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VS

	STEREOLITHOGRAPHY (SLA)	SELECTIVE LASER SINTERING (SLS)
Resolution and Build	**HIGH RESOLUTION, LARGE BED PRINTING** Print volume to 800 x 800 x 600 mm. Extremely accurate printer with a layer resolution between 50 to 200 µm. Excellent side wall quality.	**GOOD RESOLUTION, MID-SIZE BED PRINTING** Print volume to 300 x 330 x 457 mm. Layer resolution at 0.15mm. SLS layer bonding is exceptionally strong, resulting in parts with virtually isotropic mechanical properties.
Process	**VAT POLYMERISATION = GREAT DETAILING** Uses light-curable thermoset resins. Resultant structure is solid, homogeneous, and with a super-smooth A-surface. Liquid resin enables design fluidity which in turn helps to achieve complex features and intricate detailing. **N.B. Requires support structures.**	**POWDER BED FUSION = TOUGH COMPOSITES** Uses nylon-based powders sintered together with a laser. Nylon and nylon composites result in robust, functional parts with higher impact strength than those created with SLA. Detailing cannot be as refined as SLA parts. **N.B. Parts DO NOT require support structures.**
Surface quality and finishing	**EXCELLENT SURFACE QUALITY** Provides a smooth A surface finish with very little layering. Parts are comparable in look and feel to injection moulded parts. Parts need to be washed and cured. Support structures and pips need to be removed. Parts cannot be dyed but can be blasted, primed and painted.	**REQUIRES EXTRA FINISHING** Overall surface quality is influenced by material properties and build orientation. The resultant print surface can be grainy - particularly for composite materials. Parts therefore need to be bead blasted and polished for a smoother finish. Can be dyed or painted.
Materials	**SIMILAR TO TRADITIONAL THERMOPLASTICS** **SOMOS® EvoLVE 128** is a white, strong, durable plastic ideal for intricately detailed models; **SOMOS® WaterShed XC11122** is a clear, hard plastic ideal for fluid flow analysis and surgical planning.	**FUNCTIONAL NYLONS AND COMPOSITES** **PA 650 Nylon** (PA 12 sintering material) produces tough, white, biocompatible parts with good heat resistance. **PA 615 - GF Nylon** (PA 12 glass-filled) comprises 50% glass spheres, delivering on toughness, temperature and chemical resistance. Not biocompatible until processed.
Applications	**PATTERN MASTERS, PROTOTYPES & MODELS** Very low volumes of parts. E.g. Medical anatomical models; surgical planning; and device prototypes. Automotive jigs and fixtures, industrial and aerospace part prototypes with snap fit designs. Props and exhibition models. Casting cores for silicone casting.	**LOW VOLUMES OF FUNCTIONAL PARTS** Perfect for low volumes of durable, mass customised parts, e.g. under bonnet and industrial applications. Snap fit and living hinge designs. Aerospace parts, ducting and electronics housing. Medical device exploration prototypes. Jigs, fixtures and accurate tooling.

What do you want to make today?

Expertise across industries