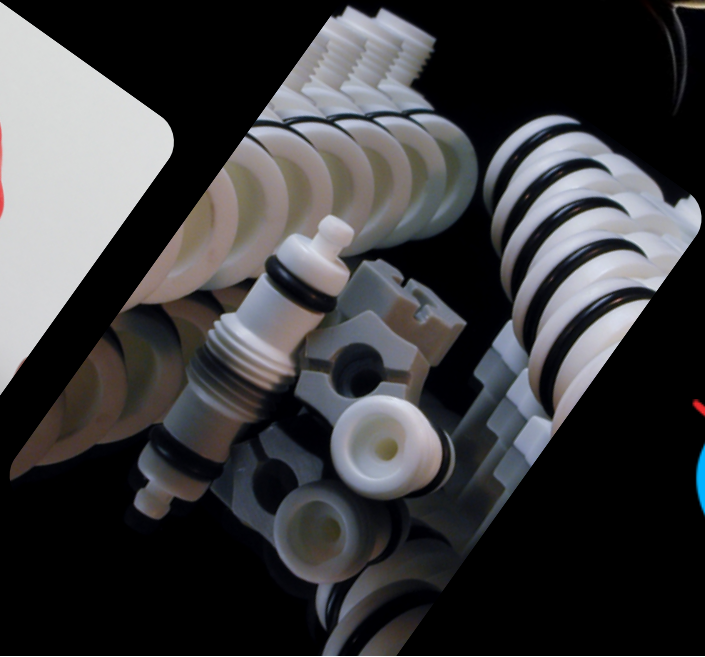
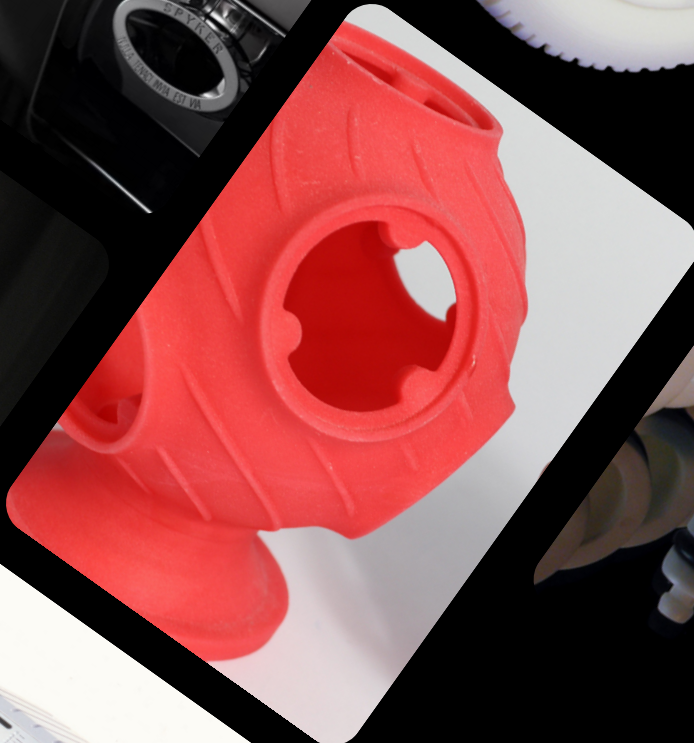


MNL Machine Technologies



SLS Machines Sizes & Tolerances, Materials Used

SLS

- EOS P396 machines 340 x 340 x 600mm
- EOS P760s 700x380x580mm
- Roboze Argo 500.

Laser beam size 0.35mm (features smaller than this will not form properly or at all)

Standard Tolerances $\pm(0.1+0.1\%)$ suited to most components that intend to be injection moulded.

Non-standard components with differing wall thicknesses or thick sections need to be assessed before an idea of tolerances can be given.

As for tolerances, we operate a $\pm 0.3\text{mm}$ or 0.3% per 100mm.

SLS Materials

PA2200

- Colour: White
- Polyamide 12
- Biocompatible
- Medical grade

PA3200

- Colour: Light grey
- Polyamide 12
- With glass beads for greater torsional stiffness.

More materials listed on the next page

We also specialise in;

- 3D Printing and surface finishing
- Traditional Model Making
- Prototyping
- Low Volume Production
- Model Making
- CNC Machining
- Vacuum Forming
- Silicone Tooling
- Vacuum Casting
- Specialist finishes such as vacuum metalizing , pearlescent painting, and more



SLS Materials

SLS Materials - Continued

PA1101

Colour: Yellow beige, dyed black

PP R-201

- Colour: Beige white
- Polypropylene
- Enhanced impact strength

Duraform Flex

- Colour: Beige white
- Rubber-like
- Shore 80A

PA 11

- Increased flexibility
- Enhanced impact strength
- Made from renewable material (castor oil)
- Improved chemical resistance

PA2210FR

- Colour: White
- Polyamide 12
- Class V0 fire-rated

PA2240FR

- Colour: White
- Polyamide 12
- Class V0 fire-rated
- Suitable for the aerospace industry

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SLA Machines Sizes & Tolerances

Neo 800 – Two Machines

- Build envelope 800 x 800 x 600mm Layer thickness 0.1mm as standard. 0.15mm for turbo mode, 0.2mm for super express.
- Laser beam sizes Variable spot; large diam 0.7mm, medium spot 0.4, small spot 0.2mm
- (Features smaller than this will not form properly or at all) Standard Tolerances $\pm(0.1+0.15\%)$ suited to most components that intend to be injection moulded.
- Non-standard components with differing wall thicknesses or thick sections need to be assessed before an idea of tolerances can be given.

SLA500/7000 - Two Machines

- Build envelope 508 x 508x 580mm
- Layer thickness 0.1mm as standard. 0.15mm for turbo mode
- Laser beam size 0.4mm (features smaller than this will not form properly or at all)
- Standard Tolerances $\pm(0.1+0.075\%)$ suited to most components that intend to be injection moulded.
- Non-standard components with differing wall thicknesses or thick sections need to be assessed before an idea of tolerances can be given.

SLA Viper (Hi-Res Mode)

- Build envelope 125 x 125x 250mm
- Layer thickness 0.05mm
- Laser beam size 0.075mm (features smaller than this will not form properly or at all)
- Standard Tolerances $\pm(0.05+0.05\%)$ suited to most components that intend to be injection moulded.
- Non-standard components with differing wall thicknesses or thick sections need to be assessed before an idea of tolerances can be given.

SLA Viper (Standard Mode) - Two Machines

- Build envelope 250 x 250x 250mm
- Layer thickness 0.1mm
- Laser beam size 0.25mm (features smaller than this will not form properly or at all)
- Standard Tolerances $\pm(0.05+0.075\%)$ suited to most components that intend to be injection moulded.
- Non-standard components with differing wall thicknesses or thick sections need to be assessed before an idea of tolerances can be given.

SLA Materials

DSM's Somos® WaterShed XC 11122 is a low viscosity liquid photopolymer that produces strong, tough, water-resistant, ABS-like parts. Most importantly, parts created with Somos® WaterShed XC 11122 are nearly colourless and look more like true, clear engineered plastic.

Taurus (Dark Grey)





FDM

FDM Machines Sizes & Tolerances

FDM

Get in touch with us, using the latest FDM technology we can offer a wide variety of machines and materials to include;

Fortus 450mc

- Build Envelope 406 x 355 x 406mm
- Layer thicknesses include:
 - 0.127mm
 - 0.178mm
 - 0.254mm
 - 0.330mm
- Standard Tolerances Parts are produced within an accuracy of $\pm .127$ mm or $\pm .0015$ mm/mm whichever is greater).

Note: Accuracy is geometry dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield.

Fortus 900mc

Build Envelope 914.4 x 609.6 x 914.4 mm
Layer thicknesses include:

- 0.178mm
- 0.254mm
- 0.330mm
- 0.508mm

Standard Tolerances Parts are produced within an accuracy of $\pm .089$ mm or $\pm .0015$ mm/mm whichever is greater).

Note: Accuracy is geometry dependent. Achievable accuracy specification derived from statistical data at 95% dimensional yield.

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FDM

FDM Materials

FDM Materials

Nylon-CF10
ABS-CF10
Antero 840CN03
Diran 410MF07
TPU 92A
Antero 800NA PEKK
PLA
Nylon 6
Nylon 12 CF
ST-130
ULTEM™ 1010 High temp Filament 340° F (supports are not soluble)
PPSF
ULTEM™ 9085 High Temp 340° F Filament (supports are not soluble)
PC- ABS
PC-ISO
PC
Nylon 12
ABSi
ABS ESD7
ABS M30i
ABS M30
ABS Plus P430
ASA

We also specialise in;

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- Traditional Model Making
- Prototyping
- Low Volume Production
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CNC Machine Size & Materials Used

CNC Machining – Materials

5 Axis - 2000mm*1300mm*600mm max size

Materials


- Buff ABS, Black ABS, 94V0 flame retarding ABS, ABS+30%PC
- Black Polycarbonate, Transparent Polycarbonate
- Acrylic,
- NYLON 6
- NYLON 66
- PA6+30% GF
- POM
- PP
- PP+20% GF
- PE
- TEFLON
- PPS
- PEEK
- PPO
- PPE
- PEI
- PAI
- PES etc.

Aluminum Alloy, Carbon steel, Stainless steel, M303E (high chrome content steel), Zinc, Brass, Red Copper, Bronze etc.

We also specialise in;

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- Traditional Model Making
- Prototyping
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**MNL Metal
Plating**

Metal Plating Finishes

Metal Plating – Finishes

- Shiny Nickel
- Pearlescent Black
- Nickel
- Copper
- Gold
- Silver
- High Gloss Chrome
- Brushed Chrome
- Satin Chrome
- Technical Copper

We also specialise in;

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- Traditional Model Making
- Prototyping
- Low Volume Production
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