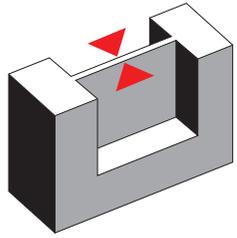


SECTION 4 : FDM PRINTING MODELLING BASICS

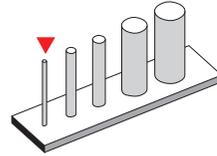
SECTION 4.1 : MODELLING GUIDE



Minimum Supported Wall Thickness

Recommended: 0.8 mm

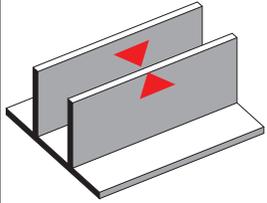
A supported wall is a wall connected along two or more sides to other volumes.



Minimum Vertical-Wire Diameter

Recommended: 0.8mm (7 mm tall)

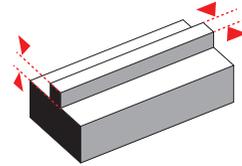
All vertical wires below 0.8mm will likely fail.



Minimum Unsupported Wall Thickness

Recommended: 1.6 mm

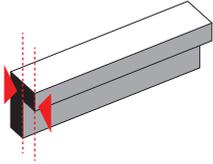
An unsupported wall is a wall connected along one or no sides to other volumes



Minimum Embossed Detail

Recommended: 0.8 mm

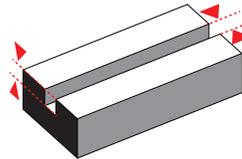
Any embossed detail less than 0.1mm will not show up on your print



Maximum Unsupported Overhang Length

Recommended: 1 - 2 mm

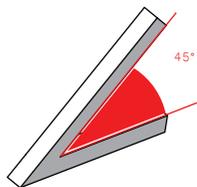
An overhang is a piece of the model that extends out perpendicular to the build platform. Overhangs less than 1mm are likely to deform whilst printing.



Minimum Engrave Detail

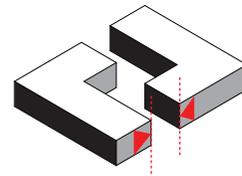
Recommended: 0.8 mm

Any engrave detail less than 0.1mm will not show up on your print



Minimum Unsupported Overhang Angle

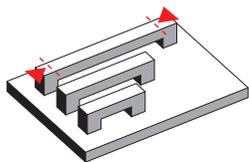
Recommended: 30 - 45° from level



Minimum Clearance

Recommended: 0.6 mm

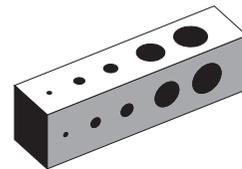
Clearance is the space left between moving parts. Leave a clearance to avoid parts fusing together



Maximum Horizontal Support Span/Bridge

Recommended: 25 mm
(5 mm width × 3 mm thick)

All spans greater than this will require support material. Ensure you leave enough space to remove material.

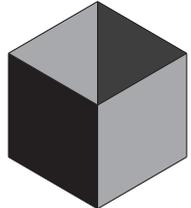
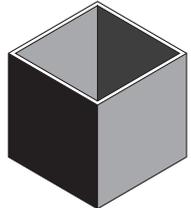
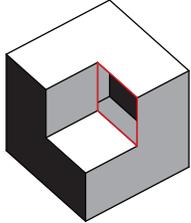
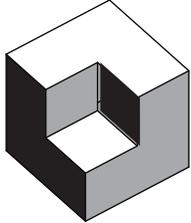
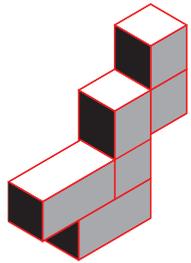
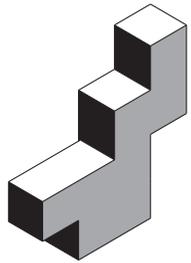
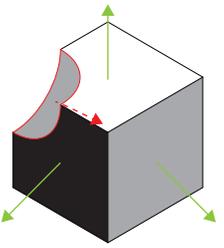
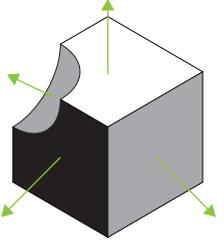
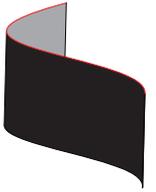


Minimum Hole Diameter

Recommended: 0.8 mm (2x nozzle)

Any hole smaller than 0.8mm will likely close over.

SECTION 4.2 : MODELLING GUIDE

		<p>WALLS MUST HAVE A THICKNESS</p> <p>0.8 mm</p> <p>Objects that do not have a thickness will not be recognised in slicing software.</p>		
		<p>OBJECTS MUST BE FULLY CLOSED AND WATERTIGHT</p> <p>Objects that are not fully 'solid' may fail. Slicing software can often generate infill incorrectly resulting in a failed print.</p>		
		<p>INTERSECTING OBJECTS MUST BE BOOLEANED OR JOINED INTO ONE SINGLE OBJECT</p> <p>Slicing software may register objects separately resulting in a fragile model with seams where models have not been merged. These models will often break</p>		
		<p>NO INVERTED NORMALS CAN BE PRESENT WITHIN A MODEL</p> <p>A 'normal' is a perpendicular reference point to the surface of a model. All normals of a model must face the same direction - outwards from model surface. You may need to flip a surface to fix this issue.</p>		
		<p>SINGLE SURFACES CANNOT BE PRINTED</p> <p>all surfaces present in a model must either be offset and given a printable thickness or deleted.</p>	