

Azenic DHP™ Single-Use Disposable High Speed Handpiece (Project 11-15) (6/12)



The **Azenic™ DHP**, a single-use disposable high speed handpiece, is an American made, FDA approved, disposable handpiece. Because it is pre-sterilized and disposable, the handpiece offers the advantage of protection against cross-contamination and the cost of disinfection, sterilization, and ongoing maintenance. Every handpiece is individually wrapped, sterile, and “brand new” so performance problems and costs that occur from repeated use and sterilization are eliminated.

Specifically, the manufacturer mentions that the DHP is ideally suited as a stand-in handpiece for the removal of old crowns and fixed partial dentures, which cause considerable wear and tear to metallic handpieces leading to breakdowns and repairs. Equally important to note, the DHP produces no chip-air, preventing the possibility of air embolism from cross sectioning, surgical extractions, and crown lengthening procedures. It is also touted as a trusted back up to traditional metallic handpieces when the autoclave is backed up, the regular metallic handpiece has failed or is out for repair, or the clinician is operating in remote areas or mobile units.



Manufacturer (or Source):

Azenic, Inc.™
350 East Michigan Ave., Suite 135
Kalamazoo, MI 49007
(888) 347-7576 ext. 1001
(269) 585-2220 FAX
www.azenic.com

Suggested Retail Price:

\$276 for a box of 12 (\$23 each)

Government Price:

\$186 for a box of 12 (\$15.50 each)

ADVANTAGES:

- + Overall cost in the long run may be less considering expense of maintenance and sterilization
- + Disposability is always a plus now
- + Single use, ideal for infection control and no worry about spreading disease
- + Reduction of cross contamination risk for patient
- + Ideal for deployed location/lack of sterilization
- + No maintenance required
- + No turnaround delay for sterilization
- + Single use ensures a “new” handpiece each time; no issues with fiber optic light or the air/water spray
- + No chance of air embolism
- + Great for surgical procedures
- + Great when the sterilizer goes down or when I need a high speed immediately for a small procedure

DISADVANTAGES:

- Excessive noise
- Excessive vibration
- Bur retention and length inconsistent, at times couldn't remove bur
- Inadequate water spray
- Leaves debris at the preparation site because there is no chip air in the handpiece
- Not as precise cutting (eccentricity, bur wobble)
- Bulkier, head is too large, limits access, visibility

- No swivel, causes hoses/lines to twist (manufacturer note* an adapter can be purchased that will allow the handpiece to swivel, but was not evaluated by DECS)
- Fiber optic light not as efficient
- Power/torque not as efficient--excessive pressure needed to cut
- Time consuming because cut slower
- Inconsistent length (too long/short), unable to get length for endodontic procedures
- Inconsistent cutting
- Insufficient torque, especially when removing amalgam
- Too light so hose controlled the balance, lack of swivel made me wrestle with the handpiece



Azenic™ DHP



Traditional high-speed

SUMMARY AND CONCLUSIONS:

The introduction of the Azenic™ DHP single-use disposable high-speed handpiece is the first move forward by any manufacturer to reduce the cost and eliminate maintenance problems caused by handpiece sterilization and to eliminate any possibility of cross-contamination from dental handpieces. It is a first generation model with product line extensions planned for the future. The Dental Product Shopper (2012) said the DHP is “a good product for special use,” adding, “[It] would be very useful in an environment where sterilization is difficult or the pace of work is extreme.” The Catapult Group (Clinical Evaluation 2011) reported “81% thought there was a direct application in their practice and would recommend the DHP to their colleagues”.⁴ The Azenic DHP provides the benefit of enhanced infection-control, since the product is discarded after single-patient use. Specifically, it can be helpful in applications with ‘walk in’ and immune-compromised patients as well as procedures where elimination of lubricant discharge and/or cleaner residue from the handpiece is desired.⁵ The Dental Advisor found Azenic DHP had good torque and cut well but was notably louder than any of their other handpieces. Manually changing burs is inconvenient and requires a very hard push to insert and remove burs. Both Dental Advisor and DECS evaluators did report instances of burs becoming stuck in the chuck which could be caused by the brand of bur used. The head size is large and can potentially impede visibility and access. There is no chip-air through the handpiece, so the delivery unit water pressure must be set to the recommended 5 psi; otherwise, the spray will not be directed at the tip but will follow gravity or be pulled into the suction tip, leaving debris at the preparation site. With no chip-air the handpiece is capable of handling minor surgical applications, which is highly beneficial. The Editor of Dental Economics commented “How about protecting your high-precision highspeed that you use day in and day out to remove old metal crowns, old amalgam restorations, and the new zirconia crowns? Constant use in this manner causes the cartridges to break down faster and replacing them is time consuming and expensive. Use the Azenic DHP in those situations and then pick up your precision handpiece to finish your preparations.”⁶ Other clinicians have suggested that the Azenic Disposable Handpiece is not intended to replace the everyday handpiece. Rather, the intent is to increase the longevity of more expensive

handpieces by using the disposable as an alternative to more demanding situations. Laboratory tests demonstrate that the Azenic DHP runs comparable to many standard handpieces on the market today and for the low introductory price, it is a 'no brainer' to have in every dental office today."⁷

In short, there are numerous advantages and disadvantages to using this handpiece. DECS evaluators' thought that the Azenic DHP was well made and reliable, and served a valuable purpose as an adjunct to their practice of dentistry. However, DECS evaluators would not replace their current stock of traditional, sterilizable metallic handpieces with the disposable Azenic DHPs, but they see many advantages to their use as an adjunct in surgery (no chip air, sterile packaging), short procedures not requiring many bur changes, or in any instance where the autoclave is down or if a traditional highspeed handpiece is not available. The disposable high-speed handpiece will be a very attractive addition to the Expeditionary Medical Support armamentarium.

The **Azenic™ DHP** single-use disposable high-speed handpiece is rated **Acceptable** for use in federal dental facilities.