Exclusive Distributor

Ray Iran

SCAN · DESIGN · MAKE


SCAN

RAYFace
3D Facial Scanner

One Shot Scanning

6 Cameras, 0.5sec

Auto Alignment

Accurate automatic matching with Intraoral Scan Data

Face Driven Treatment

Natural Balance Between Your Facial Features and Teeth

RAYFace

OFFICIAL
PARTNERS

COMPATIBLE

INTERNATIONAL ACADEMY FOR DIGITAL DENTAL MEDICINE

Digital Dentistry Society

exocad

RAYFace blurs the boundaries between the physical and digital realms

With RAYFace, the dental world has been revolutionized with a new level of sophistication. The sleek & iconic design, combined with its advanced virtual technology, makes it easy and familiar for dental professionals & patients.
It uses your face as a virtual patient for digital dental treatment, resulting in a precise outcome tailored to your unique needs. Powered by AI, the intra-oral scans and CT data automatically align your virtual face, which we refer to as a 'Dental Avatar', creating a 3D virtual patient analyzed using cutting-edge facially driven technology for aesthetic and smile design.
The benefits of RAYFace extend beyond the dental office. By utilizing the 4th Industrial Revolution (4IR) technology, dental professionals can save time and reduce the number of visits required for patients. Additionally, The design of RAYFace has been carefully crafted to be aesthetically pleasing, user-friendly, and to positively impact the world.

RAYFace is a Game-Changer in the dental industry

RAYFace sophisticated technology and innovative design bring a new level of efficiency, precision, and comfort to the treatment process, providing patients and dental professionals with a life-changing experience.

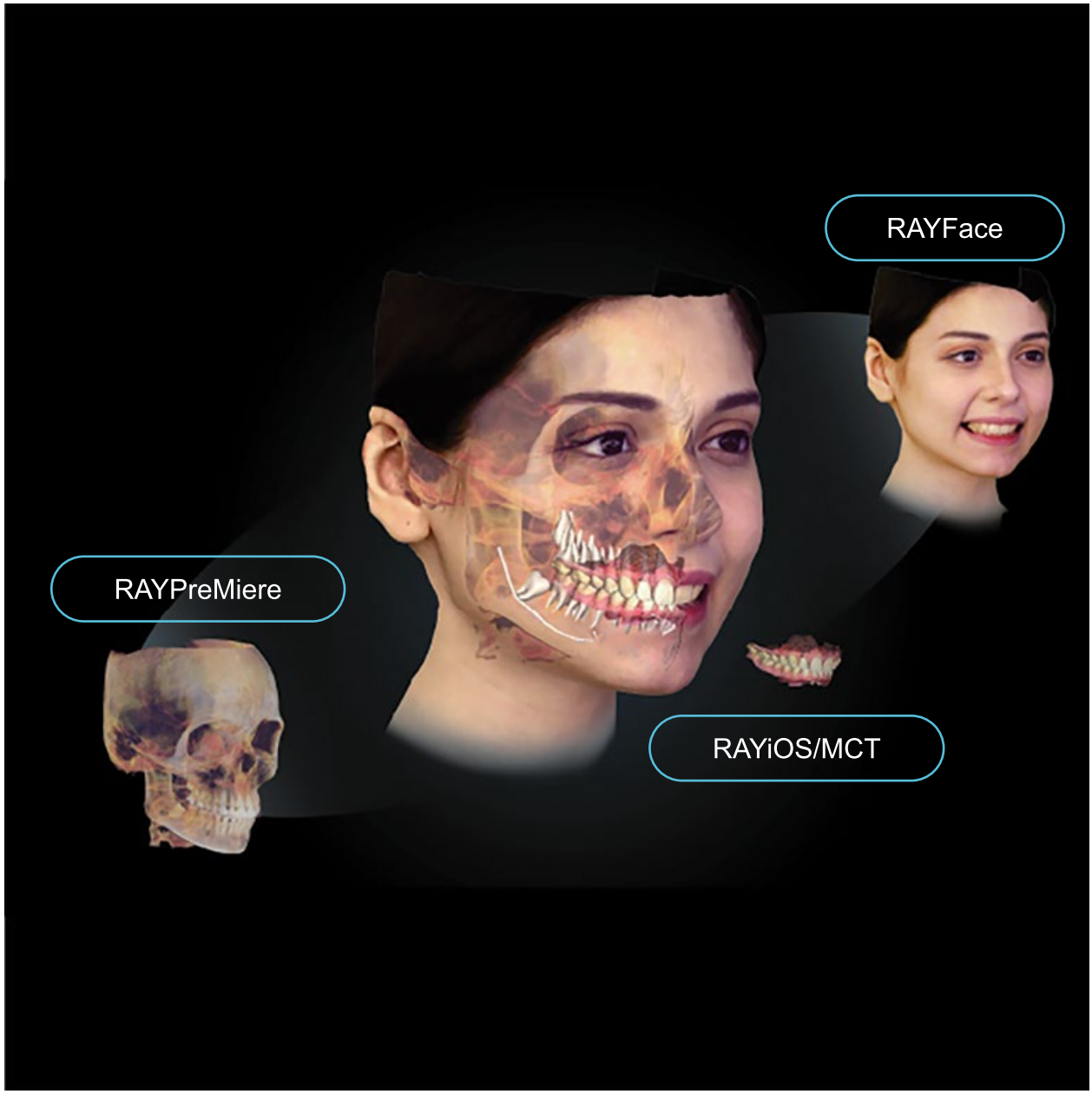
It is One of the Fastest and Easiest-to-Use Facial Scanners on the market.
Dr. Ahmad Al-Hassiny

What RAYFace isn't just a Scanning Technology. It's a Digital Platform, and that's What makes it Unique.
Dr. Miguel Stanley, DDS

When I saw RAYFace, this is it! It has Everything I need. It's Easy and User-Friendly.
Dr. Dean Vafiadis, DDS

Virtual Patient

We have ‘Digital Twin’ as core solution technology in the field of Dentistry to generate virtual patients. Our virtual patient exceeds levels of the prior digital dentistry solution.



Key Features

1. single-shot scanning Lightning-fast

RAYFace's cutting-edge technology scans your dental structure in just 0.05 seconds, providing a quick and efficient process that saves dental professionals and patients time.

2. Auto-alignment

RAYFace uses advanced AI technology to automatically align your virtual patient, creating a 3D virtual patient analyzed using cutting-edge facially driven technology for aesthetic and smile design.

3. Face-driven treatment

At RAYFace, we use a unique approach to dental treatment that focuses on creating a natural balance between your facial features and teeth, resulting in a personalized and natural-looking smile.

4. Enhancing Communications

RAYFace is the most efficient communication tool with your patients and partners. RAYFace may helpful not only to communicate smoothly between dentists and patients, but also to share virtual patient data to your partner via our open type platform, RAYTeams.

Lightning-fast single-shot scanning
One-shot scanning

▪ RAYFace has built-in 6 camera sensors to capture a patient's natural smile within 0.5 seconds, also featuring continuous multi-shots, select the best-captured image to render into 3D facial images.

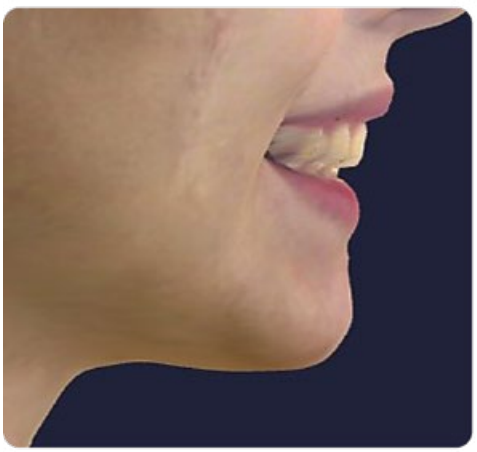
1. Lightning-fast single-shot scanning
Minimizing movements reduces errors

▪ Fixed position of the scanner and the patient minimalizes marginal errors during scanning to obtain the highest quality of the 3D data.

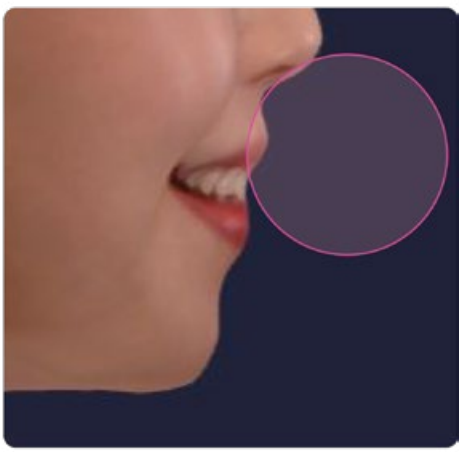
1. Lightning-fast single-shot scanning

Secure precise teeth data

▪ A specialized camera is placed to capture the teeth area, obtaining 4 times more precise Mesh data.
▪ Able to achieve better automatic alignment of intraoral and CT data through the captured facial teeth data.



RAYFace



Competitor

2. Auto-alignment
AI-Powered Quick Data Merging

- AI-powered technology to merge patient data at a glance
- Simple Workflow and Intuitive procedures to generate virtual patients.

2. Auto-alignment
Virtual Patient

- The merged 3D facial data through virtual patient technology allows for consultation and
- treatment plans at any given time, just like having the patient by your side at all times.

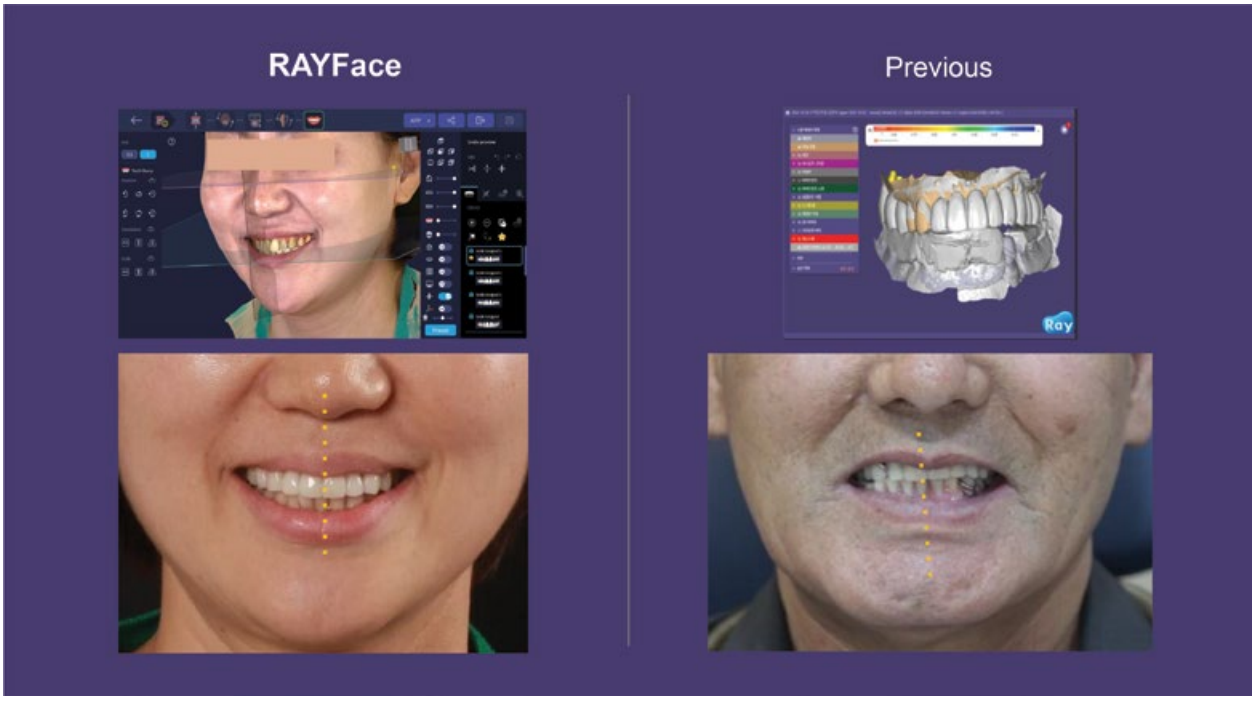
3.Face driven treatment
Midline position, facial lines for ideal smile lines that may fit well on the face

The virtual patient can deliver the entire patient's information, including the face, to the labs

To increase satisfaction with the patient's treatment plans, better communication with the labs are crucial.The labs have problems designing prosthetics without the knowledge of the patient's facial information (mid-line & occlusal plane). These types of deliverables bring lower satisfaction for the patients.

Virtual patient technology can enhance communication by sending the complete patient and facial data to the labs. The labs can provide accurate deliverables (prosthetics) with fewer re-makes, ultimately increasing patient satisfaction.

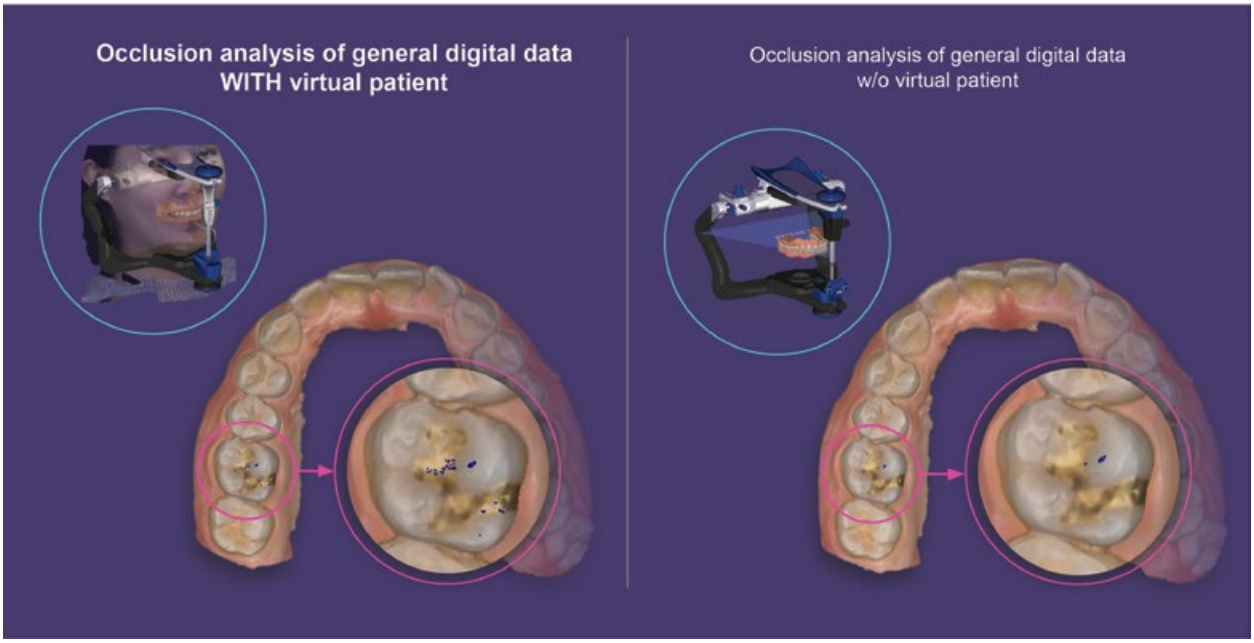
3.RAYFace is a Game-Changer
Midline position, facial lines for ideal smile lines that may fit well on the face



3.Face driven treatment
Detailed checks of the dynamic bite

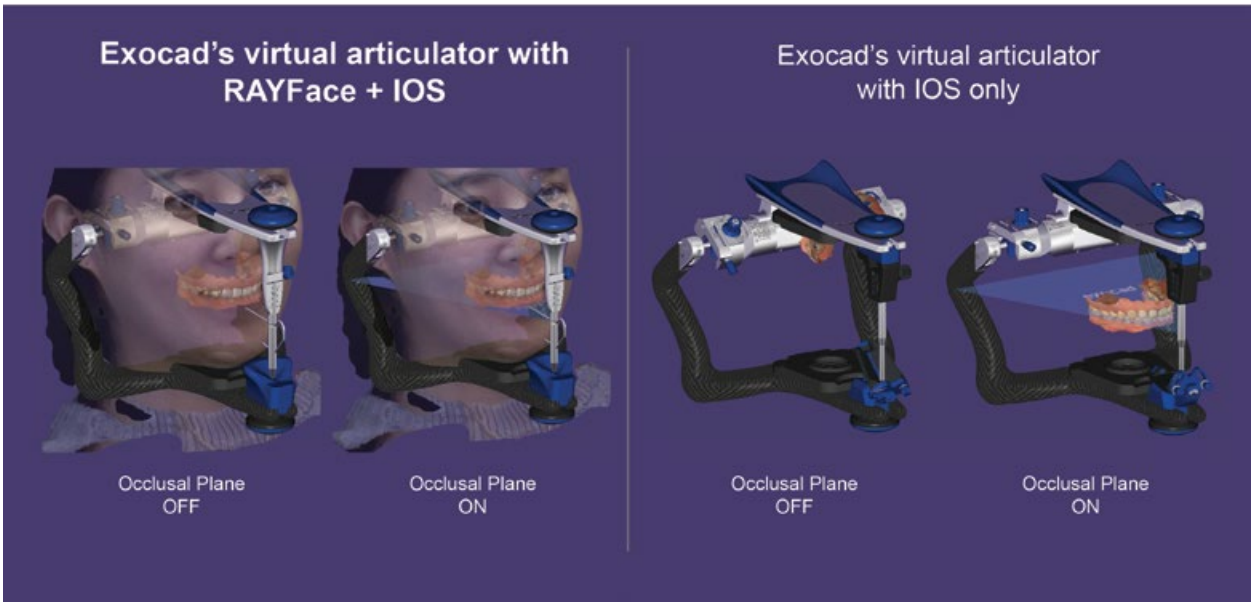
- Digital dental solutions without facial data limit the analysis of the patient's bite.
- Simulates more accurate patient's occlusion using facial, arbitrary hinge-axis, and intraoral data through virtual patient technology.

3.RAYFace is a Game-Changer
Midline position, facial lines for ideal smile lines that may fit well on the face



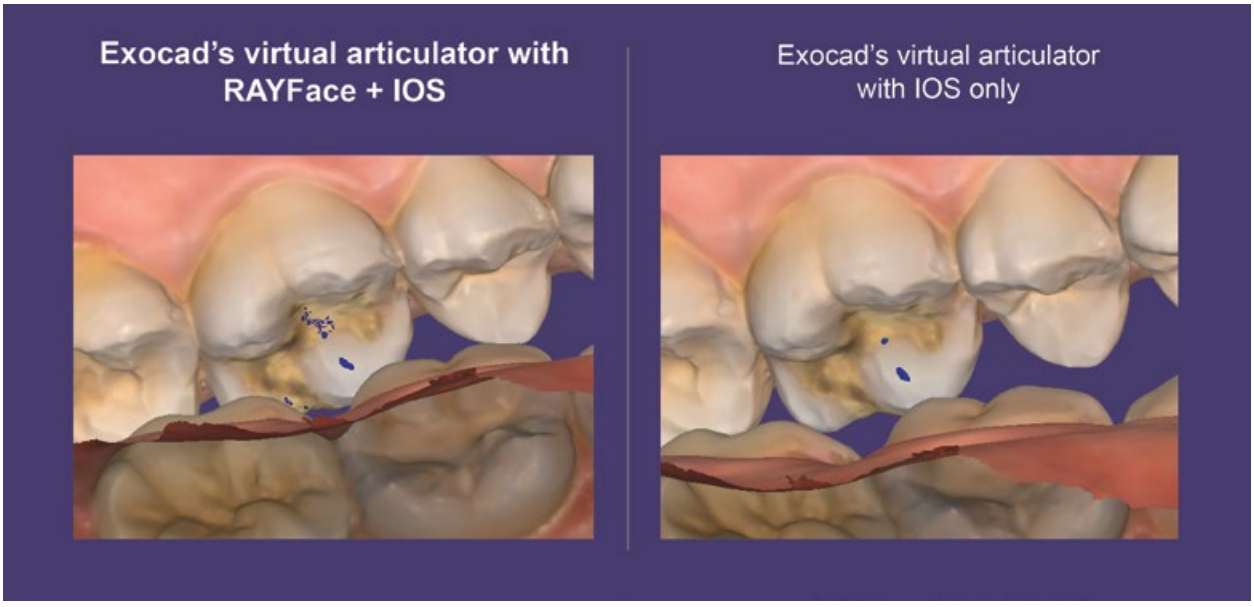
3.Face driven treatment
Detailed checks of the dynamic bite
Comparison of standard positioning and movement

Locations as shown in the guide, are occlusal planes provided by Exocad. By comparing the two, you observe that the occlusal plane with facial data places the occlusal plane on the accurate location of the patient. The results are on the next page.



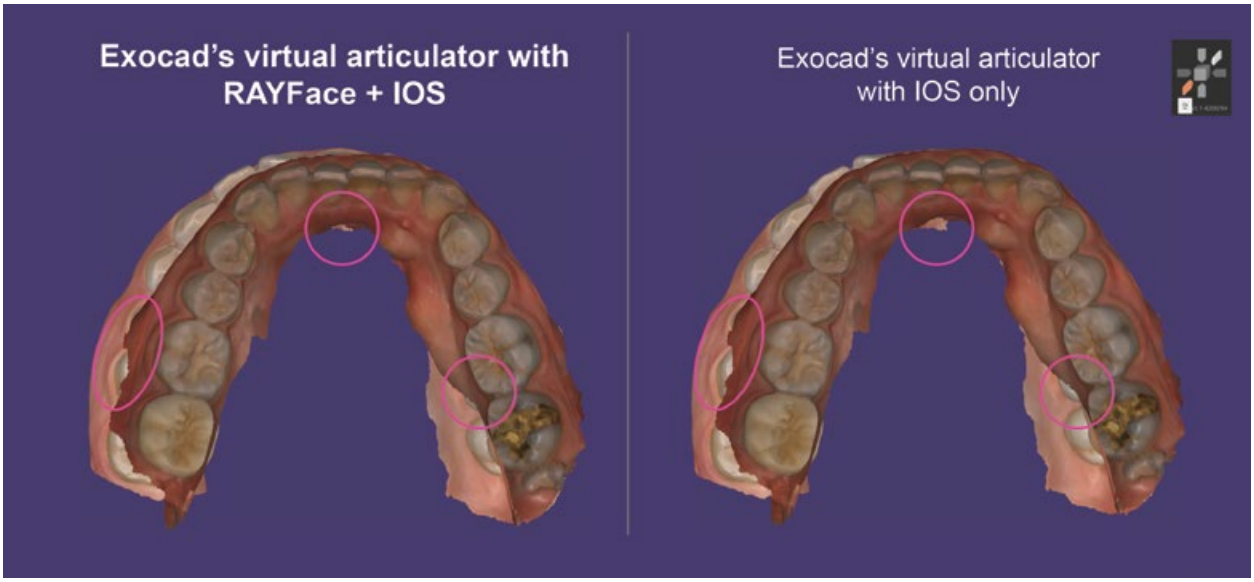
3.Face driven treatment
Movement of Articulator by simulation (front, left, right) after occlusion

Depending on the presence or absence of the hinge point, the front and back occlusal relationship was formed differently, the visual difference in occlusal points are shown by comparison.



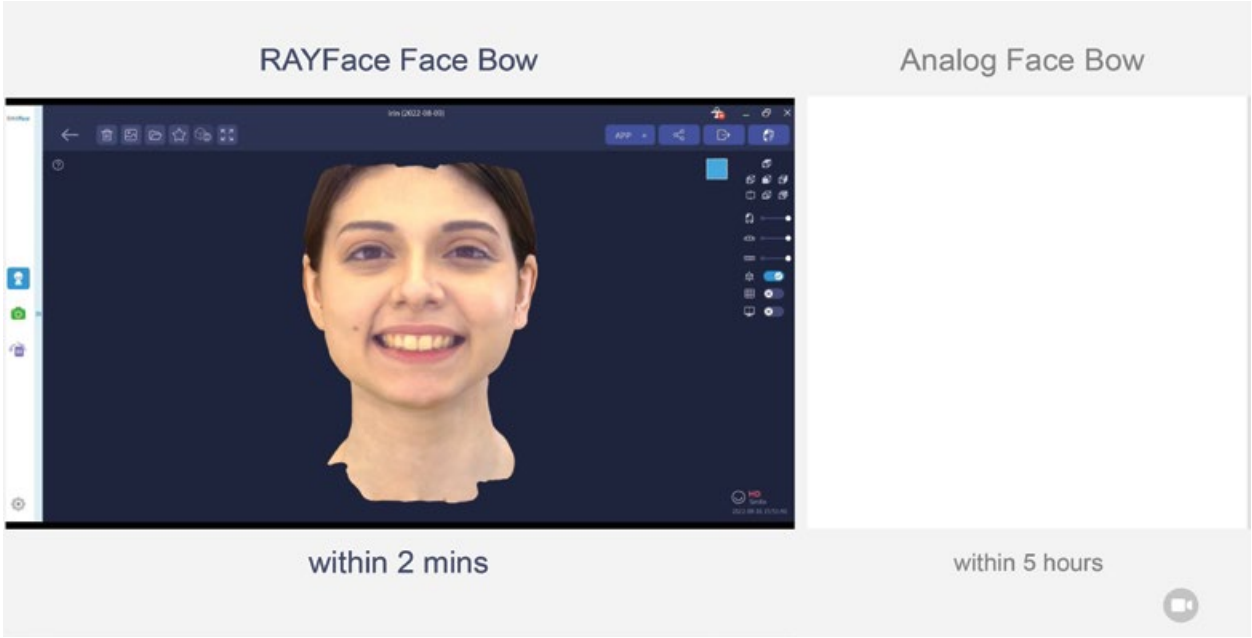
3.Face driven treatment
Detailed checks of the dynamic bite
Difference in the maximal movement path of the movement of the left side of the articulator

When the maximum lateral movement is implemented, it can be confirmed that the relationship between the working tooth and the opposing tooth is different even when visually checked, as shown in the figure.



3.Face driven treatment
Simply makes Digital Face Bow

Completing the Digital Face Bow using RAYFace is simpler and time-saving compared to the existing analog



4. Enhancing Communications
Increased patient consent rate
Comparison of standard positioning and movement

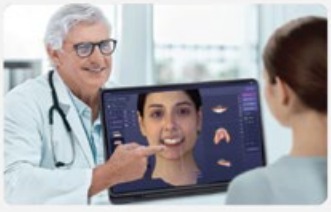
- Virtual patients with face information enable smooth communication between dentists and patients.
- Patients can better understand the treatment that suits their face, which increases the consent rate.

Prosthodontics

Orthodontics

4. Enhancing Communications
Increased efficiency through better communication with the labs.

- RAYTeams, allows the delivery of virtual patient data to the desired lab anytime.
- The lab can use virtual patient data to produce the optimal quality of deliverables.



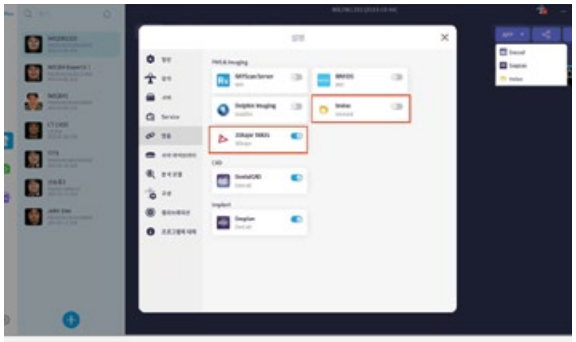
Clinic

Real time instant chats &
Design Confirmation

Lab

4. Enhancing Communications
Diverse integration of software

- Able to integrate freely with any 3rd party software.
- Treatments can be tailored using digital solutions ranging from implants to clear alignment.



CAD SW

Invivo S/W

RAYiOS 2

The First Move into Digital Dentistry, RAYiOS

HIGH USABILITY

1 Open System

It supports an open type file format that is compatible with any device and allows collaboration with dental labs and other partners.

2 Ergonomic Design

Stable center of gravity design and grip feeling for user consideration make scanning more comfortable.

3 No Powder

You can scan comfortably without powder.

PRECISE EXPRESSION

1 Full Color

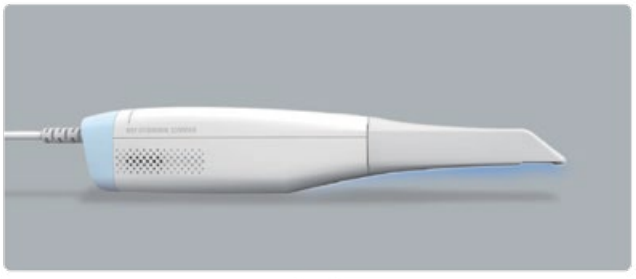
It provides a real color scan that can distinguish between teeth and soft tissue in the mouth.

2 HD Scanning

High-definition 3D scanning technology is applied to show even the details of margin lines.

3 Accurate Scanning

The advanced technology enables precise scanning.



For your Best Digital Experience, RAYiOS

Accurate Scanning

For best result, precision is a top priority from scanning to design and milling.

Fast Processing

Save time for patients and staff with ONE-DAY treatment.

High Compatibility

Introduce digital treatment with advanced imaging systems and equipments designed for dental clinics and labs.

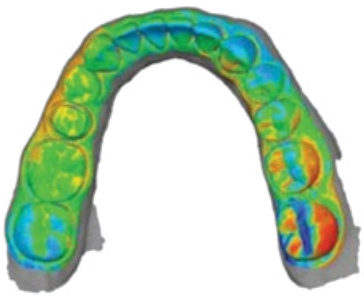
Bringing the power of facial tr ansformation to the world

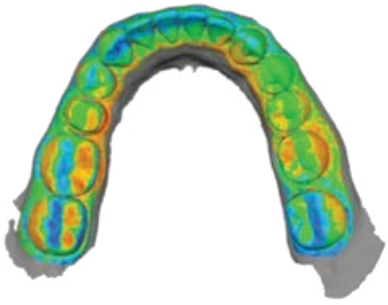
RAYIOS Full Arch precision improvement

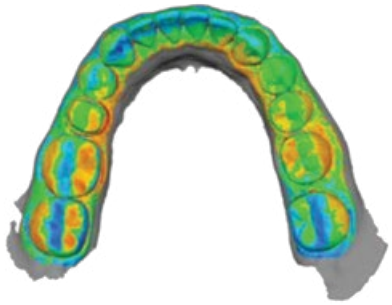
Fulfil clinical standard after 10 scans
RMS 150 9 70~90

1. RAYIOS Full Arch precision improvement

Fulfil clinical standard after 10 scans
RMS 150 → 70~90







REF: M社 Model Scanner**

2. HD mod 3 D mesh quality improvement

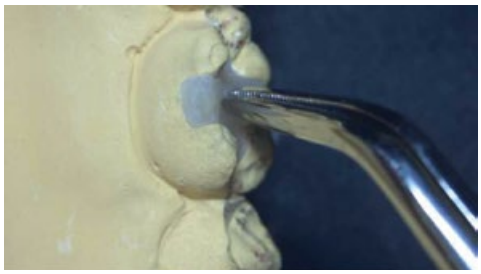
Equivalent **Mesh sharpness** to competitors

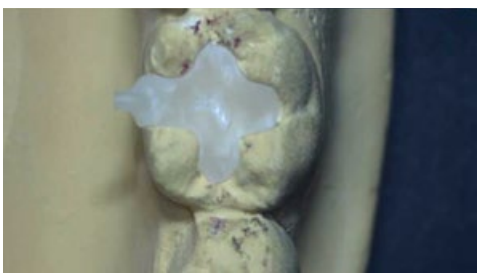
MEDIT 1700

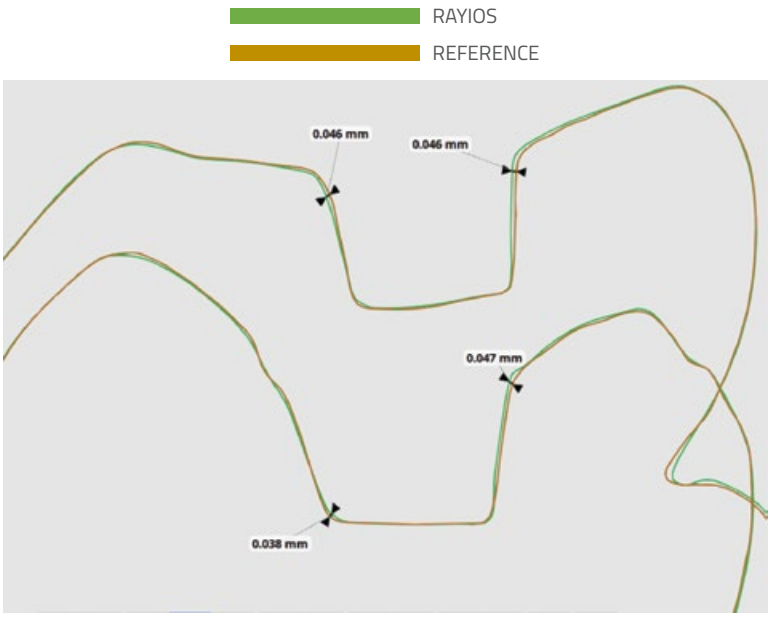
Primescan

RAYIOS

3. Fit improvement (Inlay)

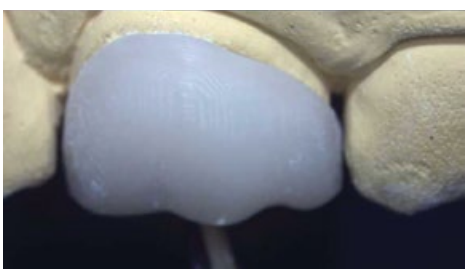






Margin fit satisfied

4. Fit improvement (Inlay)



Margin fit satisfied

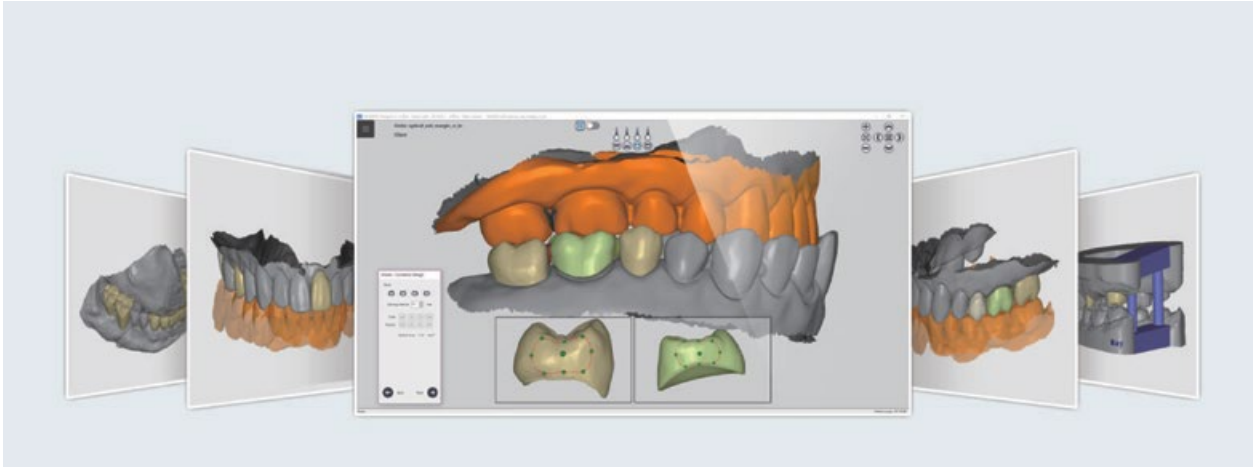
CHANGE IN THE CALIBRATION METHOD

1. After connecting the scanner, turn on the scanner power and run D+SCAN.
2. If calibration is required, it will be indicated on the bottom status bar

You Don't need to Calibration, just wait to download the application

RAYDENT Designer

Using Ray CAD Software, optimized for chairside solution, makes a digital treatment plan more simple and easier.



Easy & Fast Patient-Tailored Tooth Design

It is easy to design all kind of tooth shapes such as incisor, premolar and molar.

Seamless Workflow

It works smoothly with various CAM systems, including 3D Printer and Milling Machine.

Manual/Automatic Occlusal Adjustment

Occlusal adjustment is available manually or automatically at user's convenience.

Various Prosthetic Design

RAYDENT Designer provides various design functions including Crown, Bridge, Inlay/Onlay, Provisional Crown & Bridge, Veneer, Coping, Diagnostic wax up and Model Builder.

Expand Realm of Treatment Possibilities with RAYiOS

Snapshot & Camera

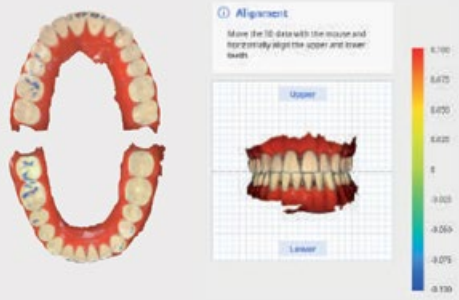
You can use the snapshot and photo functions to store data and send it to where you need it. This can be useful for patient counseling and charting.

Color mode

By selecting various color modes (Photo, Graphic, Mono), you can check the image of the scanned data more clearly and accurately.

Trim

You can modify the scan data quickly and easily.



Bite Analysis

Analyze occlusions using scan data.

Implant

Scan body and Scan post for implant treatment can be scanned.

Implant

Scan body and Scan post for implant treatment can be scanned.

Specifications

Field of View	14 x 14 mm
Depth of Field	16 mm
Accuracy	20 um (Single Crown)
Scanning Method	Digital structured light projection
Acquisition	Realtime video process scanning
Weight	280 g (Only handpiece weight)
Dimensions	263.5 x 43 x 49.4 mm
Tip (Autoclavable)	Autoclave 100 times

PC Requirements

CPU	Intel Core i9-11900H
RAM	32 GB
GPU	NVIDIA GeForece RTX 3070 8 GB
OS	Windows 10 Pro 64 bit


DESIGN

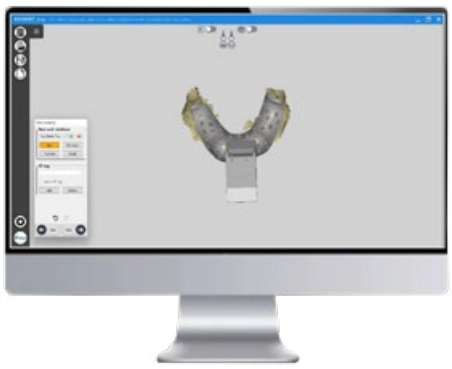
Design Software

Chairside CAD SW

Designer

AI-driven patient-specific crown design

- Automated Crown Design concept Using AI
- Various Prosthetic Design support
- Occlusal adjustment feature
- Add user crown library
- Various Export options:
  PTS file, STL file, RAYDENT Studio (3D printer)



Tray

Simple made customized patient Tray

- For various purposes such as Full denture cases
- Gutta Percha Marker for Implant surgery planning
- Standard STL file
- Design libraries are available, including the libraries for Ray's CT impression scan Jig and auxiliary handle
- Compatible with Ray DIGITAL TRAY™

Splint

Designing for splints by referencing patient condyle, Night guards, Crown lengthening guide

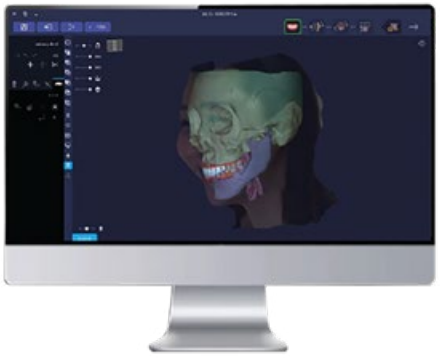
- Occlusal bite simulation
- Hinge axis setting referred by patient ceph
- Mouth opening range setting
- STL Format File for 3D Printers
- Compatible with Ray DIGITAL TRAY

Design Software

Chairside CAD SW

RAYFusion

- Cranionmaxillofacial Surgery
- Sleep Apnea Treatment
- Orthodontic Treatment Planning



DSD

- Digital Smile Design
- Prosthodontics

Ortho Simulator

- Orthodontic


MAKE

RAYMill C

Chairside Grinding, Wet Machine

Materials

Glass ceramic, Lithium Disilicate, Hybrid materials

Compact Size

645 x 490 x 460mm

Features

With embedded memory in Mill C It gives to user the exact time of process. Communication between PC and RAZMill C via Wi-Fi.

Composition

Bur: 1set/5ea
Screw: 30ea
Cal block: 2ea
Vita block: 1set / 5ea
Filter: 1ea
Oil: RAY Spindle oil 1L

Easy-to-Use

Create a Single Crown in 10min

Fast and Precise Milling

Built-in dedicated CAM Software

RAYMIII C

Precise & Rapid Production Capabilities, Easy Maintenance & Chair-Side Friendly Design

RAYMIII C

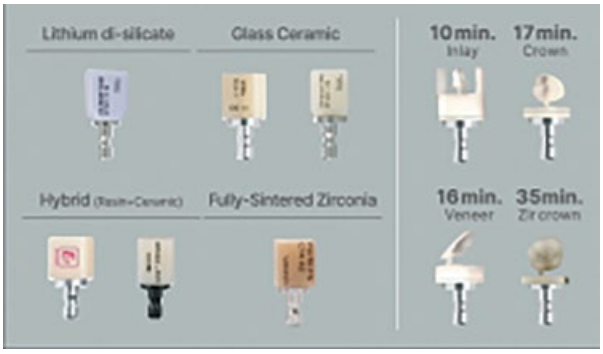
Optimum Performance

FREE 300 Cases

of AI CrownFully-Sintered Zirconia

A New Generation of Dental Prosthetic Machines, RAYMill C, Revolutionizes the Industry

RAYMill C has revolutionized dental prosthetics production by increasing efficiency and accuracy while reducing wait times and the need for multiple visits.



Precise and Rapid Production

RAYMIII C is a state-of-the-art machine that features two world-class spindles for grinding work. With a powerful motor rotation of 60,000 RPM, RAYMIII C can create a single E.max crown in just 17 min. and a single zirconia crown in just 35 minutes. Plus, it can produce veneers with a minimum thickness of 300 um.

Innovative Productivity Growth

RAYMill C and Dentbird helps dental professionals save time and money and be ahead of the game. The Al dental CAD minimize the time and effort for crown design.

Chairside Dental Grinding Machine

RAYMill C's optimal design is alsó a game changer. Its chair-side-friendly design features a compact size of 645mm x 490mm x 460mm, making it easy to place in your dental office. The machine's easy maintenance is improved with a one touch system for burr replacements and an internal circulation system that maintains the same intemal condition. Plus, it even features convenient detection of the water level in the storage and detects damages to the burr during the processes.

Seamless & Intuitive Communication

The intuitive user interface of RAYMill C simplifies the workflow for users, providing a convenient experience. Users are guided step-by-step through maintenance procedures and tool management, making operation easy and straightforward. In addition, the tool's status and replacement timing are displayed, which helps in its efficient use.

RAYDENT Studio

Chairside 3D Printing Solution Printing, Curing and Software

Curing Unit

LED Specification 395nm

Software features

Auto-orient for optimal position
Auto-mesh repair
Layer slicer for path inspection
Optimal printing PRESET for output

Fast & High Precision Printing

For Daily Treatment
(Dental model, Te mporary restoration, Surgical guide)

Water washable Resin

Materials for 3D printing Resin
Biocompatible and Water washable

RAYDENT Studio

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 μm

Surgical guides

Printing time 40-50 min / Half 25-30 min
Accuracy avg. 50 μm

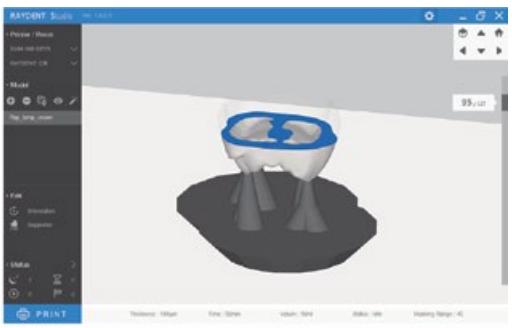
Dental Models

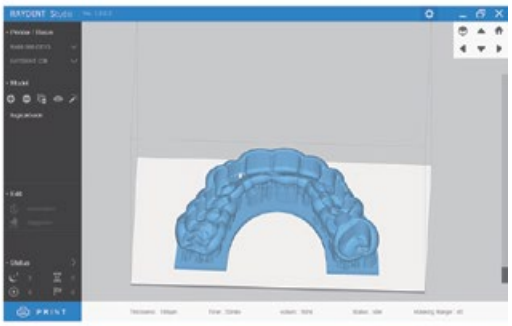
Printing time 40-50 min
Accuracy avg. 50 μm

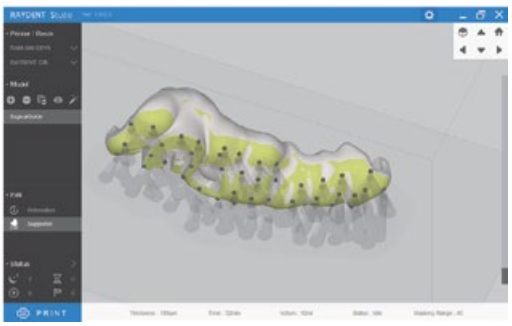
Software features

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).

RAYDENT C&B

For temporary crowns & bridges

- 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 /mm3
Water Solubility	DIN EN ISO 10477	0.4 µm /mm3
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)

RAYDENT DM

For dental models

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.

Specifications are subject to change without prior notice.

Technical Specifications

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

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

SOFTWARE	
Features	Auto-orientation for optimal position Auto-generation of supports Au-to-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

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