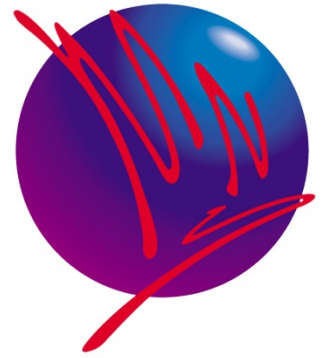


# Malcolm Nicholls Limited utilise the following machines and sizes:

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## ***SLA – Stereolithography***

### ***Super Size machine – 1 off as follows***

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.

### ***Standard Resolution machines – 2 off as follows***

Build envelope 508 x 508 x 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.

### ***Hi Resolution Machines – 2 off as follows***

Build envelope 250 x 250 x 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.

### ***Ultra-High Resolution Machine***

Build envelope 125 x 125 x 250mm

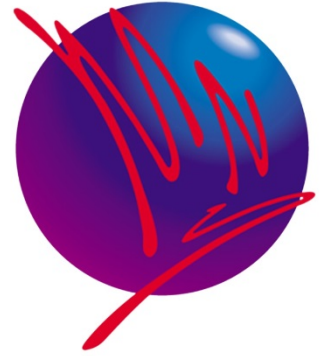
Layer thickness 0.05mm

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.

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## ***SLS – Selective Laser Sintering***

### ***Standard Resolution Machine***

Build envelope 380 x 330x 457mm this gets seriously reduced when thermal borders and shrinkage are accounted for.

Practical envelope for Nylon:- 320 x 270 x 400mm

Practical envelope for GBAL:- 330 x 280 x 400mm

Practical envelope for CastForm PS:- 340 x 290 x 420mm

Layer thickness 0.1mm (0.15mm for CastForm PS)

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

Standard Tolerances  $\pm(0.15+0.15\%)$  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.

## ***FDM – Fused Deposition Modelling***

### ***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.

