

The Blue Handbook



How to Care for
Your Dental Handpiece



1-800-331-7993

A Message from American Dental Accessories to You:

We understand that the dental practice can be a busy and demanding place. The dental handpieces you work with everyday, whether high or slow speed, are precision instruments designed to bring years of service to the practice when cared for properly. Proper care includes following the manufacturers instructions for cleaning, lubrication and autoclaving procedures.

The Blue Handbook is based on American Dental Accessories' experience as a handpiece manufacturer and as a repair service. This handbook brings together information you need to know and practice everyday to get the best performance from your handpieces. You will also find several other useful sections: handpiece inventory page, glossary of handpiece terms; information on American Dental Accessories's repair service, and useful coupons for cleaner/lubricant.

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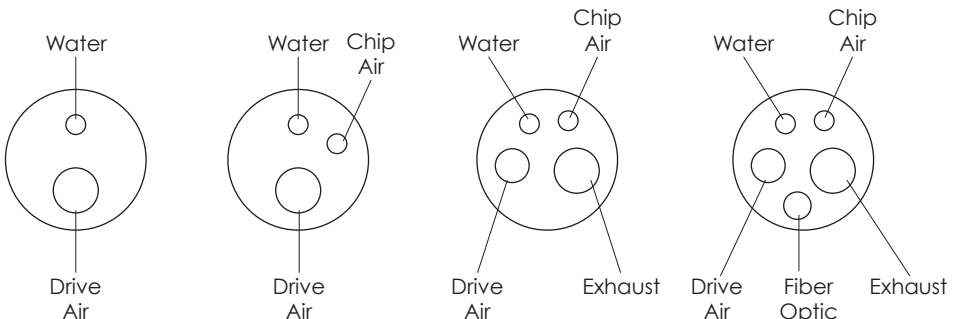
Standard Practices to Follow

- The air pressure should not exceed 35 PSI. Increasing the air pressure will not increase handpiece performance and may prove detrimental to the turbine.
- Do not tighten the chuck without a bur or bur blank in place or it may damage the collet.
- The handpiece should only be operated with a bur securely in place.
- Do not depress the push button of a handpiece during operation. This may open the chucking mechanism and the bur may be released.
- Do not use the handpiece to retract the patient's cheek or other soft tissue. Excessive heat can be generated if cap is depressed when turbine is running.
- Use the handpiece manufacturer's tools supplied with the handpiece. For example, never use pliers on a handpiece to avoid unnecessary damage.
- Before operating a handpiece and/or component, always carefully read and follow the manufacturer's instructions for use. These are the procedures that the manufacturer recommends for the best performance of the instrument.



Handy Tips on Cleaning & Lubrication

- American Dental Accessories recommends cleaning and lubricating the handpiece before and after each autoclave cycle. When following this procedure routinely, the staff can be assured that each handpiece has been properly maintained to insure the longevity of the turbine.
- A tooth brush and hot, soapy water can be used to clean the handpiece threads and handle knurls.
- Never wash or immerse the handpiece in cold sterilant or chemical disinfectants containing phenols, acids, or chlorines. They can damage and/or corrode some metals.
- The handpiece exterior can be washed with germicidal detergent/cleaner.
- Isopropyl alcohol can be used to wipe down the exterior of the handpiece.
- The handpiece turbine should not be removed for cleaning.
- The quick disconnect connections should be wiped down with isopropyl alcohol. Do not use cold sterilants as they may damage the o-rings.
- The fiber optic surfaces can be cleaned using isopropyl alcohol or acetone on a cotton applicator.
- Do not pick the fiber optic ends with any sharp instruments.
- Use approved lubricants such as American Dental Accessories's Lubricants for high and slow speed handpieces, nosecones and contra angles.
- Flush or purge the handpiece after every lubrication and before autoclaving. We have three easy to use Flush Systems specifically for this operation. Part #HF-100, #HF-010, & #HF-400.
- Cleaner/lubricant is sprayed or dropped **ONLY** into the drive air hole which leads to the turbine. The exhaust hole does not connect to the turbine.



- Nosecones, contra angles and heads should all be detached and lubricated separately.
- A slow speed handpiece should be inverted and run after lubrication to force the cleaner/lubricant through all handpiece components.



Gear Up for Infection Control

- For staff protection, always wear masks, gloves and protective eye wear during infection control/sterilization procedures.
- When autoclaving or chemiclaving, do not exceed 275°F or 135°C.
- Do not autoclave the handpiece, nosecone or latch head with a bur in place. Remove the bur before sterilizing. There may be a corrosive reaction between different metallic surfaces resulting in damage.
- Use autoclave bags with at least one paper side. This type of bag allows moisture to escape. Never use all plastic bags.
- Slow speed motors, nosecones, contra angles and heads should be detached and bagged separately for the autoclave.
- When the drying cycle is finished, remove the handpieces from the autoclave. Do not leave overnight or store in the autoclave.
- After handpieces and/or components are removed from the autoclave or chemiclave, they should be allowed to return to ambient room temperature before use. When cool, handpieces or components are ready to be lubricated.



Lubricants & Cleaners

To assist you in keeping your handpieces in good working condition, American Dental Accessories offers high quality lubricants & cleaners. There are several options to choose from:

Pro-Lube+ (#15-90) is specifically designed for use in air turbine handpieces, prophy angles, contra angles, and other jointed instruments. Use before and after sterilization to ensure peak performance. Available in a two bottle set with colored labels, you can use one before and the other bottle after sterilization to eliminate cross-contamination.

Pro-Lube+ Pen Oiler (#15-900) is a handy lubricant with a micro dispensing tip for easy use, and be quickly used chairside.

Euro-Lube (#15-92) is a lubricant refill for European handpiece turbines and motors.

Once-A-Day (#15-91) is an economical lubricant specifically designed for use in air turbine handpieces, prophy angles, contra angles, and other jointed instruments. Use before and after sterilization to ensure peak performance.

Pro-Kleen (#15-930) is a cleaner that is designed to dissolve baked on deposits and debris



Know Your Handpiece Lingo

Air Motor- A slow speed handpiece without integral reduction gears or attachments

Auto Chuck- A mechanism used to change a bur by pressing a button or by releasing a latch

Autoclave- A steam sterilizer which kills living organisms. Temperature is raised to 270-275° F (135° C) while pressure is raised to 30 PSI.

Bearing- A high precision part used to support rotating parts with very low friction

Bur- A rotary dental instrument, held and revolved in a handpiece. Used to remove carious material within decayed teeth, to reduce decayed or fractured hard tissues, to form a design of the cavity preparation and to finish and polish teeth and restorations. Can be made of high speed steel, carbide, or diamond coated material.

Canister- A closed cylinder which houses a rotating turbine assembly.

Chemiclave- An sterilizer which uses chemicals for instrument sterilization. The temperature generally is 270-275° F (135° C) while the pressure is raised to 30 PSI.

Chip Air- Air supplied to the cutting surface to cool the tooth and flush chips and residual material resulting from the removal of decayed tooth surface.

Chucks- The part used to hold the cutting or polishing tool (bur).

Connector- There are four types of U.S. standard handpiece connectors. They include the 2-hole (also called a Borden connector), 3-hole, and 4-hole (also called a Midwest connector). The 4-hole is the most popular connector. In a 4-hole connector, the holes are (1) drive air, (2) chip air, (3) water, and (4) exhaust. Sometimes a 5-hole connector is referenced. The fifth hole represents the fiber optic bundle. Hole locations are determined by an ISO specification. See page 5 for configurations.

Contra Angle- An attachment used with a straight or slow speed motor which changes the desired angle to better reach areas in the oral cavity which are difficult to access.

Drive Air- The air supply used to power an air-driven dental instrument.

“E” Type Motor- Motor which has a standardized male connection to accept nosecones or contra angles having the matching female connection

Exhaust- The air discharged from a dental handpiece

Fiber Optic Handpiece- A handpiece which incorporates a fiber optic bundle and light source to facilitate illumination of the oral cavity.

FG or Friction Grip Handpiece (or chuck)- Often incorrectly used to describe a Jacob Chuck handpiece. The bur is held strictly by friction and is pushed into the chuck using force to overcome the friction caused by the chuck, usually a spring material lining the chuck.

Handpiece- A handheld device which engages rotary instruments for cutting, cleaning, or polishing teeth. A handpiece can be belt-driven, pneumatic, or electric.

High Speed Handpiece- A handpiece which operates at a speed greater than 100,000 RPM.

Impeller- The part of a high speed instrument which provides rotation of the cutting tool (bur).

Jacob Chuck- A chucking mechanism which utilizes a bur wrench to tighten the chuck. The chuck has slots which are closed on the bur with the bur wrench.

Lubricant/Cleaner- A liquid applied to moving parts of a handpiece or attachment in order to reduce friction, heat, wear, or applied to surfaces in close contact to prevent them from adhering to one another. Also includes a solvent for cleaning. May be administered with an aerosol or non-aerosol applicator.

Nosecone- A straight attachment used with a slow speed motor which holds a bur (generally 2.35mm) or standard "U" attachment.

Prophy Angle- An angle which attaches to a hygiene-type slowspeed handpiece or to a nosecone. A prophy angle accepts screw-in brushes, screw-in cups, or snap-on cups.

Replacement Cartridge- A cartridge for a high speed handpiece which may be inserted into a handpiece at chair side.

RPM- Revolutions per minute (RPM) is often used to delineate the types of handpieces. For hygiene 6,000 RPM or less is used, for general lab work 25,000 RPM or less, and for operative/crown and bridge 300,000 RPM and greater.

Slow Speed Handpiece- In general, any handpiece used by a dentist or hygienist at speeds less than 100,000 RPM

Straight Handpiece- Same as a slow speed handpiece. Often refers to a handpiece with a nosecone permanently fixed to the motor

Turbine- Located in the head of a highspeed handpiece, it rotates by use of compressed air. Slow speed turbines are different and may be a rotary type.

Quick-Disconnect- A handpiece attachment or fitting designed to allow easy separation of the handpiece from the supply tubing.

American Dental Handpiece repair service features experienced technicians who deliver quality service. In addition, our service is convenient and easy to use with a reliable 48 hour turn around.

American Dental provides a 120 day warranty on highspeed handpieces and nosecones, 180 day warranty on slowspeed handpieces, for parts and labor from date of repair.

Services include:

- High speed overhaul
- Autochuck handpiece overhaul
- Slowspeed overhaul
- Re-sleeve handpiece threads
- Slowspeed nosecone overhaul
- Clean/oil/test highspeed handpiece or nosecone
- Clean/oil/test slowspeed handpiece
- Air scaler repair

Just Call 1-800-331-7993!

Name(s) _____
 Address _____
 City/State/Zip _____
 Phone () _____
 Fax () _____
 E-mail address _____

Name(s) _____
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 E-mail address _____

HANDPIECE MODEL	SERIAL #	PROBLEM ENCOUNTERED/ SERVICE REQUIRED

Use a traceable method of shipment and insurance against loss/damage.

Ship to: American Dental
 Attn: Handpiece Repair
 7310 Oxford Street
 St. Louis Park, MN 55426



7310 Oxford Street
St. Louis Park, MN 55426
(800) 331-7993 f (888) 729-1016