



## Simplify Your Handpiece Care

**Gordon's Clinical Bottom Line:** Many practitioners have discovered the value of routinely using an automatic device to purge and lubricate air and electric handpieces. Cleaning and lubricating handpieces reduces heating and may positively influence handpiece longevity. The task is simple. Assistina is the most popular brand, but other less-known devices that service multiple handpieces at one time may be preferable. This concept should be a mandatory procedure.

To maximize service life, most heat sterilized handpieces and attachments require lubrication and purging after each use to minimize the buildup of debris and deposits around bearings and gears. Improper or neglected maintenance can cause loss of power, turbine failure, and overheating of attachments.

Automated maintenance machines simplify and expedite handpiece processing by performing precise lubrication and purging steps within

an enclosed container that minimizes the mess. Dental staff are free to continue with other tasks instead of holding oily paper towels around purging handpieces. The automation helps ensure that maintenance is performed routinely and consistently.

**This report discusses findings from a user survey, gives key features of five automated handpiece maintenance machines, and provides clinical tips for implementing them into your practice.**

### Survey Results (from 63 Owner/Users)

- Assistina (A-dec) and QuattroCare (KaVo) were the most popular brands in use and have been on the market the longest.
- 69% of users reported that the machines had improved the life of their handpieces.
- 97% found insertion and removal of the handpieces to be easy.

- 59% considered the machines essential in their practice, while another 40% considered them a convenience. Only 2% felt they were a waste.
- 90% would purchase the same machine again, indicating a high level of user satisfaction.
- A recurring problem was finding appropriate adapters for certain attachments.

### Automated Maintenance Machines

The following chart shows key features of five automated handpiece maintenance machines.

All are intended to be installed in the office sterilization area and require compressed air and electrical hookups.

Product Photos					
<b>Product</b>	Assistina 301 Plus	Care 3 Plus (Model CI)	Lubrina	QuattroCare	Statmatic
<b>Company</b>	A-dec www.a-dec.com 800-547-1883	Brasseler USA/NSK www.brasselerusa.com 800-841-4522	J. Morita www.morita.com/usa 888-566-7482	KaVo www.kavo.com 888-275-5286	SciCan www.scican.com 800-572-1211
<b>Unit Cost</b>	\$2,435	\$2,285	\$2,420	\$3,115	\$2,600
<b>Function(s)</b>					
Lubricate	✓	✓	✓	✓	✓
Purge	✓	✓	✓	✓	✓
Extra long purge	✗	✓	✓	✗	✗
Separate clean cycle	✓	✗	✗	✗	✗
Lubricate chuck (optional attachment)	✗	✗	✓	✗	✓
Rotate handpiece gears	✓	✓	✗	✗	✗
<b>Lubricants Recommended by Manufacturer (Check with manufacturer to see if other lubricants may be used)</b>	Manufacturer's: W&H Service Oil, W&H Maintenance Solution  (2 reservoirs)	Manufacturer's: Care 3 Maintenance Fluid  (1 reservoir)	User's choice: Lubrina AR Spray, Sirona T1 Spray, NSK Pana Spray, Bien Air Lubrafluid Spray, W&H service oil F1, Kavo Spray (holds 2 spray cans)	Manufacturer's: QuattroCare Spray  (holds 1 spray can)	Manufacturer's: SciCan Spray  (holds 1 spray can)
<b>Handpiece Ports</b>	1	3	4 (2 for each lubricant)	4	3
<b>Process Options and Purge Times</b>	Standard: 35 sec	Short: 35 sec Long: 45 sec Extra Long: 50 sec Air purge: 60, 80, or 90 sec Programmable for each port	Short: 25 sec Long (more oil): 25 sec Long Blow-Out: 120 sec Programmable for each port	#1: 20 sec #2: 25 sec #3: 30 sec #4: 40 sec Same setting for all ports	#1: 15 sec #2: 20 sec #3: 30 sec #4: 40 sec Same setting for all ports
<b>Warranty</b>	1 year	1 year	1 year	1 year	10 years
<b>Overall Grade</b>	Excellent-Good	Excellent-Good	Excellent	Excellent-Good	Excellent-Good

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### Clinical Tips and Observations

- Handpieces should be disinfected and cleaned prior to automatic processing which should be performed before heat sterilization.
- High-speed air turbine handpieces were compatible with all machines using custom or universal adapters.
- Electric and low-speed attachments with e-style (ISO) connectors are compatible with all machines. For other attachments, contact machine manufacturer to determine compatibility.
- Lubricants used in some machines may not be recommended for all handpieces. Contact handpiece manufacturer for compatibility.
- Machines with multiple ports can be configured to process different handpiece styles without changing adapters (*Care 3 Plus, Lubrina, QuattroCare, Statmatic*).
- Machines that rotate the gears of attachments while processing may provide better cleaning and greater longevity (*Assistina, Care 3 Plus*).
- Two machines allow each port to be programmed independently (*Care 3 Plus, Lubrina*). Lubrina can also supply different lubricants to separate ports.
- Two machines have separate ports for cleaning and lubricating the handpiece chuck (*Lubrina, Statmatic*).
- Maintenance machines and long purge cycles did not eliminate the problem of sporadic oil expulsion from handpieces. Additional 30–60 second purge immediately before clinical use helps minimize problem.
- Lube-free handpieces and attachments should not be processed in automated maintenance machines.
- Overall, Lubrina was the most versatile with multiple ports, programmability, and compatibility with many lubricants and handpieces.

**CR Conclusions:** Automated lubrication and purging machines simplify and help ensure regular maintenance of handpieces. All machines tested performed well and were easy to use and integrate into practice. No machine had all desired characteristics, but all had high user satisfaction. Lubrina was the most versatile and provided a good combination of features and cost.

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