

Build the future

The world-class industrial large-format stereolithography system

Build large functional models, prototype patterns and production parts with the state-of-the-art NEO800.

Designed and manufactured by RPS engineers, the NEO800 builds high-quality parts with superior surface quality, accuracy and detail.



Why choose the NEO800?

Exceptional part sidewall quality

Scanning resolution to within one micron reduces finishing time by up to 50%.

Open resin system

Compatible with all 355nm SL resins, allowing freedom of material selection.

Connected services

Stay connected and keep updated with the built-in camera, emailed progress reports and status updates.

Customer-driven development

Customer suggestions and feedback are encouraged, driving user-enhanced software updates.

Large build platform

Measuring 800 x 800 x 600 mm, build larger parts without sectioning and bonding.

Intuitive Titanium software

Easy-to-use software optimises build time and part quality with part-traceability and machine utilisation reporting.

Accessible support

Remote diagnostics or convenient on-site support from our exceptional service team.

Quality assurance

The NEO800 is carefully designed and engineered throughout, using premium components, parts and finishes.

Specification

Printing technology

Stereolithography

Printing capacity (XYZ)

Full vat: 800 x 800 x 600 mm

Half vat: 800 x 800 x 300 mm

Short vat: 800 x 800 x 120 mm

Material compatibility

Open resin system, compatible with 355 nm stereolithography resins

Vat fill capacity

Full vat: 555 litre (630* kg)

Half vat: 300 litre (336* kg)

Short vat: 173 litre (194* kg)

*Based on a typical unfilled material of density 1.12 kg/litre @26°C

Accuracy

±0.15%

Accuracy will vary depending on parameters, part geometry and size, pre-processing or post-processing methods, materials and environment.

Laser

2 Watt, 355 nm, solid-state frequency tripled Nd: YV04

Beam size

Dynamic focusing: 150 to 600 µm

Scanning speed

Up to 10 m/s

Layer resolution

50 to 200 µm

Pre-build features & options

- Build validation
- Standard or high-definition build style
- Open build parameters enabling any material to be processed
- Pre-set recoat styles, with user-definable options
- Bubble remover, user-definable or automated options
- Build time estimator
- Stir function (user-definable)

In-build features

- Ability to modify recoating parameters mid-build
- Ability to modify part parameters mid-build
- Ability to delete parts and supports mid-build

Post-build features

- Part traceability; build history log: part name(s), parameters, build time, etc.
- Machine utilisation log

Other features

- Built-in camera
- System status information
- Easy 1-click 'snapshot' to support remote diagnostics

System software

Input file format: SLC

Control software: Titanium

Operating system: Windows 10 Pro

Electrical requirements

230 volts, 50 Hz single phase supply at 6 amps 1.4kw

UPS

Approximately 10 mins of system up-time

Ethernet network connectivity

Fully compliant with IEE 802.3, IEEE 802.3u, IEEE 802.3ab

Wireless adaptor: fully compliant with IEEE 802.11 b/g/n

Environmental requirements

Temperature range: 20-23°C

Max temp rate change: ±1°C degree hour

Relative humidity: 20-50% non-condensing

Machine dimensions

Size (mm): 1350 W x 1630 D x 2300 H

Weight: 800 kg

Vat Weight: 240 kg (empty)

Accessories

NEO offload trolley - manual offload trolley

NEO UV 800 - post-cure, with heated resin store

System warranty

12 months on-site service and support, as per RPS conditions of sale

Laser warranty

Replacement <800 mW after 10,000 hours or 18 months (whichever is sooner)

