Transforming digital manufacturing and industrial production

Neo® stereolithography range

Neo®800

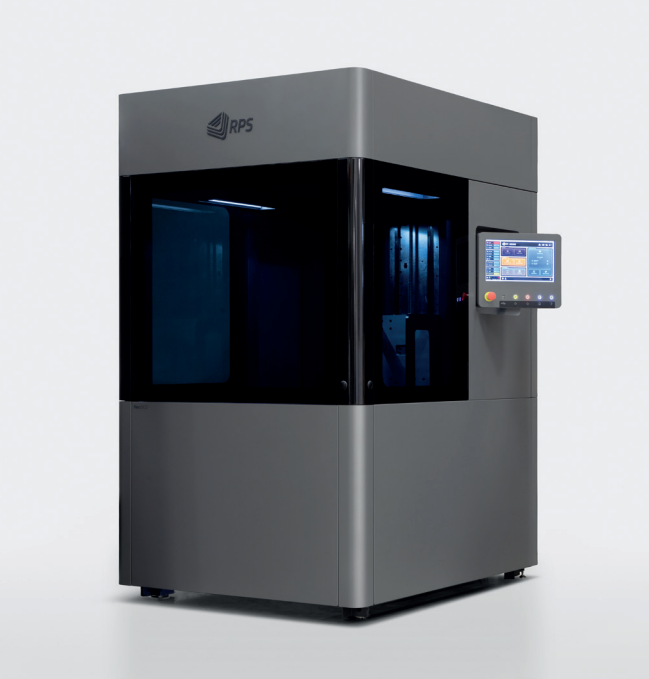
Build large parts with superior surface quality, accuracy and detail

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

The Neo800 has been developed with the customer in mind. The Neo800 is renowned for its reliability and industry standard side-wall quality. It has an established proven track record for delivering consistently accurate parts and high yield volumes for industrial production.

Known in the industry for its productivity and performance, build exceptionally large parts with detail and accuracy.

Already proven in the market, the Neo800 is placed around the world in companies that belong to a range of industries such as F1, automotive, service bureaus and Universities.



Key highlights

Print large parts with outstanding surface finish on the 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 optimises build quality and captures build data for greater traceability, enhancing work efficiencies.

Dynamic laser focusing and SD and HD build modes produces highly accurate and detailed parts.

The Neo unload trolley and UV800 post-curing oven & hotbox is available for the Neo800 for a complete end-to-end 3D printing solution.

Specification**

Laser & Scanning System	**Laser**	2 Watt		
		355 nm, solid-state frequency tripled Nd: YVO_4		
	Beam Focus	Dynamic & Variable		
	Beam Size	150 to 600 µm		
	Scanning Speed	Up to 10 m/s		
Layer Resolution		50 to 200 µm*		
Minimum Feature Size		0.2 mm in X & Y† / 0.4mm in Z†		
Build Modes		HD & SD		
Accuracy		Dimension <100 mm ±0.1 mm. Dimension >100 mm ±0.15%†		
Material Compatibility		Open resin system - compatible with 355 nm stereolithography resins		
Capacities	**Build (XYZ)**	Short: 800 × 800 × 120 mm	Half: 800 × 800 × 300 mm	Full: 800 × 800 × 600 mm
	Vat Fill	173 ltr (194 kg‡)	300 ltr (336 kg‡)	555 ltr (630 kg‡)
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 optimisation / Bubble remover with automated option		
Advanced Services & Reporting Tools		Industry 4.0 compliant / Full part traceability / Logging of machine utilisation; build history; parameters; material usage; formatted data export / System & build status email notification§ / On-board camera / Resin viscosity tracking / User level access control / Scheduled lighting		
Support		1-click 'snapshot' job diagnostic pack for remote support / Remote diagnostics§		
Electrical Requirements	**208 ~ 240 V, 50/60 Hz**	900 W Typical operation, 1900 W Max		
Environmental Requirements		Temperature range: 20-23°C, max rate change ±1°C/hr. Relative humidity 20-50% non-condensing		
Dimensions (WxDxH)		1350 × 1630 × 2300 mm		
Weight	**Printer**	800 kg		
	Vat (empty)	240 kg		
Warranty	**System**	12 months on-site service and support, as per RPS 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		CE FC UK CA		

* 100µm layer parameters are supplied for RPS certified materials. Parameters for alternative thicknesses may be available. Layer thickness range is material dependant. Contact RPS for more detail. †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 1.12kg/ltr @ 26°C. §Internet connection is required for full or partial functionality. **Specification can be subject to change without prior notice.

Neo®450

A versatile printer with flexible options to suit all needs

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

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

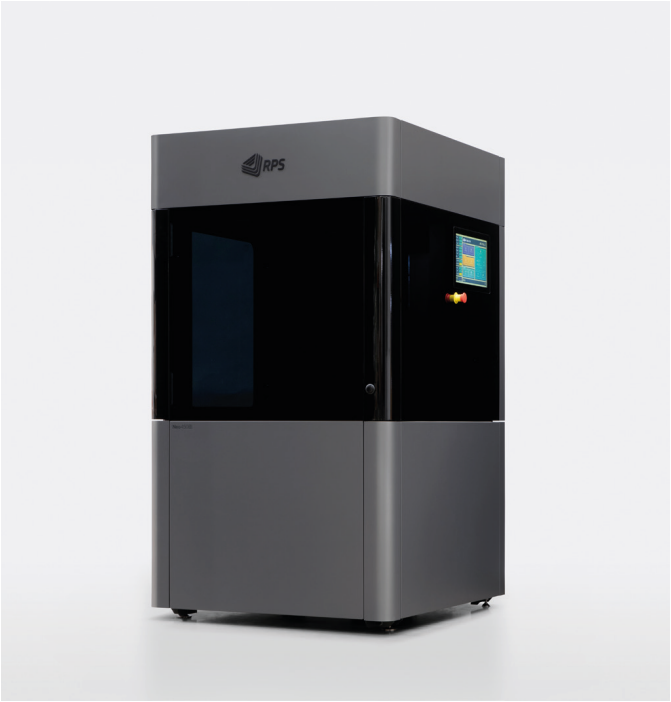
Designed for greater flexibility and versatility, the Neo450 series is available in two models with different performance and functionality depending on your needs.

Neo450e

The Neo450e is an affordable industrial grade 3D printer producing small to medium parts with consistent accuracy and repeatability. Dependable and reliable the Neo450e is designed for non-stop 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 non-stop printing of industrial production parts. Dynamic laser beam technology ensures highly-accurate laser beam positioning with outstanding layer resolution.

Intuitive Titanium™ software helps you capture 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.[1, 4]

Specification‡‡

		Neo450e	Neo450s
Laser & Scanning System	**Laser**	1 Watt	2 Watt
		355 nm, solid-state frequency tripled Nd: YVO_4	355 nm, solid-state frequency tripled Nd: YVO_4
	Beam Focus	Dynamic	Dynamic & Variable
	Beam Size	250 µm	80 to 750 µm
	Scanning Speed	Up to 10 m/s	Up to 10 m/s
Layer Resolution		50 to 200 µm*	50 to 200 µm*
Minimum Feature Size		0.3 mm in X & Y† / 0.4mm in Z†	0.15 mm in X & Y† / 0.4mm in Z†
Build Modes		SD	HD & SD
Build Speed		In like-for-like comparisons, build times are up to 40% shorter with the Neo®450s†◊	
Accuracy		Dimension <100 mm ±0.1 mm. Dimension >100 mm ±0.1%†	
Material Compatibility		Open resin system - compatible with 355 nm stereolithography resins	
Capacities	**Build (XYZ)**	Short:** 450 × 450 × 50 mm	Half:** 450 × 450 × 200 mm	Full: 450 × 450 × 400 mm
	Vat Fill	38 ltr (43kg‡)	82 ltr (92kg‡)	141 ltr (158 kg‡)
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 optimisation / Bubble remover with automated option / Scheduled start	
Advanced Services & Reporting Tools		Industry 4.0 compliant / On-board camera / Full part traceability / Logging of machine utilisation; build history; parameters; material usage; formatted data export / System & build status email notification§ / Resin viscosity tracking / User level access control / Scheduled lighting	
Support		1-click 'snapshot' job diagnostic pack for remote support / Remote diagnostics§	
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		10 ~ 20 mins of system up-time with Intelligent Control (not sold with the Neo450 series, please contact Stratasys for recommended suppliers)	
Environmental Requirements		Temperature range: 20-23°C, max rate change ±1°C/hr.Relative humidity 20-50% non-condensing.	
Dimensions (WxDxH)		1050 × 1225 × 1900 mm	
Weight	**Printer**	600 kg	
	Vat (empty)	100 kg	
Warranty	**System**	12 months on-site service and support, as per RPS 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		CE FC UK CA	

*100µm layer parameters are supplied for RPS certified materials. Parameters for alternative thicknesses may be available. Layer thickness range is material dependant. Contact RPS for more detail. †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 1.12kg/ltr @ 26°C. §Internet connection is required for full or partial functionality. ◊ Based on internal testing October 2019. **Available 2021 Q4. ††Ethernet connection recommended to ensure all functionality, please contact RPS for more details.‡‡Specification can be subject to change without prior notice.

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