BIEN-AIR® ELECTRIC HANDPIECES – THINGS TO CONSIDER

midmark®

CONSIDER	WHY THIS CONSIDERATION IS IMPORTANT	HOW TO SOLVE	BIEN-AIR® AND MIDMARK® SOLUTIONS	RATE IMPORTANCE *(scale of 1–5 where 1 is lowest and 5 is highest)*
Consistency Does the handpiece provide the consistency you need for procedures?	Some procedures, such as cutting resin, finishing procedures, cutting off crowns, and more, are best accomplished with the consistent speed and torque of electric handpieces[1]. Electric handpieces can produce greater precision and concentricity with quieter operation and less vibration than air-driven handpieces.	Consider that a single attachment can achieve all restorative high- and low-speed functions when evaluating performance and product offerings for your services.	Bien-Air Optima MX2 Plus Micromotor, Smart Logic Controller and NOVA® Contra-Angle Handpieces with the Midmark Procenter Instrument Delivery System	
Savings and Workflow How many attachments and/or separate motor systems do you need to run your practice?	Often, dental practices buy separate instruments for each service they provide. More attachments cost more and require more time, space, and resources to use, clean, and sterilize. Some handpiece solutions require up to seven attachments to perform a broad range of clinical procedures.	Consider an electric motor that requires only two contra-angle handpieces to perform a broad range of clinical procedures, including all operative dentistry and rotary endodontics.	Bien-Air MX2 Plus Micromotor and NOVA Contra-Angle Handpieces	
Head Size Is the handpiece head small enough to provide the visibility you need, yet robust enough to support the complete range of restorative applications?	Large handpiece heads can reduce accessibility and inhibit visibility. A small handpiece head and slim handle can feel more comfortable and provide better access to the oral cavity with better visibility.	Consider an electric handpiece designed with a smaller head size that can support a standard-length bur to accomplish a complete range of restorative procedures.	Bien-Air NOVA Contra-Angle Handpieces	
Musculoskeletal Disorders (MSDs) and Optimized Ergonomics Are you experiencing numbness, muscle soreness, fatigue or decreased range of motion in your extremities?	It can take only weeks or months for a healthy dental clinician to develop musculoskeletal disorder (MSD) symptoms,[2] and a pooled annual prevalence rate of 78% of dental professionals in Western countries suffer from MSDs and musculoskeletal pains.[3] Furthermore, MSDs are one of the top reported reasons for early retirement among dentists.[4]	Consider handpieces that feature an ergonomically balanced complete assembly of tubing, motor and attachment and provide a center of gravity close to the crest of the palm to effectively reduce strain on the hand, arm and shoulder, helping prevent MSDs.	Bien-Air MX2 combined with micro-series NOVA Contra-Angle Handpieces	
Programmable Speeds Do you have to adjust speed for each procedure?	Adjusting the handpiece speed for each procedure can be inefficient and tedious. Evaluate how many program pre-sets are available to perform a broad range of clinical procedures optimally.	Consider handpieces that provide more than a handful of presets with up to 40 programmable preset speeds for all the main restorative procedures of general dentistry and endodontics.	Bien-Air NOVA Contra-Angle and Straight Handpieces	
Patient Safety How can you avoid soft tissue burns sometimes caused by handpieces?	Patient soft tissue burns can be a risk when handpieces are not maintained properly[5] and/or overheat during operation.	Consider using the only electric handpieces available with patented CoolTouch+™ heat-arresting technology and proven to never exceed human body temperature.[6]	Bien-Air NOVA Contra-Angle Handpieces	
Noise Level Is the handpiece noisy?	Too-loud handpieces can increase patient anxiety and even lead to drill deafness. Long-term clinician exposure can contribute to hearing loss.	Consider the quietest electric handpiece at full speed on the market [6], designed with optimized gears, stainless steel construction and a monobloc handle to reduce both vibrations and sound level.	Bien-Air NOVA Contra-Angle and Straight Handpieces	

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Maintenance Requirements How simple and effective is the handpiece care and maintenance?	Regular handpiece maintenance (cleaning and lubrication) is essential for durability and safety. Using a two-stage process in which cleaning and lubrication occur separately is optimal for the longevity of the handpiece.	Consider a handpiece care and maintenance system that can quickly clean and lubricate handpieces with consistent, repeatable high standards using a two-stage process.	Bien-Air Lubricare 2® Handpiece Care and Maintenance System	
Infection Prevention Is the handpiece designed to help prevent cross-contamination?	When the water pressure in dental unit lines decreases during use, water can flow into the line and potentially be transferred to the next patient unless a valve or other solution is in place to prevent it. An anti-retraction valve helps keep contaminants inside the handpiece, as those contaminants attach to the valve. If you cannot, then, sterilize the valve, you may still risk transferring liquid between patients.	Consider handpieces that feature not only an anti-retraction valve and Sealed Head mechanism to minimize the potential backflow of fluids from the oral cavity into the dental unit's hoses but also a valve that is autoclavable to reduce the risk of cross-contamination.	Bien-Air MX2 Plus Micromotor and NOVA® Contra-Angle Handpieces	
Handpiece Lifespan Does the handpiece use the latest available technology to increase longevity?	The most common point of failure in a handpiece is the chuck, which can lead to bur slipping during operation.	Consider handpieces with a PVD-coated chuck system for more robust resistance to wear from sterilization procedures and better prevention of bur slipping during operation.	Bien-Air NOVA Contra-Angle Handpieces	

SOURCES

1 Dental Economics. Ask Dr. Christensen: What are the best techniques for electric dental handpieces? https://www.dentaleconomics.com/science-tech/article/16389573/ask-dr-christensen-what-are-the-best-techniques-for-electric-dental-handpieces. Accessed January 10, 2024.

2 University of North Carolina at Chapel Hill. Musculoskeletal Disorders. https://ehs.unc.edu/topics/ergonomics/musculoskeletal-disorders/#:~:text=Musculoskeletal%20disorders%20(MSDs)%2C%20also,the%20slow%20onset%20of%20symptoms. Accessed January 20, 2024.

3 PLOS ONE. Prevalence and occupational risk factors of musculoskeletal diseases and pain among dental professionals in Western countries: A systematic literature review and meta-analysis. https://doi.org/10.1371/journal.pone.0208628. Accessed January 20, 2024.

4 International Journal of Clinical Pediatric Dentistry. Ergonomics in Dentistry. https://www.ncbi.nlm.nih.gov/pmc/articles/PMC4144062/. Accessed January 10, 2024.

5 U.S. Food and Drug Administration. FDA public health notification: patient burns from electric dental handpieces. www.fda.gov/MedicalDevices/Safety/AlertsandNotices/PublicHealthNotifications/ucm062018.htm. Accessed January 10, 2024.

6 Data on file with Bien-Air.

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