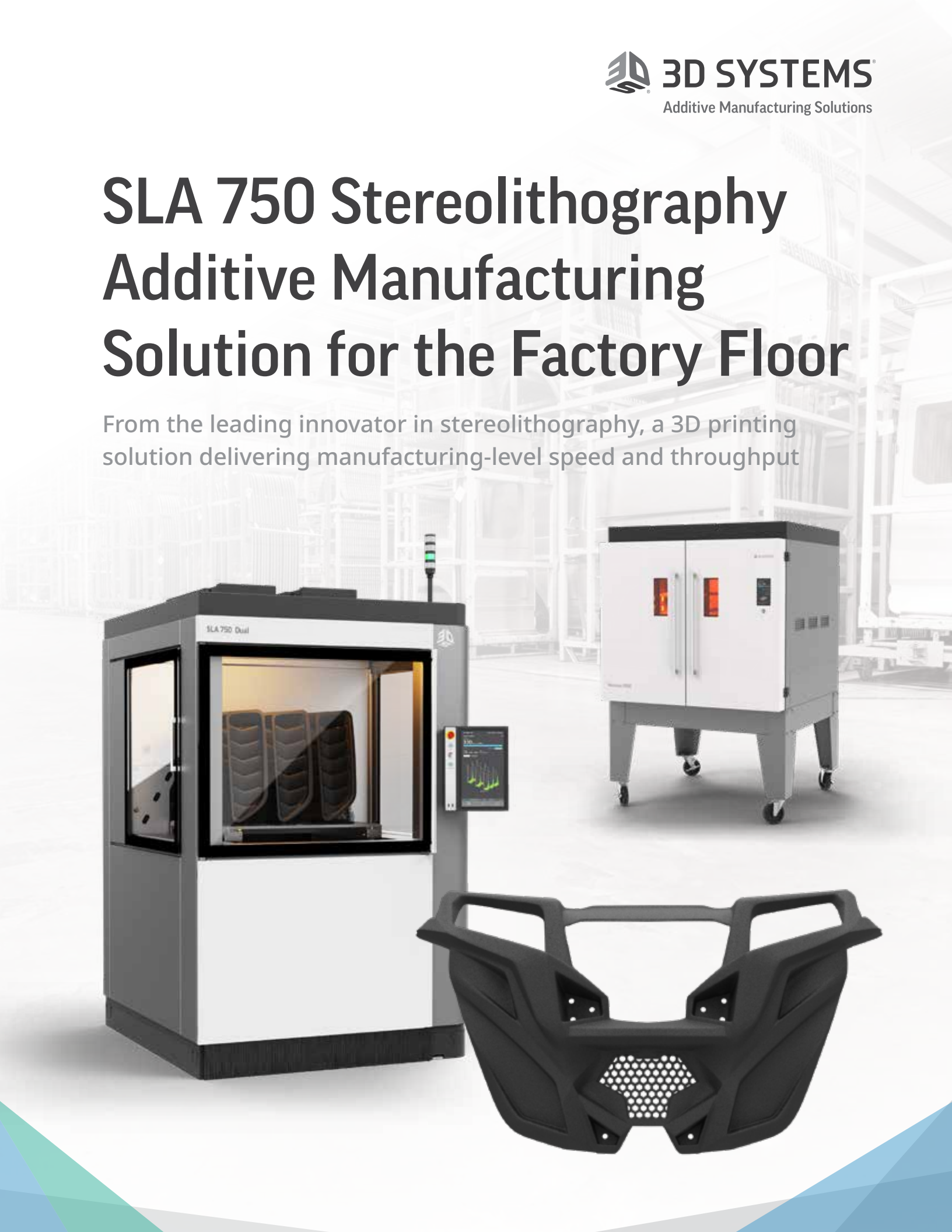
3D SYSTEMS
Additive Manufacturing Solutions

SLA 750 Stereolithography Additive Manufacturing Solution for the Factory Floor

From the leading innovator in stereolithography, a 3D printing solution delivering manufacturing-level speed and throughput



Integrated AM Factory Ecosystem – A Full Workflow Solution

Optimized for manufacturers who want to take the next step in integrating additive manufacturing into their factory-floor ecosystems

3D Systems' SLA 750 3D printing workflow solution answers the demand for cost-effective SLA batch production parts with unprecedented levels of throughput, consistency, performance, and yield, together with full factory-level integration, management, control, and traceability.

Integrated Factory Floor Ecosystem

Additive Manufacturing Solution

Additive software

Quickly and efficiently go from design to high quality, true-to-CAD printed parts without needing additional third party software with 3D Sprint®

Production grade materials

Long-lasting production-grade photopolymer resins deliver significantly improved part performance and stability over standard 3D printed photopolymers

High speed stereolithography

Factory-ready, dual-laser, SLA additive manufacturing solution delivers large production-grade parts, up to 3X throughput of competing systems

Automated post-processing

Industrial-scale post-processing system offers high volume, high-speed drying and curing for batch jobs and large-scale production-grade resin parts

Automation compatible

Automation readiness and robot-compatibility for 24/7 lights-out operation

3D printed production parts

Cost-effective, batch volume production of repeatable, end-use plastic parts

Production floor

AI-based seamless integration of additive manufacturing with all factory floor equipment

OQTON

Manufacturing Operating System

SLA 750,
single laser 3D printer

Field upgradeable

SLA 750 Dual,
synchronous dual-laser 3D printer

SLA 750 and SLA 750 Dual 3D Printers

World's First Synchronous Dual-Laser SLA 3D Printer: Large Production Parts at the Highest Speeds

From the original inventor of SLA and the innovation leader in production-grade photopolymer technology, 3D Systems introduces the industry's fastest SLA 3D printers: the SLA 750 and the SLA 750 Dual.

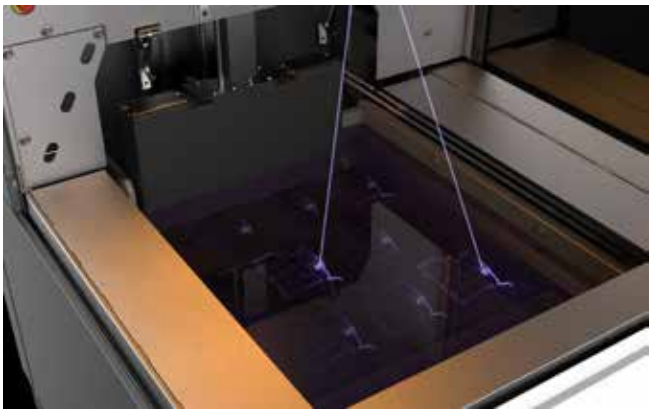
The SLA 750 Dual is the world's first synchronous dual-laser SLA printer delivering up to twice the speed and triple the throughput of current SLA printers, using dual imaging systems together with a proprietary scan algorithm, *Hyper-Scan™ vector technology*, developed especially for efficient, high-quality production manufacturing.

The SLA 750 3D printer delivers up to 30% faster print speeds than comparable SLA 3D printers and is fully upgradeable to the SLA 750 Dual model.

More Production Advantages Than Ever Before

Both the SLA 750 and SLA 750 Dual were conceived from the ground-up to deliver the industry's leading combination of print size, speed, accuracy, resolution, part finish, and part mechanical performance, with unprecedented part yield, isotropic strength, and cost-effectiveness.

The SLA 750 and SLA 750 Dual feature a large build envelope within a compact printer footprint, allowing you to optimize and scale-up productivity within your factory floor space. The system also includes a dual-rail recoater that self-calibrates at the push of a button, ensuring a more reliable print process and superior parts.



Optimized Laser Scanning Technology for Additive Manufacturing

Unlike conventional SLA 3D printers that use off-the-shelf scanning technology, the SLA 750 and SLA 750 Dual use a proprietary scanning algorithm developed for the unique needs of production additive manufacturing. *Hyper-Scan™ vector technology* optimizes key speed and productivity elements to answer the needs of high demand production manufacturing environments.

Highest Aesthetics – Comparable to Injection Molded Parts

The SLA 750 and SLA 750 Dual deliver superior surface quality and accuracy at every point across large builds, with superior detail resolution, wall smoothness, and incremental fidelity.

Fleet Automation Readiness with 24/7 Lights-Out Operation

The SLA 750 and SLA 750 Dual come with downstream automation readiness and robot-compatibility for 24/7 lights-out operation with fully automatic printer turnover, including job off-loading, washing, and onboarding.

Both 3D printers come with a robot accessible chamber handle, fixed START and STOP buttons, robot cycle start controls similar to existing CNC machines, automatic bottle or bulk material feed and connectivity ports.

SLA 750 SYSTEM ADVANTAGES

- High laser power (4-watt laser)
- Dynamic beam range with 2 beam sizes per print layer
- Choice of single or dual laser scanning
- New all-metal chassis design for heavy-duty workloads, improved ergonomics and clean-ability
- Self-calibrating, dual-rail recoater
- 15% larger build volume and smaller hardware footprint (compared to previous models)
- Best-in-class production-grade resin materials
- All new UX and UI with full visibility and user-friendly experience
- Remote monitoring and control
- Removable vat and in-vat auto material mixing
- Field upgradeable from single-laser SLA 750 to dual-laser SLA 750 Dual
- Automation ready for factory-level ecosystem integration

SLA 750 PART ADVANTAGES

- Sharpest part corners
- Superior side wall detail
- Smallest extruded and embossed feature detail
- Thinnest features
- Smoothest layer lines on angled faces
- No ‘orange peel’ effect on side walls
- Highest incremental fidelity

Technical Specifications	SLA 750	SLA 750 Dual
3D Printer Size Crated	1887 x 1887 x 2515mm (73.5 x 73.5 x 99 in)	
3D Printer Size Uncrated	1370 x 1539 x 2255 mm (54 x 61 x 89 in)	
3D Printer Weight Crated (not including MDM)	998 kg (2200 lbs)	1044 kg (2300 lbs)
3D Printer Weight Uncrated (not including MDM)	771 kg (1700 lbs)	817 kg (1800 lbs)
Interchangeable Material Deliverable Modules (MDMs)	Yes	
MDM Size Crated	1676 x 1194 x 1146 mm (66 x 47 x 45 in)	
MDM Size Uncrated	968 x 1296 x 910 mm (31 x 51 x 36 in)	
MDM Weight Crated (not including material)	1102 kg (500 lbs)	
MDM Weight Uncrated (not including material)	136 kg (300 lbs)	
Electrical Requirements	200-240 VAC, 1- Ph, 50/60Hz, 24A	200-240 VAC, 1- Ph, 50/60Hz, 30A
Operating Temperature Range	18°C to 28°C	
Max Part Size - Full	750 x 750 x 550 mm (29.5 x 29.5 x 21.65 in)	
Max Part Size - Short	750 x 750 x 50 mm (29.5 x 29.5 x 1.97 in)	
Max Build Volume - Full	558 liters (147.4 U.S. gal)	
Max Build Volume - Short	176 liters (46.5 U.S. gal)	
Max Part Weight	86 kg (190 lbs)	
Max Resolution	2000 dpi	
Accuracy	Dimensions >34 mm (1.34 inch): ± 0.15% of feature size* Dimensions <34 mm (1.34 inch): ± 0.051 mm (0.002 inch)*	
Hyper-Scan™ Vector Technology	Proprietary scan algorithm developed especially for efficient, high-quality production	
Laser	4 watts, 355 nm, Solid-state frequency tripled Nd: YV0^4	
Laser Power in Printing (watts per laser)	3	
Dynamically Focusing Beam Size	125 - 1000 µm (0.005 - 0.040 in)	
SLA Printer Controller Software OS	Windows 10 LTSC 1809	
SLA Printer Controller Software Network Compatibility	Class A Ethernet interface, interfaces with 10/100/1000 Gigabit Ethernet network Standard USB wireless adapter compatible	
Certifications	NRTL, SCC, CE, UKCA, KC & RCM	
Language Support	English, German, French, Italian, Spanish, Portuguese, Japanese, Korean, Simplified Chinese	
Accessories	Transfer Cart In-Vat Mixer	

* Accuracy may vary depending on build parameters, part geometry and size, part orientation, and post-processing methods.

PostCure™ 1050
High Speed, High Volume Post-Processing

Industrial Scale Post-Processing System for High Yield, Repeatable, and Large Parts

PostCure 1050 is an industrial-scale post-processing system offering high volume, high-speed drying and curing for batch jobs and large-scale, production-grade resin parts up to 1050 x 800 x 625 mm.

Consistent Cure Volume. Repeatable Part Results. Minimal Expertise.

Production-ready features including: long-life LED light sources, automatic detection and alert of light failures, and a light output calibration routine for more predictable and consistent part and job outcomes.

Consistent 360° light-uniformity, including on down-facing part surfaces, means more parts cured in less time with no need for part flipping or manual intervention.

Featuring optimized light wavelengths, a separately configurable UV intensity, and actively cooled LEDs with separately adjustable heating, you can now ensure optimal part curing without incurring unwanted thermally-induced warp in your printed parts.

Better Predict and Manage Your Capital Equipment Investment

PostCure 1050 is compatible with all 3D Systems photopolymer 3D printers and suitable for current and future 3D Systems material innovations, allowing you to eliminate additional or redundant post-processing investments.

You can now deliver repeatable part performance, consistent part quality, and higher yield from a more automated, cost-effective, and high throughput process – both now and in the future.

POSTCURE 1050 PRODUCTIVITY ADVANTAGES

- 5 times faster production cure times vs. competing systems
- 5 times higher throughput vs. competing systems (daily cure cycles)
- Optimized and programmable pre-set cycles
- Strongest light output (25 mW/cm2)
- Built-in heating (up to 80°C)
- Built-in drying (optional)
- High powered LED light source
- No need for mid-cure part flip
- Highest batch-to-batch consistency

Technical Specifications	PostCure 1050
Max Part Extents / Chamber Size (W X D X H)	1050 x 800 x 625 mm | 41 x 31 x 25 in
Optimized Consistent Curing Volume (W X D X H)	850 x 750 x 550 mm | 33.5 x 30 x 22 in
Illumination Pattern	36 UV Light Modules (each containing 18 LEDs) distributed on all 6 internal surfaces for maximum uniformity. No need to flip parts
Light Output	Up to 1000 Watts total UV power evenly distributed within consistent curing volume
Light Wavelengths	350 – 450 nm range provided by 3 LED types centered around 365, 395, and 425 nm
Heat Output	Up to 3000 Watts total convective heating power fully adjustable and controlled up to 80°C for Figure 4 and AMX range of 3D Systems SLA materials
Active Cooling	Active cooling keeps sensitive parts within 5°C of ambient temperature
Part Drying	Optional part drying cycle to remove residual solvent prior to curing
Throughput	3-10X more parts cured per hour depending on application
Curing Times	Material-dependent. 15 – 120 minutes
Size Crated	1575 x 1500 x 2057 mm | 62 x 59 x 81 in
Size Uncrated	1218 x 1270 x 1760 mm | 48 x 50 x 69 in
Weight Crated	454 kg (1,000 lbs)
Weight Uncrated	299 kg (660 lbs)
Electrical Requirements	200-240VAC, 1- Ph, 50/60Hz, 24A
Heating Range	20-80°C
Operating Temperature Range	13-30°C
Max Part Weight	86 kg (190 lbs)
Adjustability	User-adjustable by time, temperature, and illumination intensity
Materials Compatibility	3D Systems optimized recipes for all SLA and Figure 4 materials. Compatible with most resin materials.

Production-Grade Photopolymer Resin Materials

Long-Term Mechanical Performance and Stability

3D Systems' range of production-grade stereolithography resin materials utilizes patented material chemistry to deliver long-term mechanical performance and stability in UV and humidity environments for large-scale plastic parts.

Tested for up to 8 years of indoor and 1.5 years of outdoor mechanical performance per ASTM methods, these materials deliver significantly improved longevity and stability compared to standard 3D printed photopolymers.

3D Systems SLA printed parts exhibit surface quality comparable to injection molded plastics and similar stress/strain toughness performance to standard thermoplastics. They also feature isotropic mechanical properties, enabling greater part performance at any build orientation compared to alternative additive technologies, such as filament deposition or powder binding.

Production-Grade Materials Spotlight

ACCURA® AMX RIGID BLACK

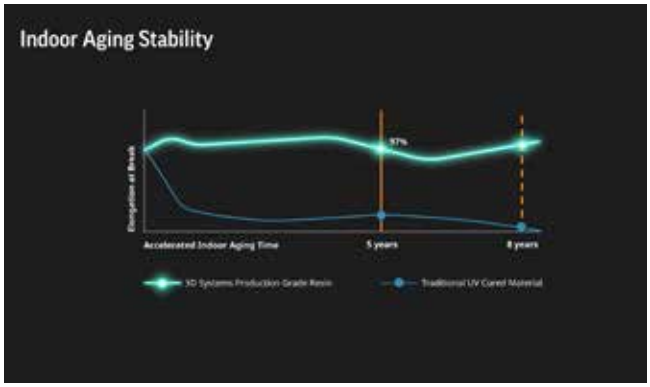
Rigid, tough, production-grade material for high mechanical loads and structural parts. Features long-term stability of mechanical properties together with exceptional surface finish.

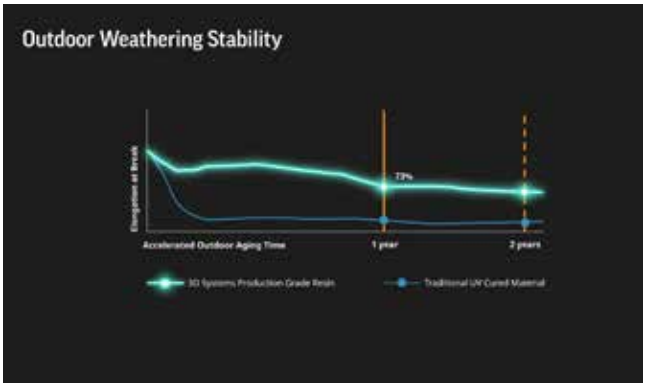
Ideal for industries such as automotive, consumer goods, and manufacturing services requiring large end-use parts, manufacturing aids, and functional prototypes.

ACCURA® AMX DURABLE NATURAL

The industry's toughest production-grade SLA material, with a unique combination of impact resistance, tear-strength, and elongation at break. Ideal for mandrel tooling of composites.

Features long-term stability of mechanical properties for repeatable mechanical loads and structural parts used in motorsports, aerospace, consumer goods, and manufacturing services.





Applications and Materials

Prototyping & Production

- Fit, form and functional prototypes
- End-use production parts
- Aesthetic concept & showroom models
- PIV wind tunnel testing models
- Automotive body exterior, paneling, under-hood, powertrain and interior cabin parts
- Air and fluid handling tubes,vents,connectors and valves
- High clarity, transparent containers, lenses and lighting covers

Manufacturing Aids

- Lightweight investment casting patterns for large metal parts
- Mandrel tooling
- Molds and dies
- Custom assembly jigs and fixtures
- Cast urethane/vacuum
- Casting master patterns

Biocompatible

- Surgical tools, guides and appliances
- Medical education and presentation models
- Biocompatible medical and dental parts
- Fluid and gas test-flow equipment

SLA 750 3D printers are designed to use 3D Systems' extensive portfolio of SLA materials featuring a wide range of properties such as rigid, tough, high temperature, and clear, as well as specially formulated materials for biocompatible medical applications and sacrificial investment casting patterns.

Rigid

Similar aesthetics and properties to injection-molded ABS.

Tough & Durable

Look and feel of polyproylene.

Clear

Including the industry's highest clarity material for polycarbonate-like parts.

Castable

Expendable resins specifically formulated for QuickCast® sacrificial patterns for investment casting.

High Temperature

Heat deflection temperatures up to over 215°C (419°F) offering exceptional performance under extreme conditions.

Specialty Materials

Including options for jewelry-specific casting and dental models' production.

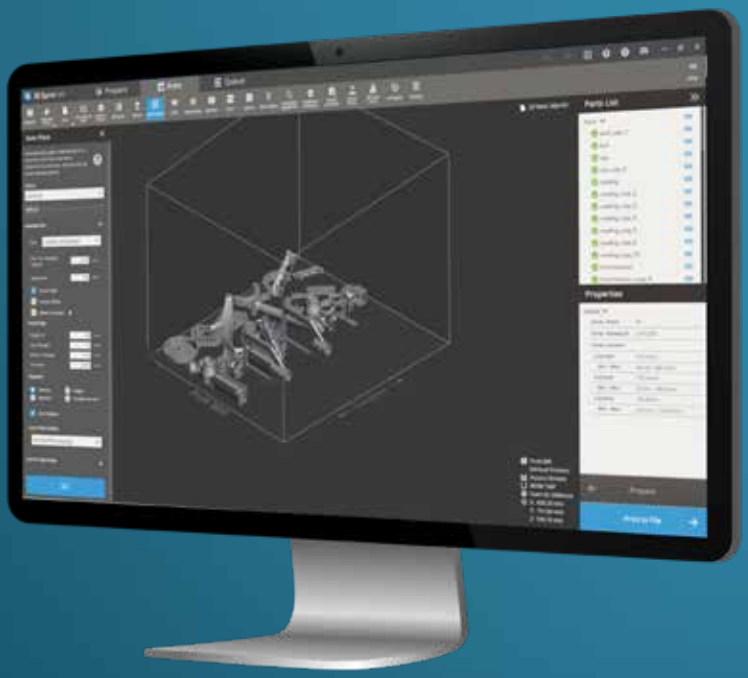
All-In-One Software for Plastic Printing

3D Sprint®

An all-in-one software to prepare, optimize and print 3D CAD data. 3D Sprint delivers all the tools you need to quickly and efficiently go from design to high quality, true-to-CAD printed parts without needing additional third party software.

Designed especially for the needs of SLA power-users, 3D Sprint facilitates file preparation with native CAD import and advanced mesh repair tools, increases productivity with auto placement, enhances manufacturing efficiency with finely tuned supports, and reduces the need for additional software.

- **Print True-to-CAD Parts**
  Smart geometry processing and powerful slicing technology eliminate geometry processing artifacts.
- **Streamline Time to Finished Parts**
  An extensive automated toolset facilitates the entire 3D printing process, saving material and post-processing time without compromising on part quality.
- **Increase Productivity with Optimized Data Management**
  Accurately estimate print time and optimize material levels and usage both before and during the print operation.



From CAD to Factory Floor Integration, Management and Control

Oqton: Intelligent Manufacturing OS

Oqton automates the end-to-end additive workflow across and beyond the production floor. Oqton allows you to upload prepared jobs or use the platform's integrated build preparation tools. Schedule and track production orders, and connect your machines to enable full traceability and valuable data insights.

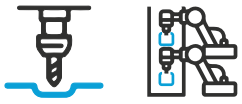
Oqton's Manufacturing OS allows you to schedule all your production and post-production processes in a smart and efficient way. Powered by artificial intelligence, the Oqton Manufacturing OS helps you manage all your machines, orders, and production materials for efficient machine utilization.

Leverage the Industrial Internet of Things to connect all your factory floor equipment. Monitor your machines and processes remotely. Use process-based alerts to bring you piece of mind and easily generate automated reports and insightful live dashboards.

OQTON: ADVANTAGES FOR CONNECTED AM PRODUCTION

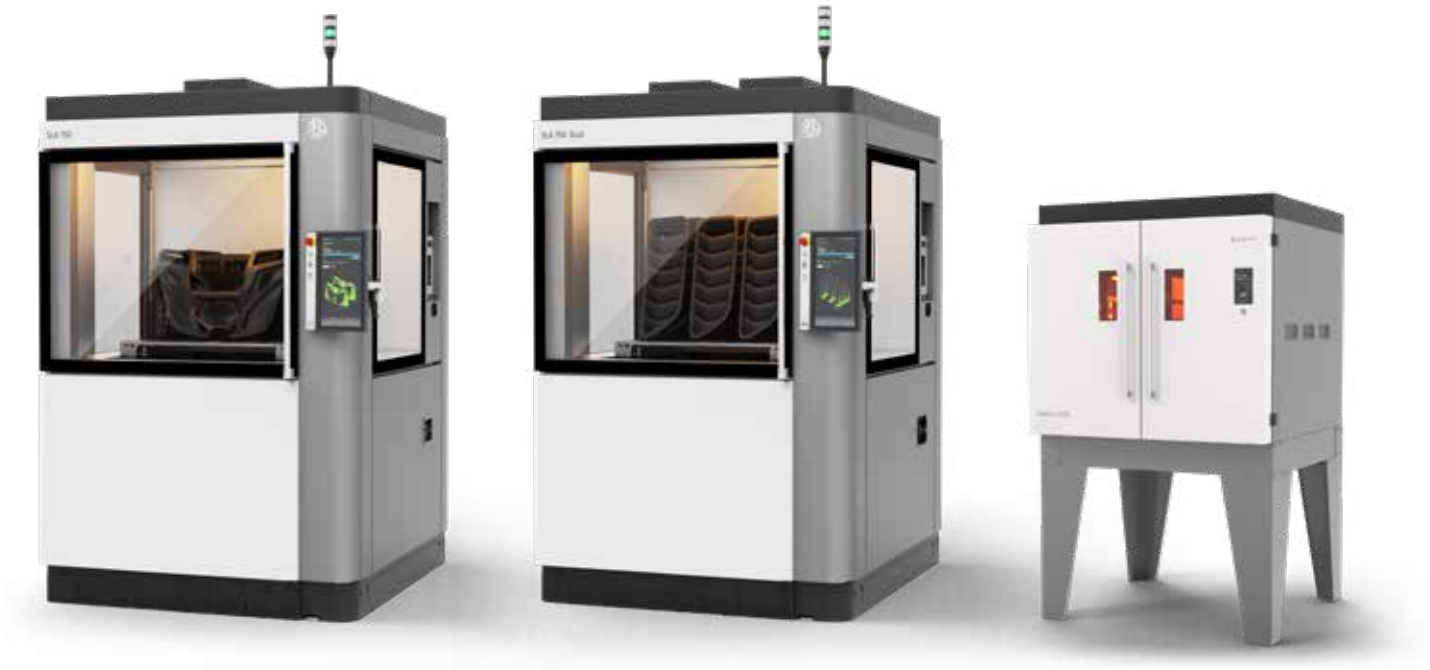
- Open and extendable cloud-based platform
- Flexible on-premise and private cloud deployment options
- Infrastructure agnostic
- Tightly connects manufacturing software and hardware
- Artificial intelligence to capture production knowledge
- Engineering automation
- Digital thread enabling full visibility and traceability

Cost-effective, batch volume production of repeatable, end-use plastic parts



AI-based seamless integration of additive manufacturing with all factory floor equipment

OQTON



Advance Production Efficiency with 3D Systems' Additive Manufacturing Solutions

3D Systems delivers a breakthrough in additive manufacturing productivity, speed, reliability, and automation for SLA 3D printing. A full solution comprised of the SLA 750 family of large-format 3D printing systems, advanced production-grade photopolymer materials, the PostCure 1050 post-processing system, and the Oqton cloud-based, end-to-end manufacturing operating system.

CONTACT US

3dsystems.com