

## NLX nano / NLX plus

NLX nano / NLX plus



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

MADE IN JAPAN  
OM-E0498E



## ⚠ CAUTION

- When operating this system always consider the safety of the patient.
- The product is designed only for clinical dental use by qualified personnel.
- This product can not operate without exclusive control unit.
- Do not allow any impact on to the Product. Do not drop it. It is cause a malfunction.
- Check for vibration, noise and overheating outside the patient's oral cavity before use. If any abnormalities are found, stop using the Product immediately and contact authorized dealer.
- Do not exceed the drive motor speed recommended the handpiece (Option) manufacturers.
- Prior to use, always check the handpiece tightness, vibration, noise and overheatin. If any abnormalities are detected, stop using immediately and contact authorized dealer.
- Do not use contaminated air (by dust or moisture). If the air contains water or dust, it might cause a malfunction or overheat.
- Do not use this product under strong stress for long time. It is cause overheat.
- Do not connect or disconnect the cord until the drive motor has completely stopped.
- Do not connect / disconnect the handpiece during operation.
- Verify that the Speed Control Switch is adjusted within the allowable speed before use.
- Air Requirements: dry, free from contamination and oil. Use a compressor with a dry air system. Install an air filter if necessary. Blow out the lines before installation.
- Do not Autoclave (or any other high temperature Sterilization) Motor Code.
- The user shall be responsible for operation, maintenance and operation.
- The operator is responsible for correct operational control, maintenance and inspection.

## 1. Specification

Model	NLXnano	NLX plus
Max. Rated input	Electric voltage AC19V	Electric voltage AC25V
	Electric current 5A	Electric current 5A
Max.Rotation Speed	1,000 - 40,000 min <sup>-1</sup>	100 - 40,000 min <sup>-1</sup>
Max. Torque	3.4 N·cm	4.0 N·cm
Dimensions	DØ22 x H70 mm	DØ22 x H77 mm

Spray Supplying water	More than 50 mL/min (0.25MPa)
Air Pressure	More than 1.5 mL/min (0.25MPa)
Heat-absorbing Air Pressure	More than 40 L/min (Max Pressuer 0.5MPa)

## 2. Motor

### 2-1 Connecting / Disconnecting the Motor and the Motor Cord

Align and insert firmly the motor pin into the pin holes of the Motor Cord Connector, and fasten the Motor Cord Nut securely.(Fig. 1)

To remove the Motor Cord from the Motor, unscrew and detach the motor cord nut, and gently pull out the motor cord connector.

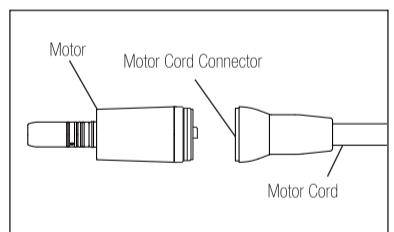


Fig.1

### 2-2 Connectioning / Disconnecting the motor and the handpiece (Option)

To insert the E-type handpiece in the Motor Insert, align handpiece and Motor, then turn those until its click. (Positioning pins are aligned)

To remove the handpiece, simply pull out the handpiece from the Motor.

\*Handpiece is not included.

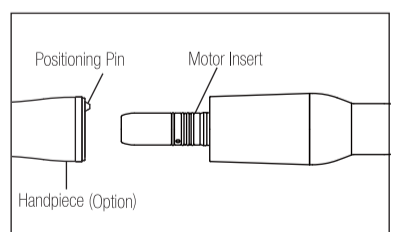


Fig.2

## ⚠ CAUTION

- Care should be taken when using any handpiece attachment which requires lubrication (E Type Micromotor). Following lubrication stand the handpiece attachment vertically until the excess solution drains. Wipe the handpiece then attach it to the Micromotor.
- Do not connect or disconnect the handpiece until the motor has completely stopped.

### 3. Sterilization

For the sterilization method, we recommend the autoclave sterilization method. Sterilization is required first time you use and after each patient as noted below.

#### ■ Autoclaving

- 1) Turn off the Power.
- 2) Detach the motor from the Motor Cord. (Refer to 2-1 Connecting/disconnecting the Motor and the Motor Cord)
- 3) Clean the surface of the Motor with brush. (Do not use the metal brush), and wipe it with the cotton moistened with disinfecting alcohol.
- 4) Screw the Motor Cap to the Motor. Put the Autoclave plug to the motor insert.
- 5) Insert into an autoclave pouch. Seal the pouch.
- 6) Autoclavable up to max. 135°C.  
ex.) Autoclave for 20 min. at 121°C, or 15 min. at 132°C.
- 7) Keep the Motor 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.

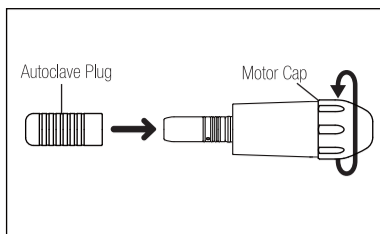


Fig.3

#### ⚠ CAUTION

- Do not Autoclave (or any other high temperature Sterilization) Motor Cord.
- Do not lubricate the motor.
- Do not wipe nor immerse the system in acidic water or acidic solutions.
- Do not sterilize with dirt on the surface. It might cause rust.

### 4. Maintenance

If the O-Ring became depleted, such as difficult to connect the handpiece or air or water might leak, replace the O-Ring.

Remove the O-Ring at the Motor Insert with a pointed tool, and mount the new O-Rings into the groove.

- \* O-Ring (Blue) : 0313-084070
- O-Ring (Black): 0312-074080

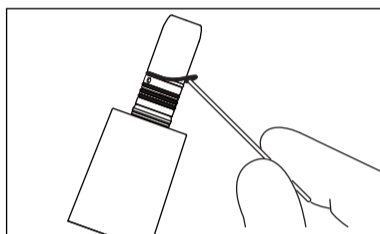
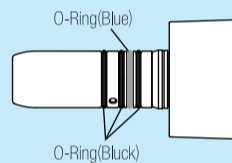


Fig.4

#### ⚠ CAUTION

There are 4 O-Rings on the Motor Insert. Blue one is thinner than other 3 pieces. Make sure to order it.



#### ⚠ CAUTION

- It might happen if the O-Ring becomes depleted.
- Air/Water leak
  - Air/Water does not come off
  - Vibration
  - Difficult to connect/disconnect the handpiece

### 4. Troubleshooting

If the motor stops due to an abnormality such as a malfunction, overload, break or incorrect usage, it automatically checks the state of the Control Box and detects the cause of the abnormality and displays an error code on the Speed Indicator. If an error code is displayed, turn on the power again and check whether the same error code is displayed. If the same error code is displayed, take action by referring to the instructions provided in the "Check/Remedy" column in the following table.

Check/Remedy	Cause	Solution
Motor does not run	Motor Cord is not connected correctly	Check the connection.
LED does not light.	Reached the end of life expectancy.	Contact your dealer.
Water leakage	Motor Cord is not connected correctly.	Contact your dealer.
	Water is leaking from the motor.	Replace with new O-ring.

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

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