



Sinterstation® Pro

SLS® system



Rapidly manufacture end-use plastic parts to strict manufacturing specifications directly from 3-D CAD data.



APPLICATIONS

- Rapid manufacturing and rapid prototyping
- Tool-less plastic part manufacturing
- Form/fit/functional plastic prototypes
- Ideal for automotive, motorsports, aerospace, white goods/kitchen appliances, R&D and others needing small to extra-large plastic parts from 3-D CAD data

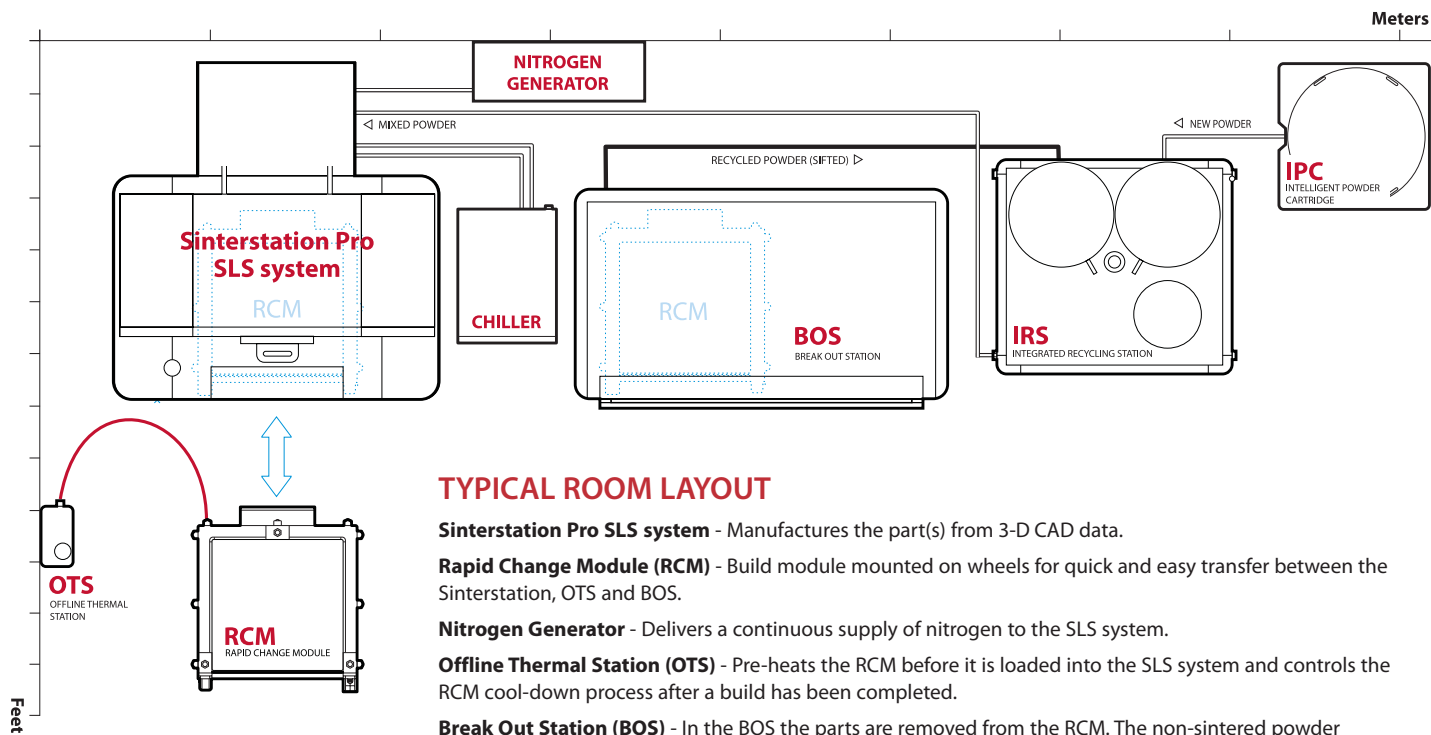
FEATURES

- Modular design
- Largest available part size
- Closed-loop thermal control
- Digital scanning system
- Fully integrated powder recycle system
- Counter-rotating powder deposit roller
- Multiple size removable build modules
- Offline thermal station
- Nitrogen generator
- Real-time monitoring software
- Intelligent powder tracking

BENEFITS

- **Cost-effective.** Directly manufacture customized short production runs.
- **Productive.** Go from 3-D CAD design to finished part in one step.
- **Tool-less.** Eliminate the time and expense of tooling.
- **Design for function.** No limitation on design complexity.
- **Intelligent.** Meet demanding part specifications with advanced process control.
- **Automated.** Seamless process integration from raw material to finished part.
- **Modular.** Easily upgradeable, expandable system.
- **Superior throughput and utilization.** Virtually no time between builds for maximum part building throughput.

Sinterstation Pro SLS system



TYPICAL ROOM LAYOUT

Sinterstation Pro SLS system - Manufactures the part(s) from 3-D CAD data.

Rapid Change Module (RCM) - Build module mounted on wheels for quick and easy transfer between the Sinterstation, OTS and BOS.

Nitrogen Generator - Delivers a continuous supply of nitrogen to the SLS system.

Offline Thermal Station (OTS) - Pre-heats the RCM before it is loaded into the SLS system and controls the RCM cool-down process after a build has been completed.

Break Out Station (BOS) - In the BOS the parts are removed from the RCM. The non-sintered powder automatically gets sifted and transferred to the IRS.

Integrated Recycling Station (IRS) - The IRS automatically blends recycled & new powder. The mixed powder is automatically transferred to the SLS system.

Intelligent Powder Cartridge (IPC) - New powder is loaded into the IRS from a returnable powder cartridge. When the IPC is connected to the IRS, electronic material information is automatically transferred to the SLS system.

TECHNICAL DATA

All specifications are based on tests using 3D Systems' SLS systems and 3D Systems' DuraForm materials. For additional specifications and/or installation related information, refer to the Sinterstation Pro SLS System Facility Requirements Guide.

Process

Maximum Build Volume (XYZ)	
Pro 140	550 x 550 x 460 mm (22 x 22 x 18 in) 140 liters
Pro 230	550 x 550 x 750 mm (22 x 22 x 30 in) 230 liters
Layer Thickness (DuraForm PA/GF)	0.1 mm (0.004 in) or 0.15 mm (.006 in)
Powder Deposition Method	Counter rotating roller
Scanning System	Digital, including real-time monitoring and calibration
Scan Speed	10 m/sec. (400 in/sec)
Laser	70 watt CO ₂
Thermal Control Method	Intelligent Thermal Control including real-time monitoring and calibration

Data Input

CAD interface	STL
Network	Ethernet

Electrical

Sinterstation Pro SLS system	208 VAC, 63A, 3-phase
Integrated Recycling Station	208-240 VAC, 15A, 1-phase
Break Out Station	208-240 VAC, 15A, 1-phase
Offline Thermal Station	208-240 VAC, 30A, 1-phase
Chiller	208-240 VAC, 13A, 1-phase

Software

Build Setup and Sinter (included)
SinterScan™ (optional) software provides more uniform properties in X and Y directions and improved surface finish
RealMonitor™ (optional) software provides advanced monitoring and tracking capabilities

Warranty

One-year



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