

# SLS® Production Series

Production 3D Printers



3DSYSTEMS®

## Tough end-use parts, faster and more accurate

The industry's best combination of part durability and surface finish, 3D Systems' family of advanced Selective Laser Sintering (SLS®) machines are raising the bar in direct manufacturing and functional prototyping.

SLS 3D printers by 3D Systems produce true, functional thermoplastics with the highest resolution and surface finish of any other SLS process. Manufacturers—producing anything from industrial designs to medical devices to ducting components to patient-specific devices—can now break free of the time, design and economic constraints of traditional ABS methods while maintaining a high level of quality.



[www.3dsystems.com](http://www.3dsystems.com)

**MANUFACTURING *THE* FUTURE**

# A higher level of SLS® strength, repeatability and throughput

## Ensure quality and functionality, meet ever-increasing client demands, and manufacture complex parts faster.

- Manufacture volumes of durable parts with 3D mechanical properties suitable for end use and tough prototyping applications.
- Make parts faster with superior build speed and high throughput.
- Be confident in the precision of your parts with the highest accuracy and resolution available from an SLS system.
- Save money and decrease ecological footprint; 3D Systems SLS 3D printers have the best material recycling rate in class.
- Reduce production and logistics costs because no tooling is required.
- Enjoy the design freedom you need to manufacture complex geometries and whole parts because SLS production printers don't require supports.
- Enhance your portfolio with the ability to make large numbers of customer- or patient-specific parts quickly.
- Fit your specifications with a broad range of SLS materials.



## A selection of SLS machines and features to fit your specifications:

Our sPro™ and ProX™ SLS printers produce stronger parts with excellent and consistent mechanical properties, independent of build position. We offer the smoothest surface finish, highest resolution and edge definition of any SLS system.

### Other features include:

- One-year warranty
- All-in-one powder delivery, part building, finishing capability and powder recycling on most models
- Control production from start to finish with intuitive software

### ProX 500

The ProX 500 is the new standard for SLS accuracy and toughness. Designed to increase throughput and precision, the ProX 500, combined with DuraForm® ProX materials, produces high-quality thermoplastic parts for a variety of end-use and functional prototyping applications in aerospace, medical, industrial design and more.

### sPro

The sPro SLS systems are available in seven models for high-throughput of medium to extra-large parts. Upgrade options are available with each sPro model. The following build volumes are available:

**sPro 60:** 15 x 13 x 18 in  
(381 x 330 x 437 mm)

**sPro 140:** 22 x 22 x 18 in  
(550 x 550 x 460 mm)

**sPro 230:** 22 x 22 x 30 in  
(550 x 550 x 750 mm)

# More materials to make real parts

## Material Spotlight:

**DuraForm ProX** is a durable, white engineering plastic. Combined with the ProX 500 system, this material offers unrivalled surface finish and recyclability, creating a new standard for production LS materials.

**DuraForm EX Black** is a black, impact-resistant engineering plastic with the toughness of injection-moulded polypropylene. For housings, enclosures, thin-walled ducts and more, DuraForm EX Black provides the durability you need.

**DuraForm FR 100** is a halogen-free, flame-retardant engineering plastic that is compliant with UL 94 V-0. Perfect for many production applications, this material fits the requirements for consumer products, aircraft cabin and cargo parts, and appliance enclosures.

**DuraForm Flex** is a durable, rubber-like material with top-notch tear resistance and burst strength. This material is perfect for athletic footwear and equipment, gaskets and hoses.

Visit [www.3dsystems.com](http://www.3dsystems.com) for more materials.



**3D Systems' SLS® 3D printers create parts with the level of impact resistance, surface finish and precision required for a variety of end-use and consumer-specific applications.**

## Applications:

- **Aerospace ducting**
- **Customised medical drill guides**
- **Prosthetics and orthotics**
- **Consumer goods – Mobile device cases**
- **Electronic housings**
- **Automotive interiors and prototypes**



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Extend Innovation. Extend Production. Extend Choices.



**ProX 500**



**sPro 60 SD**



**sPro 60 HD Base**



**sPro 60 HD-HS**

### Specifications

Build envelope capacity (XYZ)	15 x 13 x 18 in (381 x 330 x 457 mm)	15 x 13 x 18 in (381 x 330 x 437 mm), 15.2 U.S. gal (57.5 l)		
Powder layout	Variable Speed Counter Rotating Roller	Precision Counter Rotating Roller		
Layer thickness range (typical)	0.003 – 0.006 in (0.08 – 0.15 mm) (0.004 in, 0.10 mm)	0.003 in (Min 0.08 mm); Max 0.006 in (0.15 mm), (0.004 in, 0.10 mm)		Min 0.003 in (0.08 mm); Max 0.006 in (0.15 mm), (0.0047 in ; 0.1 & 0.12 mm)
Imaging System	ProScan DX Digital High Speed	High Torque Scanning Motors (analog)	ProScan™ CX (digital)	ProScan™ DX Dual Mode High Speed (digital)
Scanning speed	Fill - 500 in/s (12.7 m/s) Outline - 200 in/s (5m/s)	240 in/s (5 m/s)	200 in/s (6 m/s)	240 in/s and 480 in/s (6 m/s and 12 m/s)
Laser power/type	100 W / CO <sub>2</sub>	30 W / CO <sub>2</sub>	30 W / CO <sub>2</sub>	70 W / CO <sub>2</sub>
Volume build rate	2 L/hr	0.9 L/hr	1.0 L/hr (60 cu in/hr)	1.8 L/hr (110 cu in/hr)

### Electrical Requirements

System	208 VAC/7.5 kVA, 50/60 Hz, 3 PH	240 V/12.5 kVA, 50/60 Hz AC 50/60 Hz, 3-phase (System)		
HMS	100-240 VAC, 50/60 Hz, 1 PH			

### System Warranty

One-year warranty, under 3D Systems purchase terms and conditions



**sPro 140 Base**



**sPro 140 HS**



**sPro 230 Base**



**sPro 230 HS**

### Specifications

Build envelope capacity (XYZ)	22 x 22 x 18 in (550 x 550 x 460 mm), 8,500 cu in (139 l)		22 x 22 x 30 in (550 x 550 x 750 mm), 13,900 cu in (227 l)	
Powder layout	Precision Counter Rotating Roller			
Layer thickness range (typical)	Min 0.08 mm (0.003 in); Max 0.15 mm (0.006 in), (0.004 in, 0.1 mm)			
Imaging System	ProScan™ Standard Digital Imaging Systems	ProScan™ GX Dual Mode High Speed Digital Imaging System	ProScan™ Standard Digital Imaging System	ProScan™ GX Dual Mode High Speed Digital Imaging System
Scanning speed	400 in/s (10 m/s)	400 in/s (15 m/s) (600 and 400 in/s)	400 in/s (10 m/s)	400 in/s (15 m/s) (600 and 400 in/s)
Laser power/type	70 W / CO <sub>2</sub>	200 W / CO <sub>2</sub>	70 W / CO <sub>2</sub>	200 W / CO <sub>2</sub>
Volume build rate	185 cu in/hr (3.0 L/hr)	300 cu in/hr (5.0 L/hr)	185 cu in/hr (3.0 L/hr)	300 cu in/hr (5.0 L/hr)

### Electrical Requirements

System	208 V/17 kVA, 50/60 Hz AC 50/60 Hz, 3-phase (System)			
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### System Warranty

One-year warranty, under 3D Systems purchase terms and conditions

**Standard Features:** System Control & Part Preparation Software - LS4.4 Sinter/BuildSetUp Software featuring part Add/Delete on-the-fly for flexibility, SinterScan Module for high accuracy and part consistency, and Build Time Estimator.

**Other Options:** RemoteNotify™ Software Module - automatically send emails upon machine status change, including build height, part completion, alarms, etc. RealMonitor & Graphic Viewer-Advanced Software - Logs laser, heater, and sensor data during build and allows for export to a database for statistical process control.



**3D Systems Corporation**  
333 Three D Systems Circle  
Rock Hill, SC 29730

Tel: +1 803.326.3900  
[moreinfo@3dsystems.com](mailto:moreinfo@3dsystems.com)

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