

B E Y O N D Y O U R E X P E C T A T I O N



Rayform engages in research & development & industrialization of 3D printing intelligent manufacturing technology. Base on developing technology oriented and the core advantages of optical design, image algorithm, digital materials, micro and nano processing, the company realize industrial application of 3D printing. We hope to reduce manufacturing costs, shorten delivery cycles, and improve personalized customization services by improving the speed and efficiency of 3D printing.

“Honesty, win-win cooperation, diligence and Innovation” are our core values. We insist on rooting deeply into technology, and keeping long-term vision for development, we serve customers well via high-quality products, in order to obtain the long-term development of the company.



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RayForm 锐沣科技

CLEAR ALIGNERS AUTOMATED PRODUCTION SOLUTION

—3D PRINTING SYSTEM SUPPLIER FOR TOP3 GLOBAL INVISIBLE ORTHODONTICS



Largest Build Volume
768*432mm



Rapid Printing
120 dental models printed in 45 minutes



High Automated Production
7x24 hours unmanned-
High Automated Production with PMS

► Patent Certificates

50+invention patents, utility model and design patent.

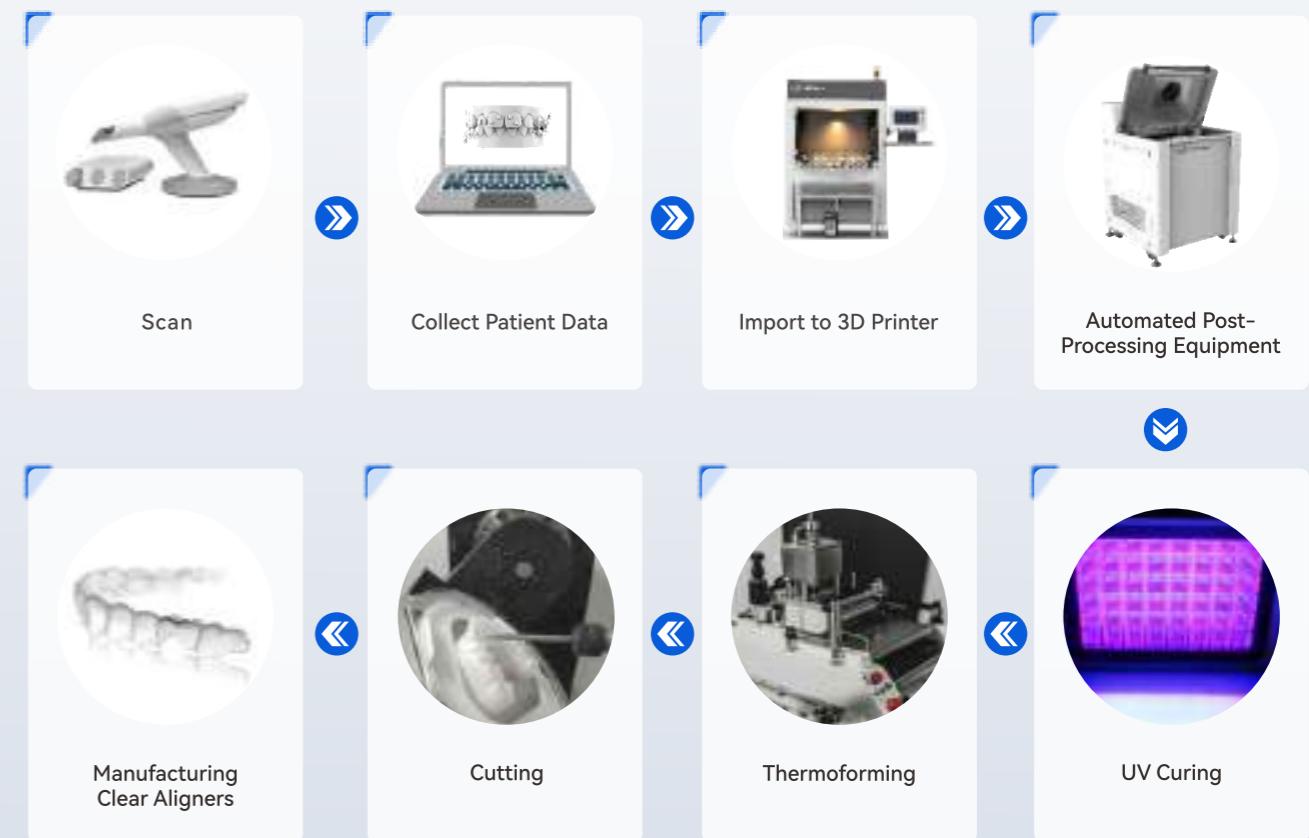
40+ invention patents, utility model and design patents to be authorized.



► Our Partners



► Rayform Validated Ecosystem for Clear Aligners Production



► RF-8800 3D PRINTER

The RF8800 series 3D printers boast a fully automated system, featuring capabilities for automatic removal, sorting, refilling, task assignment, and printing. It adopts multi-matrix DLP technology, sinking platform mode, and its mechanical design innovative reduces the peeling force, safeguarding dental models, enhancing stability, and ensuring clean removal. Moreover, its superior design ensures high reliability, stability, and straightforward maintenance, the highest efficiency on the market.



4X4K DLP Engines



Intelligent control by PMS System



Auto-refilling



Auto-removal

RF -8800

Advanced HADP™ technology, the largest DLP build volume 768*432mm

High precision laser displacement sensor combined with a unique liquid level adjustment algorithm, which achieves ultra high printing speed up to 30mm/h.

Innovative separation technology and convenient automatic resin refilled system, together with intelligent control system for multiple printers achieve 7x24 hours unmanned-automated production.

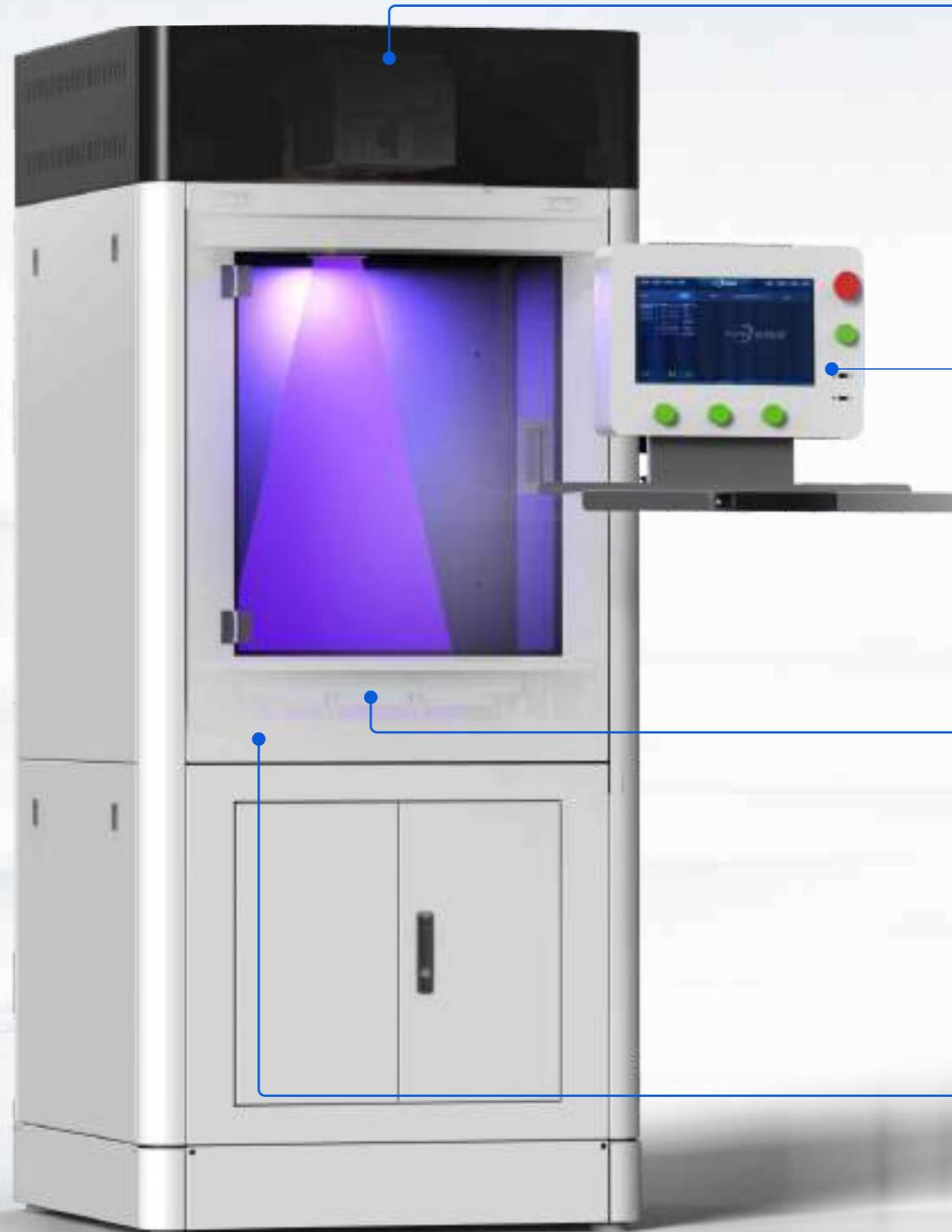
4x4K DLP optical engines, each one with more than 30,000 hours of lifetime

RF8800 Series Specification

Build Volume:	768x432x50mm
Pixel Size:	100um
Accuracy:	80um
Wavelength:	405nm
Resolution:	3840x2160(px)×4
Layer Thickness:	0.08-0.15mm
Projection Mode:	Top-down Projection
Resin Vat:	Replaceable
Relative Humidity:	< 65%
Temperature Range:	24°C (71.6°F) --28°C (82.4 °F)
Machine Weight:	800kg
Machine Size (W x D x H):	1240x1270x1930mm
Electrical Requirements:	200-240VAC,50/60Hz,Single phase
Rated Power:	3KW
Controlling Software:	RAYFORM 3D PRINT SYSTEM
Operation System:	Win10
File Format:	STL/BMP

► RF-4030 3D PRINTER

The RF4030 same DLP technology as the RF8800 series, with 1X4K DLP engine, It has high reliability, stability, and straightforward maintenance, high efficiency, which is more flexible for the dental labs and Clinics.



● 4K DLP Engines



● Intelligent control by PMS System



● Auto-removal



● Auto-refilling

RF -4030

■ Advanced HADP™ technology, the large DLP build volume 384*216mm

■ High precision laser displacement sensor combined with a unique liquid level adjustment algorithm, which achieves ultra high printing speed up to 30mm/h.

■ Innovative separation technology and convenient automatic resin refilled system, together with intelligent control system for multiple printers achieve 7x24 hours unmanned-automated production.

■ 4K DLP optical engine, with more than 30,000 hours of lifetime

RF4030 Series Specification

Build Volume:	384x216x50mm
Pixel Size:	100um
Accuracy:	80um
Wavelength:	405nm
Resolution:	3840x2160px
Layer Thickness:	0.08-0.15mm
Projection Mode:	Top-down Projection
Resin Vat:	Replaceable
Relative Humidity:	< 65%
Temperature Range:	24°C (71.6°F) --28°C (82.4 °F)
Machine Weight:	400kg
Machine Size (W x D x H):	830x890x1930mm
Electrical Requirements:	200-240VAC,50/60Hz,Single phase
Rated Power:	2.5KW
Controlling Software:	RAYFORM 3D PRINT SYSTEM
Operation System:	Win10
File Format:	STL/BMP

► RF-4050 3D PRINTER



Product Features

- Advanced HADP™ technology, the large DLP build volume 384*432mm
- High precision laser displacement sensor combined with a unique liquid level adjustment algorithm, which achieves ultra high printing speed up to 30mm/h.
- Innovative separation technology and convenient automatic resin refilled system, together with intelligent control system for multiple printers achieve 7x24 hours unmanned- automated production.
- 2x4K DLP optical engine, with more than 30,000 hours of lifetime

► RF-3020D LCD 3D PRINTER



Product Features

- Sturdy and durable, build volume 228x128x235mm
- Unique structure of release film, reduces the peeling force, which achieves ultra high printing speed up to 60mm/h
- Adopts COB centralized light source design, the uniformity can get to 92%
- Upgraded UI interface, easy to operate, brings users a better operating experience

The RF4050 with 2X4K DLP engines has high precision, stability, and high efficiency, which is very popular with the dental labs and Clinics.

RF-3020D has high-precision and fast printing, suitable for printing dental models.

RF-4050 Series Specification

Build Volume: 384x432x50mm	Temperature Range: 22–26 °C
Pixel Size: 100um	Machine Weight: 800kg
Accuracy: 80um	Machine Size (W x D x H): 1550x1280x1930mm
Wavelength: 405nm	Electrical Requirements: 200–240VAC, 50/60Hz, Single phase
Resolution: 3840x2160(px)×2	Rated Power: 3KW
Layer Thickness: 0.08–0.15mm	Controlling Software: RAYFORM 3D PRINT SYSTEM
Projection Mode: Top-down Projection	Operation System: Win10
Resin Vat: Replaceable	File Format: STL/BMP
Relative Humidity: < 60%	

RF-3020D LCD Series Specification

Build Volume: 228x128x235mm	Temperature Range: 22–26 °C
Pixel Size: 29.7um	Machine Weight: 22kg
Accuracy: 30um	Machine Size (W x D x H): 350x330x600mm
Wavelength: 405nm	Electrical Requirements: 200–240VAC, 50/60Hz, Single phase
Resolution: 7680x4320	Rated Power: 128W
Layer Thickness: 0.025–0.1mm	Controlling Software: RAYFORM 3D PRINT SYSTEM
Projection Mode: Pull-up Projection	Operation System: Win10
Resin Vat: Replaceable	File Format: STL
Relative Humidity: < 60%	

Materials Formulated for Clear Aligner Models



High-temp Resistant Dental Model Resin

Odor:	Odourless
Colors:	Milky White
Specification:	5KG/Bottle
Washing Agent :	IPA or ethanol
Machines Compatibility:	3D printers with 405nm Light source



Water Washable Dental Model Resin

Odor:	Odourless
Colors:	Milky White
Specification:	5KG/Bottle
Washing Agent :	Water
Machines Compatibility:	3D printers with 405nm Light source

Advantage

-  Fast forming rate
-  High precision
-  Ultra-high surface hardness
-  High-temperature resistance
-  Superior toughness and force retention

Advantage

-  Fast forming rate
-  High precision
-  Ultra-high surface hardness
-  High-temperature resistance
-  Water washable

RF-MI-1101 Product Performance

Parameter	Standard	Unit	Result
Shore	ASTM D2240	Shore D	86
Flexural Strength	ASTM D790	Mpa	69.6
Flexural Modulus	ASTM D790	Mpa	1713
Elongation	ASTM D638	%	17.2
Water Sorption	ASTM D570	%	0.45-0.6

RF-MI-2103 Product Performance

Parameter	Test standards	Unit	Result
Shore	ASTM D2240	Shore D	87
Flexural Strength	ASTM D790	Mpa	106
Flexural Modulus	ASTM D790	Mpa	2964
Elongation	ASTM D638	%	13.2
Water Sorption	ASTM D570	%	0.7

Model Processing Solution

Washing Material

IPA or Ethanol

Supporting equipment:
Ultrasonic cleaning machine or Mechanical mixing and cleaning machine

Supporting cleaning agent:
Ethanol (alcohol) or isopropanol IPA

High-Temp resistant dental model resin is suitable for IPA or ethanal washing



Water Washable

Supporting equipment:
Ultrasonic cleaning machine or Mechanical mixing and cleaning machine

Cleaning agent: Water

Water washable dental model resin is suitable for water washing



Washing-free material

No need solven to clean, and more environment friendly.

Spinner RFADM-03 is developed for our washing free resin and dental mode cleaning. This superior machine is high-speed in operation and its powerful action gives quick and exceptional results. It is silent in operation and 100% safe for all cleaning applications.

Both High-Temp resistant dental model resin & Water washable dental model resin are suitable for solven-free machine.



RFADM-03

RFADM-03 Specification

Model:	RFADM-03
Inner Gallbladder Diameter:	770X770mm
Inner Gallbladder Height:	419mm
Motor Model:	YEJ-90L-4-B51.5KW
Electrical Requirements:	200-240VAC, 50/60Hz
Maximum Speed:	1000rpm/min
Machine Weight:	380Kg
External Dimensions:	900x900x1250m

Invisible Orthodontic Sheet

Innovative TPU Material, Redefining Orthodontic Experience

Core Advantages

- Excellent Stress Retention: Provides stable and long-lasting corrective force, improving treatment efficiency.
- Exceptional Crack and Wear Resistance: Extends product lifespan and reduces replacement frequency.
- Strong Elastic Recovery: Fits tooth contours for enhanced comfort.
- High Transparency and Stain Resistance: Invisible and aesthetically pleasing, leaving no trace in daily use.

Why Choose TPU Over PETG?

- Superior Stress Performance: Maintains stable corrective force over time.
- 30% Improved Crack Resistance: Verified by three-point bending tests.
- Enhanced Wear Resistance: Adapts to complex oral environments, reducing wear.

Certifications and Quality Assurance

- China Medical Device Registration Certificate: Guangdong Device Registration No. 20222170718
- Production Standards: Compliant with ISO Quality Management System.
- Validity Period: Until June 8, 2027



Technical Parameters

Material:	Thermoplastic Polyurethane (TPU)
Thickness Range:	0.35mm - 1.2mm
Sheet Size:	125mm x 120mm (diameter)
Roll Size:	130mm x 137mm (width)
Multi-Layer Sheets:	Customizable, contact the sales team for details

Specialty Materials

Focused on Innovative Materials, Empowering Precision Medicine

Note: Product images and test data are for reference only. Actual products may vary.

AUTOMATIC TRIMMING

Automatic trimming machine, no labor involved in correction, after cutting, the edge of the appliance is consistent with the original cutting line, and the accuracy is $<0.3\text{m}$; trimming edges with almost no burrs, the cutting individual appliance operation time: $\leq 25\text{s}$; no interference in the cutting process, Percentage of raw edge of appliance after cutting $<2\%$.



Process



● The camera takes pictures



● Automatic cutting



● Finished product display and reads the code

Description of main consumables

- The cutting tool is durable, the diameter is as small as possible, and the blade can be stressed out
- Average tool life < 800 (appliance cutting times, refer to the cutting effect of TPU diaphragm model)
- Unit appliance cutting tool cost is less than 0.1 yuan
- The water cooler needs to be replaced once every six months with pure water or distilled water. You need to add antifreeze in winter

Device Communication Description

- Provide or cooperate with automated production line model recognition systems
- Support TCP/IP RS232/485 and other communication modes
- The cutting line can be automatically obtained and the cutting can be completed based on the unique identification information of the model

Automatic Trimming Specification

Power:	3.5KW
Weight:	520kg
Equipment Size:	1350mmx1050mmx2000mm
Payload:	7kg
Rotational Speed:	$\leq 40000\text{r/min}$
Heat Dissipation Mode:	Water-cooling
Cut defect(rework) rate:	$<1\%$

► AUTOMATIC THERMOFORMING

Automatic thermoforming has good adhesion of pressed film. Ensure even adhesion of the membrane to the model resulting in clearer expression of features. It has stable heating process and the refrigerant is available environmentally, the machine temperature control accuracy $\pm 0.3^{\circ}\text{C}$.



Device Communication Description

- Support external data monitoring interface and communication interface
- Support TCP/IP RS232/485 and other communication modes

Molding process



Coil loading



Mold feeding



Heat forming

Automatic Thermoforming Specification

Equipment Size:	2300mmx1050mmx2000mm
Controllable Molding Temperature Range (Coil material can be uniformly heated):	150°C-700°C
Weight:	1810kg
Heating Efficiency:	< 30s/100°C
Working Efficiency of Film Pressing:	$\leq 30\text{s/pcs}$ (two at one time)
Defective Rate of Film Pressing(rework ratio):	< 1%

Applicable Coil specifications

Coil Outer Diameter:	100-480 mm
Coil Aperture:	70 mm
Coil Width:	100-137 mm(Customizable size)

► Technical Services

Installation

Installation Consultation Service

- Equipment consultation
- On-site Installation

Training

Training

- Machine use training
- Maintenance training
- Slice software training

After-sales

Worry-Free After-Sales Service

- 24*7 Online technical support
- Remote and on-site maintenance services
- Free software upgrade
- Two years warranty

