



HLH DESIGN GUIDE

SLS 3D PRINTING

Address

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HLH Proto LTD

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✉ info@HLHProto.com

High Quality Rapid Prototypes,
Rapid Injection Moldings and Rapid Parts

BUILD VOLUME: 500*500*400mm

TIPS & TRICKS: Hollow parts out with escape holes for trapped materials. Anneal living hinges by dipping in boiling water and work back and forth.

MATERIALS:

PA、
PA + GF

SURFACE FINISHES:

Painting、
Dying、
Etc.

ADVANTAGES:

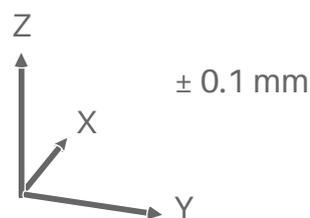
Self-supporting, no support required
High strength parts
Chemical resistance
Biocompatible
Accurate to CAD
Fast build times - No tooling costs
Complex geometries possible

DRAWBACKS:

Rough surface finish
Limited material choice
Low resolution so loss of fine details
Warping

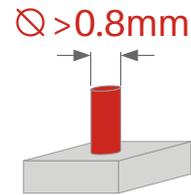
TOLERANCES:

± 0.2mm is standard.



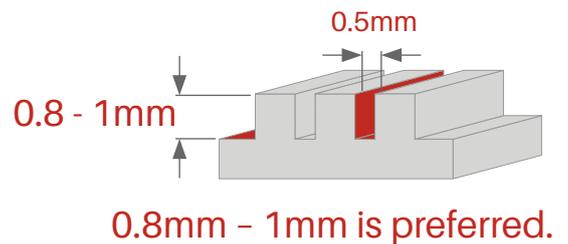
PINS:

Standard tolerance is +/- 0.3mm so any features with dimensions below this are unlikely to be printed without issue. So pins should be designed $\geq 0.8\text{mm}$.



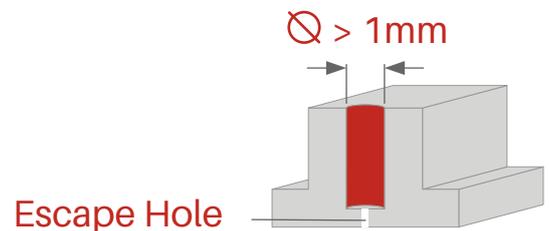
SLOTS:

Effected by depth or thickness of the wall, $\geq 0.5\text{mm}$ is minimum but will fail to print if the depth or wall thickness is over 2mm.



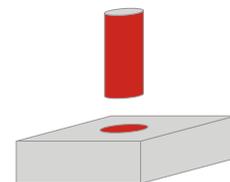
HOLES:

The deeper the hole the larger the diameter needed. All holes should be $\geq 1\text{mm}$. Blind holes should be designed with an escape hole to remove powder.



MATING (AXELS, GEARS) :

$> 0.5\text{mm}$ and $< 1\text{mm}$ gaps prevent fusion.
Min Clearance: $> 0.5\text{mm}$
Max Clearance: $> 1.0\text{mm}$



TEXT:

Sans serif such as Arial with a minimum font height of 2mm.
Embossed text: $> 1\text{mm}$ high.
Engraved features: $> 1\text{mm}$ deep.

