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NextDent® Jetted Denture Solution

Transform Dental Care with the Industry's First Multi-Material, Monolithic Jetted Denture Solution

3D SYSTEMS

Solution Overview

NextDent Jetted Denture Solution sets a new benchmark in denture production. Using MultiJet Printing (MJP) technology, this solution delivers superior-quality dentures with fewer manual steps, streamlining production while reducing costs. This solution is designed to help labs scale production efficiently while delivering high-quality dentures that meet the growing demand for digital solutions.

Why Choose NextDent Jetted Denture Solution?

Unmatched Speed and Efficiency

Our cutting-edge, multi-material jetting technology and fully automated workflow allow labs to produce dentures in approximately 10 hours of total labor time without sacrificing quality.

Best-in-Class Fit, Strength and Aesthetics

The ability to print monolithic dentures with a seamless integration of materials provides natural aesthetics, superior strength and a highly realistic appearance that enhances patient satisfaction.

Scalability and Digital Integration

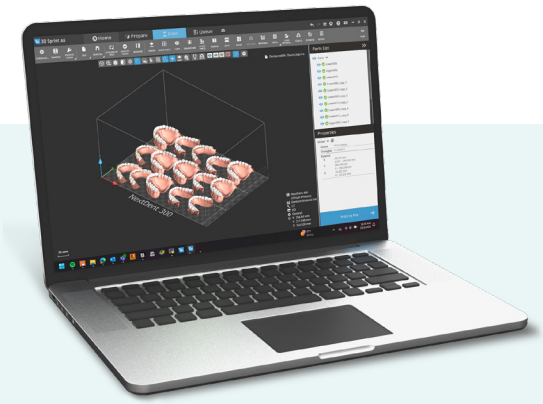
The solution seamlessly integrates with CAD/CAM workflows, allowing for rapid customization and design iteration that scales effortlessly from small batch to high-volume denture production.

How Does the Solution Compare to Other Production Methods?

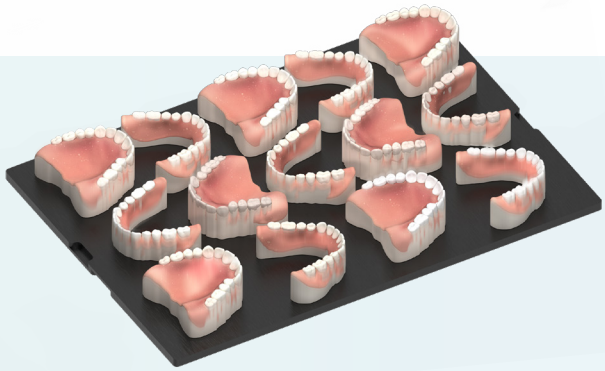
The Jetted Denture Solution provides a faster, more cost-effective and highly scalable alternative to traditional denture fabrication, enabling better business outcomes for labs and improved results for patients.

	Jetted Denture Solution	Projector-based 3D Printing	Milling	Analog Dentures
Business Benefits				
Production speed	Fast	Moderate	Slow	Long (manual)
Material waste	Minimal	Moderate	High (disc waste)	High (manual errors)
Labor requirements	Low (automated)	Moderate	High	High
Scalability	Easily scalable	Limited	Not ideal for mass production	No scalability
Cost per denture	Low	Moderate	High	High
Return on investment (ROI)	High	Moderate	Low	Very low
User Benefits				
Fit accuracy	High (due to monolithic nature)	High, but bonding of teeth reduces accuracy	High, but tool wear affects accuracy	Highly variable
Aesthetic quality	Seamless color and translucency	High, but limited shades	High, but labor-intensive	Technician-dependent
Strength & durability	High-strength monolithic dentures	Layer adhesion issues	Strong	Variable (material-dependent)
Customization & consistency	Fully digital and repeatable	Digital, with manual teeth bonding	Limited options	Highly manual, difficult to replicate
Biocompatibility & safety	Biocompatible, with minimal waste	Biocompatible, but fewer material options	Biocompatible, but high material waste	Biocompatible, but high material waste

NextDent Jetted Denture Solution – Complete Workflow



Create CAD files and import into 3D Sprint. Indicate shades, auto-position & support, and send to printer

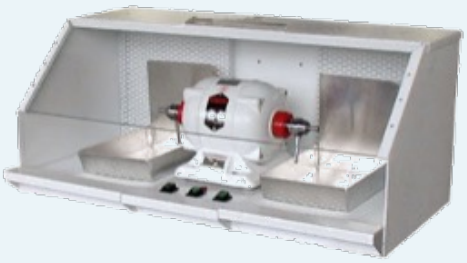


Remove platform and place onto hotplate or into freezer for adequate time

	Prepare Files	Print	Remove Build
TOTAL TIME	5-10 min	3-9 hours	5-10 min
LABOR TIME	5-10 min	5 min	1 min

Verify printer is ready, check materials & waste bin; print time varies on part count

Transfer parts to wet bead blast cabinet for treatment



Pre-polish then final-polish part with lathe buffing wheel

Bulk Wax Removal
120 min

Fine Wax Removal
20 min

Wet Bead Blast
3 min/part

Polish
3 min/art

2 min — 2 min — 3 min/part — 3 min/part

Place parts in forced air oven at 65-70°C until majority of wax supports melt away

Place parts in mineral oil sonic bath. Transfer to hot soapy water bath, rinse

TOTAL LABOR TIME: ~20 min

TOTAL TIME: ~12 hours

NextDent 300 Printer Properties	
Dimensions (W x D x H)	1183 x 740 x 1077 mm (47 x 29 x 42 in)
Weight	247 kg (546 lbs)
Electrical requirements	100–127 VAC, 50/60 Hz, single-phase, 15AA 200–240 VAC, 50 Hz, single-phase, 10A
Internal hard drive	500 GB minimum
Operating temperature range	25° C (77° F)
Operating humidity	30–70% relative humidity
Noise	<65 dBa estimated (at medium fan setting)

Materials	
Build material	NextDent Jet Teeth White NextDent Jet Teeth Yellow NextDent Jet Base LT
Support material	VisiJet® M2 SUP
Material packaging:	Build material 1 kg Support material 1.4 kg
Auto switching bottle capacity	2 of each (build/support)

Printer Specifications	
Max build of volume (xyz)[1]	294 x 211 x 144 mm (11.6 x 8.3 x 5.6 in)
Resolution	800 x 900 x 800 DPI; 32 µm layers

What Dental Labs and Clinicians Are Saying

"The quality of a monolithic denture with different material properties is unique and has a huge advantage for our customers due to the high quality and strength in combination with the best possible aesthetics."

Germen Versteeg, Denturist and Owner of Denticien

Software and Network	
3D Sprint® Software	Easy build job set-up, submission and job queue management; automatic part placement and build optimization tools; part stacking and nesting capability; extensive part editing tools; automatic support generation; job statistics reporting tools
Client hardware minimum specifications	• Intel® or AMD® processor with a minimum of 2.0 GHz and 4 GB RAM • OpenGL 2.1 and GLSL 1.20 enabled graphics card; screen resolution 1280 x 960 • Dedicated graphics card: NVIDIA GeForce GTX 285, Quadro P1000, AMD Radeon HD 6450, or newer • 10 GB of available hard-disk space; additional space may be required for cache. Temporary file cache requires about 3 GB free disk space for every 100 million points • Internet Explorer 9 or newer • Other: 3–button mouse with scroll, keyboard, Microsoft .NET Framework 4.8 installed with application
3D Connect™ capable	3D Connect Service provides a secure, cloud-based connection to 3D Systems service teams for support
Connectivity	Network-ready with 10/100/1000 base ethernet interface; USB port
E-mail notice capability	Yes
Client operating system	Windows 8.1 ~ Windows 11 (64-bit)
Input data file formats supported	STL, CTL, OBJ, PLY, ZPR, ZBD, AMF, WRL, 3DS, FBX, IGES, IGS, STEP, STP, MJPDDD

[1] Maximum part size is dependent on geometry, among other factors.

* It is the responsibility of each customer to determine that its use of any VisiJet material is safe, lawful and technically suitable to the customer's intended applications. The values presented here are for reference only and may vary. Customers should conduct their own testing to ensure suitability for their intended application.