

FPB / FFB / NRS2

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

MADE IN JAPAN
[OM-C0364E]001



This operation manual is for :

FPB-EC / ER4 / ER10 / ER16 / ER64 / ECM / ER4M / ER10M / ER16M / ER64M
 FFB-EC / ER4 / ER10 / ER16 / ER64 / ECM / ER4M / ER10M / ER16M / ER64M
 NRS2-EC / ER4 / ER10 / ER16 / ER64 / ECM / ER4M / ER10M / ER16M / ER64M

⚠ Caution

- When operating the handpiece always consider the safety of the patient.
- The handpiece is designed only for dental clinical use.
- Do not attempt to disassemble the handpiece nor tamper with the mechanism.
- Check the vibration, noise and overheating outside the patient's oral cavity before use. If any abnormalities are found, stop using immediately and contact your dealer.
- Should the handpiece function abnormally, cease operation immediately and return the handpiece to the dealer for repair.
- 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 allow any impact on the sheath. Do not drop the handpiece.
- 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, looseness and the bur could not be mounted inmost.
- Do not exceed the drive motor speed recommended by the bur manufacturers.
- Do not operate the handpiece without the bur or bur blank.
- Always mount the bur or the bur blank even when the handpiece is not in use.
- Do not connect or disconnect the handpiece until the drive motor has completely stopped.
- Do not wipe with, or clean or immerse in, high acid water or sterilizing solutions.

1. Specifications

Model	FPB-Y	FFB-Y	NRS2-Y
Gear Ratio	1:1	1:1	10:1 Reduction
Allowable Max. Speed (Motor)	40,000 min ⁻¹	40,000 min ⁻¹	30,000 min ⁻¹
Bur Size	ISO 1797-1 Type 1	ISO 1797-1 Type3	ISO 1797-1 Type 1

2. Mounting and Removing Bur

⚠ Caution

Do not connect or disconnect the handpiece until the drive motor has completely stopped.

(1) Mounting

A) FPB/NRS2 (Latch Bur)

Mount the handpiece to the Motor.

Insert the latch bur into the head. Lightly turn the bur until it engages with the latch mechanism. Push it inward to click. (Fig. 1)

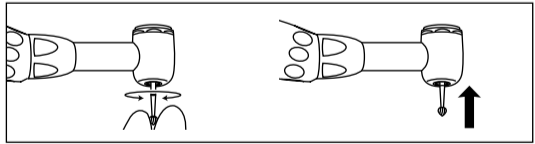


Fig. 1

B) FFB (FG-Bur)

Mount the handpiece to the Motor.

Insert the bur into the head. Push the button and insert the bur all the way into the head. (Fig. 2)

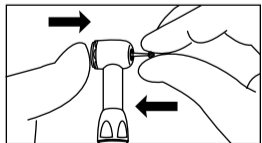


Fig. 2

⚠ Caution

After the bur is locked in place, lightly pull out the bur to make sure the bur is locked. (Fig. 3)

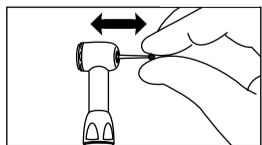


Fig. 3

(2) Removal

Push the push button with a thumb, and the bur is removed. (Fig. 4)

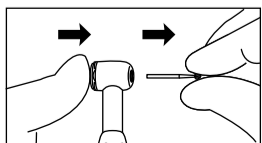


Fig. 4

3. Lubrication

Supply PANA SPRAY Plus / PANA SPRAY or Care3 Plus after each use and/or before autoclaving.

■ PANA SPRAY Plus / PANA SPRAY (Fig. 5)

- ① Mount the E-type spray nozzle into the spray port.
- ② Shake the can 3-4 times to well mix lubricant and propellant.
- ③ Insert the E-type spray nozzle in the rear of the handpiece and spray for approximately 2-3 seconds until the oil comes out of the handpiece head.

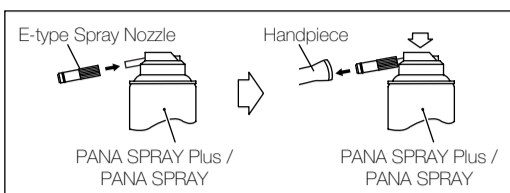


Fig. 5

⚠ 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 (for approx. 2 seconds).
- Hold the PANA SPRAY Plus / PANA SPRAY can upright.

■ Care3 Plus

NSK Care3 Plus automatic handpiece cleaning and lubrication system
After connecting the handpiece to the correct adaptor, activate the Care3 System per the Care3 System instructions.

4. Cleaning and Sterilization



The products listed below are washable with Thermo Disinfectant.
FPB- ECM / ER4M / ER10M / ER16M / ER64M
FFB- ECM / ER4M / ER10M / ER16M / ER64M
NRS2- ECM / ER4M / ER10M / ER16M / ER64M

Steam autoclave is recommended. Sterilization is required first time you use and after each patient as noted below.

■ Autoclave Procedure :

- ① Scrub dirt and debris from the handpiece, and wipe clean with alcohol-immersed cotton swab or cloth. Do not use a wire brush.
 - ② Lubricate with PANA SPRAY Plus / PANA SPRAY. Refer to 3. Lubrication.
 - ③ Insert into an autoclave pouch. Seal the pouch.
 - ④ Autoclavable up to max. 135°C.
ex.) Autoclave for 20 min. at 121°C, or 15 min. at 132°C.
 - ⑤ Keep the handpiece in the autoclave pouch to keep it clean until you use it.
- * Sterilization at 121°C for more than 15 minutes is recommended by EN13060 or EN554.

⚠ Caution

Do not wipe with, or clean or immerse in, high acid water or sterilizing solutions.

5. Cartridge Replacement (FPB)

- ① Loosen the union nut and remove the head from the sheath.
- ② Pull out the drive gear assembly from the head. (Fig. 6)
- ③ Place cap wrench on the head cap and turn counterclockwise. Unscrew and separate the cap. (Fig. 7)

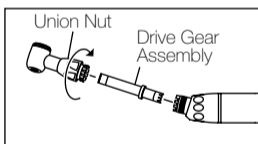


Fig. 6

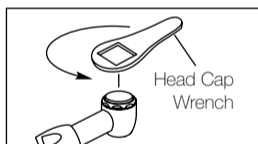


Fig. 7

- ④ Insert a $\varnothing 2.35\text{mm}$ round rod from the front of end. Push up the round rod, and cartridge and washer are removed from the top end of the head. (Fig. 8, 9)

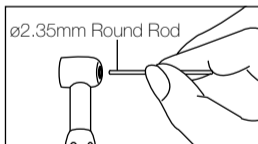


Fig. 8

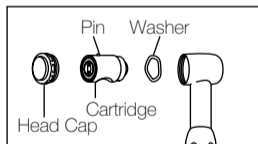


Fig. 9

- ⑤ Before inserting a new cartridge, clean the head interior with PANA SPRAY Plus.
- ⑥ Insert a washer and the new cartridge with its pin aligned in the head. Hand tighten the cap until finger tight and secure with wrench.
Optional Cartridge : Order No. C875-060

⚠ Caution

The head cap screw thread is very fine. To prevent it from breaking, use of the wrench from the first thread is not recommended.

CE 0177 The EU directive 93/42/EEC was applied in the design and production of this medical device.

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