

# Premium LUX

## E11/E15/E16/E20

### Contra Angle Handpiece

# OPERATION MANUAL



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

#### Introduction

Dear User

- Congratulations on purchasing this Jindell Quality product as your professional tool. This device is designed for dental treatment such as grinding, drilling and polishing teeth purpose. By following the instructions below you will be able to work smoothly, economically and safely.
- This medical device is intended for transmitting rotation of the power source at the direct drive ratio or at a different gear ratio, there by running the instrument such as a bur or a reamer to cut and polish natural or artificial teeth during dental treatment.

© Copyright by Jindell Medical Instruments Co., Ltd.

#### Precautions for handling and operation

- Please read these precautions carefully and use only as intended or instructed.
- Safety instructions are intended to avoid potential hazards that could result in personal injury or damage to the device. Safety instructions are classified as follows in accordance with the seriousness of the risk.

Class	Degree of Risk
<b>WARNING</b>	Hazard that could result in serious injury or damage to the device if the safety instructions are not correctly followed.
<b>CAUTION</b>	Hazard that could result in light or moderate injury or damage to the device if the safety instructions are not correctly followed.
<b>NOTICE</b>	General product specification information highlighted to avoid product malfunction and performance reduction.

01

#### Disclaimer

The Jindell Company will not be responsible for accidents, equipment damage, or bodily injury resulting from:

1. repairs made by personal not authorized by the Jindell Company
  2. any changes, modifications, or alterations of its products
  3. the use of products or equipment made by the other manufacturers, except for those procures by the Jindell Company
  4. maintenance or repairs using parts or components other than those specified by the Jindell Company and other than in the original condition
  5. operating the equipment in ways other than the operating procedures described in the manual or resulting from the safety precautions and warnings in this manual not being observed
  6. workplace conditions and environment or installation conditions which do not conform to those stated in this manual such as improper electrical power supply
  7. fires, earthquakes, flood, lightning, natural disasters, or acts of God.
- The Jindell Company will supply replacement parts and be able to repair the product for a period of 10 years after the manufacture of the product has been discontinued.
  - Warranty is honored only when a claim is accompanied by the warranty agreement with purchase date, product name and model, serial number (inscribed on the body of the product) and name of the distributor.
  - Products are subjected to change without notice.

02

#### Caution

- The handpiece is supplied by Non-sterile condition before shipping. It must be autoclaved or sterilized before first use and after each use.
  - Immediately after a treatment, the handpiece should be cleaned, lubricated and sterilized. Failure to properly maintain the handpiece may lead to overheating, causing burn injuries or product failure.
  - If blood infiltrates inside a handpiece, an automatic handpiece cleaning and lubrication system may not totally clean the internal handpiece components and may lead to blood coagulation inside the handpiece. Coagulated blood may cause handpiece failure and overheating, causing burn injuries.
  - Never press the Push-Button Back Cap while the handpiece is in rotating. Otherwise it may result in overheating and burn injuries or product failure. Avoid the push button to contact with any oral tissue.
  - Supply coolant water and coolant air while using the handpiece. No supplying the coolant water and coolant air may result in overheating and burn injuries or product failure.
  - Proper cleaning& lubrication before sterilizations is essential to prevent the build-up of debris.
  - **Do not** use the handpiece for prophylaxis purposes. Polishing paste could enter the handpiece, causing the failure of the Push Button or may result in overheating and burn injuries or product failure all from the handpiece head.
  - Keep any debris away the handpiece or avoid any other foreign materials into the gear or the handpiece. Foreign materials remaining inside may result in overheating and burn injuries or product failure or other accidents.
  - Operators and all others in the area must wear eye protection and a mask when operating this handpiece.
- Do not** attempt to disassemble the handpiece nor tamper with the mechanism.

03

#### Caution

- **Do not** use bur/ drill with problems listed below as the bur may break, seize up (onger than 26mm) or disengage from the chuck.
  - Bent, deformed, worn, rusted, broken, deficient bur/ drill.
  - Bur/ drill which is cracked on the edge or axis.
  - Non-ISO (EN ISO) standard, or tampered bur/ drill
- Always keep the bur/ drill shank clean. Debris in the chuck could cause poor bur concentricity or low chuck retention force.
- **Do not** use the following fluids to wipe, immerse or clean the product; strong/super acid water, strong acid/alkaline chemicals, chlorine- containing solutions, solvents such as benzine or thinner.
- The operation of the handpiece is permitted only on dental units which correspond to the standards IEC 60601-1 (EN 60601-1) and IEC 60601-1-2 (EN 60601-1-2).
- Use a short shank FG bur/ drill for the product because the handpiece has the miniature head. Using a long bur/ drill with this handpiece may lead to premature abrasion of the bearings. In addition, sudden release, bend or breakage of the bur/ drill may occur.
- **Do not** use a surgical bur/ drill with its maximum length of 26mm or longer. Using such bur with this handpiece may lead to premature abrasion of the bearings. In addition, sudden release, bend or breakage of the bur/ drill may occur.
- Ball bearings in time, will become worn and will require replacement. Be sure to inspect the handpiece before use. If abnormal vibration or noise are found, the bearings or other internal parts may require replacement. Damaged parts may result in overheating and burn injuries or product failure. If overheating is suspected, stop using the handpiece immediately and contact your Authorized Dealer.
- Avoid crashing the handpiece. Take care not to drop the handpiece as it may cause serious damage and void the warranty. Be carefully!
- **Do not** use Dry-Heat sterilization; it will result in malfunctions and lead to premature bearing wear.

04

#### Caution

- **Rx only** 3. Federal law restricts this device to sale by or on the order of a licensed physician.
- Remove the bur (rotary instrument) only after the handpiece has completely stopped rotating.
- **Do not** use wire brush to clean the handpiece sheath. Wipe clean with alcohol-immersed cloth or cotton swab.
- **Do not** immerse handpiece or cartridges/ rotor in disinfectant solution or boiling water, nor chemicals, and not to be cleaned by ultrasonic cleaning bath device process.
- If damage due to wear happened, like as irregular running noise, significant vibration, Head overheating, unbalanced or with insufficient, please stop work immediately. Contact your authorized **Jindell** Dealer for service.

05

#### Connecting and Disconnecting the Handpiece from the Motor

##### Connecting

- Insert the handpiece direct into the motor (Fig. 1). When connecting an optic handpiece, turn the handpiece until it clicks and locks into position.
- Confirm that the handpiece is securely connected to the motor.

##### Disconnecting

- Hold the motor and the handpiece, then pull apart.

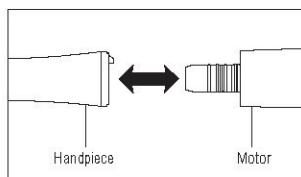


Fig. 1

#### Caution

- **Do not** connect or disconnect the handpiece until the motor has completely stopped.
- Connect ONLY to E type motors (ISO 3964 (EN ISO 3964)).
- **Do not** exceed the Max. of rotating speed (Motor) shown in Specifications.
- For Fiber Optic 20:1 gear ratio type: This handpiece is intended for use only with Surgical Units with Torque Calibration System. Using this product with other surgical units may damage the handpiece or bone.
- For Non- Fiber Optic 20:1 gear ratio type: The handpiece is designed for connection to a Non-optic motor or to a motor with a stopper pin. Connection to any other type of motor cannot lock the handpiece.

06

#### To Change the Bur (rotary instrument):

- ◆ Inserting the Bur
  - For CA Bur (Model: E11-CA/ E11L-CA/ E20/ E20L)
  - Insert the bur/ drill until it is correctly secured in place. (Fig. 2)
  - Depress the Push Button and insert the bur/drill into the chuck until the bur/ drill "notch" mechanism engages. Release the button.
  - Confirm that the bur/ drill is secure by gently pulling and pushing the bur/ drill without depressing the Push Button.

#### Caution

- Only LUX E20L/ LUX E20 type can use drill.

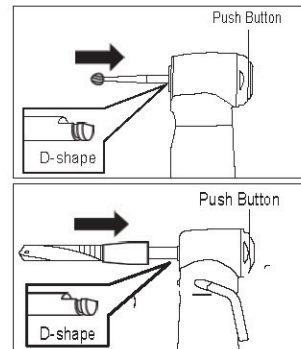


Fig. 2

- For FG Bur (Model: E11-FG/ E11L-FG/ E15/ E15L)
  - Insert the bur/ drill into the chuck.
  - Depress the Push Button to open the chuck ( ❶ ).
  - Insert the bur/ drill fully into the chuck until it stops ( ❷ ) then release the Push Button
  - Confirm that the bur/ drill is secure by gently pulling and pushing the bur/ drill without depressing the Push Button

#### Caution

- For easy operation of the Chuck Release Button, simply grip the handpiece and use your thumb tip to press the Chuck Release Button.

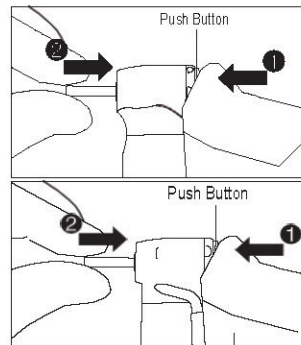


Fig. 3

#### Removing the Bur

- Depress the push button back cap to open the chuck ( ❶ ) and, while the chuck is open, remove the bur/ drill ( ❷ ).

#### Caution

- Always keep the bur/ drill shank clean. Debris in the chuck could cause poor bur concentricity or low chuck retention force.
- Always insert the bur/ drill all the way into the chuck. If insertion is insufficient, premature failure of the handpiece head bearings, or accidental release of the bur/ drill, may occur.
- Always follow the instructions provided by the bur/ drill manufacturer.
- **Do not** exceed the bur/ drill speed recommended by the bur/ drill manufacturer.
- **Do not** insert or remove the bur/ drill until rotation has completely stopped.
- **Do not** apply excess pressure to the bur/ drill as it may break or bend and become difficult to remove.
- After the bur/drill is locked in place, pull and push the bur/drill to make sure the bur/drill is locked. Depress the push button until it is almost parallel to the head cap.

If removing the bur/drill is difficult, grip the bur with fine pliers while depressing the Push-button, and gently remove the bur/ drill. This situation can be avoided by mounting and removing the bur/drill.

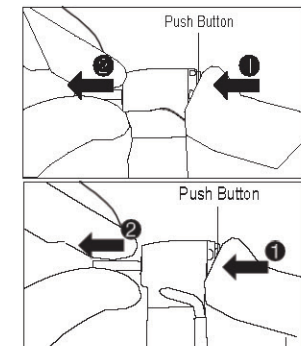


Fig. 4

#### Regarding the Spray Nozzle

Three irrigation methods are available for E20L / E20; External, Internal or both simultaneously, depending on the instrument and operation procedure.

##### External Spray Nozzle

- Connect the Irrigation Tube to the External Spray Nozzle firmly. (Fig. 5)

##### Internal Spray Nozzle

Only for a drill with internal irrigation system.

- Attach the Nozzle Holder. (Fig.6)
- Connect the Irrigation Tube to the Internal Spray Nozzle firmly. (Fig.7)
- Insert the end of the Internal Spray Nozzle into the hole at the top of the handpiece head, then attach the Internal Spray Nozzle into the slot on the Nozzle Holder. (Fig.8)

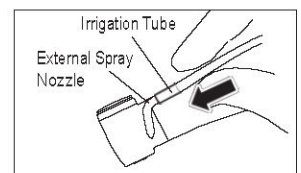


Fig. 5

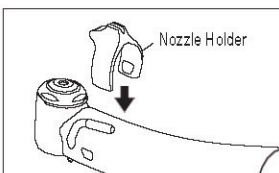


Fig. 6

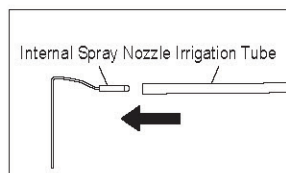


Fig. 7

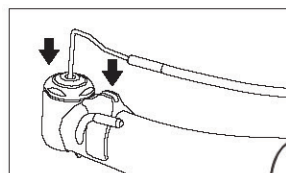


Fig. 8

##### Simultaneous External and Internal Irrigation

- Connect one end of the Y-Connector to the External Spray Nozzle and the other end into the Internal Spray Nozzle.
- Connect the Irrigation Tube to the Y-Connector firmly. (Fig.9)

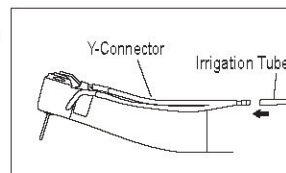


Fig. 9

#### Checking the Handpiece before Each Use

Follow the check procedure below before use. If any abnormalities are found, stop using the handpiece immediately and contact your Authorized Jindell Dealer.

- Check the Head Cap is firmly tightened.
- Check coolant water is flowing properly.
- Insert the bur/ drill. (Refer to " To Change the Bur (rotary instrument)" )
- Rotate the handpiece for about one minute, using coolant water, and with the motor operating at full speed. During rotation, check for abnormalities such as abnormal rotation, vibration, noise.
- After the handpiece rotation has completely stopped, touch the handpiece head to confirm the head is NOT heating abnormally (Fig. 10).

#### Caution

- To avoid injury, keep your hands away from the bur during rotation.
- Immediately after a treatment, the handpiece should be cleaned, lubricated and sterilized. Failure to properly maintain the handpiece may lead to overheating, causing burn injuries or product failure.

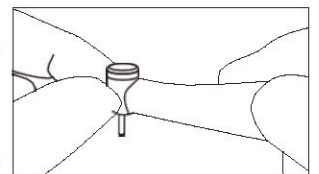


Fig. 10

#### Hygienic Maintenance& Cleaning:

Follow your country-specific directives, standards and guidelines for cleaning, disinfection and sterilization. Daily maintenance the turbine handpiece manually or mechanically procedure will recommend:

- step 1: Wear eye protection, clothing, a mask and gloves to avoid infection & remove the handpiece from the motor,
- step 2: Remove the bur/ drill (rotary instrument),
- step 3: Only for E20L/ E20) Immerse about 20mm of the handpiece head in water, and rotate the handpiece for about 15 seconds while switching the Forward/Reverse rotation direction (Fig. 11),
- step 4: Disconnect the handpiece from the motor,
- Step 5: Manual Cleaning (External Surface). Scrub handpiece under flowing tap water (30° C ± 5°C (86°F ± 10°F) with soft sponge or cloth or a medium hard toothbrush to remove external debris. **DO NOT** use a wire brush, lubrication,
- Final: Sterilization.

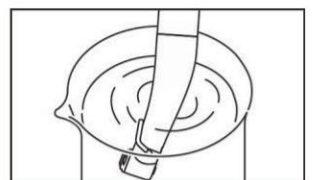


Fig. 11

07

08

09

10

11

12

13