



# Dental CAD/CAM 3D Printers

High productivity manufacturing of accurate, highly detailed dental prostheses, precision working models, drill guides and orthodontic thermoforming models



# Enter the Digital Dentistry Era

## ENHANCE QUALITY

Reduce the need for remakes with the digital precision, detail resolution and the design freedom of 3D Systems dental printing solutions. Printing unique feathered edges and crisp grooves that are commonly found on tooth anatomy, with verified accuracy and consistency for dental applications, ensures you can get the perfect fit every time.

## ACCELERATE YOUR CYCLE TIMES

Achieve a 50% increase in throughput with no additional labor. From highly flexible bench-top personal printers to high-capacity printers with round-the-clock operation and same-day cycle times, our dental CAD/CAM printers dramatically reduce lead times.


## INCREASE MANUFACTURING AGILITY

3D printing provides more flexibility and throughput to develop your business and access the digital dentistry world, while reducing resource dependency. Our dental solutions are designed for use in laboratories and are compatible with all open .STL dental CAD/CAM software, making production methods faster, easier and more effective.

## REDUCE COSTS

With uniformly thin walls, users enjoy an average of 20% savings on alloy consumption and 50% savings on framework finishing time with extremely smooth surface finish, adding to the remakes savings. For high volumes, Direct Metal Printing eliminates multiple steps and reduces the unit cost per restoration.

## DENTAL APPLICATIONS INCLUDE:



**IMPLANT-SUPPORTED STRUCTURES**  
Unlimited design possibilities for metal printed (DMP) implant bars and implant suprastructures.

**DRILL GUIDES**  
USP Class VI-capable transparent materials for biocompatible drill guides.

**PARTIALS, FRAMES**  
Production of castable wax-ups or direct metal printing.

**DENTAL WORKING MODELS**  
Precision, beautiful working models in stone-like materials.

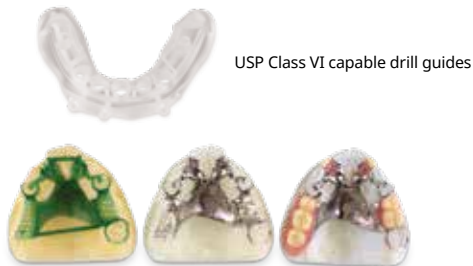
**CROWNS, BRIDGES, VENEERS**  
Production of castable and pressable wax-ups, or direct metal printing.

**THERMOFORMING ORTHODONTIC MODELS**  
High accuracy and repeatability models for thermoformed aligners.

# Projet® MJP Printers

## Exceptional quality, unmatched throughput

3D Systems' digital dentistry Multijet Printing solutions produce high-quality, accurate, sharp and crisp dental parts, at high speed and economically, to increase dental labs' efficiency and flexibility, and support development.



USP Class VI capable drill guides

Partials and working models printed on the Projet MJP 3600 Dental



Wax-ups production

## MJP PRODUCTIVITY AND ECONOMICS

Designed for 24/7 use, laboratories can boast same-day cycle times, reduced lead times and diminished costs for high ROI. Delivering new levels of productivity, the Projet MJP 3600 Dental printer can produce hundreds of units per cycle and up to 24 quad cases in a single build, while the Projet MJP 2500 Plus adjusts the cadence of your models production workflow from a few hours to full day batches.

## MJP EASE-OF-USE AND ECONOMICS

Optimize labor costs and save on remakes—finishing MJP parts is as easy as melting wax away from even the tightest spaces, preserving the finest details and smooth surface quality. No hand scraping, high-pressure water jets, caustic chemical baths, or special facilities requirements.

## HIGH CAPACITY FOR THE BROADEST RANGE OF DENTAL LAB APPLICATIONS

The versatile Projet MJP 3600 Dental printer is capable of quickly and consistently producing accurate wax-ups for the production of prosthetic devices, and manufacturing precision working models in a stone-like material, as well as orthodontic thermoforming models or drill guides in USP-Class VI capable durable plastic material.



## PRECISION, SPEED AND SIMPLICITY MADE AFFORDABLE

With excellent edge fidelity, smooth and hard low-friction matte surfaces, the Projet MJP 2500 Plus utilizes Visijet M2R-TN tan material to produce accurate prosthodontic and thermoforming models, for easy detail visualization, in a fast, effective and economical design-to-part process.

High precision dental models produced on the Projet MJP 2500 Plus

# Projet® 1200 Micro-SLA Printer

## Low-cost, professional-grade dental wax-up 3D printer

The Projet 1200 micro-SLA 3D printer puts the high precision of a professional dental 3D printer right on your lab bench, so you can make accurate wax-ups faster with no 3D printing experience required.

### FOR EVERY DENTAL LAB BENCH

The Projet 1200 is so affordable to own and use that every dental CAD/CAM designer can have one on the desktop, so there's no waiting to start a print on a shared printer.

Wax-ups made on the Projet 1200 are castable and pressable with standard dental lab equipment



### ALL-IN-ONE SOLUTION

With an integrated curing chamber, everything you need is built-in, and replenishing material is as easy as popping in a new Visijet® FTX cartridge. It is factory calibrated for reliable, accurate and pushbutton operation.

### FAST WORKFLOW

Fast print times allow you to keep up with the production of two dental CAD/CAM designers. Print 10 dental wax-ups in less than an hour.

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# Projet® & ProX® SLA Printers

## Unrivaled precision and surface quality

These highly productive printers offer all the benefits of legendary stereolithography, fine-tuned for even greater speed, cost-efficiency and reliability for dental models and drill guides production.

### HIGHEST PRODUCTIVITY

Advance your dental model manufacturing workflow with the fastest print technology for large production runs. With swappable material delivery modules, get 24/7 utilization.

### ENGINEERED SPECIALTY MATERIALS

Using our advanced SLA materials, you can produce accurate dental models that are ideal for crown and bridge restorations, working models for partial frameworks and orthodontic thermoforming models. With the USP Class VI capable biocompatible material, you can produce drill guides, parts for medical devices and more.



Working models produced on an SLA printer



Dental models for thermoformed aligners



# ProX® DMP 100, 200 & 320

## High productivity, exceptional quality

3D Systems Direct Metal Printing solutions build complex metal parts in hours, providing industry leading quality, fine details, precision and repeatability for dental applications.



Dental frames



Partials, copings and bridges production in Cobalt Chrome (CoCr)



Implant bar and removable suprastructure in titanium alloy

### EXCEPTIONAL SURFACE FINISH

Reduced machining or polishing to get final parts.

### UNMATCHED ACCURACY

Print the finest features at the tightest tolerances in Direct Metal Printing.

### PRODUCTION READY

Offering unmatched precision and consistency, ProX DMP printers are the proven standard with tens of thousands of in-mouth dentures produced worldwide.

### SUPERIOR MECHANICAL PROPERTIES

Produce exceptionally strong dental parts with uniform mechanicals, higher density and chemical purity.

### HIGH PERFORMANCE DENTAL ALLOYS

Nickel and beryllium-free LaserForm® CoCr (C) for ProX DMP 100 and 200 metal printers speeds up production of dental frames, partials, copings and bridges in dental laboratories. The ProX DMP 320 selection of high-strength LaserForm Titanium alloys is ideal for dental implant bars and suprastructures.

### UNLIMITED DESIGN FREEDOM – UNPARALLELED RETENTION

The capability of Direct Metal Printing to accurately produce parts of unlimited complexity, including tailored surface textures that are not possible with milling, provides the ideal retention structure as an integral part of the implant suprastructure production.



	Proj <sup>et</sup> 1200	Proj <sup>et</sup> MJP 2500 Plus	Proj <sup>et</sup> MJP 3600 Dental	Proj <sup>et</sup> 6000 HD/ Proj <sup>et</sup> 7000 HD	ProX 800
<b>Technology</b>	Micro-SLA	Multijet Printing (MJP)		Stereolithography (SLA)	
<b>Build Envelope</b> (W x D x H) <sup>1</sup>	1.69 x 1.06 x 5.90 in (43 x 27 x 150 mm)	11.6 x 8.3 x 5.6 in (295 x 211 x 142 mm)	11.2 x 7.3 x 8 in (284 x 185 x 203 mm)	Up to 15 x 15 x 10 in (380 x 380 x 250 mm)	25.6 x 29.5 x 21.65 in (650 x 750 x 550 mm)
<b>Recommended dental specialty materials</b>	Visijet <sup>®</sup> FTX Green (tough castable plastic)  Visijet FTX Cast (wax and plastic hybrid)	Visijet M2R-TN (high-contrast color, stone-like)	Visijet M3 Dentcast (wax-up castable material)  Visijet M3 PearlStone (solid stone appearance)  Visijet M3 Stoneplast (USP Class VI capable, translucent or stone finish)	Visijet SL e-Stone <sup>™</sup> (high-contrast color, dental stone)  Visijet SL Clear (USP Class VI capable, crystal-clear appearance, polycarbonate-like)	Accura <sup>®</sup> e-Stone <sup>™</sup> (high-contrast color, dental stone)  Accura ClearVue (USP Class VI capable, crystal-clear appearance, polycarbonate-like)
<b>Resolution</b>	56 micron (xy) (effective 585 DPI)	800 x 900 x 790 DPI	<b>UHD Mode:</b> 750 x 750 x 890 DPI <b>HDX and HDP Modes:</b> 375 x 450 x 790 DPI	4000 DPI (equivalent DPI based on laser spot location resolution of 6.35 µm in 3D Systems testing)	
<b>Layer thickness</b>	30 µm	32 µm	29 or 32 µm	50-100 µm	50-100 µm
<b>Typical accuracy</b>	Reference voxel size (XYZ)	±0.004 in per in (±0.1016 mm per 25.4 mm) of part dimension	±0.001-0.002 in per in (0.025-0.05 mm per 25.4 mm) of part dimension		
<b>Main dental applications</b>	Wax-ups	Working and thermoforming models	Wax-ups, working and thermoforming models, drill guides	Working and thermoforming models, drill guides	

	ProX DMP 100	ProX DMP 200	ProX DMP 320
<b>Technology</b>	Direct Metal Printing	Direct Metal Printing	Direct Metal Printing
<b>Max. build envelope capacity</b> (W x D x H) <sup>1</sup>	3.94 x 3.94 x 3.94 in (100 x 100 x 100 mm) <sup>2</sup>	5.51 x 5.51 x 4.92 in (140 x 140 x 125 mm) <sup>2</sup>	10.82 x 10.82 x 16.53 in (275 x 275 x 420 mm) <sup>2</sup>
<b>Dental metal alloys with developed print parameters</b>	LaserForm <sup>®</sup> CoCr (C)	LaserForm <sup>®</sup> CoCr (C)	LaserForm <sup>®</sup> Ti Gr1 (A) LaserForm <sup>®</sup> Ti Gr5 (A) LaserForm <sup>®</sup> Ti Gr23 (A) LaserForm <sup>®</sup> CoCrF75 (A)
<b>Layer thickness</b>	Adjustable, min 5 µm - max 100 µm Preset: 30, 40 and 50 µm		Adjustable Preset: 30 and 60 µm
<b>Repeatability</b>	x=20 µm, y=20 µm, z=20 µm		
<b>Min. feature size</b>	x=100 µm, y=100 µm, z=20 µm		100 µm
<b>Min. wall thickness</b>	150 µm	150 µm	150 µm
<b>Typical accuracy</b>	± 0.1-0.2% with ± 50 µm minimum		
<b>Material loading</b>	Manual	Semiautomatic	Manual
<b>Recycling system</b>	Optional external system	Optional external system	Optional external system
<b>Interchangeable build modules</b>	No	No	Yes
<b>Main dental applications</b>	Partials, frames, copings, bridges		Dental implant bars, suprastructures and high-volume production of removable partial frames

<sup>1</sup>Maximum part size is dependent on geometry, among other factors.

Complete specifications available at [www.3dsystems.com](http://www.3dsystems.com)

<sup>2</sup>Including build plate

Warranty/Disclaimer: The performance characteristics of these products may vary according to product application, operating conditions, material combined with, or with end use. 3D Systems makes no warranties of any type, express or implied, including, but not limited to, the warranties of merchantability or fitness for a particular use.



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