

sPro™ 125 and sPro™ 250

Direct Metal SLM Production Printer



BDSYSTEMS™



F1 motorsports part

Rapidly manufacture fully dense end-use metal parts

Applications

- Functional testing of production-quality prototypes
- Economical manufacturing of organic or highly complex geometries
- Rapid low-volume manufacturing of metal parts
- Examples:
 - Custom medical implants
 - Lightweight aerospace and motorsports parts
 - Efficient heat sinks
 - Injection mold inserts with conformal cooling channels
 - Dental caps, crowns

Features

- Multiple build volumes available
- Vacuum evacuation with Argon gas recharge
- Reliable powder re-coating system
- Multiple laser options
- Easy to remove support structures
- Advanced digital scanning system
- Heated build platform

Benefits

- Excellent surface finish and reduced finishing time
- High definition features
- Fine geometries
- Tight tolerances
- Fast build speeds
- Superior mechanical properties
- Parts from a variety of steel, aluminum and titanium alloys



*Custom hip implant.
(Photo courtesy of Royal Perth Hospital - Australia)*



Dental caps from a digital scan

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Injection mold insert with conformal cooling.



Ultra-light structure in aluminum.

Selective Laser Melting (SLM) is an innovative additive metals rapid manufacturing technology. It is also used for rapid prototyping and manufacturing.

The technology uses a laser to melt a developing range of commercially available fine metal powders to form a pre-defined shape. Each part is built up layer by layer and is directly driven from 3D CAD data through a software interface.

Technical Data

sPro™ 125

	Metric	U.S.
Max Part Building Area	125 x 125 x 125 mm (x, y, z)	4.92 x 4.92 x 4.92 in (x, y, z)
Build Speed*	5 cm ³ - 20 cm ³ per hour	0.3 in ³ - 1.22 in ³ per hour
Scan Speed	up to 1000 mm/s	up to 39.4 in/s
Layer Thickness	20 - 100 μm	0.0008 - 0.004 in
Laser Beam Diameter	35 μm diameter at powder surface	0.00137 in at powder surface
Laser Options	100 or 200 W	100 or 200 W
External Dimensions**	1350L x 800W x 1900H mm	53L x 31.5W x 75H in
Weight	1125 kg Gross, 900 kg Net	2480 lbs Gross, 1984 lbs Net
Power Supply	208V 3PH, 30A, 60Hz or localized via transformer	

sPro™ 250

	Metric	U.S.
Max Part Building Area	250 x 250 x 320 mm (x, y, z)	9.84 x 9.84 x 12.6 in (x, y, z)
Build Speed*	5cm ³ - 20 cm ³ per hour	0.3 in ³ - 1.22 in ³ per hour
Scan Speed	up to 1000 mm/s	up to 39.4 in/s
Layer Thickness	20 - 100 μm	0.0008 - 0.004 in
Laser Beam Diameter	70 μm diameter at powder surface	0.0027 in at powder surface
Laser Options	200 or 400 W	200 or 400 W
External Dimensions**	1700L x 800W x 2025H mm	67L x 31.5W x 80H in
Weight	1225 kg Gross, 1100 kg Net	2700 lbs Gross, 2425 lbs Net
Power Supply	208V 3PH, 30A, 60Hz or localized via transformer	



*Build speed is material and density dependent, **Dimensions are without accessories

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