



A-dec Tooth Dryer

INSTRUCTIONS FOR USE

Contents

- Introduction 1
- How the Tooth Dryer Works . . 1
- Adjust the Temperature 2
- Clean the Tooth Dryer 3
- Flush the Tooth Dryer 3
- Warranty 4
- Regulatory Information 4

Introduction

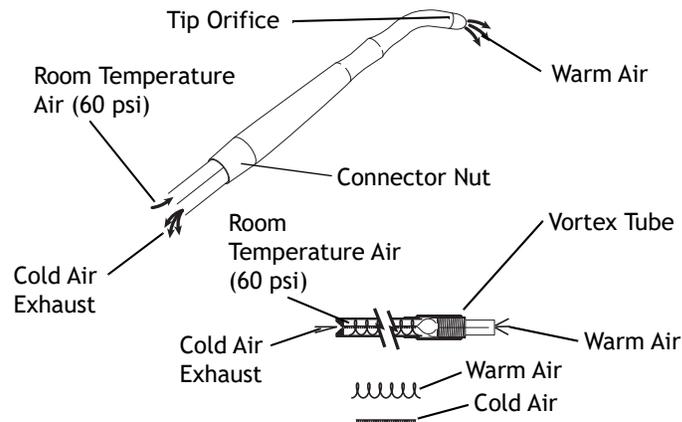
This guide provides technical information for adjusting, maintaining, and servicing the A-dec tooth dryer.

How the Tooth Dryer Works

The tooth dryer allows you to prepare the tooth and tissue surface using warm, nearly dry air (the tooth dryer reduces the moisture content of the air). The dryer requires no electricity and has no moving parts, and the dryer handle is thermally insulated for comfort and safety.

The tooth dryer operates under the principle of the Ranque-Hilsch tube in which compressed air is passed through a vortex tube. As the compressed air passes through the tube it separates into two swirling air streams: one warm and one cold. The warm air flows out gently from the tip orifice, while cold air is exhausted.

Figure 1. Tooth Dryer Operating Principles

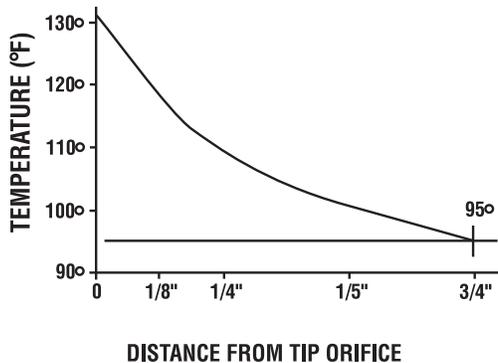


Operating Temperature

The tooth dryer is designed to deliver warm air between 125°F (51.7°C) and 135°F (57°C) when the air pressure at the tooth dryer is 60 psi. This temperature is present only at the tip orifice, and will decrease rapidly as you increase the distance between the tip orifice and tooth or tissue surface. The drying temperature is regulated by altering this distance (see Figure 2 on page 2).

The tooth dryer air temperature will be affected by changes in air pressure: an increase in air pressure will cause an increase in temperature; likewise, a decrease in air pressure will cause a decrease in temperature. Be aware that the handpiece pressure gauge on the control system indicates tooth dryer air pressure.

Figure 2. Temperature Verses Distance From Tip



Adjust the Temperature

The drive air pressure should be set at 60 psi for optimal warm air temperature. Follow these steps to adjust the drive air pressure.

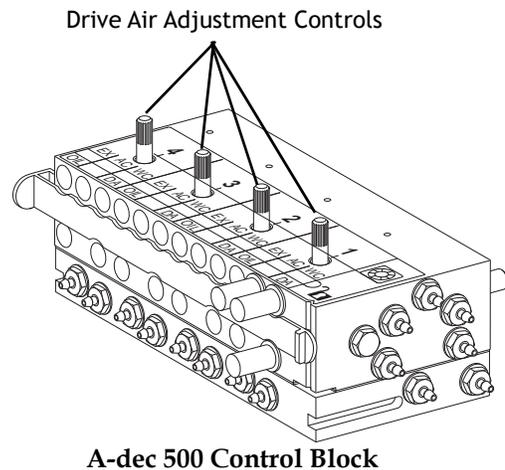
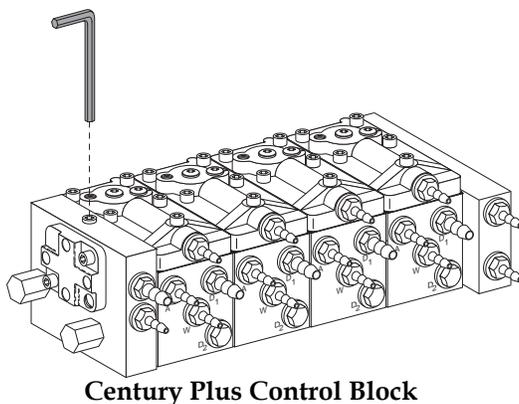
Control Block	Location
Century® Plus	Front of delivery system
A-dec 500	Digital read inside the delivery system

1. Locate the drive air pressure gauge.
2. Adjust the drive air pressure until it reaches 60 psi. See Figure 3.



NOTE Do not turn the screw beyond the point where the air pressure stops increasing. The screw can come completely out of the control block.

Figure 3. Adjust Air Temperature



Air Pressure Specifications

Input Minimum Air Pressure: 60 psi (413.7 kPa)

Output Minimum Air Flow: 0.25 scfm (7.1 liter/minute) at 130± 5°F (55 ± 3°C)

Clean the Tooth Dryer

1. Remove the tooth dryer from its designated handpiece tubing to prevent corrosion of the connecting threads.
2. Wipe the exterior of the tooth dryer with a handpiece cleaning solution. Make sure the cleaning solution does not enter the tooth dryer through its tip orifice or air supply and exhaust ports. Trapped solution can interfere with normal operation. If you suspect solution is trapped internally, see "How to Flush the Tooth Dryer" below.



CAUTION Use only handpiece cleaning solutions that are not corrosive to aluminum. Avoid bleach and peroxides. Be sure to thoroughly remove all cleaning solutions.

3. Sterilize the tooth dryer using steam autoclave (275°F [135°C] maximum temperature) four minutes at temperature. Do not use dry heat sterilization.

Flush the Tooth Dryer

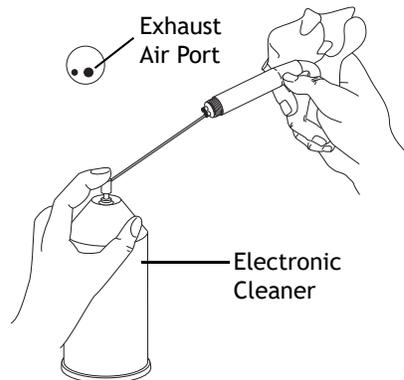


CAUTION The tooth dryer should only be used on dedicated handpiece tubing that has never been used with any other handpiece.

Oil residues in the handpiece tubing contaminate the dryer internally which may reduce or block air flow, and seriously contaminate the tooth or tissue surface. If you suspect that the tooth dryer has been contaminated, follow these steps:

1. Before using, remove the dryer from the handpiece tubing.
2. Hold the dryer over a sink and spray an electronics cleaner into the exhaust air port for 5 to 10 seconds.

Figure 4. Spray Electronics Cleaner into Exhaust Air Port



3. Shake the tooth dryer to force out any remaining degreaser.
4. The tooth dryer will air dry within several minutes. If you need to use the instrument immediately, dry it out on its own dedicated handpiece tubing by operating for 10 to 15 seconds.

Warranty

Warranty information is provided in the *Regulatory Information, Specifications, and Warranty* document (p/n 86.0221.00), which is available in the Document Library at www.a-dec.com.

Regulatory Information

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A-dec Headquarters

2601 Crestview Drive
Newberg, OR 97132 USA
Tel: 1.800.547.1883 Within USA/Canada
Tel: 1.503.538.7478 Outside USA/Canada
Fax: 1.503.538.0276
www.a-dec.com

A-dec Australia

Unit 8
5-9 Ricketty Street
Mascot, NSW 2020
Australia
Tel: 1.800.225.010 within AUS
Tel: +61.(0).2.8332.4000 outside AUS

A-dec China

A-dec (Hangzhou) Dental Equipment Co., Ltd.
528 Shunfeng Road
Qianjiang Economic Development Zone
Hangzhou 311106
Zhejiang, China
Tel: +1.503.538.7478

A-dec United Kingdom

Austin House, 11 Liberty Way
Nuneaton, Warwickshire CV11 6RZ
England
Tel: 0800 ADECUK (233285) Within UK
Tel: +44 (0) 24 7635 0901 Outside UK



85.0674.00 Rev R
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