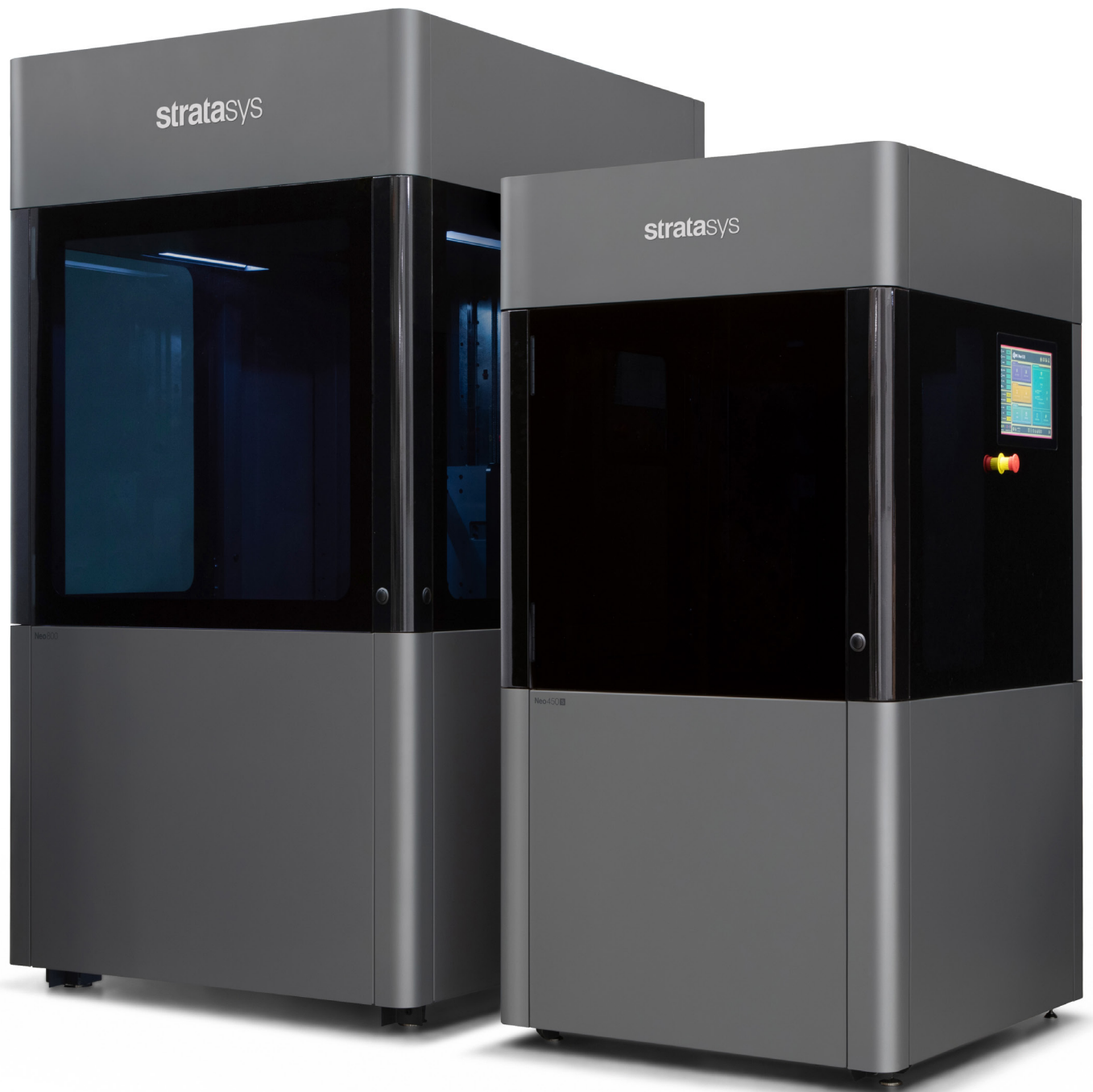
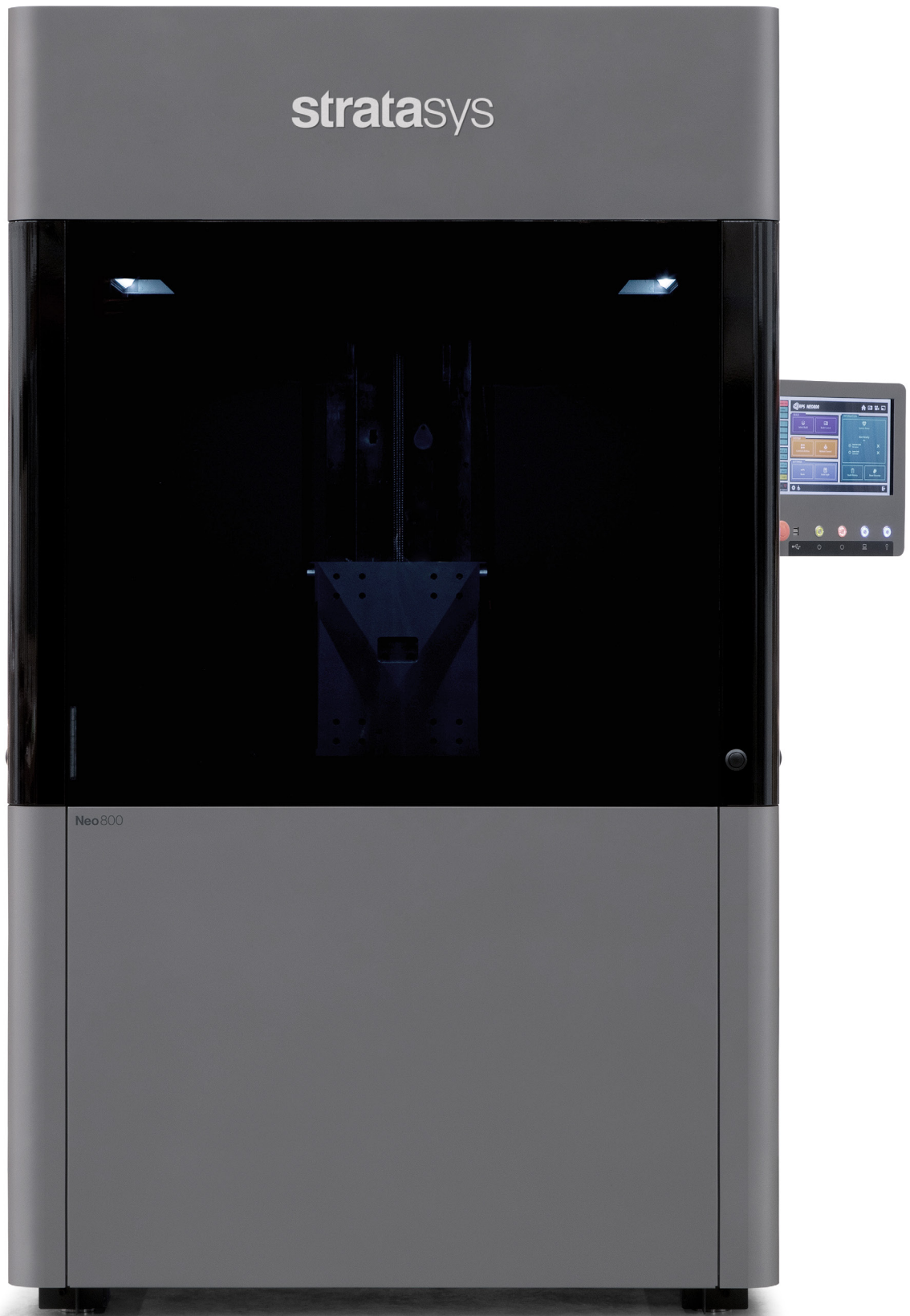


# Stratasys Neo stereolithography 3D printers



# Neo800



# Neo450



Build prototypes, rapid tooling and master patterns with the state of the art Neo<sup>®</sup> stereolithography range.

The reliable and proven Neo builds high-quality parts with superior surface quality, accuracy and detail.

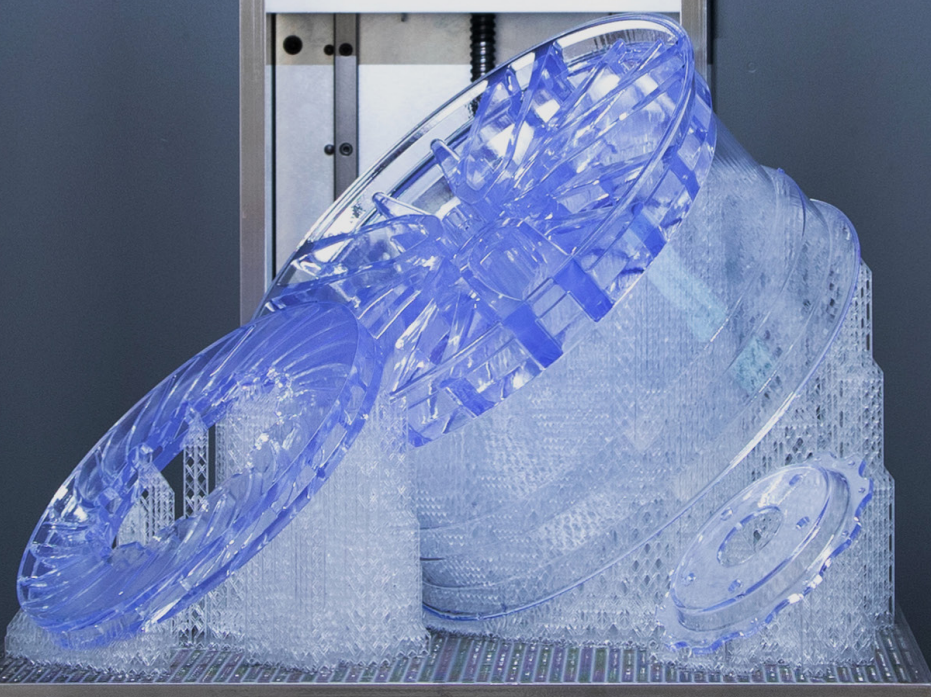
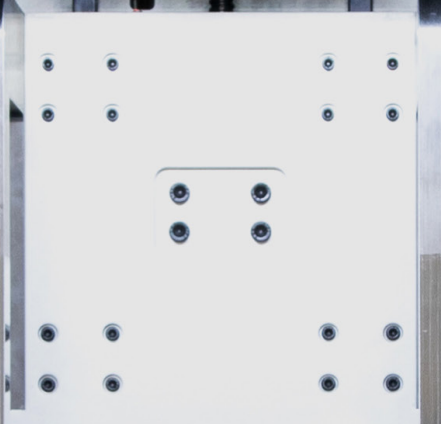
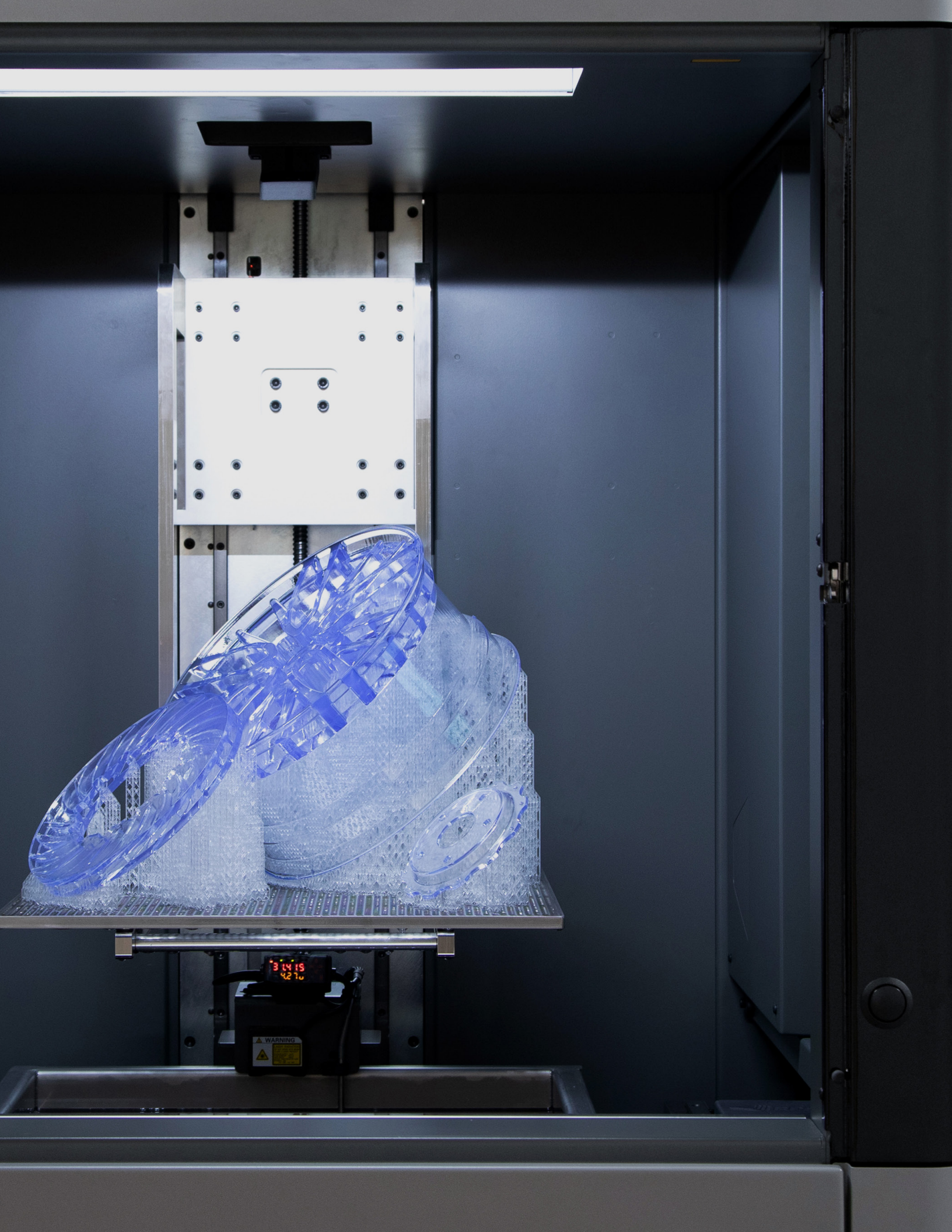


Build medium to large SD parts  
or small detailed HD parts on  
the Neo450s.



Neo450s







# Why choose the Stratasys Neo stereolithography 3D printer?

## Reduce finishing time by up to 50%

The Stratasys Neo produces highly accurate parts with unparalleled industry quality. Optimizing machine design and utilizing the latest cutting-edge technology available for lasers and scanners, our beam delivery system produces exceptional layer-to-layer alignment repeatability. The printed parts are dimensionally accurate, with exceptional sidewalls and crisp feature resolution.

## Versatile and functional

The Stratasys Neo is available in a large 53.2 × 64.2 × 90.6 in. (800 × 800 × 600 mm) platform or smaller 17.72 × 17.72 × 15.75 in. (450 × 450 × 400 mm) platform. Both offer different build options and modes to suit all applications.<sup>1</sup>

## Faster build speeds<sup>2</sup>

Stratasys Neo's high-power laser processes any commercially available 355 nm SL resin, while maintaining maximum productivity between services. Build speeds are enhanced with carefully developed and efficient software. Dynamic beam shape control is standard throughout the Neo range, with a variable option available for even greater build speeds.

## Proven reliability and quality assurance

The Stratasys Neo is carefully engineered throughout, using state-of-the-art technology, proven components and aesthetic finishes.



Designed with an open-resin system, offering customers the ability to utilize any commercially available 355 nm hybrid resin chemistry.

Produce highly accurate parts with unparalleled industry quality.





## Open resin system

An open material system means users are not restricted by the usual parameter constraints, offering the ability to utilize any commercially available 355 nm hybrid resin chemistry.

## Enhance workflow efficiencies with Titanium software

Intuitive software simplifies daily operation and can add functionality. Customer suggestions and feedback are encouraged, driving user-focused software updates.

## Part traceability and data reporting

Titanium™ software captures build history, parameter detail and part traceability data reporting.

## Outstanding, accessible service and support

Highly skilled Stratasys engineers are available for remote diagnostic support or, when needed, on-site support the next business day<sup>3</sup>. Get direct access to the Stratasys engineers behind the design of the Neo for even greater reassurance when needed.



Printed parts are dimensionally accurate, with exceptional sidewalls and crisp feature resolution.

The Neo is designed for reliability and productivity. Stratasys expert service engineers are available to assist when needed.





# Stratasys

## Neo800

Build large parts with superior surface quality, accuracy and detail

**The Neo800 builds large prototypes, rapid tooling and master patterns, and is the global market leader of large-format stereolithography technology.**

The Neo800 is renowned for its reliability and industry standard side wall quality. It has an established track record for delivering consistently accurate parts and high yield volumes for industrial production.

Known in the industry for its productivity and performance, the Neo800 is placed around the world in a range of organizations, including F1, automotive, service bureaus and universities.


### Key highlights

- Print large parts with outstanding surface finish on the 53.2 × 64.2 × 90.6 in. (800 × 800 × 600 mm) build platform.
- Produce large parts without the need for sectioning, or build multiple parts in one build, saving time and costs.
- Intuitive Titanium software optimizes build quality and captures build data for greater traceability, enhancing work efficiency.
- Dynamic laser focusing and SD and HD build modes produce highly accurate and detailed parts.
- The Neo Unload Trolley and UV800 post-curing oven & hotbox are available for a complete, end-to-end 3D printing solution.



# See the Specs

## Neo800 3D Printer Specifications\*\*

Laser & Scanning System	Laser	2 Watt; 355 nm, solid-state frequency tripled Nd: YVO <sup>4</sup>
	Beam Focus	Dynamic & Variable
	Beam Size	150 to 600 µm
	Scanning Speed	Up to 400 in./s (10 m/s)
Layer Resolution	50 to 200 µm*	
Minimum Feature Size	0.008 in. (0.2 mm) in X & Y <sup>†</sup> / 0.016 in. (0.4mm) in Z <sup>†</sup>	
Build Modes	HD & SD	
Accuracy	Dimension <3.94 in. ±0.004 in.; Dimension >3.94 in. ±0.15% <sup>†</sup> Dimension <100 mm ±0.1 mm; Dimension >100 mm ±0.15% <sup>†</sup>	
Material Compatibility	Open resin system - compatible with commercially available 355 nm stereolithography resins	
Capacities	Build (XYZ)	31.50 × 31.50 × 23.62 in. (800 × 800 × 600 mm)
	Vat Fill	147 US gal (1389 lb <sup>‡</sup> ) [555 ltr (630 kg <sup>‡</sup> )]
Software	Operating System	Windows 10 Pro
	Input File Format	SLC
	Control Software	Titanium
	Remote Editor	Titanium Assistant (Optional)
Connectivity	Ethernet	Fully compliant with IEE 802.3, IEEE 802.3u, IEEE 802.3ab
	USB Port	USB 2.0
Features & Build Options	Build validation / Build time estimator / Material usage estimator / Scheduled start / Open build parameters enabling any material to be processed / On-the-fly parameter adjustment & part deletion / Upper surface build quality optimization / Bubble remover with automated option.	
Advanced Services & Reporting Tools	Industry 4.0 compliant / Full part traceability / Logging of machine utilization; build history; parameters; material usage; formatted data export / System & build status email notification <sup>§</sup> / Onboard camera / Resin viscosity tracking / User level access control / Scheduled lighting.	
Support	1-click “snapshot” job diagnostic pack for remote support / Remote diagnostics <sup>§</sup>	
Electrical Requirements	208 ~ 240 V, 50/60 Hz 900 W Typical operation, 1900 W Max	
Environmental Requirements	Temperature range: 68-74°F (20-23°C), max rate change ±2°F/hr (1°C/hr). Relative humidity 20-50% non-condensing.	
Dimensions (WxDxH)	53.2 × 64.2 × 90.6 in. (1350 × 1630 × 2300 mm)	
Weight	Printer	1764 lb (800 kg)
	Vat (empty)	529 lb (240 kg)
Warranty	System	12 months on-site service and support, as per Stratasys conditions of sale
	Laser	Replacement <800 mW before 10,000 hours or 18 months (whichever is sooner)
Accessories	Unload Trolley for Neo800 / UV800 oven & hot box	
Regulatory Conformity		

\* 100µm layer parameters are supplied for Stratasys certified materials. Parameters for alternative thicknesses may be available. Layer thickness range is material dependent. Contact Stratasys for more details.

† Accuracy & minimum feature size will vary depending on material, parameters, part geometry and size, pre- & post-processing methods and environment.

‡ Based on typical material density, 2.47 lb/0.3 gal @ 78.8°F (1.12kg/ltr @ 26°C).

§ Internet connection is required for full or partial functionality.

\*\* Specification can be subject to change without prior notice.

# Stratasys

## Neo450

A versatile printer with flexible options to suit multiple needs

**Reliable, productive and efficient, the Neo450 series is designed and engineered for industrial-grade performance.**

Based on the proven Stratasys Neo800, the compact Stratasys Neo450 series has a 17.72 × 17.72 × 15.75 in. (450 × 450 × 400 mm) platform and builds prototypes, rapid tooling and master patterns with exceptional surface quality, accuracy and detail.

Designed for greater flexibility and versatility, the Neo450 series is available in two models, with different performance and functionality depending on your needs.

### Neo450e

The Neo450e is an affordable industrial-grade 3D printer that produces small to medium parts with consistent accuracy and repeatability. Dependable and reliable, the Neo450e is designed for nonstop printing of industrial production parts.

### Neo450s

The Neo450s offers performance and versatility, along with all the benefits of the Neo450e. Producing superior quality parts, the Neo450s is up to 40% faster and offers standard and high-definition build modes.

### Key highlights

#### Neo450e

- Produce complex, industrial-grade quality prototypes, tooling or master patterns. Build parts with accurate detail and outstanding sidewall quality.
- Dependable and reliable, the Neo450e is designed for nonstop printing of industrial production parts. Dynamic laser beam technology ensures highly accurate laser beam positioning, with outstanding layer resolution.
- Intuitive Titanium software captures build history, parameter detail and part traceability data for further insight and reporting.


#### Neo450s

- Faster part production of industrial grade prototypes, master patterns and tooling, with superior surface finish and detail.
- One machine with multiple build modes reduces the need to operate many SL systems with different functions, reducing costs and space requirements.
- The Neo450s variable laser beam technology allows you to rapidly build SD or produce fine resolution HD parts with intricate, small, detailed designs.<sup>1, 4</sup>





# See the Specs

3D Printer Specifications <sup>††</sup>		Neo450e	Neo450s
Laser & Scanning System	Laser	1 Watt; 355 nm, solid-state frequency tripled Nd: YVO <sup>4</sup>	2 Watt; 355 nm, solid-state frequency tripled Nd: YVO <sup>4</sup>
	Beam Focus	Dynamic	Dynamic & Variable
	Beam Size	250 μm	80 to 750 μm
	Scanning Speed	Up to 400 in./s (10 m/s)	Up to 400 in./s (10 m/s)
Layer Resolution		50 to 200 μm*	50 to 200 μm*
Minimum Feature Size		0.012 in. (0.3 mm) in X & Y <sup>†</sup> /	0.006 in. (0.15 mm) in X & Y <sup>†</sup> /
		0.016 in. (0.4mm) in Z <sup>†</sup>	0.016 in. (0.4 mm) in Z <sup>†</sup>
Build Modes		SD	HD & SD
Build Speed	In like-for-like comparisons, build times are up to 40% shorter with the Neo450s <sup>‡</sup> ◊		
Accuracy		Dimension <3.94 in. ±0.004 in.; Dimension >3.94 in. ±0.1% <sup>†</sup>	
		Dimension <100 mm ±0.1 mm; Dimension >100 mm ±0.1% <sup>†</sup>	
Material Compatibility	Open resin system - compatible with commercially available 355 nm stereolithography resins		
Capacities	Build (XYZ)	Short: ** 17.72 × 17.72 × 1.97 in. (450 × 450 × 50 mm) Half: ** 17.72 × 17.72 × 7.87 in. (450 × 450 × 200 mm) Full: 17.72 × 17.72 × 15.75 in. (450 × 450 × 400 mm)	
	Vat Fill	Short: 10 US gal (95 lb <sup>‡</sup> ) [38 ltr (43kg <sup>‡</sup> )] Half: 22 US gal (203 lb <sup>‡</sup> ) [82 ltr (92kg <sup>‡</sup> )] Full: 37 US gal (348 lb <sup>‡</sup> ) [141 ltr (158 kg <sup>‡</sup> )]	
Software	Operating System	Windows 10 Pro	
	Input File Format	SLC	
	Control Software	Titanium	
	Remote Editor	Titanium Assistant (Optional)	
Connectivity	Ethernet	Fully compliant with IEE 802.3, IEEE 802.3u, IEEE 802.3ab	
	USB Port	USB 3.1	
Features & Build Options	Build validation / Build time estimator / Material usage estimator / Open build parameters enabling any material to be processed / On-the-fly parameter adjustment & part deletion / Upper surface build quality optimization / Bubble remover with automated option / Scheduled start		
Advanced Services & Reporting Tools	Industry 4.0 compliant / Full part traceability / Logging of machine utilization; build history; parameters; material usage; formatted data export / System & build status email notification <sup>§</sup> / Onboard camera / Resin viscosity tracking / User level access control / Scheduled lighting		
Support	1-click "snapshot" job diagnostic pack for remote support / Remote diagnostics <sup>§</sup>		
Electrical Requirements	110 ~ 120 Volt, 60 Hz	300 W Typical operation, 550 W Max	
	220 ~ 240 Volt, 50 Hz	700 W Typical operation, 1300 W Max	
UPS	20 ~ 40 mins of system up-time with Intelligent Control (not sold with the Neo450 series; please contact Stratasys for recommended suppliers)		
Environmental Requirements	Temperature range: 68-74°F (20-23°C), max rate change ±2°F/hr (±1°C/hr).		
	Relative humidity 20-50% non-condensing.		
Dimensions (WxDxH)	41.3 × 48.2 × 74.8 in. (1050 × 1225 × 1900 mm)		
Weight	Printer	1323 lb (600 kg)	
	Vat (empty)	221 lb (100 kg)	
Warranty	System	12 months on-site service and support, as per Stratasys conditions of sale	
	Laser	Replacement <400 mW after 10,000 hours or 18 months (whichever is sooner)	Replacement <800 mW after 10,000 hours or 18 months (whichever is sooner)
Regulatory Conformity			

\* 100μm layer parameters are supplied for Stratasys certified materials. Parameters for alternative thicknesses may be available. Layer thickness range is material dependant. Contact Stratasys for more details.

† Accuracy & minimum feature size will vary depending on material, parameters, part geometry and size, pre- & post-processing methods and environment.

‡ Based on typical material density 2.47 lb/0.3 gal @ 78.8°F. (1.12kg/ltr @ 26°C).

§ Internet connection is required for full or partial functionality.

◊ Based on internal testing October 2019.

\*\* Available Q4, 2021.

†† Specification can be subject to change without prior notice.



# Stratasys Neo software – Titanium and Titanium Assistant

## What is Titanium software?

Stratasys Neo Titanium is industry-leading software designed with the user in mind. Compatible with Windows 10, the easy-to-use interface allows users to start builds quickly and monitor the building process. Software updates are driven by customer suggestions and feedback, providing a system that is optimized for customers and their applications.

## What can you do with Titanium software?

Titanium enables simple click-and-print operation. Many options are user-definable as defaults.

Automated communications assist department efficiency and field service response. Excellent reporting capabilities facilitate part traceability and hardware utilization.

## Highlights:

### 1. Range of build options & features

- Build validation
- Build time estimator
- Material usage estimator
- On-the-fly parameter adjustment and part deletion
- Upper surface build quality optimization
- Bubble remover with automated option
- Scheduled start

### 2. Build status notification emails

Build progress emails can be sent to users at any point during a build. This assists department efficiency, optimizing machine utilization. Titanium can also be configured so users can receive emails for build start, pause, completion or alert progress.

### 3. Onboard camera

Each Neo system is installed with a built-in camera, allowing users to keep track of builds remotely, at any stage.

## 4. Industry 4.0

The Neo stereolithography system range can be integrated into an Industry 4.0 system.

Integration is available via multiple mechanisms, including a RESTful API and shared file access. The data provided include progress details of the current build.

Stratasys Neo uses industry standard formats, like XML. The RESTful API supplies the data using JSON.

Stratasys is happy to work with customers to develop the remote access interface and RESTful API to provide additional functionality.<sup>5</sup>

## 5. Reporting tools

Titanium features a range of reporting tools and dashboards to help users capture build history, parameter detail, hardware usage and part traceability data. These data help operators and managers utilize the Stratasys Neo to help meet business objectives. Data can be exported as a formatted Microsoft® Excel spreadsheet via email or to a USB drive. Data can cover a range of timeframes and builds, including build reports and monthly/yearly/custom period reports.

## 6. Part traceability and hardware utilization

Part traceability is paramount in many industries. Titanium software traces parts to each build and records all parameters. A complete insight on hardware usage hours can be easily obtained to determine hardware productivity.

Users can define many options as defaults, enabling simple click-and-print operation. Excellent reporting capabilities facilitate part traceability and hardware utilization.

## Titanium Assistant, the companion application to the Neo Titanium software.

Titanium Assistant is a standalone software application that allows operators to preview build files, schedule planning and prepare builds on multiple Neo systems from any PC on a network.

Designed to optimize workflow, Titanium Assistant can run on a local workstation, offering users remote access to operational alerts and status updates on multiple Neo printers utilized within a facility.

### Prepare

Once slice files are available, this function allows the user to alter the parameters of a build remotely.

### Preview

Titanium Assistant analyzes and validates each build before printing. Users can also preview and check the integrity of the slice file quickly and easily.

### Plan

Obtain independent build time estimates prior to sending files to a Neo. This assists operators with build scheduling and maximizes machine utilization.

### Print

Effortlessly and remotely transfer your build files, with all parameters, to a specific Neo platform. No need to move build files remotely using memory sticks. This increases productivity.





# Accessories and support

A range of Neo accessories are available for the Neo800 for an end-to-end 3D printing solution.

## Unload Trolley for Neo800

This allows completed build platforms to be moved from the Neo800 to the part cleanup area.

## UV800 oven & hot box

Printed parts need to undergo a final post-cure process. The UV800 is designed to fulfil this requirement with high-intensity UV lamps and a turntable. Exposure processing times are controlled via a dedicated PLC with HMI screen.

The lower half of the UV800 is a heated resin store, maintaining resin at VAT temperature. This avoids any significant temperature changes when refilling a vat.

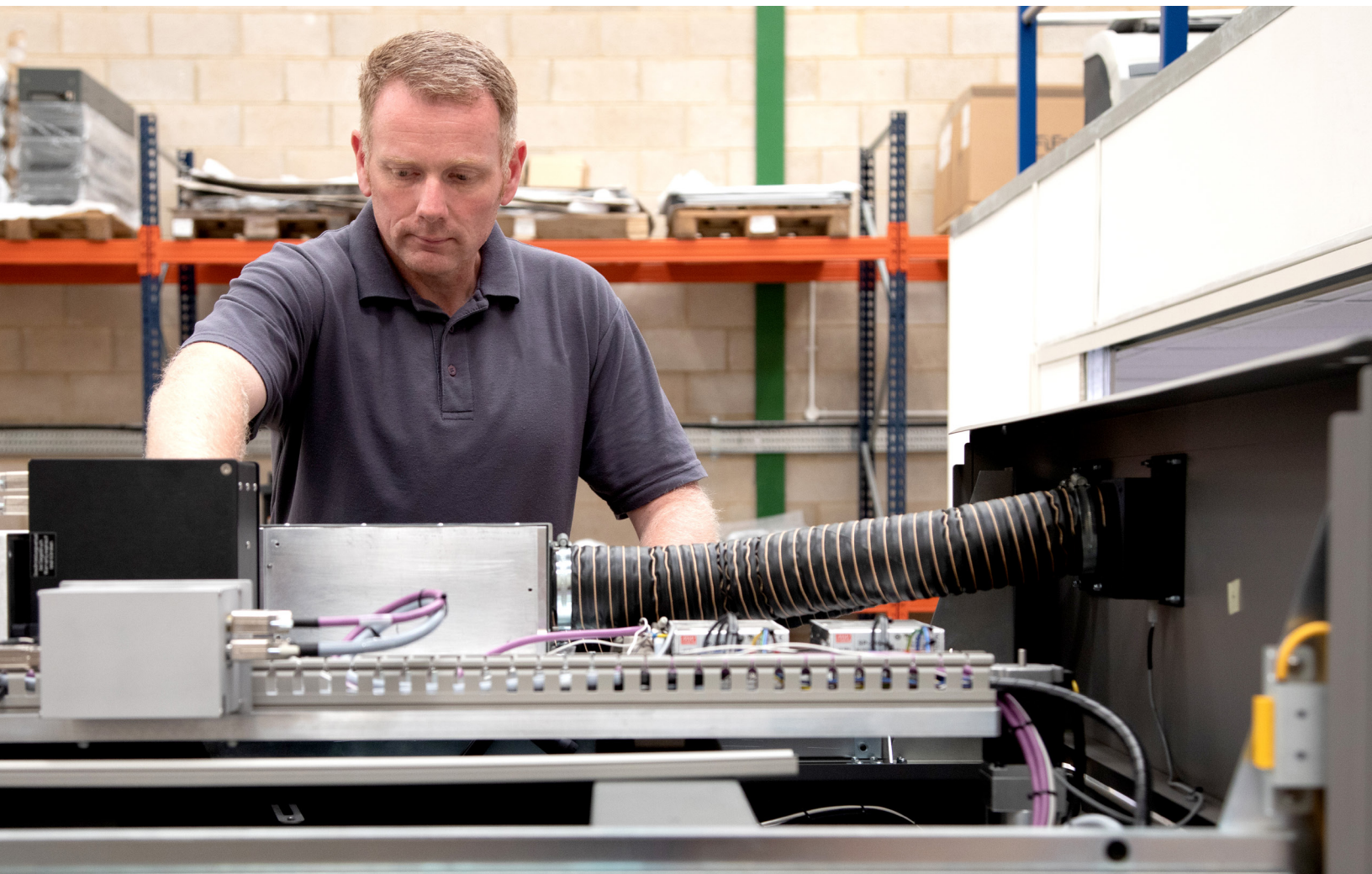
## Materials

In partnership with Covestro Additive Manufacturing (formerly DSM) and its Somos® resins, the Neo 3D printers can run the most technically advanced stereolithography materials.

## Support

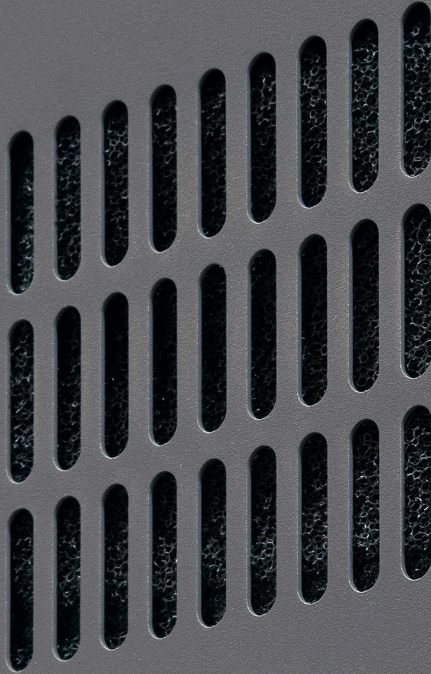
The highly reliable Neo range has a proven track record of reliability, productivity and performance. For further support or maintenance, Stratasys' dedicated team of highly skilled and knowledgeable service engineers are ready to assist when needed. Service support is available via remote system access and telephone assistance or, when needed, we provide in-person repairs, parts and service the next business day.<sup>3</sup>

Our expert engineers can be there for in-person repairs, parts and service the very next business day.<sup>3</sup>

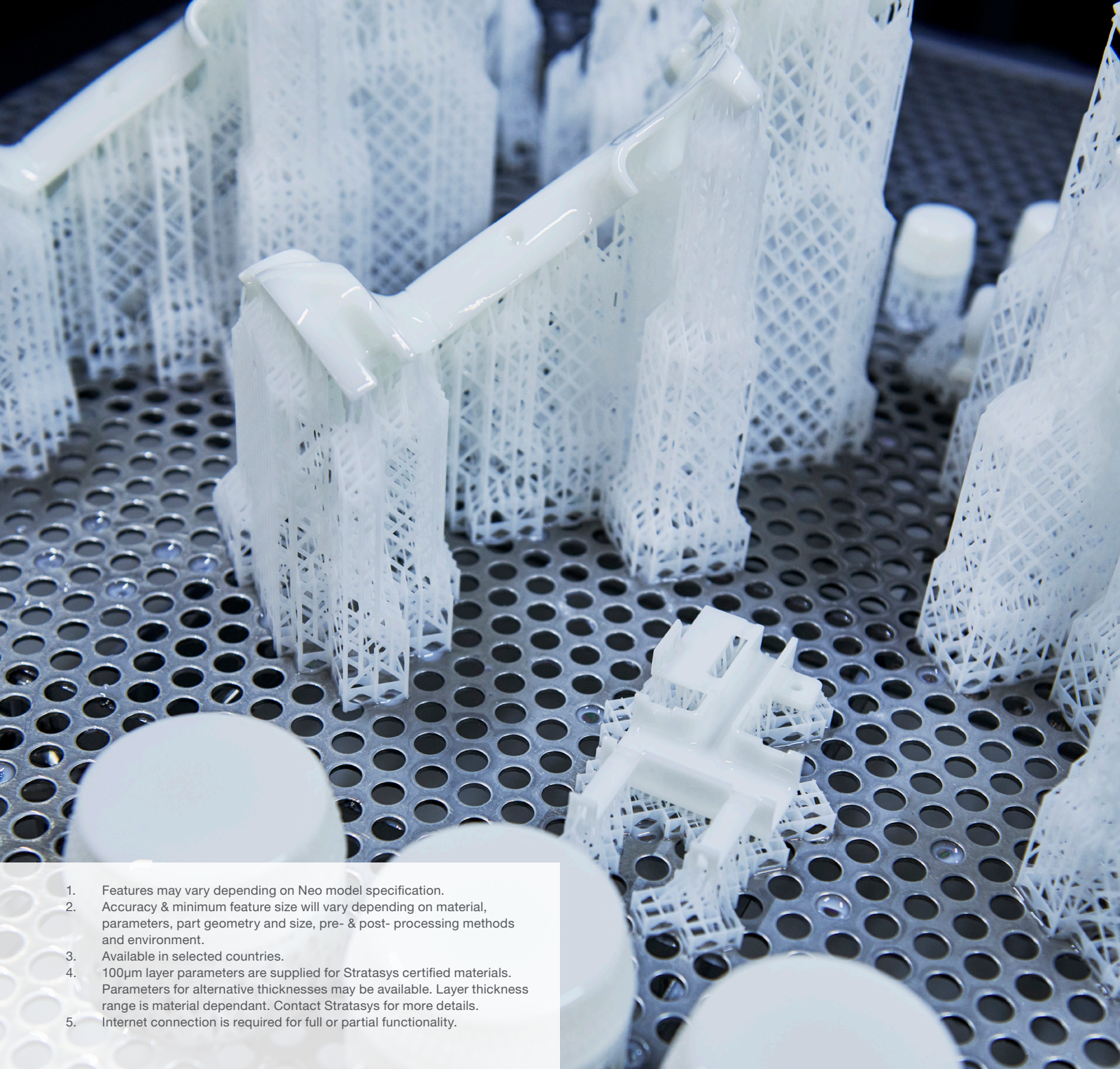




The Neo450 has been carefully designed and engineered, using premium components, parts and finishes.







1. Features may vary depending on Neo model specification.
2. Accuracy & minimum feature size will vary depending on material, parameters, part geometry and size, pre- & post- processing methods and environment.
3. Available in selected countries.
4. 100µm layer parameters are supplied for Stratasys certified materials. Parameters for alternative thicknesses may be available. Layer thickness range is material dependant. Contact Stratasys for more details.
5. Internet connection is required for full or partial functionality.

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