



## Z500 Electric Laboratory Handpiece (Project 03-33) (4/05)



The NSK Z500 is an electric handpiece designed for dental laboratory use. The Z500 components include a tabletop power console, compact brushless handpiece, variable speed foot pedal, handpiece stand, and accessory kit. The handpiece speed ranges from 1,000 to 50,000 rpm with a reported maximum torque of 6 Ncm. It has a twist type chuck release with a standard 2.35mm chuck size, but optional sizes of 1.6 and 3.0 mm are available. It features a large variable-speed dial and digital rpm display window. It also has an auto speed feature, which allows the operator to maintain current speed by pressing the motor button. Speed is then

maintained even when the foot pedal is released. The Z500 has several built-in safety features. A built-in circuit breaker ceases rotation if irregularities are sensed and an error code will be displayed. The Z500 also has a maintenance mode that can be used to check the functionality of the switches, display, foot pedal, motor, etc. The Z500 has the capability to be set to vacuum-coupled mode; this function allows bench vacuum to work simultaneously. The Z500 also comes in a knee, tower, or foot power console types.



### Manufacturer:

NSK America Corporation  
700B Cooper Court  
Schaumburg, IL 60173  
(888) 675-1675  
(847) 843-7664  
(847) 843-7622 FAX  
[www.nskamerica.com](http://www.nskamerica.com)

### Distributor:

Brasseler USA  
(800) 841-4522

### Suggested Retail Price:

\$1,100.00 Components include:  
-Tabletop power console (NE114)  
-Compact brushless handpiece (UM50C)  
-Variable speed foot pedal (FC-40)  
-Handpiece stand (Z095 201)  
-Accessory kit (i.e., chuck wrench, spindle holder and handpiece holder)

### Government Price:

\$780.00 Component list as listed above  
\$845.00 Knee, Tower, Foot power console versions

### ADVANTAGES:

- + Smooth, quiet operation
- + Auto-cruise or variable-speed foot control
- + Easy to use twist chuck release
- + Easy to use instruction manual
- + Large variable-speed-dial
- + Allows setting up to 50,000 rpm
- + Error codes for irregularities

- + Easy to read digital display screen
- + Sufficient torque
- + Carrying handle, handpiece holder on side
- + Competitively priced

**DISADVANTAGES:**

- Table-top version is slightly large if low on workspace
- No automatic shut-off if handpiece is left on
- Weekly maintenance required

**SUMMARY AND CONCLUSIONS:**

The NSK Z500 is a dental laboratory electric handpiece with a tabletop power console. Its brushless motor requires less maintenance than traditional brush-type motors and was found to run smoothly and quietly with minimal vibration. The handpiece has a twist-type chuck release that was preferred by these evaluators. The handpiece has sufficient torque to perform a variety of tasks. The Z500's power console has easy-to-use push-button switches and a constant/variable speed mode for the foot control. Evaluators also found the large speed-dial easy to use and the digital display screen was easy to read. The Z500 desktop version is slightly larger than other popular models but was recommended for use by evaluators. The **Z500 Electric Laboratory Handpiece** is rated **Excellent** for use in USAF dental facilities.