

Tech and Material Chart

brought to you by NW Rapid Manufacturing

THE TECH	COMMON MONIKER/BRAND NAME	HOW THEY WORK	MATERIALS	GOOD TO KNOW
Binder Jetting	Z-Corp ColorJet VoxelJet	Liquid binder sprayed onto powder bed	Gypsum Plaster-based powder	*Extremely fragile *Requires post-processing *Full color *Sand-like finish
Material Extrusion	FDM (Fused Deposition Modeling) FFF (Fused Filament Fabrication) Desktop Printing	Filament heated and extruded through nozzle onto platform	Plastics – ABS, PLA in filament form	*Lots of material choice – colors, fills (carbon fiber, glass, wood) *May require support structure *Visible layers
Material Jetting	PolyJet ProJet	UV-cured jetted polymer	Various polymers, including rubber-like and transparent materials	*Fine details *Multi-material build capability *Good finish
Powder Bed Fusion <i>Disclosure: This is what WE do</i>	SLS (Selective Laser Sintering)	Lasers used to melt layers in powder bed	Nylon 12 Rubber-like TPE	*Tough & durable *Working assemblies possible *Ease of 2 nd Ops *Good to Excellent finish
Vat Photopolymerization	SLA (Stereolithography)	Laser- or UV-cured liquid resin	Transparent	*Finest details *Moderately fragile *Breaks down with UV exposure *Very clear materials, some transparent colors