

BE **RIGHT ON**, WITH riton.

Partnering for Validated Performance Predictability.

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RITON Flexible Denture *3D Printing Solutions*



Engineered for Precision

Validated for Operational Reliability

Optimized for Exceptional Comfort

THE DIGITAL WORKFLOW

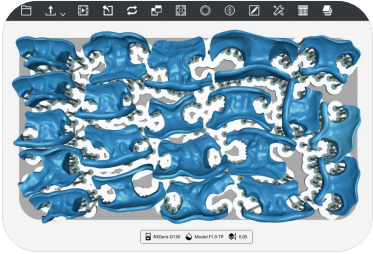
A Validated Pathway to Excellence

A Seamless, Validated System from Scan to Final Restoration.



1

Data Acquisition
Import designed STL files from CAD software (EXOCad/3Shape).



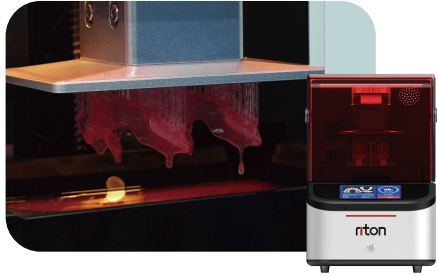
2

Nesting & Slicing
Optimize part orientation, generate support structures, and slice the file.



3

Material Preparation
Load validated resin above the minimum fill line.



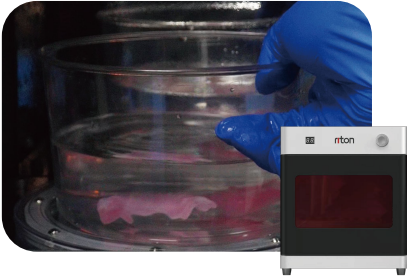
4

3D Printing
Select the print file and initiate the high-speed print cycle.



5

Dual-Stage Wash
Perform a 1-minute primary wash, remove supports, followed by a 1-minute secondary wash.



6

Submerged UV Curing
Air-dry thoroughly to remove alcohol, then submerge in water and UV cure for 5 mins.



OK

Flexible Denture
Ready for clinical delivery.



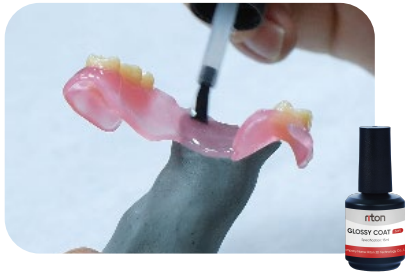
11

Thermal Stabilization
Thermally cure at 100°C for 1 hour; allow to cool naturally on the model.



10

Secondary Curing
Cure for 5 minutes.



9

Glazing
Ensure a clean surface. Apply a transparent Glossy Coat Soft uniformly in a single direction.



8

Tooth Bonding
Apply pressure to seat teeth, tack-cure both sides, then release.



7

Trimming
Precision-grind and polish support contact points.

RITON's integrated "Closed-Loop" ecosystem replaces the variability of traditional processing with a predictable, repeatable, and efficient digital manufacturing pathway.

Every step is jointly validated to ensure the final restoration meets rigorous standards of manufacturing accuracy and material performance.



The Validated Ecosystem:

Our hardware, materials and processes are validated as an integrated system to support operational predictability.



Global Technical Network:

A dedicated team of engineers provides 24/7 support and ongoing technical training worldwide.



*Products and accessories subject to change. Actual product governs.



RXDent-L Series

Chairside LCD 3D Printer

A high-precision desktop LCD 3D printer designed for efficient digital dental workflows. With 34 μm XY accuracy and a 385 nm Dental-Optimized Uniform Light Source System, it delivers reliable printing performance for a wide range of dental applications, including models, temporary restorations, surgical guides, and splints.



385 nm Dental-Dedicated Uniform Light Engine



High-Rigidity Closed-Loop Z-Axis Motion System



30°C Constant-Temperature Printing Environment



Dual Resin Vat Configuration



Intuitive Operation & Seamless Digital Workflow Integration



Spring-Assisted Leveling & Quick-Release Build Platform

Technical Specifications

Model	RXDent-L130 Ultra	Printing Speed	1–8 s/layer
Projection Technology	LCD	Touchscreen	5-inch HD Color Touchscreen
Light Source Wavelength	385 nm	Connectivity	Wi-Fi / USB
XY Resolution	3840 x 2400	Voltage	100–240V, 50/60Hz
XY Accuracy	34 μm	Power	300 W
Layer Thickness	0.01–0.2 mm	Dimensions (W x D x H)	320 x 420 x 500 mm
Molding Size (Large Vat) (X x Y x Z)	130 x 80 x 110 mm	Net Weight	20 kg
Molding Size (Small Vat) (X x Y x Z)	60 x 60 x 110 mm	Supported Languages	Multilingual



RXDent-L Series

High-Throughput LCD



High-Volume Production:
A large build envelope (228 x 128 x 150 mm) allows for the simultaneous printing of 10+ denture bases.



8K Precision:
7680 x 4320 pixel resolution delivers exceptional surface smoothness and crisp edge definition.

Technical Specification

Model	RXDent-L230		RXDent-L230SE
Dimensions (W x D x H)	370 x 370 x 530 mm		370 x 258 x 515 mm
Build Volume (X x Y x Z)	228 x 128 x 150 mm		
Resolution	7680 x 4320		
Accuracy	30 μm		
Projection Technology	LCD		
Wavelength	385 nm		
Curing Speed	1–8 s/layer		1–10 s/layer
Layer Thickness	0.01–0.2 mm		0.02–0.2 mm



RXDent-D Series

Ultra-High Fidelity DLP



Micron-Level Accuracy:
30 µm resolution and a high-contrast digital light projector render retention grooves, interproximal surfaces, and denture borders with exceptional fidelity, ensuring an intimate, passive fit on the master model.



Material Optimization:
The system's precise 385 nm wavelength is optimized for controlled polymerization, specifically tuned for our high-viscosity resins to achieve a smooth, bubble-free texture and superior surface quality on every build.

Technical Specification

Model	RXDent-D130
Dimensions (W x D x H)	320 x 420 x 500 mm
Build Volume (Large Vat) (X x Y x Z)	130 x 70 x 120 mm
Build Volume (Small Vat) (X x Y x Z)	60 x 60 x 120 mm
Projection Technology	DLP
Resolution	1920 x 1080
Accuracy	30 µm
Light Source Wavelength	385 nm
Printing Speed	1-6 s/layer
Layer Thickness Setting	0.01-0.2 mm

MATERIAL SCIENCE

Advanced Biocompatible Resins

RITON's validated material portfolio delivers reliable structural integrity, consistent performance outcomes, and long-term wear comfort.



Denture Base

A specialized dental photopolymer resin for producing flexible denture bases.

- **Dynamic Elasticity:**
High rebound capacity maintains precise retention and a secure fit under continuous masticatory stress.
- **Fracture Resistance:**
Advanced impact toughness minimizes the risk of accidental breakage or clinical failure.
- **Biomimetic Aesthetics:**
Lifelike translucent shades (e.g., Transparent Pink) blend seamlessly with natural gingival tissue.
- **Material Safety:**
Biocompatible, odorless, and highly resistant to plaque accumulation.

POST-PROCESSING & SURFACE SCIENCE

Complete Workflow Control

• Denture Teeth (Model T1.0)

A specialized dental photopolymer resin for the digital fabrication of crowns, bridges, and removable denture restorations.

- **Excellent Mechanical Properties:**
Reinforced with 15% nano-ceramic fillers, delivering superior tensile, flexural, and wear resistance. Mechanical properties and water absorption meet relevant clinical requirements.
- **Natural Aesthetics & Safety:**
Safe and odorless, offering biomimetic tooth aesthetics and natural translucency.
- **Rapid Printing & Efficient Post-Processing:**
Fast printing with easy cleaning and post-processing, supporting high productivity and cost-effective production.
- **Integrated Chemical Bonding:**
Designed for cross-linking with Denture Base resins to achieve an integrated, seamless restoration.





RXDent-C260

Curing Unit *The Foundation of Material Performance.*

A 3D printer defines the shape; the Riton Curing Unit defines the material's final properties. It delivers precisely controlled, high-intensity 365–420 nm light for thorough, predictable curing.

360° Uniform Irradiance:
Optimizes light distribution to minimize shading effects, ensuring contact surfaces are thoroughly cured and biocompatible.

Validated Presets:
Tailored curing profiles for Riton Flexible Resins guarantee every batch meets certified mechanical standards.

Technical Specification	
Model	RXDent-C260
Dimensions (W x D x H)	300 x 280 x 350 mm
Wavelength	365–420 nm
Optical Power	260 W
Machine Weight	10 kg
Input Voltage	100–240 V 50/60 Hz

Riton-Curing Unit



RXDent-W150

Ultrasonic Cleaner

An efficient ultrasonic cleaning solution designed to remove residual resin from printed dental parts, ensuring reliable post-processing results.

Powerful Deep Cleaning:
Ultrasonic cavitation thoroughly removes uncured resin from intricate geometries and narrow gaps.

Full Stainless Steel Construction:
Both the tank and housing are constructed from corrosion-resistant stainless steel for long-term durability.

Technical Specification	
Model	RXDent-W150
Capacity	3.2 L
Power	150 W
Tank Dimensions (W x D x H)	240 x 135 x 100 mm
Net Weight	10 kg
Dimensions (W x D x H)	268 x 165 x 230 mm
Rated Voltage	110 V / 220 V

Riton-Ultrasonic Cleaner



RXDent-H500

Constant-Temperature Hot Air Drying Oven

A built-in forced-air temperature control system minimizes internal stress during processing, while heat treatment enhances the final strength and chemical stability of dentures.

Technical Specification	
Model	RXDent-H500
Capacity	16 L
Temperature Fluctuation	±2°C
Power	500 W
Internal Chamber Size	250 x 250 x 250 mm
Net Weight	15 kg
Dimensions (W x D x H)	510 x 380 x 410 mm
Rated Voltage	110 V / 220 V

Ritron-Constant-Temperature Hot Air Drying Oven

SURFACE TREATMENTS

Glossy Coat

Advanced surface science for premium aesthetics and structural integrity.

Glossy Coat Soft

- **Instant Luster:**
Significantly reducing the need for manual polishing.
- **Dynamic Flexibility:**
Flexes seamlessly under masticatory stress to prevent surface cracking or peeling.
- **Stain Protection:**
Seals microscopic surface porosity to resist plaque and fluid discoloration.

Effect Comparison

Before

After

Glossy Coat DA

- **Monolithic Fusion:**
Chemically crosslinks teeth and bases into a unified, high-strength structure to minimize detachment risks.
- **Precise Seating:**
Low-viscosity flow ensures robust micro-mechanical interlocking with highly minimized gaps.

Ritron-Glossy Coat