

# 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)

