

Our team is comprised of highly experienced prototype engineers, model makers and finishers.

We operate to a quality management system which is accredited to ISO 9001-2015 standards.

(Certificate available via our website page <https://www.prototypeprojects.com/downloads/policies/>)

Vacuum Casting

- If First off or samples are required for inspection by the client before production can commence, this must be requested at the time of ordering. Approval must be given within two working days of receiving the 1st off or sample. Approval will be required to schedule the balance of the order.
- Silicone tooling has a limited production life, this is dependent of the geometry of the part being made and the Polyurethane material being used. We do not guarantee tool life and will advise on tool life if the required production quantity will not be met due to tool degradation.
- SLA Master Patterns and Tooling (Hard/Soft) will be kept for 3 months after the order has been completed. If tools are required to be kept for longer, this should be requested (by email: office@prototypeprojects.com) at the time of the order or within the 3-month period. We will dispose of all tools after three months without further notice.
- Polyurethane takes approximately seven days to obtain its full mechanical properties.
- Parts should be stored at room temperature, away from UV light (unless UV stable material is used) and kept in suitable packing.

Plastic Laser Cutting

- 0.1mm tolerance per 100mm (X & Y) + material tolerance (Z)

3D Printing

Please note: dimensional tolerances (accuracy) vary on part geometry and build orientation. Dimensions measured, that are within ± 0.5mm, will be released as ok, unless specific tolerances are required and requested at time of quote. This request may affect build orientation, delivery time and cost. Build orientation will be determined by the part features and not print speed.

Print Layer thickness has no relevance to dimensional tolerance (accuracy) with any process.

Small features: RP processes cannot form every feature. If your part has a feature which is below 1mm in any dimension, please inform us before we quote as we will need to interrogate the part to see what is the best orientation for building. If the part has features below 0.6mm (see table below for each process), these will not form. We will not check for small features during the quoting stage unless specifically advised prior to receiving any data.

	Build Modes	Layer Thickness	Laser Beam Diameter		Features this small will not form
			Fine Feature	Larger Feature	
					(guidance only)
SLA	UHD*	100µ	75µ	750µ	< 0.3 -0.5mm
	XHD*	50µ	75µ	750µ	< 0.3-0.5mm
SLS		0.1mm	0.4mm		< 0.6mm
Figure 4		Material specific	N/A		< 0.3 -0.5mm
FDM		0.254mm	N/A		1mm
Polyjet		0.030mm	N/A		< 0.5mm

CNC

We can machine from 3D CAD files; we do not need a 2D drawing unless specific tolerances/thread/detail is called for. All parts will be machined to a general machining tolerance applicable to the material selected, unless a specific tolerance is required and advised of at time of estimating. Details received after quoting and order placement may require re-quoting. Inspection reports need to be requested at time of quoting.

- General Machining tolerance: ± 0.1 mm
- Any dimension reports required (F.A.I.R.) must be requested at time of quote request. If these are requested after we have submitted our estimate, we reserve the right to submit advised costs and timing schedules to cover the extra work required.
- We will only measure to two (2) decimal places.
- If First off or samples are required for inspection by the client before production can commence, this must be requested at the time of quoting. Approval must be given within two working days of receiving the 1st off or sample. Failure to approve will result in the order being rescheduled.
- Only critical dimensions will be measured; these need to be highlighted on the 2D drawing.
- Production inspection quantities: 10% of total quantity (must be requested at time of ordering)
- Certificate of Conformance: available upon request at time of ordering (charge may be applied)
- RoHS Material Statement: subject to supplier availability and must be requested at time of order.

Dispatch times for 3D Printing & CNC

We offer a delivery service to clients within a 15-mile radius of Royston, this is a chargeable service.

Delivery to clients outside the 15-mile radius of Royston will be via Royal Mail Next business day before 1pm service or equivalent, for which there is a charge. Other delivery options are available, please ask.

When requesting a quote or ordering please specify the following:

Number of working days to dispatch

	3D Printing	CNC
Express*	Next day - 5pm order cut off**	3
Standard	3	7
Economy	8	12

*subject to process, part size, build time and capacity.

** Quote requests must be sent before 4pm

All express orders are subject to timing risk and cannot be guaranteed. If your project is time critical, please contact us to discuss timing requirements.

Request for Quote and Placing Your Order Times

Express Orders Only	RFQ – Final Data	Order Received by
3D Printing	4pm	5pm
CNC	1pm	5pm

All other Service Level orders received after 12:00pm will be schedule from the next working day.

		Finish Codes		
		B1 – B7	S1-S2	D1 – D8
Service	Express	✓	✓	✗
	Standard	✓	✓	✓
	Economy	✓	✓	✓

Finish Code	Description of finishing process	Process	Material
B1	Support witness marks left on down facing surfaces	SLA	ALL
B2	Support witness marks removed ("A" Surface only)	SLA	ALL
B3	Support witness marks removed ("A" Surface only) + light bead blast	SLA	Opaque
B4	Support witness marks removed – 1 coat of clear lacquer	SLA	Translucent
B5	Support removed washed in cleaning solution	Polyjet/FDM	ALL
B6	SLS Cleaning	SLS	Nylon
B7	Lacquer to seal surfaces - B2 or B6 finish will be applied first	SLA/SLS	ALL
B9	Support witness marks removed – 1 coat of paint (light blow over)	ALL	ALL
S1	Build lines removed and light bead blast	SLA	ALL
S2	SLS Surfacing (smoothing the surface)	SLS	Nylon
D1	Primer coat - Grey/White ("A" Surface only)	SLA	Opaque
D2	Paint finish: Satin, Gloss, Textured (fine, medium, course) ("A" Surface)	SLA	Opaque
D3	Lacquer - To give gloss effect ("A" Surface only)	SLA/SLS	ALL
D4	Rubberised - soft feel coating to painted surface ("A" Surface)	SLA	ALL
D5	Colouring	SLS	Nylon
D6	Assembly including fitting of inserts/ helicoils	ALL	ALL
D7	Lacquer to give maximum clarity on Clear SLA parts (geometry specific)	SLA	Translucent
D8	BLACKOUT/ RFI/EMC coating to internal "B" surfaces	ALL	ALL