



# RAYDENT Studio

Your Dental 3D Printing Solution

# RAYDENT Studio

Fast and high-precision printing experiences in your daily treatment



RAYDENT Studio 3D printer is

**suitable for the digital dentistry**, specifically for:

## Temporary crowns and bridges

Printing time 20-25 min

Accuracy avg. 40  $\mu$ m



## Surgical guides

Printing time 40-50 min / Half 25-30 min

Accuracy avg. 50  $\mu$ m



## Dental Models

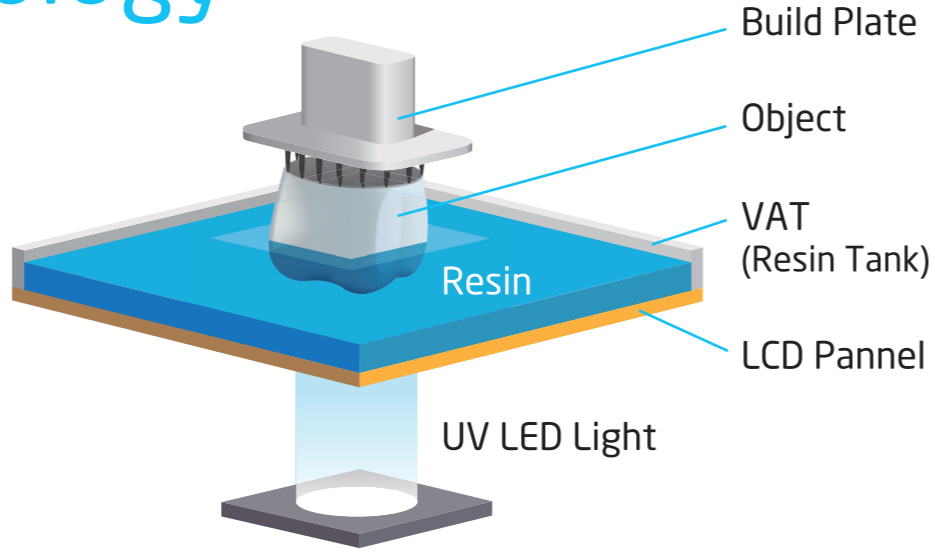
Printing time 40-50 min

Accuracy avg. 50  $\mu$ m



# RAYDENT Technology

RAYDENT Studio utilizes LCD technology, the ones used in mobile phones. LCPS provides fast printing with a high precision and an improved uniformity in a compact conventional printer size body.



Liquid Crystal Planar Solidification

# Disposable vats for easy management

Ray adopted the disposable vats to guide users to have less trouble managing vats and reduce wasted resin material.

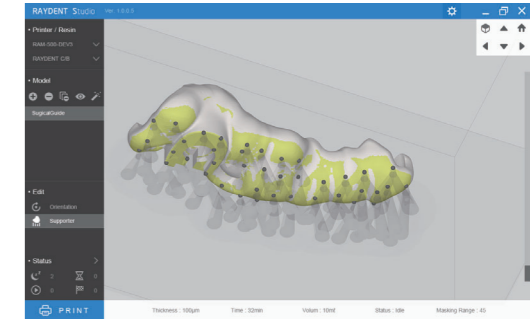
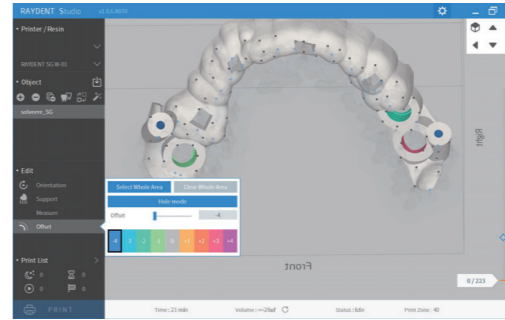
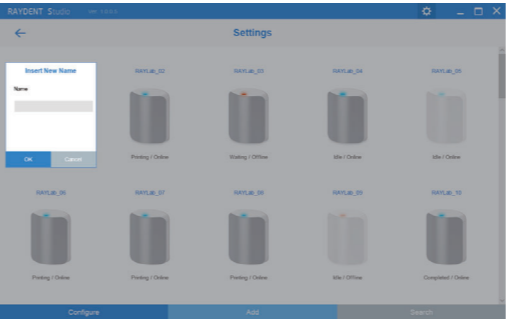
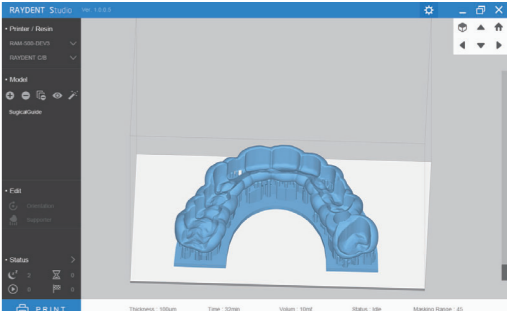
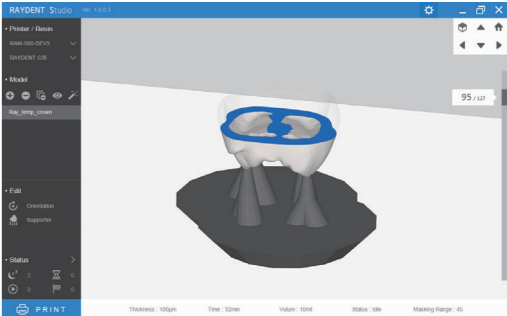


# Software features

The 3D printing solution, designed for dental professionals

## Auto-orientation for optimal position Auto-generation of supports

- Auto-mesh repair and layer slicing for path inspection
- Multiple-printer management
- Preset printing conditions for successful printing each time
- Dynamic mask control for faster printing
- Guide hole offset for hole fitting



# Materials for 3D printing

RAYDENT offers various types of resins for a wide range of applications. These are also **biocompatible** and **water washable** (alcohol-free cleaning process).



For temporary crowns & bridges **RAYDENT C&B**

- **Class IIa biocompatible**
- Water washable
- Low viscosity
- High abrasion resistance
- Breaking and flexural resistant
- Natural tooth shade: A2
- Wavelength: 405 nm

Property	Standard	Result
Brookfield viscosity at 23°C		0.9-1.4Pa's
Flexural strength	DIN EN ISO 10477	> 90 MPa
Water absorption	DIN EN ISO 10477	14 µm /mm <sup>3</sup>
Water Solubility	DIN EN ISO 10477	0.4 µm /mm <sup>3</sup>
Biocompatibility	DIN EN ISO 10993-1	complies

Package Type	Model	Contents
Pouch	RCB02PW	500g (20g x 25 pouches)
Bottle	RCB10BW	1kg (1kg x 1 bottle)





# RAYDENT SG For surgical guides

- Class I biocompatible
- Water washable
- Low viscosity
- Breaking and flexural resistant
- Transparent Yellow
- Wavelength: 405 nm



Property	Standard	Result
Brookfield viscosity at 23°C		1.0-2.4Pa's
Flexural strength	DIN EN ISO 20795-1	> 80 MPa
Flexural modulus	DIN EN ISO 20795-1	> 2,000 Mpa
Biocompatibility	DIN EN ISO 10993-1	complies

Package Type	Model	Contents
Pouch	RSG02PW	500g (20g x 25 pouches)
Bottle	RSG10BW	1kg (1kg x 1 bottle)

# For dental models RAYDENT DM

- Water washable
- Low viscosity
- Prosthetic / Orthodontic / Thermoforming
- Deep Yellow / Grey
- Wavelength: 405 nm



Property	Standard	Result
Brookfield viscosity at 23°C		1.0-2.4Pa's
Hardness Shore	ISO 178	> 89 MPa

Package Type	Model	Contents
Pouch	RDM02P	500g (20g x 25 pouches)
Bottle	RDM10B	1kg (1kg x 1 bottle)

# RAYDENT Post-Curing Unit

The RAYDENT Post-Curing Unit is designed for digital dentistry. It is customized on the RAYDENT 3D Printing materials. The presets can be customized by resin type in the RAYDENT 3D printer software.

## RAYDENT Post-Curing Unit Applications

- Temporary crowns and bridges
- Surgical guides
- Dental models

Notably, the curing time for temporary crowns and bridges for perfect teeth shade is about **10 minutes**.



# Technical Specifications

Specifications are subject to change without prior notice.

## 3D PRINTER (RAM600)

Dimensions	31 x 21 x 37 cm 12.2 x 8.3 x 14.6 in
Weight	6.5 kg / 14.3 lbs
Operating Temperature	5~35°C 41~95°F
Power Requirement	100-240 VAC, 50/60 Hz (24 VDC, 2.5 A, AC/DC Adaptor)
Connectivity	Ethernet
UV Specification	405 nm IEC62471

## SOFTWARE

Features	Auto-orientation for optimal position Auto-generation of supports Auto-mesh repair Layer slicing for path inspection Optimal printing PRESET for output
System Requirements	Windows 7 32 / 64bit (or higher) 4GB RAM (or higher) OpenGL 3.2 (or higher) File type .STL or .OBJ

## PRINTING PROPERTIES

Technology	Liquid Crystal Planar Solidification
XY Resolution	47µm
Build Volume	100 x 64 x 70 mm 3.9 x 2.5 x 2.8 in
Layer Thickness (Axis Resolution)	50 µm, 100 µm

## POST-CURING UNIT (RPC500)

Dimensions	22 x 15 x 26 cm 8.7 x 5.9 x 10.2 in
Weight	2.5 kg / 5.5 lbs
Power Requirement	100-240 VAC, 50/60 Hz (24 VDC, 2.5 A, AC/DC Adaptor)
LED Specification	395 nm



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or contact your local representative.

RBS-RD61 (rev.1)

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