Fuse 1

formlabs

The industrial power of selective laser sintering (SLS) in your workshop.

Fuse 1 Starts at $9,999

Manage prototyping and production yourself, in your space, at a tenth of the cost of existing SLS machines.

A Complete SLS Solution

Full ecosystem includes a benchtop SLS 3D printer, post-processing station, and intuitive software for setting up and managing prints.

No Specialized Infrastructure

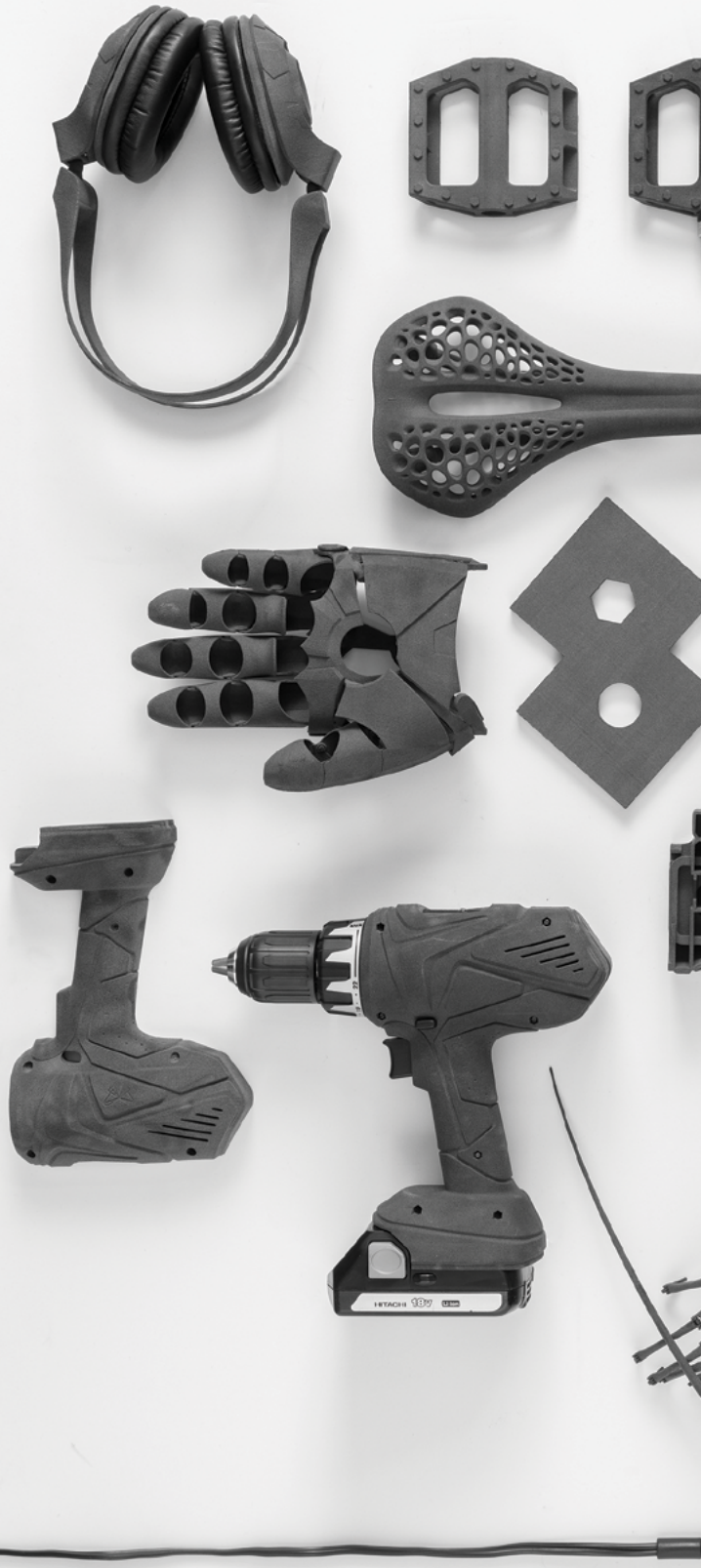
No need for a dedicated room, inert gas, or special air handling equipment.

No Supports

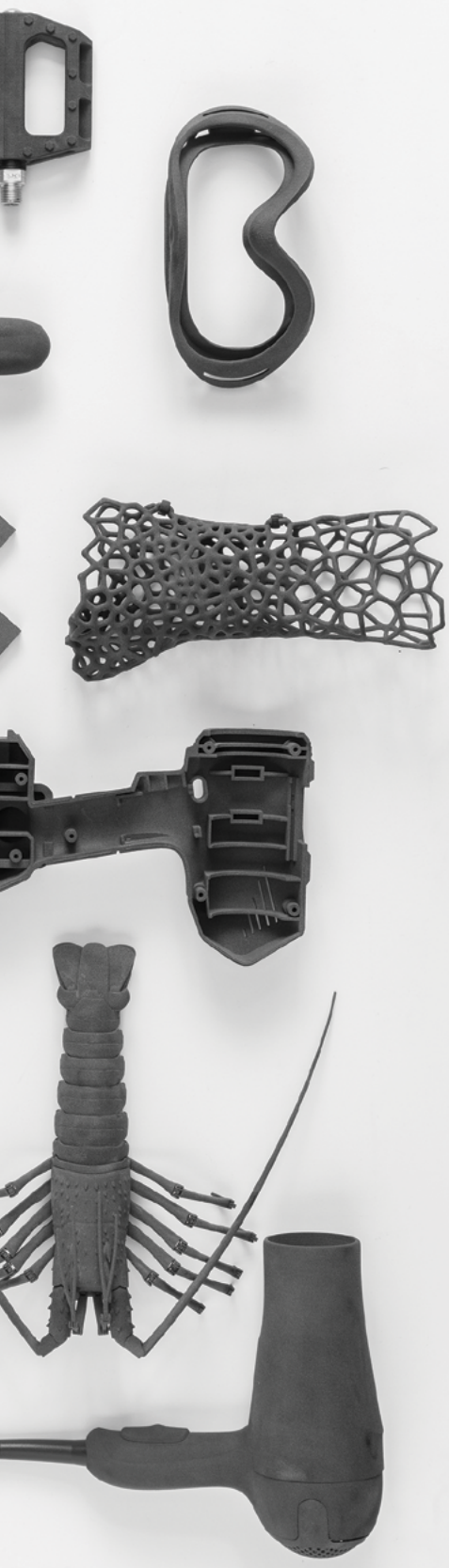
Pack the build chamber full of parts, print intricate geometries, and save time in post-processing.

Powder Recovery System

Print with up to 50% recycled powder.



Technical Specifications



FUSE 1

Print Engine	Selective Laser Sintering
Build Volume	165 x 165 x 320 mm
Build Speed	10 mm / hour
Layer Thickness	100 µm
Material Refresh Rate	Up to 50 %
Startup Time	60 minutes
Network Connectivity	Ethernet or Wi-Fi
Dimensions	677 x 668 x 1059 mm
Weight	88 kg
Power Requirements	2 kW, 120 or 240 VAC

OPTICAL SYSTEM

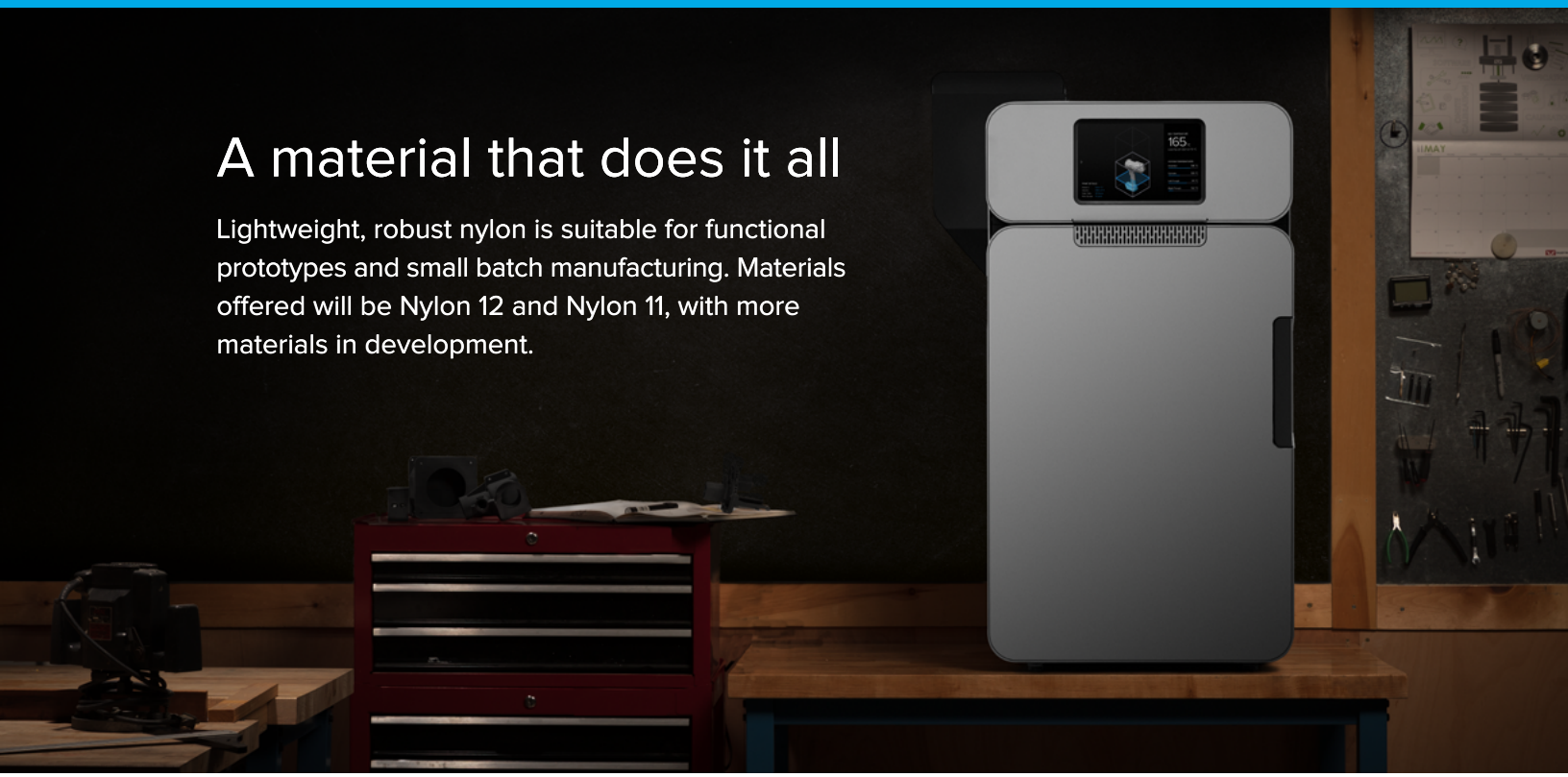
Galvanometers	Formlabs Custom
Scan Speed	2,000 mm/sec
Laser Type	Fiber rated to > 10,000 hrs
Laser Wavelength	1064 nm
Laser Power	10 W
Laser Spot Size	200 µm (FWHM)

SOFTWARE

Print Preparation	PreForm Desktop Software
File Type	.STL or .OBJ

PRICING

Fuse 1	**$9,999** Fuse 1 Printer
Fuse 1 System	**$19,999** Fuse 1 Printer Cleaning System Service Plan



A material that does it all

Lightweight, robust nylon is suitable for functional prototypes and small batch manufacturing. Materials offered will be Nylon 12 and Nylon 11, with more materials in development.

Nylon 12: Material Properties

MEASUREMENT	AS PRINTED ON FUSE 1	PUBLISHED VALUE
Ultimate Tensile Strength (XY)	52 MPa	50 MPa
Ultimate Tensile Strength (Z)	50 MPa	48 MPa
Tensile Modulus (XY)	1800 MPa	1850 MPa
Tensile Modulus (Z)	1900 MPa	1800 MPa
Elongation at Break (XY)	14 %	12 %
Elongation at Break (Z)	7 %	6 %

Feature Design Guidelines

FEATURE	MINIMUM VALUE	FULL STRENGTH / DEPTH
Wall Thickness	0.75 mm	2.00 mm
Pin Diameter	1.00 mm	2.00 mm
Hole Diameter	0.60 mm	1.00 mm
Slot Width	0.75 mm	3.00 mm
Moving Part Clearance	0.25 mm	1.00 mm

Contact sales to learn more

+1 617 702 8476 sales@formlabs.com formlabs.com/store