



BRASSLER USA®
DENTAL INSTRUMENTATION

E-type Straight Nose Cone

FORZA FIS • LS15

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



Caution

- This handpiece is intended for use by dental professionals only.
- Do not use this for the treatment in dental surgery.
- Should the handpiece function abnormally, cease operation immediately and return the handpiece to Brasseler USA for repair.

 **Caution**

- Do not turn the bur lock ring while the handpiece is rotating.
- Do not rotate the motor when the bur lock ring is at OPEN position, or a bur is not mounted in the chuck. It may cause motor/handpiece disconnection or sudden heat generation.
- This handpiece is designed for (dental) treatment and precision technical use. Extended use with high torque with thick burs such as 4mm or greater in diameter may cause a short life to the bur, hard-to-pull-off bur or bur drop-off, which results in injury.
- Do not allow any impact on the shank. Do not drop the handpiece.
- Check the vibration, noise and overheating outside the patient's mouth before use. If any abnormalities are found, stop using immediately and contact Brasseler USA.
- Make sure that the bur is securely locked in the chuck before each use. Improper mounting of the bur could cause the bur to spin out during rotation and endanger anyone in the vicinity.

 **Caution**

- Do not use bent, off-centered, deformed, damaged, nor non-ISO standard burs.
- Use clean bur. Dirt on the shank may lodge in the chuck and could cause poor concentricity of the bur or poor chucking power.
- Be sure to check on the device and the components periodically.
- Make sure that the product is operating properly by rotating it with attention to backlash, vibration, noise, heat generation.
- When operating the handpiece always consider the safety of the patient.
- Do not disassemble or alter handpiece.
- Wear protection glass and dust mask for your health and safety.

1. Connecting / disconnecting the motor and the handpiece.

To connect the motor and the handpiece, align the positioning marks of the motor and the handpiece, and insert straight.

To disconnect, hold the front part of the motor and the back part of the handpiece, and pull straight out.

**Caution**

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

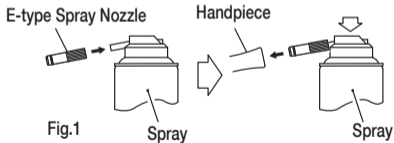
2. Lubrication

Supply spray after each use and/or before autoclaving.

- 1) Mount the E-type spray nozzle into the spray port of the spray can.
- 2) Shake the can 3-4 times to 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 or nose.

Caution

- Keep the spray can upright.
- Be sure to hold the handpiece firmly to prevent the handpiece from slipping out by the spray pressure when lubricating.
- Supply lubricant until it comes out of the handpiece nose (for approx. 2 seconds).



3. Cleaning and Sterilization

1) Cleaning



The F1S can be cleaned and washed with a Thermo Disinfector.

The LS1S should not be used with a Thermo Disinfector

Wipe clean the handpiece sheath with alcohol-dipped soft tissue or cotton. Never clean the handpiece in chemicals, with wire brushes, or in ultrasonic cleaners.

2) Sterilization

Steam autoclave is recommended.

Sterilization is required before using for the first time and after each patient.

■ Autoclaving procedure

- 1) Clean the handpiece sheath as described above.
- 2) Lubricate the handpiece with spray.
- 3) Place handpiece into autoclaving pouch and seal it in accordance with instructions on the pouch.
- 4) Autoclavable up to max. 135°C (275°F). ex.) Autoclave for 20 min. at 121°C (250°F), or 15 min. at 132°C (270°F).
- 5) Keep the handpiece in the autoclave pouch to keep it clean until you use it.

* Sterilization at 121°C (250°F) for more than 15 minutes is recommended by EN13060 or EN ISO17665-1.

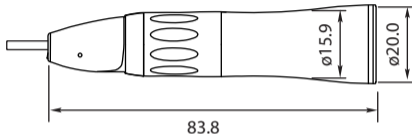
Caution

- Never clean LS1S in boiling water.
- Do not wipe with, or clean or immerse in, high acid water or sterilizing solutions.

4.

FORZA F1S

4a. Specifications



Model	F1S
Gear Ratio	1:1
Max. Rotation Speed (Bur)	40,000 RPM
Bur Type	ISO 1797-1 Type 2 ($\varnothing 2.35$ mm Handpiece Bur) ISO 1797-1 Type 1 ($\varnothing 2.35$ mm Latch Bur)

4b. Mounting/Removing Bur

■ Mounting the Bur

- 1) Turn the Bur Lock Ring in the direction of mark [0] until it clicks.
- 2) Insert the bur.
- 3) Turn the Bur Lock Ring in the direction of the [C] until it clicks. Make sure Black Dots align (See the picture below).

■ Removing the Bur

- 1) Turn the Bur Lock Ring in the direction of mark [0] until it clicks and remove the bur.

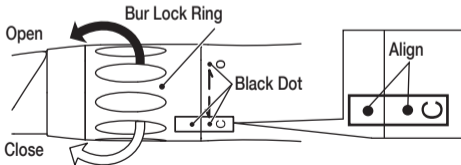


Fig. 2

4c. Using the Bur Stopper (The bur stopper can be used for latch burs)

■ Inserting the Bur

- 1) Turn the Bur Lock Ring in the direction of mark [0] until it clicks. (Fig. 2)
- 2) Insert the supplied bur stopper into the chuck. (Fig. 3).
- 3) Insert the bur until it stops.
- 4) Turn the Bur Lock Ring in the direction of the mark [C] until it clicks.
Make sure Black Dots align.

■ Removing the Bur

- 1) Turn the Bur Lock Ring in the direction of mark [0] until it clicks and remove the bur.

■ Remove the Bur Stopper

- 1) Turn the Bur Lock Ring in the direction of mark [0] until it clicks.
- 2) Insert the supplied bur stopper into the chuck. Pull out the Bur Stopper by hooking slit of Bur Stopper (Fig. 4)

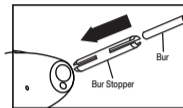


Fig. 3

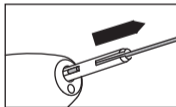


Fig. 4

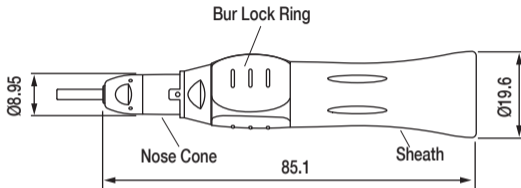
Cautions for Bur Usage

- Make sure that the bur is securely locked in the chuck before each use. Improper mounting of the bur could cause the bur to spin out during rotation and endanger anyone in the vicinity.
- Mount bur stopper firmly into handpiece until it stops. If inserted incorrectly, it may become difficult to remove. Injury could occur if chuck loosens and the bur flies out.
- Do not use bent, damaged or sub-standard burs. Do not exceed the drive motor speed recommended by the bur manufacturers.
- Do not use short shank burs. Injury could occur if chuck loosens and the bur flies out.
- Do not rotate the motor when the bur lock ring in OPEN position or if a bur is not mounted in the chuck. Do not turn the bur lock ring while the handpiece is rotating. It may cause the motor/handpiece disconnection or sudden heat generation.
- Bur and/or Bur Stopper should remain inserted until rotation stops. This will prevent “BUR WALK OUT” and/or damage to the ball bearings.

5.

LS | 1S

5a. Specifications



Model	LS1S
Gear Ratio	1:1
Max. Rotation Speed (Bur)	40,000 RPM
Bur Type	ISO 1797-1 Type 2 (Ø2.35mm Handpiece Bur)

*Accepts doriot style prophyl angles

5b. Mounting Burs

To mount the bur, insert it into the chuck and turn the Bur Lock Ring in the direction of the mark [C] until it clicks and the Black Dots align (*See the picture below).

To remove the bur, turn the Bur Lock Ring in the direction of mark [O] until it clicks.

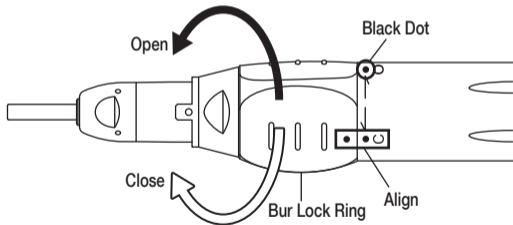


Fig.5

Tips for safe use and for maximum service life

- Never use bent, off-centered or damaged burs. Excessive loads generated by defective burs rotating at 40,000min⁻¹(rpm) will quickly damage ball bearings.
- This handpiece is designed for (dental) treatment and precision technical use. Longtime excavation with high torque with thick burs such as 4mm or greater in diameter may cause a short life to the bur, hard-to-pull-off bur or bur drop-off, which results in injury.
- Always insert a bur all the way into chuck. This will prevent “BUR-WALK-OUT”, and/or damage to the ball bearing.
- Never operate Straight Nose Cone without a bur or bur blank securely in place, or bur lock ring at different positions.
- Make sure if Black Dots of the Bur Lock Ring line up after fixing the bur. Rotating the bur in an improper position may cause heat generation, which results in burns.

6. Warranty

Brasseler USA warrants the handpiece against defects in manufacturing, workmanship and materials. Brasseler USA reserves the right to analyze and determine the cause of any problem. Warranty is voided should the handpiece not be used in accordance with this manual.

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in Dentistry



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