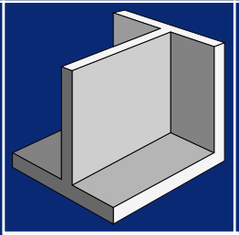
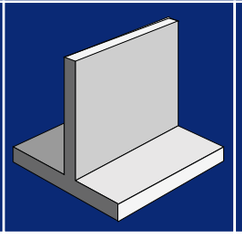
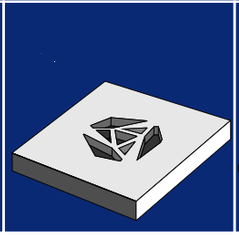
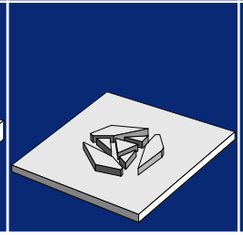
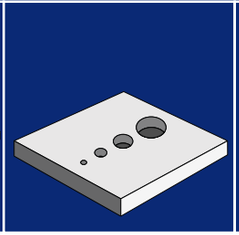
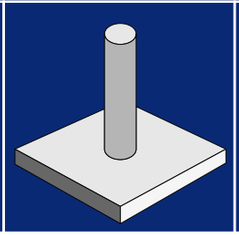
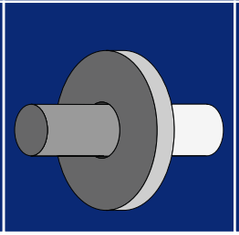
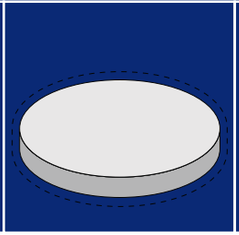
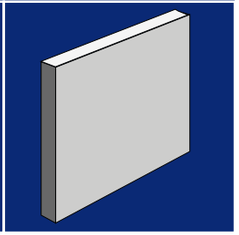
DESIGN GUIDE

Design tips for 3D printing & casting

AME-3D
Redefining Manufacturing Limits

	FEATURE	 SUPPORTED WALLS Walls attached to the print on 2 edges or more	 UN SUPPORTED WALLS Walls attached to the print on 1 edge	 ENGRAVING Features are carved or depressed	 EMBOSSING Features are raised	 HOLE SIZES Min. Size hole required to print	 PIN / FEATURE SIZE Min. Diameter of a pin / feature	 CONNECTING & MOVING PARTS Required clearance to ensure fit	 TOLERANCE Overall dimensional accuracy	 WALL THICKNESS Distance between one surface to its opposite sheer surface
3D PRINTING	SLA	Min. 0.4mm thick	Min. 0.6mm thick	Min. 0.4mm wide and 0.4mm thick	Min 0.1mm height	Min. 0.5mm ø	Min. 0.5mm HR, Min 0.3mm	0.2mm assembly connections, 0.2mm snug fits	+/- 0.2% (with a lower limit of +/-0.2mm)	Min. 1mm
	SLS	0.7mm - 2.0mm	N/A	Min. depth of 1mm Min. font size of 2mm for text	Min height of 1mm	> 1.5mm ø escape holes min. 3.5mm ø	Min. 0.8mm	0.5mm - 0.6mm for moving parts. 0.2mm clearance.	± 0.3mm or ± 0.5mm	Min. 0.8mm - 1mm
	MJF	0.7mm - 2.0mm	N/A	Min. depth of 1mm Min. font size of 2mm for text	Min height of 1mm	> 1.5mm ø escape holes min. 3.5mm ø	Min. 0.8mm	0.5mm - 0.6mm for moving parts. 0.2mm clearance.	± 0.3% (min: ± 0.15 mm)	Min. 1mm
CASTING	VACUUM CASTING	-	-	Min. 0.4mm wide and 0.4mm thick	Width - 2x height min. gap between raised letters min. 1.27mm	-	-	-	± 0.3% geometry dependent	Min. 1.5mm (Depending on overall size.)
	RIM CASTING	-	-	-	-	-	-	-	-	Min. 3mm - 20mm

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