CAUTION

- Place the most priority of the patient's safety.
- For professional use only. Do not make wrong use of the handpiece.
- Do not disassemble, nor alter the handpiece.
- Check the vibration, noise and overheating outside the patient's oral cavity. If any abnormalities are found, stop using immediately and contact your dealer.
- After used and the handpiece may become noisy, replace the cartridge with a new one manufactured by NSK. Failure to replace the cartridge may cause accidents or impair operator's hearing.
- Depressing the push-button while handpiece bur is in rotation will result in OVERHEATING of the handpiece head. Special caution must be exercised during use to keep cheek tissue away from the push-button of the handpiece. Contact with cheek tissue may cause the push-button to depress and injury to the patient may occur.
- Do not drop, hit, or subject to excessive shock.
- Do not use bent, damaged, or sub-standard burs. The shank could be bent or broken even within the recommended speed.
- Always keep the bur shank clean. Entry of debris into the chuck could cause bur run-out and the bur could not be mounted into the chuck.
- Do not use non-standard burs. The ISO standard shank diameter is ø1.59 - ø1.60 mm.
- Do not use bent, worn, damaged, or non-concentric burs.
- Always use within the bur manufacturer’s recommended allowable speed.
- Always use clean burs. Uncleaned burs may allow debris to build up inside chuck, causing bur retention or premature chuck wear.
- Insert the bur all the way into the chuck until it stops with the push-button fully depressed.
- Do not exceed the recommended air pressure. This is important to prevent higher speed which could cause breaking of the bur and premature bearing failure.

2. Quick Connect Coupling

(1) Quick Connect coupling to handpiece hose. Align the tubes at the back end of the coupling with the corresponding holes in the hose connector. Insert the coupling into the hose connector and tighten the hose nut by turning it clockwise.

(2) Connecting coupling to the handpiece. Insert the coupling into the handpiece with the connector ring pushed backward as shown in Fig. 1.

(3) Disconnecting handpiece from coupling. When the handpiece is to be disconnected from the coupling for autoclaving or changing the handpiece, slide back the connector ring, and the handpiece pops out.

3. SUPPLY AIR PRESSURE

Set the pressure at the arrow, Fig. 2, to 0.2-0.25MPa (2.0-2.5kgf/cm2).

CAUTION

- Do not exceed the recommended air pressure. This is important to prevent higher speed which could cause breaking of the bur and premature bearing failure.

4. CAUTION ON BURS

- Do not use non-standard burs. The ISO standard shank diameter is ø1.59 - ø1.60 mm.
- Do not use bent, worn, damaged, or non-concentric burs.
- Always use within the bur manufacturer’s recommended allowable speed.
- Always use clean burs. Uncleaned burs may allow debris to build up inside chuck, causing bur retention or premature chuck wear.
- Insert the bur all the way into the chuck until it stops with the push-button fully depressed.
- Do not use short shank burs.

5. CHANGING BURS

(1) Bur Removal

Push the push button in the head cap with thumb to click, and remove the bur. (Fig. 3)

(2) Bur Mounting

Insert the bur into the head until it stops. Push the push button and further insert the bur all the way into the head until it stops.

CAUTION

In case of cutting under heavy vibrations such as in crown removal, there may be a case where the bur is difficult to remove with ease. In such a case, pull out the bur with pliers or the like with the push button kept pushed. This case may be prevented if you often relocate position of the bur in the chuck.

5. LUBRICATION

Supply PANA SPRAY Plus or lubrication oil after each use and/or before autoclaving.

- PANA SPRAY Plus

Attach Spray Nozzle onto the PANA SPRAY Plus.

Shake the spray can well to mix the oil and the propellant.

Insert the Spray Nozzle into the handpiece back end.

Spray for 2-3 seconds.

CAUTION

- Be sure to hold the handpiece firmly to prevent the handpiece from slipping out of hand by the spray pressure when lubricating.
- Supply lubricant until it comes out of the handpiece head.
- Hold the PANA SPRAY Plus upright.

HIGH SPEED AIR TURBINE HANDPIECE PANA-MAX QD Specifications

<table>
<thead>
<tr>
<th>Model</th>
<th>PAX-QD SU</th>
<th>PAX-QD TU</th>
</tr>
</thead>
<tbody>
<tr>
<td>Head Type</td>
<td>Standard</td>
<td>Torque</td>
</tr>
<tr>
<td>Rotation Speed</td>
<td>380,000~480,000min⁻¹</td>
<td>320,000~380,000min⁻¹</td>
</tr>
<tr>
<td>Air Pressure</td>
<td>0.2-0.25MPa (2.0-2.5kgf/cm²)</td>
<td>0.2-0.25MPa (2.0-2.5kgf/cm²)</td>
</tr>
</tbody>
</table>

Supply PANA SPRAY Plus or lubrication oil after each use and/or before autoclaving.

CAUTION

- DO NOT slide back the connector ring while the handpiece is under air pressure. The handpiece may be ejected from the coupling as a result of the pressurization.
8. CARTRIDGE REPLACEMENT

(1) Removing Cartridge
- Install the turbine head on the test bur.
- Fit the head cap wrench onto the head and remove the head cap. (Fig. 6)
- Remove the head cap, and remove the cartridge by pushing up on the test bur. (Fig. 7)
- Use the needle to remove the O-ring in the head cap. (Fig. 8)

(2) Mounting Cartridge
- Set the wave washer in the head cap. Direction doesn’t matter. (Fig. 9)
- Install the new O-ring in the head cap. Apply a small amount of turbine oil to the O-ring before installation. Needles should never be used for installation. (Fig. 10)
- Install the cartridge in the head by inserting it vertically. (Fig. 11)
- Screw the head cap with fingers until it stops, then hold the tip of the test bur and make sure if it’s tightly and securely locked by giving a pull-and-push test. (Fig. 12)
- Fasten the head cap to the head cap wrench until it’s fixed firmly.

7. CLEANING AND STERILIZATION

This handpiece can be washed via Thermo Disinfector.
Sterilization by autoclaving is recommended.

1. CLEANING
- Wash the handpiece with soap and water.
- Rinse with water and dry.
- Use a disinfectant solution or a disinfectant wipe.

2. STERILIZATION
- Sterilization is required first time you use and after each patient as noted below.
- Autoclaving: Brush off dirt and wipe clean with alcohol-soaked cloth.
- Remove PANA-MAX QD handpiece from the hose and lubricate with PANA SPRAY Plus as described in 5. LUBRICATION.
- Insert the handpiece in a sterilization pouch and seal it.
- Autoclavable up to a max. 150°C.
- Keep the handpiece in the sterilization pouch to keep it clean until you use it.
- Sterilization at 121°C for more than 15 minutes is recommended by EN13060 or EN ISO17665-1.

Do not use the handpiece in a cleaning solution.
- Do not expose the handpiece to water or care liquid solutions.
- Do not use ultrasonic cleaning devices.
- Do not use pressure water or steam to clean the handpiece.

9. Replacing Worn O-ring in the Coupling

Worn or damaged O-ring may cause air or water to leak. When water is found in the exhaust air or water leak from the coupled point, replace four O-rings as shown in Fig. 13.

10. Non-Retraction Valve

A non-retraction valve is equipped in the Q.D. Coupling Joint, which shuts off the water retraction right at the handpiece head, to prevent oral fluids drawn into the water line.

To replace the valve, remove the back-end gasket. Pull the water tube, which is the valve. (Fig. 14)

CAUTION
- Do not autoclave the handpiece, even when it is bagged, together with other instruments, from which chemicals are not sufficiently cleaned. This is to avoid discoloration and/or damage to the plating of the handpiece.
- Do not wipe with, or clean or immerse in, high acid water or sterlizing solutions.

9.03.005 S

The EU directive 93/42/EEC was applied in the design and production of this medical device.