

# 3D printing technologies, materials & applications



SLS	SAF™	MJF	FDR	SLA	FDM	PolyJet™
Selective Laser Sintering	Selection Absorption Fusion	Multi Jet Fusion	Fine Detail Resolution	Stereolithography	Fused Deposition Modelling	Material Jetting
<b>Technology Application</b>						
SLS, SAF™ & MJF are all part of the powder bed fusion technology branch within industrial 3D printing. This branch of technologies has a high dimensional accuracy, is used for various applications and can supplement traditional manufacturing technologies in small- to mid-sized serial production			FDR is also a powder bed fusion technology based on SLS. However, FDR excels at very small parts with very fine details	SLA has one of the best dimensional accuracies within 3DP technologies, but due to its chemical properties, its longevity is lower, which is why SLA is mainly used for prototypes and models	FDM has lower dimensional accuracy but offers a vast selection of materials. It is used for prototypes, models or niche production with specific material property requirements	PolyJet™ has an exceptionally high dimensional accuracy and can combine 500,000 different colors and varying hardnesses in the same print, making it ideal for prototypes and models
<b>Material Selection</b>						
PA 2200 PA 3200 GF PA 2210 FR PA 2241 FR PA 603-CF PA 640-GSL PA 12 Alu TPU (59A & 88A)	Polypropylene (PP)	PA 11 PA 12 PA 12 White PA 12 GB	PA 1101	Accura ClearVue Accura Extreme Accura 25 Accura HPC Somos® WaterClear Ultra	Ultem (9085 & 1010) Polycarbonate (PC) PC/ABS & PC-ISO ABS (ESD7, M30 & M30i) ASA SR-30 PEKK & PEKK-ESD PA 12 CF Polypropylene (PP) & other engineering materials	Digital Materials
<b>Manufacturing Details</b>						
Manufacturing via infrared light from nylon (PA) or thermoplastic polyurethane (TPU) powder	Manufacturing via infrared light from polypropylene powder	Manufacturing via infrared light from nylon powder	Manufacturing via infrared laser from powder (PA11)	Manufacturing via ultraviolet laser from epoxy resin	Manufacturing via extrusion from a polymer thread	Manufacturing via extrusion from a polymer thread
<b>Maximum Build Sizes</b>						
700 x 380 x 580 mm	315 x 208 x 293 mm	380 x 284 x 380 mm	200 x 250 x 125 mm	1500 x 750 x 550 mm	900 x 600 x 900 mm	490 x 390 x 200 mm
<b>Post-processing Offerings</b>						
Blasting, assembly, sanding, vapor smoothing (maximum 385 x 585 x 385 mm), coating, coloring, lacquering, painting, metal plating, threaded/non-threaded inserts & vibration grinding		Blasting, vapour smoothing (max 385 x 585 x 385 mm) & coloring	Assembly, support removal, sanding, coating, lacquering, painting, metal plating, threaded/non-threaded inserts		Support removal, sanding & threaded/non-threaded inserts	