



# Form 2

3D Printing for  
Digital Dentistry



# Bring Dental 3D Printing to Your Desktop

The Form 2 brings powerful 3D printing to your dental business. Its speed, precision, and compact footprint make it perfect for dental practices and labs. With the Form 2, you can easily and reliably produce precise surgical guides, retainers, aligners, and more.

Now, dental professionals can move from a digital model to a 3D print at a quick turnaround and an affordable cost. The Form 2 improves patient care by enabling mass customization of dental appliances. It takes as little as 15 minutes to get set up and start printing.

## IMPROVE CLINICAL OUTCOMES

Improve patient experience by combining intraoral scanning, CBCT imaging, and the Form 2. This powerful workflow lets you integrate imaging data in dental software to design precise appliances and plan procedures for better clinical outcomes.

## PRODUCE IN HOUSE

Bringing production in house gives you more control over the fabrication process, faster turnaround time, and lower costs. Digital workflows require less manual labor and time than traditional methods.

## WORK SMARTER

Our library of Standard and Biocompatible Resins enables a broad set of dental applications — all powered by the same machine.



**Unlock the power of 3D printing in your dental practice for only \$3499.**

# Application: Surgical Guides

Perform precise, cost-effective surgeries with better clinical outcomes.



The Form 2 makes guided surgery cost-effective, with autoclavable, Class 1 biocompatible Dental SG Resin. Now you can 3D print digitally designed guides with precision on par with lab-fabricated guides and industrial 3D printers. Take advantage of digital implantology to reduce surgery time, improve patient experience, and achieve high-precision implant placement with ease.

## **BENEFITS:**

- ✓ Low-cost guide production
- ✓ Precise implant placement
- ✓ Improved clinical outcomes
- ✓ Easier, faster surgeries

## Surgical Guide Workflow



### **1. DIGITAL DESIGN**

Design surgical guides by using implant treatment planning software to integrate CBCT and intraoral scan data.



### **2. PRINT AND PREPARE**

Print on the Form 2 with Formlabs Dental SG Resin. Post-cure with a cure chamber, remove supports, and add drill sleeves.



### **3. PROCEDURE**

Steam-sterilize prints in an autoclave to use surgical guides directly in the mouth during implant surgery.

# Case Study: Direct-Printed Surgical Guides

## Dr. Daniel Whitley, DDS

Dr. Whitley is a member of the American Dental Association, Academy of General Dentistry, North Carolina Dental Society, 5th District Dental Society, and the ICOI, and is on the executive committee for East Central Dental Society. He received his DDS from the University of North Carolina at Chapel Hill and is currently in private practice in Greenville, NC.



“The Form 2 and Dental SG Resin allow me to have total control over my patient’s implant treatment at a cost-effective price point. This method allows reduced surgical times and better surgical outcomes for my patients without the traditionally high costs of 3D printed surgical guides.”

## Cost Comparison

Dr. Whitley was able to recoup the cost of his Form 2 after 25 cases when he began using surgical guides printed with Dental SG Resin.

	Lab Fabricated	Form 2 3D Printer	Industrial 3D Printer
<b>COST OF MACHINERY</b>	—	\$3,499	\$40,000
<b>COST PER GUIDE</b>	\$250 – \$750	\$21 – \$30	\$40 – \$50
<b>TIME</b>	3 Weeks	2.5 Hours	4 Hours
<b>ACCESSIBILITY</b>	External, 3rd party	Internal, Desktop, Anyone can use	Internal, Dedicated Technician Billed by project

# Application: Orthodontic Models and Appliances

Improve your patient experience and streamline your workflow.

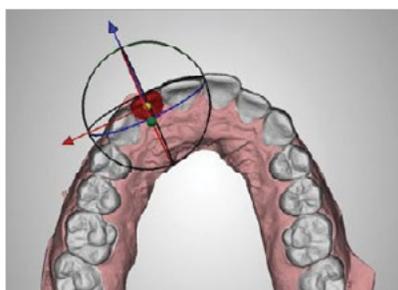


Desktop 3D printing produces retainers and aligners that are more accurate than physical methods, eliminating uncomfortable physical impressions. With the Form 2, you can print dental appliances with same-day delivery for your patients. The Form 2 not only reduces procedure costs, but improves the overall patient experience.

## **BENEFITS:**

- ✓ Eliminate physical impressions
- ✓ Reduce skilled labor costs
- ✓ Improve patient experience

## Vacuum Forming Workflow



### **1. DIGITAL DESIGN**

Use intraoral or desktop optical scanners to capture anatomical data, then generate accurate 3D models using design software.



### **2. PRINT AND PREPARE**

Prep models for the printer with PreForm software. Print on the Form 2 with Grey Resin.



### **3. VACUUM FORM**

Using an intermediary/separator layer, vacuum form over the 3D print using a pressure former.

# Case Study: Vacuum Formed Appliances

## Dr. Sean Holliday, DDS, MS

Dr. Sean Holliday, DDS, MS owns Holliday Orthodontics with three locations in Hawaii. Since the practice opened in 2004, he has been committed to advancing the practice of digital dentistry through continuing education. Third-party labs used to charge Dr. Holliday \$35 for a single retainer with a 3-week lead time. With the Form 2 3D printer, he produces a retainer for \$2 in less than 3 hours.



“When using third party labs, it can become costly with additional laboratory fees and shipping costs. The shipping adds many days, sometimes even weeks, to the fabrication process that did not work well with our commitment to our patients to be efficient with their time.”

## Cost Comparison

Dr. Holliday printed an average of 20 vacuum formed appliances per week, with a return of investment within 3 months.

	Lab Fabricated	Form 2 3D Printer	Industrial 3D Printer
<b>COST OF MACHINERY</b>	—	\$3,499	\$40,000
<b>COST PER MODEL</b>	\$10 – \$15	\$1 – \$2	\$2 – \$4
<b>COST PER APPLIANCE</b>	\$40 – \$100	\$2 – \$4	\$40 – \$50
<b>TIME</b>	3 Weeks	1.5 Hours	4 Hours
<b>ACCESSIBILITY</b>	External, 3rd party	Internal, Desktop, Anyone can use	Internal, Dedicated Technician Billed by project

# Other Applications

## Educating with 3D Printed Models

In academic settings, 3D prints of anatomically precise models allow dental students to simulate surgical practices. Instructors can easily explain treatments and procedures with 3D models that give students a tactile learning experience.



“Using 3D printing technology to generate a full-scale model of a patient’s lower jaw, students are able to simulate implant surgery using an anatomically correct model of the jaw, greatly enhancing their education by making it realistic.”

**Dr. Michael Scherer, UNLV School of Dental Medicine**

# Technical Specifications

## PRINTER

<b>Price</b>	\$3499
<b>Dimensions</b>	35 × 33 × 52 cm 13.5 × 13 × 20.5 in
<b>Weight</b>	13 kg / 28.5 lbs
<b>Operating Temperature</b>	Autoheats to 35° C or 95° F Self-heating Resin Tank
<b>Power Requirements</b>	100–240 V 1.5 A 50/60 Hz 65 W
<b>Laser Specifications</b>	EN 60825-1:2007 certified Class 1 laser product 405 nm violet laser 250 mW laser
<b>Connectivity</b>	Wi-Fi, Ethernet, and USB
<b>Printer Control</b>	Interactive touch screen

## PREFORM SOFTWARE

<b>System Requirements</b>	Windows 7 and up Mac OS X 10.7 and up
<b>File Type</b>	.STL or .OBJ

## PRINTING PROPERTIES

<b>Technology</b>	Stereolithography (SLA)
<b>Peel Mechanism</b>	Sliding peel process with wiper
<b>Resin Fill System</b>	Automated cartridge system
<b>Build Volume</b>	145 × 145 × 175 mm 5.7 × 5.7 × 6.9 in
<b>Layer Thickness (Axis Resolution)</b>	25, 50, 100, 200 microns 0.001, 0.002, 0.004, 0.008 in.
<b>Laser Spot Size (FWHM)</b>	140 microns 0.0055 inches
<b>Supports</b>	Auto-generated Easily removable

## FINISHING KIT

### Includes

- Finishing tray
- Scraper
- Pre and post-rinse tubs
- Rinse basket
- Squeeze bottle
- Flush cutters
- Tweezers
- Disposable Nitrile gloves
- Removal tool
- Removal jig



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