



# Chewing Up the Competition

DENTURE MANUFACTURER IMPROVES CUSTOMER SATISFACTION

*“The Objet Eden260V 3D Printer helps us optimize the dental modeling process by producing high-quality models, rapidly and precisely. 3D printing is critical for digital dentistry.”*

*– Kevin Shi, Manager of Digital CAD/CAM Center, KTJ Dental Technology Group*

## CASE STUDY



KTJ's in-house 3D printer streamlined the customization of dental models, a crucial aspect of digital dentistry.

The China market for dental prostheses has grown rapidly in recent years, reaching ¥4.35 billion in 2012. In order to remain competitive, KTJ Dental Technology Group is keen to employ technologies that shorten the production cycle, and produce custom dental models with greater accuracy and lower costs.

A well-known high-end dental laboratory and a pioneer in digital dentistry in China, KTJ specializes in the fabrication of various dental prostheses, including those for aesthetic dentistry. KTJ's goal of reducing its production cycle is vital: For the dental industry in China, technologies that reduce lead times are critical for maintaining competitiveness and satisfying customers. Patients and dentists are more than willing to pay for services that reduce waiting times by even just a day.

## Optimizing the Dental Prostheses Fabrication Process

In order to meet the needs of its customers, KTJ needed technologies that would allow for rapid production, a high degree of customization and low costs at the same time. Several rounds of negotiations and research finally led them to the Objet® Eden260V™ 3D Printer for KTJ's CAD/CAM Digital Center, which plays a key role in the dental prostheses fabrication process. Choosing from four materials specifically designed for the dental industry, the center uses its Objet Eden260V 3D Printer to print dental models with exceptional detail and real simulation.

KTJ technicians and engineers use the Objet Eden260V 3D Printer in its dental modeling process, which is a critical part of dental prostheses production. After a patient's digital data is collected through intraoral 3D scanning, a technician places the patient's digital data in CAD to create a printable STL file. The patient's dental model is then 3D printed from the STL file. Finally, the 3D printed model is used as a base to test fitment of a variety of dental prostheses.

The Objet Eden260V 3D Printer has reduced the time required for KTJ's dental modeling process. Combining 3D scanning and CAD/CAM designs, it rapidly prints dental models for fitting dental crowns, bridges and fixtures. Additionally, it produces surgical guides and other prostheses that are intended for short exposure to patients' mouths.

"Digital dentistry has revolutionized the dental modeling process. Using the Objet Eden260V, a patient's dental restoration can now be completed in just one day," said Kevin Shi, manager of KTJ's Digital CAD/CAM Center.

## Customization with Precise Parts

Digital dentistry requires a high degree of customization because each patient has unique dental anatomy and dental conditions. 3D scanning and imaging allows the Objet Eden260V 3D Printer to produce dental models accurately, simulating patient's real dental conditions, while helping dentists make the best treatment decisions.

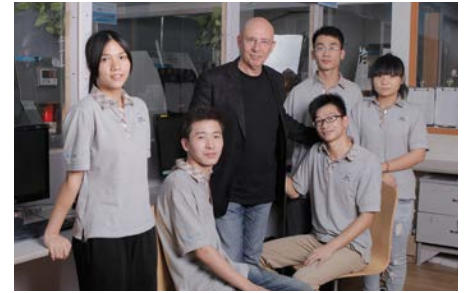
All of these features help eliminate fit issues and patient discomfort caused by inaccuracies in restorations created by traditional modeling, creating higher patient satisfaction. Shi explained, "Customers are now happier with our treatments as it causes less pain and discomfort, and they can even take the dental models home as gifts."

Digitalizing the dental modeling process has dramatically reduced KTJ's operational costs. In the past, KTJ mailed dental models to customers for testing, which was costly and slow. Making adjustments greatly increased the amount of time customers needed to wait to receive their final prostheses. Now, all of these costs have been eliminated because the 3D printer allows designs to be shared digitally and instantaneously.

"The Objet Eden260V has boosted our business with a streamlined modeling process and lower costs while making our customers happier. It's a big smile for everybody," said Shi.



KTJ's 3D printer secures the perfect fit for each patient's individual dental anatomy and conditions.



The staff at KTJ Dental Technology Group.



The Objet Eden260V 3D Printer helped eliminate fit issues and patient discomfort caused by inaccuracies in restorations.



The ability to make quick adjustments to models significantly lowered KTJ's operational costs.

**stratasys**®

E [info@stratasys.com](mailto:info@stratasys.com) / [STRATASYS.COM](http://STRATASYS.COM)

ISO 9001:2008 Certified

### HEADQUARTERS

7665 Commerce Way, Eden Prairie, MN 55344

+1 888 480 3548 (US Toll Free)

+1 952 937 3000 (Intl)

+1 952 937 0070 (Fax)

2 Holtzman St., Science Park, PO Box 2496

Rehovot 76124, Israel

+972 74 745-4000

+972 74 745-5000 (Fax)