

V650 Flex 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 | 0.008 - 0.027 in. (203 - 686 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 | |
| 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 | Quarter vat: 17.6 U.S. gal (66.6 L) |
| | Half vat: 28.6 U.S. gal (108.2 L) |
| | Full vat: 62.6 U.S. gal (237.0 L) |
| Maximum Build Envelope | Quarter vat: 20 x 20 x 4.5 in. (508 x 508 x 114 mm) |
| | Half vat: 20 x 20 x 9.5 in. (508 x 508 x 241 mm) |
| | Full vat: 20 x 20 x 23 in. (508 x 508 x 584 mm) |

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3D Printer Specifications

Build Preparation

| | |
|----------------------------------------|---------------------------------------------------------------------|
| Build Preparation Software | SolidView/Pro V650 |
| Build Preparation Software Requirement | 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 ¹ | 2,200 lb (998 kg) |
| Uncrated Process Module ¹ | 1,700 lb (771 kg) |

Miscellaneous

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

¹ Weight does not include vat or resin.

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