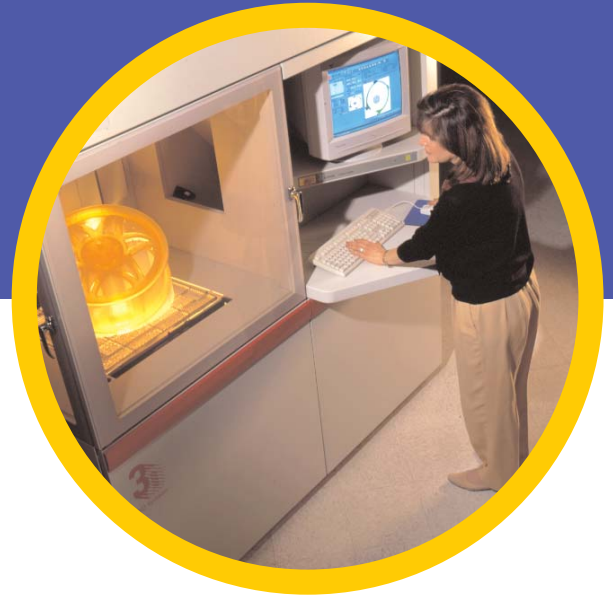


SLA[®] 7000 SYSTEM

Technology:	Stereolithography (SL) process
Material Class:	Liquid; Photo Reactive



Maximum speed, power and build envelope for the highest throughput

The fastest, most capable SLA[®] system. Utilizing a powerful, reliable, long-life 800 mW solid-state laser and high-precision optics, the SLA 7000 system offers ample power, and awesome speed, for any part production requirements. Patented SmartSweep™ technology reduces unnecessary, time-consuming vat sweeping motions for high-efficiency part building.

Reliably build any kind of geometry. Produce parts as large as 20 x 20 x 23 inches with the SLA 7000 systems' massive build envelope. Included with this system is the Zephyr™ dynamic recoating system for reliable building, including trapped volumes in any orientation. Produce parts with layers as thin as 0.001 inch* for greatly reduced post-processing time and effort.

Highly reliable workhorse for production applications. Its highly reliable design – including fewer components, a low vibration optical system, and revolutionary dual-spot laser technology – reduces downtime and errors that cost you time, money and opportunity. An automatic material dispensing system maintains the vat resin level for added ease-of-use and convenience, and interchangeable vat options offer versatile part building with a variety of material alternatives.

Tackle a full range of solid imaging applications. Choose from the family of Accura[®] general purpose or specialty SL materials, offering diverse mechanical properties to provide broad range of modeling, prototyping, pattern production, tooling or parts' production application capability. Produce durable, functional prototypes with Accura SI 40 material, or high quality patterns for casting or molding with Accura SI 10 material. And, with the convenient roll-away vat systems used on all SLA systems, you can quickly switch materials between builds.

Easy-to-use software for push-button control of your build jobs. Included is Windows-based 3D Lightyear™ file preparation software so your designers and engineers can prepare build jobs for the SLA system. Also included is Buildstation control software for comprehensive control of the build job parameters, and unattended "push-button" part-building operation.

Bring products to market faster — much faster. The SLA 7000 system is two times faster, on average, than the next fastest solid imaging system from 3D Systems. But raw speed is just the beginning. This system incorporates the most sophisticated technology, speed, power and capacity available to keep pace with the most demanding of prototyping, production or manufacturing requirements.

Benefits:

- Power – 800 mW laser power at vat
- Fastest SLA system
- Large part sizes — to 20 x 20 x 23 inches
- Highly versatile - prototyping, production, and manufacturing applications
- Zephyr "dynamic" recoating system for trapped volume building in any orientation
- Excellent part quality
- Reliable operation
- Removable platforms and vats; vat changes in under an hour
- Low "per part" costs
- Easy to use

Applications:

- Plastic prototyping for design verification and fit or functional testing
- Precision patterns for investment and sand casting
- Rapid pre-production tooling
- Vacuum-cast and thermoform tooling
- Manufacture and pre-production jigs and fixturing
- Limited production runs



* Dependent upon part geometry, build parameters and material.

SLA 7000 System Specifications

Standards and Regulations: This SLA system conforms to Federal Laser Product Performance Standards 21CFR1040.10 Class I laser in normal operation. During field service emission levels can correspond to Class IV laser product. The SLA 7000 system complies with CE requirements.

LASER	
Type	Solid state frequency tripled Nd:YVO ₄
Wavelength	354.7 nm
Power at vat	800 mW
Laser Warranty	5000 hours or 12 months (whichever comes first)
RECOATING SYSTEM	
Process	Zephyr™ recoating system
Build layer capability*	Minimum — 0.025mm (0.001 inch) Typical — 0.10 mm (0.004 inch)
OPTICAL & SCANNING	
Beam (diameter @ 1/e ²)	Small spot 0.23 - 0.28 mm (0.009 - 0.011 in) Large spot 0.685 - 0.838 mm (0.027 - 0.033 in)
Maximum part drawing speed	Small spot 2.54 m/sec (140 ips) Large spot 9.52 m/sec (525 ips)
ELEVATOR	
Vertical resolution	0.001 mm (0.00004 in)
Position repeatability	± 0.01 mm (0.0004 in)
Maximum part weight	68 kg (150 lb)
VAT CAPACITY**	
Volume	253.6 L (67 U.S. gal)
Maximum build envelope	508 x 508 x 584 mm XYZ (20 x 20 x 23 in)
Interchangeable vat	Yes
SYSTEM CONTROLLER & SOFTWARE	
Control software	Buildstation software
Operating system	Windows NT (4.0)
Input data file format	.stl .slc
Network type and protocol	Ethernet, IEEE 802.3 using TCP/IP and NFS
POWER	
200 - 240 VAC 50/60 Hz, single phase, 20 amps	
AMBIENT TEMPERATURE	
Temperature range	20 - 26°C (68 - 79°F)
Maximum change rate	1°C/hour (1.8°F/hour)
Relative humidity	10 - 50% non condensing
SIZE	
Crated machine	W2.10 x D1.55 x H2.36 m (W83 x D61 x H93 in)
Accessory kit	W1.12 x D1.22 x H1.02 m (W44 x D48 x H40 in)
Uncrated machine	W1.88 x D1.63 x H2.03 m (W74 x D64 x H80 in)
WEIGHT	
Crated machine	1451 kg (3200 lb)
Accessory kit	181 - 204 kg (400 - 450 lb)
Uncrated machine	1193 kg (2630 lb)
OPTIONS	
Additional interchangeable vats and depths (low-volume vats)** Additional build platforms Post Curing Apparatus (PCA™) equipment	
SYSTEM WARRANTY	
One year from installation date. Includes parts, labor, and 3D Systems software upgrades.	

* Dependent upon part geometry, build parameters and SL material selection. Notice: The ThinLayer™ build style with 0.001 inch layer thickness is not able to build all geometries successfully, and reliance on this build style is at the users risk.

** Other vat sizes available



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