

Operation Manual

Airturbine Handpiece

TCP-C5PM & TCP-C5PB TC-C4PM & TC-C4PB
TCP-450M & TCP-450B TC-40PM & TC-40PB

CAUTION This product is designed for dental use. Its operation and maintenance should be done under dentist's supervision.

Thank you for choosing our Airturbine Handpiece. This Handpiece, carefully produced, based on both Japanese advanced technology and ND's experienced craftsmanship since its start in 1956, boasts of its high quality. Please read this manual well before use. We hope that our product with proper use wins your full satisfaction.

- Maximum Rotation Speed : 400,000rpm (2kg/cm²)
- Maximum Air-Pressure : 2.2 kg/cm²
- Maximum Air-Consumption : 35 L/min
- Applicable Bur : FG type ISO standard (φ1.60)
: Minimum Fitting Length of Shank : 9mm
: Maximum Overall Length : 23mm
: Maximum Operating Diameter : 3mm
- Chuck Ability : Force to Withdraw : more than 2.2kg
: Bur Concentricity : less than 0.01
- Connection with Hose : TCP-C5PM, TC-C4PM, TCP-450M, TC-40PM : ISO standard B-type (4-holes)
: TCP-C5PB, TC-C4PB, TCP-450B, TC-40PB : ISO standard A-type (2-holes)
- Sterilization : 135°C autoclave for 20 min.

CAUTION Drop of Airturbine, impact or excessive force on the bur connected with the Airturbine, could cause damage on internal structure or ball-bearing, which will lead to performance failure of the equipment. Warranty is invalid for the trouble caused by those acts.

CAUTION After bur is installed, please test-run the handpiece with no load, in order to check any abnormality, before actual use on patient. If any abnormal noise or vibration is noticed, please stop its use immediately and have the handpiece either repaired or exchanged with new one. Failure to take the action may cause serious damage on ears or hands of the user, or patient body by broken bur.

1. Connection with Hose

Check the connection type of Airturbine matches that of hose. Screw tight a hose coupler at the back end of Airturbine. Make trial run at low speed to check proper connection without air- and/or water leak.

2. Bur Change

A. TCP-C5PM, TCP-C5PB, TCP-450M, TCP-450B

- Removal : Push the button at back head to open the chuck, and pull off the bur.
- Insert : Push the button at back head to open the chuck, and insert a clean bur.

Verify proper lock by pulling the bur.

Note : Insert bur at least 9mm deep into the chuck.

B. TC-C4PM, TC-C4PB, TC-40PM, TC-40PB

- Removal: Mount the Bur Changer with the knurled knob pulled out. Push the knob into the head and make a 1/4 turn in the counter-clockwise direction. Then pull off the bur.

- Insert: To insert a clean bur, turn the knob in the clockwise direction with the knob pushed into the head. Verify proper lock by pulling the bur.

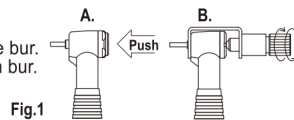


Fig.1

CAUTION To keep Airturbine under good condition, lubricate oil specifically made for dental handpiece should be used. Use the spray as instructed by its manufacturer. Lubrication should be done every day.

1. Lubrication

Lubrication should be done every-time before autoclave, as well as in time that water and /or dust gets inside. Spray lubrication could also make inside cleaning. It should be done twice each time. Spray lubricate oil in the drive-air tube at the back end Airturbine. (It has the same effect with spray lubrication that air, with the hose connected, is supplied after 2 drop of lubricate oil is placed at the drive air tube.)

Maintenance

CAUTION Do not touch Airturbine handpiece which could be pushed away by air-pressure of spray. Accidental drop of the equipment could cause damage on it.



2. Surface Cleaning

Wipe off dirt with tool such as tooth brush, and scrub the surface by clean cloth. Lubrication should be done every time after surface cleaning. Although it has effect to apply a little alcohol on the cloth, excessive amount, by seeping inside Airturbine, could take off the lubricate oil on ball-bearing. In that case, lubricate again.

3. Inside Cleaning

Take the same steps with the process of spraying lubricate oil. Operate trial run at low speed every after lubrication. In order to drive dirt out of exhaust air tube, repeat the process at least twice. Do the cleaning once a day.

4. Drain and Air-filter

Airturbine is precision equipment. Supplied air must be both dried and purified. To keep obtaining clean air, drive water out of the drain device installed at dental unit and the compressor once a week.

CAUTION Fine dust particle and moisture, if included in supplied air, could cause damage on ball-bearing.

5. Cartridge Replacement

Cartridge should be replaced with new one every 6 months, as the way followed;

Apply the wrench, the standard accessory, on the slit of head cap, and turn counter-clockwise to unscrew the cap. Slide out the cartridge backward by pushing it from the front. Push in new cartridge, with its projection sliding along with the groove inside head. Screw the cap with the fingers, then with the wrench.

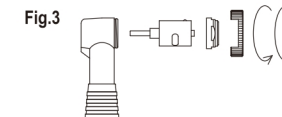


Fig.3

CAUTION Do not put Airturbine through ultrasonic disinfection solution cleaning procedure. Do not use cold sterilization nor dry heat.

- Clean the surface. Refer to the section, "MAINTENANCE, 2. Surface Cleaning".
- Lubricate with spray. Refer to the section, "MAINTENANCE, 1. Lubrication".
- Autoclave at the temperature 132 – 135°C (2Mpa) for about 20min.
Note : Prevent the bur on Airturbine from hitting others in time of autoclave.
- Take the Airturbine out of the Autoclave and dry it in room temperature.

CAUTION Do not operate Autoclave dry cycle at the temperature higher than 135°C.

- After the Airturbine is completely dried, lubricate it twice. Refer to the section, "MAINTENANCE, 1. Lubrication".

Warning

- When water gets inside Airturbine, lubricate more than three times.
- Do not run Airturbine without locking bur.
- Do not run Airturbine with chuck opened.
- For safety, mount Test Bur, the standard accessory, on the Airturbine, when it is not in use.
- Do not use the bur with its working diameter more than 3mm.

CAUTION In high speed use, the bur with large working diameter could fly off and cause serious damage on human body.

Warranty

Trouble, which occurs due to material defect or despite with correct use as the instruction manual states, during the period specified below, is covered under warranty by the manufacturer. Quality deterioration caused by drop of Airturbine will be excluded from warranty coverage.

Cartridge : 3 months
Sheath and others : 1 year

NAKAMURA DENTAL INDIA PVT. LTD.

F-91, Sector 8, Noida-201301, U.P, India
Ph. No: +91 120 4122761
Website: www.ndindia.in

Specification

How to use

Maintenance