



**Manufacturing  
Quality**

[www.kapiti3d.com](http://www.kapiti3d.com)

Contact [sales@kapiti3d.com](mailto:sales@kapiti3d.com) for more information

# Manufacturing tolerances & Standards

## 3D Printing

FDM	SLA	SLS	MJF	DMLS/SLM
$\pm 0.4\%$ (lower limit 0.4mm)	$\pm 0.4\%$ (lower limit 0.2mm)	$\pm 0.3\%$ (lower limit 0.3mm)	$\pm 0.1$ mm	$\pm 0.1$ mm
Parts are free of any scratches, chips, cracks, dents and aided manufacturing material before inspection and shipment unless specified elsewhere in order details.				

## CNC Machining

CNC Machining produces parts with standard tolerances of  $\pm 0.13$  mm,  $\pm 0.025$  mm tolerances are feasible in certain conditions.

Standard finishing will be applied to all parts unless specified elsewhere in order details. Standard finishing includes a  $\sim 3.2$  Ra  $\mu\text{m}$  finish.

## Injection Moulding

Injection moulding produces parts with tolerances of  $\pm 0.5$  mm, with tighter tolerances being as low as  $\pm 0.13$  mm.

The level of accuracy in injection moulding is comparable to both CNC Machining and 3D Printing.

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# Manufacturing Inspection



Order number: \_\_\_\_\_

Inspector: \_\_\_\_\_

An inspection of your part(s) has been conducted to ensure they meet our manufacturing guidelines and your order specifications:

- Part quantity is in agreement with order details.
- Part dimensions are in accordance with CAD model and/or supplied technical drawing.
- Part is free of sharp edges
- Threaded holes identified, processed, and tapped as per technical drawing (where applicable as indicated on order).
- Part tolerances are within specification of technical drawing (where applicable as indicated on order).
- Part surface finishing applied and free of any chips, cracks and major scratches (where applicable as indicated on order).
- Parts are packed correctly to ensure damage free transit.

Order comments:

Signature of inspector: \_\_\_\_\_

Date: \_\_\_\_\_

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# Verification of design

We offer all our customers a verification of design or proof of design, for orders that hold an individual part quantity of more than 50.

Verification of design allows customers to receive up to five parts of a volume order, before production commences in full.

This minimises risk and doubts about the quality of the parts produced that the customer receives. The programme also provides customers with much greater insight as to the quality of the parts to be produced and whether or not they meet their requirements.

# Manufacturing capabilities

**3D Printing**  
1 – 1,000 parts

FDM  
SLA/DLP  
SLS/MJF

SLM/DMLS\*  
Material Jetting

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**CNC Machining**  
1 – 1,000 parts

CNC Milling  
(3, 4, & 5-axis\*)

CNC Turning

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**Injection Moulding**  
500 – 10,000+ parts

Thermoplastic &  
Silicones

Gas-assisted\*  
Over moulding\*

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**Profile Cutting**

Laser cutting

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\* Service available on request. Contact [sales@kapiti3d.com](mailto:sales@kapiti3d.com) for more information.

Verification of design programme available for all manufacturing services.