Stratasys Neo®450s 3D Printer



A versatile printer, with flexible options to suit multiple needs

The compact Neo450s 3D printer builds on the foundation of the proven Neo800 3D printer, providing a versatile 17.72 × 17.72 × 15.75 in. (450 × 450 × 400 mm) build platform and featuring standard and high-detail build modes.

The Neo450s 3D printer enables the production of small to medium functional prototypes, tooling, and master patterns with exceptional surface quality, accuracy, detail, and consistent repeatability.

Why choose the Neo450s?

- **Exceptional part sidewall quality:** Outstanding scanning resolution reduces finishing time by up to 50%.
- **Compact design, versatile performance:** Print single large-sized or many smaller detailed parts on the 17.72 × 17.72 × 15.75 in. (450 × 450 × 400 mm) build volume.
- **Open resin system:** Compatible with all commercially available 355nm SLA resins, allowing the freedom of material selection.
- **Intuitive Titanium™ software:** Easy-to-use software optimizes build time and part quality with build history, parameter detail, hardware usage and part traceability data reporting.
- **Customer-driven development:** Customer suggestions and feedback are encouraged, driving user-focused software updates.
- **Accessible support:** Remote diagnostics or convenient on-site support from our exceptional service team.
- **Quality assurance:** The Neo450s 3D printer is carefully designed and engineered throughout, using premium components, parts and finishes.
- **Connected services:** Stay connected and updated with the built-in camera, emailed progress reports and status updates.

3D Printer Specifications††		Neo450s 3D Printer
Laser & Scanning System	Laser	2 Watt; 355 nm, solid-state frequency tripled Nd: YV0[4]
	Beam Focus	Dynamic & Variable
	Beam Size	80 to 750 µm
	Scanning Speed	Up to 400 in./s (10 m/s)
Layer Resolution		50 to 200 µm*
Minimum Feature Size		0.006 in. (0.15 mm) in X & Y† 0.016 in. (0.4 mm) in Z†
Build Modes		High Detail & Standard Detail (HD & SD)
Accuracy		Dimension <3.94 in. ±0.004 in.; Dimension >3.94 in. ±0.1%† Dimension <100 mm ±0.1 mm; Dimension >100 mm ±0.1%†
Material Compatibility		Open resin system - compatible with commercially available 355 nm stereolithography resins
Capacities	Build (XYZ)	Short: 17.72 x 17.72 x 1.97 in. (450 x 450 x 50 mm) Half: 17.72 x 17.72 x 7.87 in. (450 x 450 x 200 mm) Full: 17.72 x 17.72 x 15.75 in. (450 x 450 x 400 mm)
	Vat Fill	Short: 10 US gal (95 lb‡) [38 ltr (43kg‡)] Half: 22 US gal (203 lb‡) [82 ltr (92kg‡)] Full: 37 US gal (348 lb‡) [141 ltr (158 kg‡)]
Software	Operating System	Windows 10 IoT Enterprise LTSC 2021
	Input File Format	SLC
	Control Software	Titanium
	Build Prep Software	GrabCAD or Materialise Magics
	Remote Editor	Titanium Assistant (Optional)

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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§ / Onboard camera / 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, 50/60 Hz	300 W Typical operation, 550 W Max
	220 ~ 240 Volt, 50/60 Hz	700 W Typical operation, 1,300 W Max
UPS		20 – 40 mins of system up-time with intelligent UPS control**
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 x 48.2 x 74.8 in. (1,050 x 1,225 x 1,900 mm)
Weight	Printer	1,323 lb (600 kg)
	Vat (empty)	221 lb (100 kg)
Warranty	System	12 months on-site service and support, as per Stratasys conditions of sale
Regulatory Conformity		CE UKCA FC KC

* 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.
** When connected to a Stratasys Certified UPS, not sold with the Neo450s 3D printer, please contact Stratasys for further details.
†† Specification can be subject to change without prior notice.

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PRODUCT SPEC SHEET
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