

5.8.2 Key 2: Touch key "2", enter the pressure calibration interface

5.8.3 Key 3: Confirm or cancel

6. Safety Precautions

Notice

6.1 For repair and purchase of spare parts, please contact the authorized supplier.

6.2 The accuracy of speed monitoring depends on the high precision performance of the mobile phone installed on the motor. If the mobile phone of other manufacturers is used, the actual speed value may not be displayed correctly. To ensure the actual matching display speed, please use the matching mobile phone.

6.3 Read this manual and fully grasp the functions of each part before.

6.4 Check the operation status of Dental electric motor before use, and confirm that there is no abnormal situation before use.

6.5 In case of permanent malfunction (excessive vibration, noise, heat generation, etc.) of the dental low-voltage electric motor, please shut it down immediately and return it to the authorized dealer.

6.6 Clean the control panel with a damp cloth, and cut off the power supply before cleaning.

6.7 The use of the Product must comply with the requirements of the relevant operating specifications and relevant regulations of the medical department, and is limited to the use of trained doctors or technicians.

6.8 The manufacturers and end users of the integrated treatment table are not allowed to disassemble the built-in Dental electric motor structure, so as not to affect the performance of the device. If you have special requirements, please contact us.

6.9 Our company specializes in the manufacture of medical devices. We are only responsible for the safety of the device when the maintenance, repair and alteration of the device is carried out by our company or an authorized distributor of our company, and the replacement parts are our woodpecker brand parts and are operated according to the instruction manual.

7. Cleaning, Disinfection and Sterilization

7.1 Cleaning

Remove the motor from the tail circuit, and then wipe the surface of the motor with a clean soft cloth. Remove any liquid residue from the motor surface and wipe it repeatedly for 5 times.

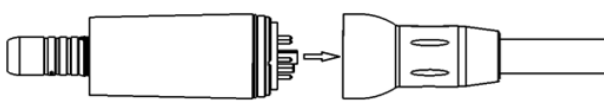


Figure 14 Schematic diagram of motor disassembly

7.2 Disinfection

Wipe the surface of the motor with a clean soft cloth dipped in methanol, ethanol or phenolic alcohol disinfectant;

Do not use disinfectants containing acetone, chloride and other substances;

It is strictly forbidden to immerse the motor in disinfectant;
Ultrasonic cleaning is not allowed.

7.3 Drying

Drying operation after cleaning and disinfection, it is recommended to use compressed air to dry.

7.4 Sterilization

Before sterilization, take sterilization plugs and sterilized aluminum sleeves on both ends of the motor, put the motor into a high pressure steam sterilization bag, and seal it, then the temperature is 134℃ (273℉), and the pressure is 2.0bar ~ 2.3bar (0.20MPa ~ 0.23MPa), high temperature and high pressure sterilization for not less than 4 minutes, and drying after sterilization. For sterilization of the dental contra-angle, please refer to the instruction manual of the dental contra-angle.

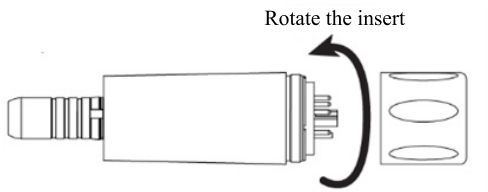


Figure 15 Schematic diagram of installing the motor sterilization sleeve

Figure 16 The installation of the motor sterilization sleeve is completed

Warning:

1. Before sterilization, a sterilization plug and a sterilized aluminum sleeve should be installed on the motor interface. The installation method is shown in the figure above.
2. The motor tail must be removed when the motor is sterilized.
3. Do not lubricate the motor inside with oil.
4. The motor can be sterilized repeatedly, at least 250 cycles of sterilization.
5. Autoclavable sterilization is Prohibited for other components (displays, drive modules, tail circuits, etc.), except for motors and contra-angles.

8.Troubleshooting

Fault	Possible reason	Treatment method
Error 02	Input voltage error	Check the circuit connection
Error 03	The motor is not installed Properly	Check whether the motor is connected Properly or replace it with a new one

Remarks: Users must use original accessories. Please contact local distributors or our company for purchase. It is forbidden to use related accessories of other brands, so as not to cause damage to electric motors or other dangers.

9. Storage and Transportation

9.1 The device shall be handled with care, away from the source, and shall be installed or stored in a cool, dry and ventilated place.
9.2 Do not mix with toxic, corrosive, flammable and explosive materials during storage.
9.3 Products should be stored in an environment with relative humidity of 10%~93%, atmospheric pressure of 70kPa~106kPa and temperature of -20℃~+ 55℃.
9.4 Excessive shock and vibration should be prevented during transportation, and should be handled with care.
9.5 It should not be mixed with dangerous goods during transportation.
9.6 Avoid sunlight, rain and snow during transportation.

10. After-sales Service

The device from the date of sale, due to quality Problems cannot work normally, by the warranty card by our company is responsible for maintenance, warranty period and warranty scope refer to the Product warranty card.
(Because this Product is a precision device, it is not recommended to disassemble it by yourself if there is a fault and need to be repaired. It should be returned to the factory or handled by a Professional).

11. Environment protection

Part name	Toxic or harmful substances or elements					
	Lead (Pb)	Mercury (Hg)	Cadmium (Cd)	Hexavalent chromium (Cr6+)	Polybrominated Biphenyls (PBB)	Polybrominated diphenyl ethers (PBDE)

Main unit	○	○	○	○	○	○
Motor handpiece	○	○	○	○	○	○
Dental contra-angle	○	○	○	○	○	○
Mechanical elements, including bolts, nuts, washers, etc.	○	○	○	○	○	○

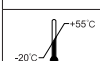
○: The content of the toxic and hazardous substance in all homogeneous materials of the part is below the limit requirement specified in SJ/T-11363-2006 "Limit Requirements for Toxic and Hazardous Substances in Electronic Information Products".

×: The content of toxic and harmful substances in at least one homogeneous material of the component exceeds the limit required by SJ/T11363-2006.

(This Product meets the EU RoHS environmental Protection requirements; At present, there is no mature technology to replace or reduce the lead content in electronic ceramics, optical glass, steel and copper alloy.)

According to the Administrative Measures on Restricting the Use of Harmful Substances in Electrical and Electronic Products, the Regulations on the Management of Recycling and Disposal of Waste Electrical and Electronic Products and related standards, please observe the safety and use precautions of the Products, and recycle or dispose of the Products in an apPropriate way according to local laws and regulations after the Products are used.

12. Symbol instruction

	Follow the operating instructions		Autoclave sterilization
	For indoor use only		Date of Production
	Be afraid of rain	IPX0	Ordinary device
	Recyclable		Humidity limitation range for storage is 10% ~ 93%
	Fragile items, handle with care	CE 0123	CE marked product
	Storage conditions, the temperature range is -20℃ ~ +55℃		

	Storage conditions, the atmospheric range is 70kPa ~ 106kPa
	The Product complies with the WEEE directive
EC REP	Authorised Representative in the EUROPEAN COMMUNITY

13. EMC-Declaration of comformity

The ME EQUIPMENT or ME SYSTEM is suitable for Professional healthcare facility environment and so on.

Warning: Don't near active HF surgical equipment and the RF shielded room of an ME system for magnetic resonance imaging, where the intensity of EM disturbances is high.

Warning: Use of this equipment adjacent to or stacked with other equipment should be avoided because it could result in improper operation. If such use is necessary, this equipment and the other equipment should be observed to verify that they are operating normally.

Warning: Use of accessories, transducers and cables other than those specified or provided by the manufacturer of this equipment could result in increased electromagnetic emissions or decreased electromagnetic immunity of this equipment and result in improper operation."

Warning: Portable RF communications equipment (including peripherals such as antenna cables and external antennas) should be used no closer than 30 cm (12 inches) to any part of the Dental Electric Motor (model name: M2 Pro), including cables specified by the manufacturer. Otherwise, degradation of the performance of this equipment could result.

NOTE The EMISSIONS characteristics of this equipment make it suitable for use in industrial areas and hospitals (CISPR 11 class A). If it is used in a residential environment (for which CISPR 11 class B is normally required) this equipment might not offer adequate protection to radio-frequency communication services. The user might need to take mitigation measures, such as relocating or re-orienting the equipment.

If any: a list of all cables and maximum lengths of cables (if applicable), transducers and other ACCESSORIES that are replaceable by the RESPONSIBLE ORGANIZATION and that are likely to affect compliance of the ME EQUIPMENT or ME SYSTEM with the requirements of Clause 7 (EMISSIONS) and Clause 8 (IMMUNITY). ACCESSORIES may be specified either generically (e.g. shielded cable, load impedance) or specifically (e.g. by MANUFACTURER and EQUIPMENT OR TYPE REFERENCE).

If any: the performance of the ME EQUIPMENT or ME SYSTEM that was determined to be ESSENTIAL PERFORMANCE and a description of what

the OPERATOR can expect if the ESSENTIAL PERFORMANCE is lost or degraded due to EM DISTURBANCES (the defined term "ESSENTIAL PERFORMANCE" need not be used).
1. all necessary instructions for maintaining BASIC SAFETY and ESSENTIAL PERFORMANCE with regard to electromagnetic disturbances for the excepted service life.
2. Dental Electric Motor do not contains magnetically sensitive electronic components and circuitry.
3. Guidance and manufacturer's declaration -electromagnetic emissions and Immunity.

Table 1

Guidance and manufacturer's declaration - electromagnetic emissions	
Emissions test	**Compliance**
RF emissions CISPR 11	Group 1
RF emissions CISPR 11	Class B
Harmonic emissions IEC 61000-3-2	Class A
Voltage fluctuations/flicker emissions IEC 61000-3-3	Complies

Table 2

Guidance and manufacturer's declaration - electromagnetic Immunity		
Immunity Test	**IEC 60601-1-2 Test level**	**Compliance level**
Electrostatic discharge (ESD) IEC 61000-4-2	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air	±8 kV contact ±2 kV, ±4 kV, ±8 kV, ±15 kV air
Electrical fast transient/burst IEC 61000-4-4	Power supply lines: ±2 kV input/output lines: ±1 kV 100 kHz repetition frequency	Power supply lines: ±2 kV input/output lines: ±1 kV 100 kHz repetition frequency
Surge IEC 61000-4-5	line(s) to line(s): ±0.5, ±1 kV line(s) to earth: ±0.5, ±1, ±2 kV	line(s) to line(s): ±0.5, ±1 kV
Voltage dips, short interruptions and voltage variations on power supply input lines IEC 61000-4-11	0% 0.5 cycle At 0º, 45 º, 90 º, 135 º, 180 º, 225 º, 270 º and 315 º 0% 1 cycle And 70% 25/30 cycles Single phase: at 0 0% 250 cycle	0% 0.5 cycle At 0º, 45 º, 90 º, 135 º, 180 º, 225 º, 270 º and 315 º 0% 1 cycle And 70% 25/30 cycles Single phase: at 0 0% 250 cycle
Power frequency magnetic field IEC 61000-4-8	30 A/m 50Hz/60Hz	30 A/m 50Hz/60Hz
Conduced RF IEC61000-4-6	150KHz to 80MHz: 3Vrms 6Vrms (in ISM bands) 80% Am at 1kHz	150KHz to 80MHz: 3Vrms 6Vrms (in ISM bands) 80% Am at 1kHz
Radiated RF IEC61000-4-3	3 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz	3 V/m 80 MHz – 2,7 GHz 80 % AM at 1 kHz

Proximity magnetic fields IEC 61000-4-39	30 kHz: 8A/m 134.2 kHz: 65A/m 13.56 MHz: 7.5A/m	Not application
NOTE U_T is the a.c. mians voltage prior to application of the test level.		

Table 3

Guidance and manufacturer's declaration - electromagnetic Immunity								
	Test Frequency (MHz)	**Band (MHz)**	**Service**	**Modulation**	**Maximum Power(W)**	**Distance (m)**	**IEC 60601-1-2 Test level (V/m)**	**Compliance level (V/m)**
Radiated RF IEC61000-4-3 (Test specifications for ENCLOSURE PORT IMMUNITY to RF wireless communications equipment)	385	380 – 390	TETRA 400	Pulse modulation 18 Hz	1,8	0,3	27	27
	450	430 – 470	GMRS 460, FRS 460	FM ± 5 kHz deviation 1 kHz sine	2	0,3	28	28
	710 745 780	704 – 787	LTE Band 13, 17	Pulse modulation 217 Hz	0,2	0,3	9	9
	810 870 930	800 – 960	GSM 800/900, TETRA 800, iDEN 820, CDMA 850, LTE Band 5	Pulse modulation 18 Hz	2	0,3	28	28
	1720 1845 1970	1700 – 1990	GSM 1800; CDMA 1900; GSM 1900; DECT; LTE Band 1, 3, 4, 25; UMTS	Pulse modulation 217 Hz	2	0,3	28	28
	2450	2400 – 2570	Bluetooth, WLAN, 802.11 b/g/n, RFID 2450, LTE Band 7	Pulse modulation 217 Hz	2	0,3	28	28
	5240 5500 5785	5100 – 5800	WLAN 802.11 a/n	Pulse modulation 217 Hz	0,2	0,3	9	9

Table 4

Guidance and manufacturer's declaration - electromagnetic Immunity		
Test frequency	**Modulation**	**IMMUNITY TEST LEVEL (A/m)**
30 kHz	CW	8
134,2 kHz	Pulse modulation[a] 2,1 kHz	65[b]
13,56 MHz	Pulse modulation[a] 50 kHz	7,5[b]
a) The carrier shall be modulated using a 50% duty cycle square wave signal. b) r.m.s., before modulation is applied.		

Scan and Login website
for more information

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E-mail: woodpecker4@glwoodpecker.com
EC REP MedNet EC-Rep GmbH
Borkstrasse 10 · 48163 Muenster · Germany

Cut along the dashed line

Dental Electric Motor Warranty Card

Name of Customer		(Ⅰ) For Distributor
Address Details		
Postal Code		
Tel		
Model		
Main Unit No.		
Handpiece No.		
Contra-angle No.		
Purchase Date		
Contact Person		
Date	Maintenance Record	Repairer

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Website: http://www.glwoodpecker.com

Distributor:

Seal

Dental Electric Motor Warranty Card

Name of Customer		(Ⅱ) Return to Manufacturer
Address Details		
Postal Code		
Tel		
Model		
Main Unit No.		
Handpiece No.		
Contra-angle No.		
Purchase Date		
Contact Person		
Date	Maintenance Record	Repairer

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Website: http://www.glwoodpecker.com

Distributor:

Seal

Warranty Instruction

Ⅰ Period validity:

Within one year from the date of sale, the main unit, handpiece and contra-angle can be repaired for free by providing warranty card.

Ⅱ Range of warranty:

Within the warranty period of validity, we are responsible for any troubles caused by quality problems or products technique and structure.

Ⅲ The following are beyond our warranty:

1. The damage caused by disobeying the operation instruction or lack of the needed condition.
2. The damage caused by unsuitable operation or disassembly without authorization.
3. The damage caused by unadvisable transportation or preservation.
4. There isn't the seal of distributor or the warranty card isn't filled in completed.

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