PIEZO ULTRASONIC SCALER

A750

Installation, Operation & User Manual

Countertop piezo scaler with variable power and lavage control · Operation, maintenance and sterilization



DOCUMENT
A750 Scaler Manual · Version 2.0
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How to read this manual

WARNING Risk of injury or damage to the equipment. Follow exactly.

NOTE Information that makes the job easier or the result more reliable.

Technical support

(800) 560-8222

Monday to Friday, 8:00 AM to 5:00 PM Pacific.

SECTION 01

Overview and specifications

The A750 piezo ultrasonic scaler is for prophylaxis, periodontal and other operative dental work. It scales with a fine, warm water spray and little of the effort hand instruments need, removing stubborn calculus and stain above and below the gumline and leaving crown and root surfaces clean and smooth.

Indications

- All supragingival and subgingival scaling
- Periodontal debridement for all types of periodontal disease
- Endodontic procedures

How the tip moves

A piezo crystal in the handpiece moves the tip back and forth in a straight line. The power setting changes the stroke between 0.04 and 0.13 mm.

Electrical

Vibration frequency	24–32 kHz
Power supply input	100–240 V AC, 50/60 Hz
Output	24 V DC, 1.7 A

Size and weight

Dimensions	7.5 cm H × 18.5 cm W × 16.5 cm D
Weight	1.54 kg

Operating conditions

Temperature	10 °C to 40 °C
Relative humidity	30% to 75%
Pressure	700 to 1060 hPa

Transport and storage

Temperature	−10 °C to 70 °C
Relative humidity	10% to 90%
Pressure	500 to 1060 hPa

Standards

Conforms to IEC 60601-1-2:2001 and IEC 60601-1-1:2000. TPC's quality system is certified to ISO 9001 and ISO 13485. CE marked under the Medical Device Directive 93/42/EEC.

GETTING STARTED

Safety and precautions

⚠ **WARNING** Not suitable for use in the presence of a flammable anesthetic mixture with air or with nitrous oxide.

⚠ **CAUTION** U.S. federal law restricts this device to sale by or on the order of a dental professional.

Contraindication

Do not use ultrasonic systems for restorative procedures that involve condensing amalgam.

Before each use

Check the case, power cord, handpiece cable, power inlet and handpiece holder. If the case is broken or any insulation is damaged, stop and return the unit to your dealer.

During use

- Keep water flowing to the handpiece the whole time.
- If the handpiece overheats, check the water supply and let the unit rest.
- Run dry (without water, or with a dry-use tip) for no more than **4 minutes**, then rest it for **8 minutes**. Longer dry use can permanently damage the handpiece.

Precautions for all systems

- Keep the unit away from radiators and other heat sources, with air free to circulate around and under it.
- The unit is portable, but handle it with care when moving it.
- Flush the equipment and maintain the dental water supply regularly.
- Close the water shut-off valve to the unit every night. An in-line water filter is recommended.

ⓘ **TIP WEAR** Tips wear like a toothbrush. A tip with just 2 mm of wear loses about 50% of its scaling efficiency. Replace tips after about a year of use to keep them efficient and avoid breakage.

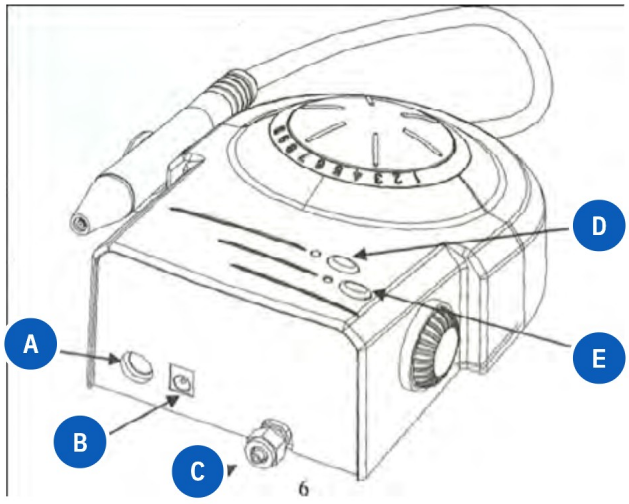
SECTION 02

Water supply, unpacking and connections

If someone other than a trained TPC distributor installs the unit, follow these requirements.

Water line

- The unit's water supply line is factory installed. Do not disconnect it from the unit.
- Supply pressure must be 1 to 4 bar (14.5 to 58 psi). Above 58 psi, fit a pressure regulator.
- Fit a manual shut-off valve so the water can be turned off when the office is empty.
- Flush the office water line thoroughly before connecting the unit.



In the box

1. A750 unit with water supply line and handpiece with cable
2. Detachable power supply with power cord
3. Foot switch with cable
4. Autoclavable handpiece
5. Ultrasonic tip and tip wrench
6. Flexible water tube for the water supply, 1.8 m

Connections

A **Foot switch connector**

B **Power input**
24 V DC from the power supply.

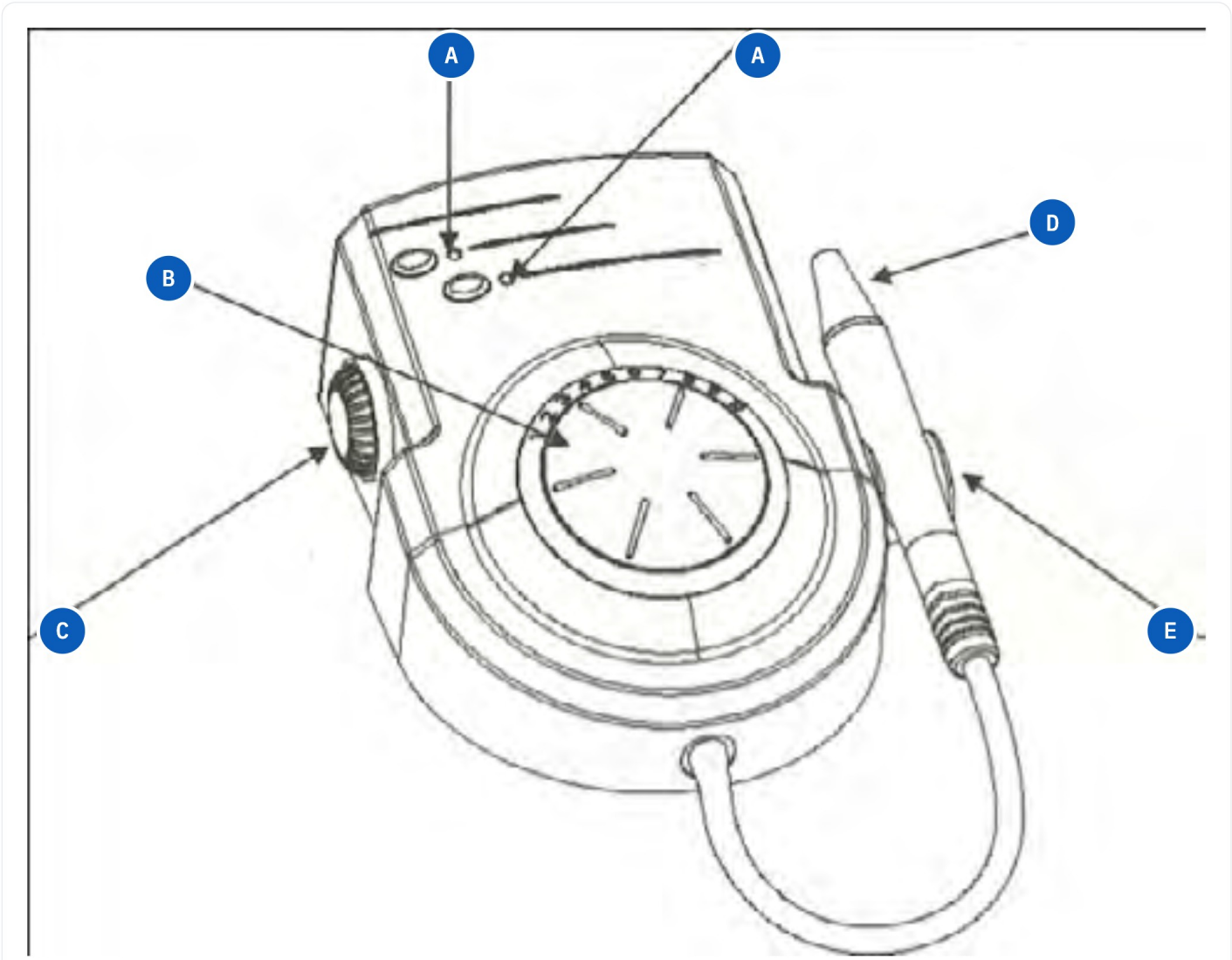
C **Water inlet**

D **Turbo switch**
Switches the unit to its maximum power setting.

E **Power switch**

SECTION 03

Controls



A **AC power indicator**
Lights when the unit is switched on.

B **Power knob**
Clockwise increases the power, counterclockwise decreases it.

C **Lavage flow knob**
Clockwise reduces flow at the tip, counterclockwise increases it. Lower flow gives warmer lavage; higher flow, cooler.

D **Handpiece**
Drives the ultrasonic tip and carries the lavage.

E **Handpiece holder**
Holds the handpiece securely when the unit is not in use.

OPERATION

Using the scaler

1. **Connect** the water supply, the power supply and the foot switch to the back of the unit.
2. **Fit a tip:** screw it on and tighten it moderately with the tip wrench.
3. **Turn the unit on** with the power switch. The AC indicator lights.
4. **Set the power** with the power knob, and the lavage flow with the side knob.
5. **Press the foot switch** to start.

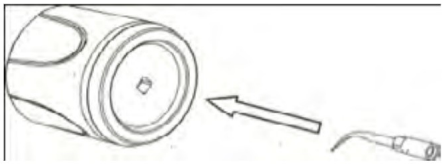


Fig. 1 Thread the tip in by hand, then tighten it moderately with the tip wrench. Do not overtighten.

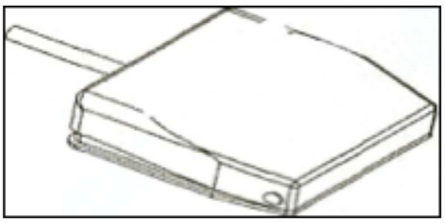


Fig. 2 Foot switch released: ultrasonic action and water stop

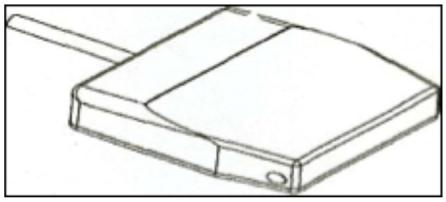


Fig. 3 Pressed fully: the tip vibrates and water flows

Connecting and removing the handpiece

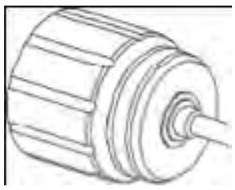


Fig. 4 Cable connector

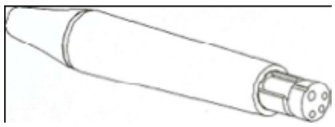


Fig. 5 Handpiece

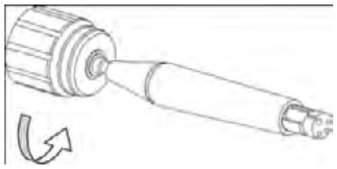


Fig. 6 Twist to connect or remove

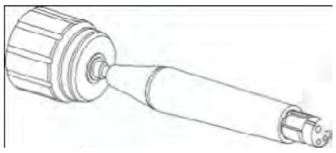


Fig. 7 Connected

TIP Rinse the connector O-ring with a little water before connecting the handpiece to the cable. It makes the O-ring last longer.

SECTION 04

Daily maintenance

Clean and disinfect the outer surfaces: cabinet, knobs, power cord, handpiece cable, foot switch and its cable. Clean and sterilize the handpiece and tips.

Start of the day

1. Connect a sterilized handpiece to its cable.
2. Hold it over a sink, set the power to low, press the foot switch and flush the water line at maximum flow for at least **2 minutes**.
3. Fit a freshly sterilized tip.

Between patients

1. Remove the used tips and handpiece; clean and sterilize them (page 9).
2. Wipe down the surfaces with an approved non-immersion disinfectant, following its maker's instructions: spray it on a clean towel, wipe, discard the towel, and let it air dry.
3. Connect a handpiece, hold it over a sink and flush at maximum flow for **30 seconds**.
4. Fit a freshly sterilized tip.

End of the day

1. Remove the used tips and handpiece; clean and sterilize them.
2. Clean and disinfect the surfaces as between patients.
3. Close the water shut-off valve to the unit.

ⓘ **DISINFECTANTS** Water-based disinfectants are preferred. Some alcohol-based ones can damage or discolor plastic.

CARE

Sterilization

Tips

1. If needed, rinse the tip under water to remove debris. Do not use cleaning or disinfecting solutions, including ultrasonic cleaning solutions.
2. Seal the tip in a paper or paper/plastic steam pouch, paper side up.
3. Autoclave at **134 °C / 216 kPa (273 °F / 31 psi) for 12 minutes**, then dry for 20–30 minutes.
4. Keep the tip in the sealed pouch until use.

Handpiece

1. Wipe it with a cloth soaked in instrument cleaner, rinse it with water and dry it with a clean cloth.
2. Disconnect it from the cable and remove the tip.
3. Autoclave at **134 °C for 12 minutes**, then dry for 20–30 minutes. Remove it as soon as the cycle ends.
4. Dry the electrical contacts of the handpiece and cable connector before reconnecting.

⚠ **CAUTION** Do not use cold sterilization solutions. Do not use chemical disinfectant before sterilizing; it can quickly damage the materials. Do not sterilize the handpiece cable.

SECTION 05

Accessories and support

Accessories

1. Switching power supply with power cord
2. Tips and tip wrench
3. Foot switch
4. Sterilizable box
5. Water tubing with connector
6. Handpiece
7. User manual

Technical support

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