## **DESIGN MANUAL**



		Laser Sintering	Multi Jet Fusion	Stereo- lithography	Digital Light Processing*	Fused Filament Fabrication	Material Jetting
	Supported Walls  Minimum thickness of wall section connected to rest of part on two sides.	0.028 in	0.02 in	0.02 in	Rigid: 0.008 in Flexible: 0.04 in	0.03 in	0.04 in
	Unsupported Walls  Minimum thickness of wall section that is connected to part on the base only, or to one other wall.	Supports not required	Supports not required	0.04 in	Rigid: 0.012 in Flexible 0.098 in	0.03 in	0.04 in
	Supports & Overhangs  Minimum angle (measured from print platform) at which a wall can be printed before additional support is necessary.	Supports not required	Supports not required	Base Support Otherwise 45°	Rigid: 25° Flexible: 45°	45°	Supports always required
	Embossing & Engraving  Minimum dimensions of embossed or engraved features upon the object surface.	Width: 0.04 in	Width: 0.04 in	Width: 0.016 in	Rigid: W: 0.008 in H/D: 0.004 in	Width: 0.024 in	Width: 0.02 in
		Height/Depth: 0.04 in	Height/Depth: 0.04 in	Height/Depth: 0.016 in	Flexible: W: 0.035 in H/D: 0.02 in	Height/Depth: 0.079 in	Height/Depth: 0.02 in
	Horizontal Spans  Maximum distance between supporting structures that a surface can traverse without additional support.	Supports not required	Supports not required	0.08 in	Rigid: 0.12 in Flexible: 0.04 in	0.4 in	Supports always required
	Holes & Openings  Minimum diameter opening for successful build.	0.02 in	0.02 in	0.02 in	Rigid: 0.008 in Flexible: 0.035 in	0.04 in	0.02 in
	Connecting & Moving Parts  Recommended minimum  clearance for moving parts or  connected assemblies printed in  place.	Moving: 0.012 in Connecting: 0.006 in	Moving: 0.012 in Connecting: 0.006 in	0.03 in	Rigid: 0.01 in Flexible: 0.03 in	0.008 in	0.008 in
	Escape Holes  Minimum diameter of an opening that can allow material and powder to be removed.	0.04 in	0.04 in	0.04 in	0.04 in	0.04 in	0.04 in
	Minimum Features The smallest size feature on a part for successful build.	0.03 in	0.03 in	0.008 in	Rigid: 0.004 in Flexible: 0.04 in	0.08 in	0.02 in
	Pin Diameter  Minimum recommended diameter of small spire features.	0.02 in	0.03 in	0.03 in	Rigid: 0.004 in Flexible: 0.04 in	0.04 in	0.02 in
Visit prototek.com for more information.  *Variable depending on material used.							

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<sup>&#</sup>x27;Variable depending on material used.

<sup>\*\*</sup>All tolerances listed are "best case" scenarios.