HYGIENE · SCALERS

AS5000

User Manual

Sonic air scaler · Runs on the high-speed handpiece air line of any dental unit · Kit includes three tips and a torque wrench



AS5000-M4
4-hole Midwest



AS5000-B2
2-hole Borden



AS5000-K
KaVo-type quick connect

DOCUMENT
AS5000 User 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

Safety

Read these warnings before using the AS5000. They protect the patient, you and others from injury and the instrument from damage.

SIGN	MEANING
Danger	Risk of serious injury and property damage.
Warning	Risk of slight injury and property damage.

⚠ **DANGER**

- Keep to the correct air pressure (page 5). Air pressure that is too high can break the tip and injure the patient's mouth.
- Even at the correct pressure, work carefully: the tip can occasionally vibrate more than 200 µm.
- Never use a rusty tip. It can break at the rusted point during use and injure the patient.

⚠ **WARNING**

- Use the AS5000 only for dental treatment of patients who need it.
- Do not let the air pressure exceed 51 psi (0.35 MPa). If you notice anything abnormal, stop at once and contact your dealer.
- Never take the handpiece apart or try to repair it.
- Protect the handpiece from hard knocks, and do not drop it.
- Before each use, run the handpiece outside the patient's mouth and check for abnormal vibration, noise or heat.
- Turn the air off before you change a tip or disconnect the handpiece from the tubing.
- Handle tips with care to avoid puncture injuries.

GETTING STARTED

The three models

All three models are the same scaler: same handpiece body, tips, frequency and care. The only difference is the connection at the back, which must match the handpiece tubing on your dental unit.



AS5000-M4 4-hole Midwest coupling

Screws straight onto standard 4-hole (Midwest-type) high-speed handpiece tubing. Marked “AS 5000 M4” on the body.



AS5000-B2 2-hole Borden coupling

Screws straight onto 2-hole (Borden-type) high-speed handpiece tubing. Marked “AS 5000 B2” on the body.

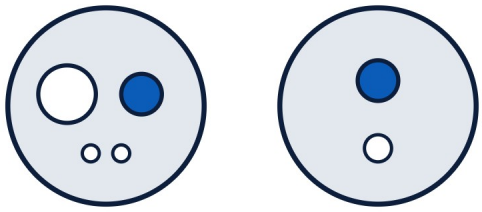


AS5000-K KaVo-type quick connect

Snaps onto a KaVo-type quick connector fitted to the tubing, and turns freely on it. The SK4 KaVo-type quick connector is not included; order it separately.

Which one do I need?

Look at the end of the high-speed handpiece tubing on the dental unit. Count the holes, or check for a KaVo-type quick connector.



4-hole · AS5000-M4 **2-hole · AS5000-B2**

Connection ends seen from the back. Blue marks the drive air hole.

In the kit



Fig. 1 AS5000 kit: handpiece, three tips and torque wrench

PART	ITEM
AS5000	Air sonic scaler handpiece
AS1 · AS2 · AS3	Universal, sickle and perio tips
A776	Tip torque wrench

SECTION 02

Specifications and air pressure

Specifications

Drive air pressure	36–51 psi (0.25–0.35 MPa)
Air consumption	20–30 L/min
Frequency	6,200–6,450 Hz
Water flow	50 ml/min
Noise	70 dB or less
Weight	64–67 g
Sterilization	Autoclave, 135 °C maximum

Connecting

1. Turn the air off at the unit.
2. Connect the AS5000 to the high-speed handpiece tubing (AS5000-K: snap it onto the quick connector).
3. Set the drive air between 36 and 51 psi on the unit's pressure gauge.
4. Run the scaler outside the mouth and check that it sounds and vibrates normally.

NOTE If the unit already runs its high-speed handpieces between 36 and 51 psi, the AS5000 can be used at that setting with no change.

DANGER Never set the air pressure above 51 psi (0.35 MPa). Higher pressure raises the frequency, can damage the tooth surface and cause the patient severe pain, and can break the tip or damage the handpiece.

WARNING Because the AS5000 is built differently from a high-speed handpiece, the gauge may read about 4 psi (0.03 MPa) higher while it runs.

Air supply

The AS5000 will not work properly if the drive air contains water or dirt. Drain the compressor tank regularly, even if the system has a filter or air dryer.

USE

The tips and what each one does

The drive air spins a rotor inside the handpiece, which makes the tip vibrate at about 6,300 times a second. The vibrating tip breaks up calculus while water from the unit cools the tip and flushes debris. Each tip is shaped for a different job; the tip number is engraved on its flat.



Fig. 2 AS1 universal tip

AS1 Universal

The general-purpose tip for routine supragingival scaling. Its gentle curve follows the shape of the tooth.

Best for: Occlusal surfaces, curved surfaces, anterior teeth, exposed root surfaces, and the lingual surfaces of molars.



Fig. 3 AS2 sickle tip

AS2 Sickle

A pointed tip for heavier deposits. The point gets into tight spots and between teeth.

Best for: Lingual surfaces of the lower anterior teeth, and large calculus deposits that are firmly attached.



Fig. 4 AS3 perio tip

AS3 Perio

A long, slender tip that reaches below the gum line with little tissue disruption.

Best for: Calculus at and below the gingival margin, periodontal pockets, and tobacco stains. Can be used for all types of treatment.

After each use

Remove the tip and dry it completely with the 3-way syringe. Take special care to dry the water outlet hole and the screw threads.

⚠ **WARNING** A tip that is not dried well can rust. A rusted tip can break during treatment and injure the patient or the operator.

USE

Changing a tip

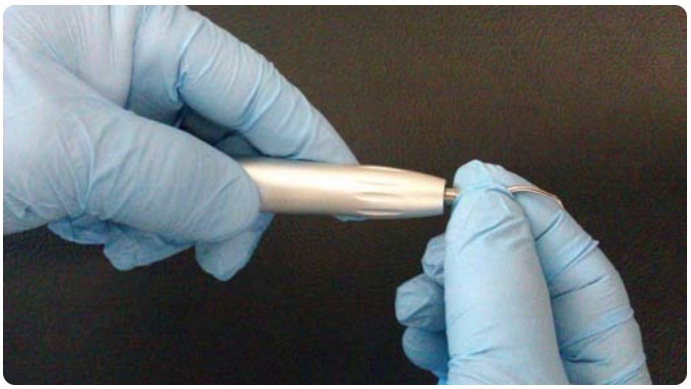


Fig. 5 Start the tip by hand

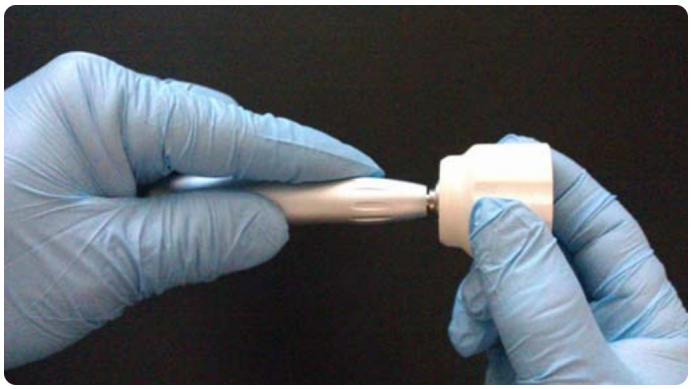


Fig. 6 Tighten with the torque wrench until it clicks

Fitting a tip

1. Turn the air off.
2. Screw the tip onto the handpiece by hand until it is snug (Fig. 5).
3. Slide the torque wrench over the tip so its square opening fits over the square flat of the tip.
4. Turn the wrench clockwise until it slips and you hear a click (Fig. 6). The tip is now at the correct tightness.

Removing a tip

1. Turn the air off.
2. Fit the torque wrench over the tip.
3. Turn the wrench counterclockwise to loosen, then unscrew the tip by hand.

⚠ **DANGER**

- Always tighten the tip with the torque wrench. A loose tip can break during treatment and injure the patient or the operator.
- Tips wear out. Replace a tip at once if it is worn or dull; corroded, nicked or rusted; or bent from a knock or a fall.
- Never sharpen or polish a tip to reuse it.

SECTION 03

Lubrication

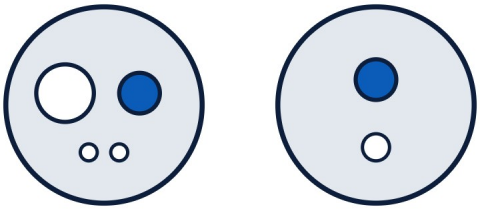
Lubricate the AS5000 at least once every 3 days with handpiece oil.

How to lubricate

1. Disconnect the AS5000 from the tubing.
2. Put 2–3 drops of handpiece oil into the drive air hole (blue in the drawings).
3. Reconnect the handpiece and run it for about 5 seconds.

NOTE AS5000-K: put the oil into the drive air port at the back end of the quick-connect coupler.

Drive air hole



AS5000-M4 AS5000-B2

WARNING Do not use a pressurized spray-can lubricant. The AS5000 has few openings for the pressure to escape, so the spray can push the handpiece forward violently.

CARE

Sterilization

Sterilize the AS5000 by autoclave before first use and after every patient.

Procedure

1. Remove the tip.
2. Brush dust and debris off the handpiece with a non-metal brush, then wipe it with a cloth moistened with disinfectant alcohol.
3. Lubricate the handpiece (page 8).
4. Seal the handpiece in a sterilization pouch.
5. Autoclave: 20 minutes at 121 °C, or 15 minutes at 132 °C. Maximum 135 °C.
6. Keep the handpiece in the pouch until it is used.

Tips

Remove the tip before cleaning the handpiece, and dry the tip completely before storing it (page 6).

NOTE Keep the AS5000 in its sealed pouch until the next patient.

WARNING DURING STERILIZATION

- If the autoclave has a drying cycle above 135 °C, skip the drying cycle.
- Place the AS5000 on the top or middle tray. The heat source is usually under the chamber floor, where the temperature can go above 135 °C.
- Do not autoclave the AS5000 with instruments that still carry chemical residue. Chemicals can discolor the finish and get inside and damage the internal parts.
- Do not clean the AS5000 with acids, oxidizing agents or disinfectant solutions.

SECTION 04

Warranty and support

6 month limited warranty

TPC warrants the AS5000 for 6 months against defects in material and workmanship. The cause of any problem is determined by the distributor. The warranty does not cover a product that has been used carelessly or not maintained as this manual describes.

Not covered

- Tips (wear items)
- Damage from air pressure above 51 psi
- Damage from drops or hard knocks
- A handpiece that has been taken apart

Replacement parts

PART	DESCRIPTION
AS1	Universal tip
AS2	Sickle tip
AS3	Perio tip
A776	Tip torque wrench
SK4	KaVo-type quick connector
AS5000-4	Handpiece only, 4-hole
AS5000-2	Handpiece only, 2-hole

Manufacturer

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