

V650 Flex 3D Stereolithography Printer

The Stratasys V650™ Flex 3D stereolithography printer provides the benefits of stereolithography 3D printing in a configurable, large-scale system. Open source material capability and the ability to configure the printer for different materials gives operators the flexibility of using any 355nm resin. Preset profiles are available for the following DSM Somos® resins:

- **Somos® Element** – Dimensionally stable, antimony-free resin with superior finish and low residual ash designed specifically for investment casting patterns.
- **Somos® NeXt** – A tough, durable resin with the look, feel and performance of traditional thermoplastics.
- **Somos® PerFORM** – Heat-tolerant, high-stiffness material with exceptional resolution for demanding applications such as tooling, housings and wind tunnel test models.
- **Somos® Watershed XC 11122** – This clear material offers unparalleled clarity and water resistance with ABS and PBT-like properties.

The V650 Flex combines high resolution and fine build layers with a generous build capacity capable of producing highly detailed parts, prototypes and casting patterns in large scale. Material changes are simplified with interchangeable vats. Uninterrupted power supply allows continued operation during power outages.

3D Printer Specifications

Laser

Type	Q-switched harmonic diode pumped solid-state UV laser
Wavelength	354.7 nm
Power @ 5000 hrs	700 mW at source, at 100 kHz pulse rate

Optical And Scanning – X/Y Axis

Beam Diameter ¹	0.005 – 0.030 in. (127 – 762 µm)
Maximum Part Drawing Speed	700 ips @ 0.030 in. (762 µm) beam size; 150 ips @ 0.005 in. (127 µm) beam size
X/Y resolution	0.0005 in. (2,000 DPI)

Elevator And Recoating - Z Axis

Minimum Layer Thickness	0.004 in. (100 µm)
Vertical Resolution	0.0000625 in. (1.6 µm)
Position Repeatability	0.0000625 in. (1.6 µm)
Maximum Part Weight	120 lbs. (54.4 kg)

Vat Capacity

Volume	Half vat: 35 U.S. gal (132.5 L)
	Full vat: 67 U.S. gal (253.6 L)
Maximum Build Envelope	Half vat: 20 x 20 x 9.5 in. (508 x 508 x 203 mm)
	Full vat: 20 x 20 x 23 in. (508 x 508 x 584 mm)

¹ User-specified at installation.

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Build Preparation

Build Preparation Software	SolidView/Pro RP Build
Build Preparation Software Requirement	Windows 7 Service Pack 1; Windows 10 recommended
Input Data File Format	STL, AMF, SLDPRT, PRT, IGES, IGS, STEP, STP, OBJ, PLY, WRL and more
Electrical Requirements	110 - 230 VAC, 50/60 Hz, single phase, 1000W

Ambient Temperature

Temperature Range	68 – 79 °F (20 – 26 °C); laser chamber max = 83 °F (28.3 °C)
Maximum Change Rate	1.8 °F/hour (1 °C/hour)
Relative Humidity	10 - 50% non-condensing

Footprint

Crated Process Module	58 x 59 x 95 in. (211 x 140 x 244 cm)
Uncrated Process Module	55 x 50 x 87 in. (140 x 127 x 221 cm)

Weight

Crated Process Module ²	2,200 lb (998 kg)
Uncrated Process Module ²	1,700 lb (771 kg)

Miscellaneous

Options	Additional interchangeable vats, additional platforms
Warranty	1 Year, full coverage including laser

² Weight does not include vat or resin.

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