

# 3D PRINTING TECHNOLOGY - STEREO LITHOGRAPHY (SLA)

SLA technology enables the direct production of 3D printed objects using liquid resin. It is used for the quick manufacturing of prototypes, small-scale production, end products and transparent parts. Final parts have the finest features, sharp edges, smooth surface and different mechanical characteristics, from rigid to rubber.

## Materials

	alternative for investment casting wax
Castable	clean burnout without ashes or residues
	high resolution
	transparency
Clear	smooth surface
	higher tensile strength and stiffness than ABS plastic
Dental Model	ideal for dental models with removable dies
	smooth, matte surface finish
	high resolution
Dental SG	ideal for surgical and pilot drill guides
	suitable for autoclave sterilization
	biocompatible
	imitation of PP and HDPE plastics
Durable	high impact strength
	high elongation
	imitation of soft-touch materials and rubber
Flexible	good impact resistance
	flexibility
	high resolution
Grey/ Black/ White	smooth surface
	higher tensile strength and stiffness than ABS plastic

High Temp	high heat deflection temperature (289°C @ 0.45 MPa)
	low thermal expansion
	high stiffness
	imitation of ABS plastic
Tough	good balance of strength and elongation
	withstands high stress and strain

## Manufacturing features and abilities

Maximum build size:	145 x 145 x 175 mm
Layer height:	25 – 100 µm
Minimum wall thickness:	0.4 mm
Minimum details:	0.2 mm
Minimum space between moving parts:	0.5 mm
Dimensional tolerance:	±0.15 mm

# 3D PRINTING TECHNOLOGY - SELECTIVE LASER SINTERING (SLS)

With its precision, SLS technology enables the production of 3D printed objects using different materials. It allows the production of complex shapes, movable parts, as well as products with good temperature and chemical resistance. It can be used in all areas for producing prototypes, small-scale production, functional parts, unique products, etc. It is also possible to post process the product's surfaces.

## Materials

Polyamide 12 / Nylon 12 (DuraForm PA)	various finishing possibilities (polishing, dyeing, etc.)
	good chemical resistance
	biocompatibility
Carbon fibre reinforced Polyamide 12 (DuraForm HST)	high specific stiffness
	elevated temperature resistance
	anisotropic mechanical properties
Polyamide 11 (DuraForm EX)	good impact resistance
	high elongation at break point
	black colour
Polystyrene (CastForm PS)	alternative for investment casting wax
	clean burnout without ashes or residues
	short burnout cycle
Tool steel A6 infiltrated with bronze (LaserForm A6)	complex patterns without welds or joints
	highly complex conformal cooling channels
	magnetic material

## Manufacturing features and abilities

Maximum build size (Polyamide 12):	485 x 485 x 440 mm
Maximum build size (other materials):	325 x 275 x 385 mm
Layer height::	100 µm
Minimum wall thickness:	0.8 mm
Minimum details:	0.3 mm
Minimum space between moving parts:	0.4 mm
Dimensional tolerance:	±0.2 % (with a lower limit of 0.2 mm)