

LED HIGH SPEED HANDPIECE

USER MANUAL



Item no. 17402323

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Please read this Operation Manual carefully and file for future reference.

1. PRODUCT PARTS

Consists of handpiece head, handle, caudal thread, turbine.

2. WORKING CONDITIONS

1. Air pressure 0.25 – 0.30 MPa, must be filtered.
2. Use high speed dental burr with shaft dimension Φ 1.59 ~ 1.60 mm and roughness less than 0.8 μm .
3. The amount of handpiece spray or water spray should be able to adjusted.

3. SPECIFICATION

1. Can be repeatedly sterilized in high temperature and pressure.
2. Operate the handpiece at pressures of 25 to 30 psi. Engineered to attain speeds of 300,000 at 25 psi and 400,000 at 30 psi.
3. Clamping force of handpiece is: 20 – 45 N.
4. LED handpiece with generator series, LED white light, longevity 10,000 hours.

4. PRODUCT SCOPE

Only used for high-speed dental burrs.



Warning!

- Consider safety first, please be careful to use it with full attention.
- Limit use to dentists who hold dental treatment qualifications.
- It's strictly forbidden to carry out unauthorized decomposition and reconstruction.
- Please run testing of the handpiece outside of the patients mouth beforehand. If anything abnormal is felt, please stop using immediately and contact our after-sales center.
- If it begins to start feeling abnormal during use, please stop using immediately and contact our after-sales center.
- A high pitched noise will occur when using a center-vibration or a bent burr. This noise may also occur when the handpiece has worn bearings. Using for a long time in this state will be harmful to peoples hearing. DO NOT use a vibrating or bent burr, if you begin to hear a high pitch noise please replace the shaft core immediately.
- Do not use a bent, cracked, deformed or poor quality burr. If these are used it may cause something to snap, or fly off and cause an accident during the operation process.
- Please ensure the burr chuck is clean. If contaminants get inside the burr chuck this may cause the burr clamping to weaken or shaft core vibration.
- Please run the burr under the advised rotation-speed by burr manufacturers.
- Please do not drop the handpiece
- Please install a burr or a blank burr before running the handpiece.
- Also remember to install a burr or a blank burr when not in use.
- ONLY remove the burr and handpiece when it has completely stopped running.

5. PRODUCT INSTALLATION

Connect the tubing (4 hole or 2 hole), if there is a quick coupling attachment, insert the quick coupling head.



Note!

- Connect the required tubing according to the model of each handpiece.
- Make sure to connect correctly, make sure to fix tightly, so it can be used.

1. To Insert quick coupling

Insert quick coupling into socket connection of the high speed handpiece, push it forward, close tightly and firmly.



Note!

For quick coupling with decorative pattern, make sure to move back before you push forward, then can be closed tightly and firmly.

2. Extract the quick coupling

Hold the handpiece body and quick coupling and drag them in opposite directions.



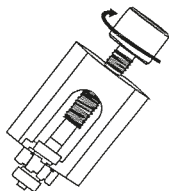
Note!

- For quick coupling with decorative pattern, holding the decorative pattern quick coupling, drag it backwards.
- Make sure to connect correctly, make sure to fix tightly, to allow use.

6. BEARING DETACHMENT AND INSTALLATION

Bearing Detachment

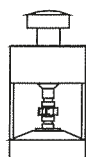
1. If the ball bearing is damaged but the outer ring has NOT dropped off, please insert the notch of the bearing detaching tool between the bearing and rotor, then rotate the screw bolt tool clockwise until the bearing is removed.
2. If the ball bearing is damaged and the outer ring has dropped off, please insert the notch of the bearing detaching tool at the inner ring path of ball bearing, then rotate the screw bolt tool clockwise until the inner ring is removed.



Bearing Installation

Firstly pre-install the bearing on the turbine on the turbine spindle. Have the shield side facing outside, then put it on the bearing installation tool. Turn the upper side of inner ring of bearing gently with the push axle, ensure the bearing is placed in the middle. Then press middle. Then press of bearing gently with the push axle, ensure the bearing is placed in the middle. Then press the push axle with a finger so that the bearing is close to the turbine.

Remark: The tool required for bearing repair is not included, it can be provided by your supplier. This product can only be repaired by the manufacturer or an authorized person.



7. REPLACEMENT OF TURBINE

Removing old Turbine

Mount a blank burr in the chuck, then turn the head cap anti-clockwise and remove the head cap. Push the blank burr, this allows the turbine to be easily removed from the head.

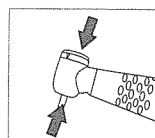
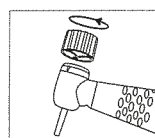
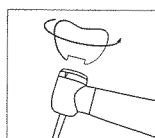
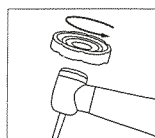
Installing new Turbine

Insert the new turbine into handpiece head, make sure to align the small knob pin on the turbine with the groove inside the front of the head, to ensure a proper fit. Mount and screw the head cap with your fingers until tight. You can tighten further with the head cap wrench.



Note!

When replacing head cap, DO NOT use the wrench first. Because the threads are very fine and can be easily cross threaded.



8. PROPER BURR

- Do not use a bent, damaged or non-circular burr.
1. Circlip type thread (change the burrs with wrench)
 - a. Lift up the handle of the spanner and pull the spanner on the head of the handpiece.
 - b. Push the cylindrical handle of spanner into the axle hole of the handpiece head. Take out the burr after rotating the spanner around 1/4 turn anti-clockwise (please do not rotate the spanner over a quarter turn).
 - c. Carry out steps in reverse to install the burrs.

wrong



Please make sure the burr is inserted properly and the amount of the burr shaft that is gripped is not too short.

right

About 3 mm



The burr can be used properly if there is a 3 mm gap between the burr and the end of the hole. Failing this the burr will appear to vibrate. It can also speed up the damage of the bearings and spanner if the burr is not properly inserted.



Note!

As the picture shows, the gripped part of the burr should not be too short; otherwise the bearings cannot bear the power smoothly/evenly and in turn can accelerate the damage of the bearings.

Do not operate the handpiece without a burr, otherwise the chuck could be thrown and the bearings could be damaged.

2. Press-button type (push button burr-exchange type)
 - a. When unloading the burr, press the center of the handpiece head firmly with your thumb, take out the burr with another hand simultaneously as shown in picture.
 - b. When loading the burr, insert it in to the chuck hole (about 1 – 2 mm). Then press the center of head firmly with your thumb, push the burr in with another hand simultaneously.



Note!

If severe vibration occurs when cutting (possibly during burring bone and sectioning the tooth crown) sometimes the burs might not be easily to be taken off.

In this case we could use an EG wrench to press the middle of the handpiece head, and then pull the burr out using pliers. While cutting if strong vibration occurs, please check the condition of the burrs to avoid the problem above.

9. MAINTENANCE

- Daily lubrication applied to the bearing is absolutely essential for extending it's life.
- After daily use, spray lubricant for 1 to 2 seconds by inserting lubricant nozzle all the way into air drive tube.
- If the work is heavy, lubrication should be taking place after every morning and afternoon use.
- Lubricate before autoclave.

10. AUTOCLAVE PROCEDURE

After every use, carry out the sterilizing procedure as follows.

- Remove burr from handpiece and clean handpiece by scrubbing with a toothbrush and then use a towel to dry handpiece.
- Lubricate handpiece.
- Place the handpiece in an autoclave pouch and date.
- Start: 20 minutes at 121 °C, 15 minutes at 132 °C.

11. TRANSPORTATION AND DEPOSITED CONDITION

Environmental temperature: -40 °C – +50 °C; Relative humidity; ≤ 80 %;

The scope of air pressure: 500 – 1,060 hPa.

12. TROUBLE SHOOTING

Trouble	Possible Cause	Solution
Loud noise, low rotation speed, cutting force decreases or handpiece fail to run	Ball bearing damages	Replace ball bearing
Handpiece fail to spray mist	Spray hole blockage	Clean with probe
Handpiece water leakage	O-ring and washer aged	Replace aged parts
Normal noise but low rotation	Low air pressure	Adjust air pressure
Burr drops out or fail to hold burr	Incompatible burr or chucking system damages	Replace new burr or send it to maintenance center
Burr wobbling, low cutting force	O-ring or ball bearing damages	Replace spare parts

Our service center can offer you technical assistance.

13. GUARANTEE

Our company grants the user a 6 months guarantee for its complete product range, (except ball bearing) from the date of invoice issued. Maintenance past the term of guarantee will be at the customer's charge.

Our company will not be responsible for damage or injury resulting from:

- Excessive use
- Improper manipulation of the product, or modification carried out by persons not authorized by our company
- Failure to follow the instruction to install, operate and maintain the handpiece
- Damage from chemical, electrical or electrolysis due to improper autoclaving and storage
- Improper working pressures are set

If the handpiece fails to work well after parts have been changed, contact the service center which is approved by company.

14. STANDARD SYMBOLS

The instrument label will show standard symbols as follows:



Important notice!



Attention, consult accompanying documents



Class II equipment



Certified to MDD93/42/EEC



Autoclave



Type B applied part



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