# THE DENTAL ADVISOR

"Improved Patient Care Through Research"



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THE DENTAL ADVISOR evaluates and rates dental products and equipment by objective clinical and laboratory protocols. The publication consists of clinical evaluations, comprehensive long-term evaluations, product comparisons and specialty reports. To subscribe, please call 734-665-2020.

#### **EDITORS**

John W. Farah, D.D.S., Ph.D. John M. Powers, Ph.D.

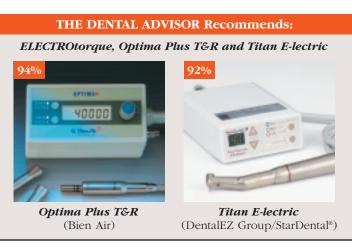
EMAIL info@dentaladvisor.com

WEB SITE www.dentaladvisor.com

## **Electric Handpieces**

Why are electric handpieces becoming popular in the U.S.?

Electric handpiece systems have been used in Europe for many years. While the first systems in the U.S. offered only air/electric conversion kits, recent electric motors can be fully integrated into the tubing of the delivery system. The constant torque and speed and the concentric cutting performance provide advantages over air-driven turbines. Many systems offer a digital display of the operating speed. Illumination and spray water coolant are available with all current electric handpiece systems. Brushless motors have been introduced to eliminate the need for routine maintenance.





### Benefits of Electric vs. Air-driven Handpieces

- Constant speed and torque under load
- Concentric cutting
- Turbine-free attachments
- Same motor used for high-speed and all slow-speed attachments (70-200,000 rpm)
- Manual control of speed digital display
- Variety of attachments slow-speed, high-speed, endodontic, implant

## Recent Improvements in Electric Handpieces

- Brushless motors
- Shorter, lighterweight motors
- Fewer attachments
- Reduction in the height and/or angle of the attachment
- Auto-reverse for endodontic procedures

## **Rating Electric Handpieces**

Product	Company	Motor Speed Range	Motor Speed Attachment	Installation Options*	Motor Weight/Length	Auto Reverse	Brushless	Motor Cost	Handpiece Cost	Clinical Rating
EA-40LT	A-dec/W&H	2,000-40,000 rpm	150-200,000 rpm	TT, A-dec Cascade-I	79 g/47 mm	No	Yes	\$2,700	\$1,175	na
EA-50LT	A-dec/W&H	300-40,000 rpm	3-200,000 rpm	A-dec 500-I	79 g/47 mm	No	Yes	\$2,800	\$1,250	na
ELECTROtorque	KaVo	2,000-40,000 rpm	27-200,000 rpm	Е	94 g/46 mm	No	No	\$1,795	25LPA \$1,540 25LHA \$1,195	96%
ELECTROtorque plus 701KL	KaVo	2,000-40,000 rpm	27-200,000 rpm	Operatory only	99 g/46 mm	No	Yes	\$2,905	25LPA \$1,540 25LHA \$1,195	ce
eStylus	Midwest	1,500-40,000 rpm	150-200,000 rpm	E, TT	98 g/51 mm	Yes w/torque	No	\$2,458	HS \$1,295 LS \$1,062	ce
Optima MX	Bien Air	100-40,000 rpm	150-200,000 rpm	E, I	116 g/66 mm	Yes w/torque	Yes	\$2,950	\$1,154	ce
Optima Plus T&R	Bien Air	20-40,000 rpm	100-200,000 rpm	E, I	102 g/64 mm	Yes w/torque	No	E \$2,100 I \$2,600	\$1,154	94%
TiMax EL 400	NSK	1,000-40,000 rpm	100-200,000 rpm	E, I	106 g/69 mm	No	No	\$1,350	\$880 standard \$980 mini	na
Titan E-lectric	DentalEZ Group/ StarDental	1,000-40,000 rpm	62.5-200,000 rpm	E, I, TT	106 g/69 mm	No	No	\$1,650	\$1,095	92%

na = not available, ce = currently evaluating

Costs are listed for comparison only and are not used to calculate the ratings. All costs shown in U.S. dollars.

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<sup>\*</sup>E = external, I = internal, TT = table top