

HLH DESIGN GUIDE

DMLS 3D PRINTING

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High Quality Rapid Prototypes,
Rapid Injection Moldings and Rapid Parts

TIPS & TRICKS:

Reducing support demand will reduce printing costs
Grid structure can reduce the weight of components
Metal 3D printing parts have excellent mechanical properties
Parts with large solid section can be printed with skin and core instead

BUILD VOLUME: 280*280*280mm

MATERIALS:

Nickel based、
Cobalt based、
Iron-based alloys、
Carbide composites、
Etc.

SURFACE FINISHES:

Smooth、
Polishing、
Painting、
Electroplating、
Etc.

ADVANTAGES:

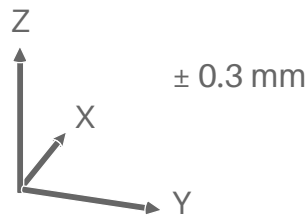
No processing, shorten delivery time
Manufacture of complex shapes or internal characteristics
It can be sintered in small area and foil products.
Simultaneous production of multiple parts
Printing of multiple metal materials together

DRAWBACKS:

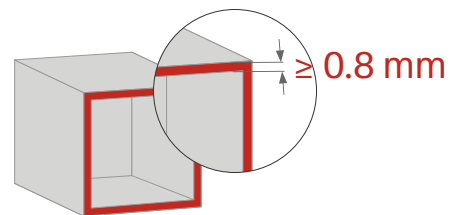
High material and manufacturing costs
Need a lot of post-processing
Rough surface treatment

TOLERANCES:

± 0.3 mm is standard.

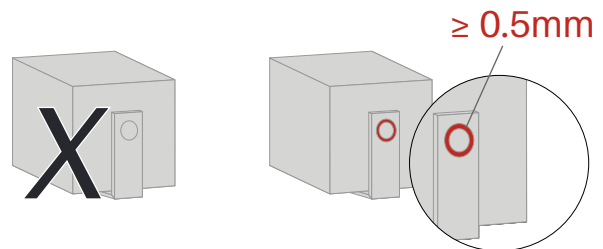


WALLS: DMLS can manage very thin walls but HLH do not recommend anything under 0.8 – 1mm. Size of single piece can not be less than 10*10*10mm



MATING PARTS:

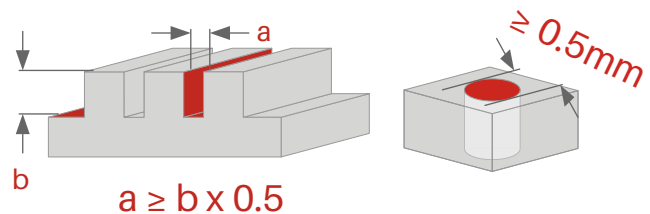
Minimum 0.5mm gap between axel and bore or other moving parts.



Minimum Clearance = 0.5mm

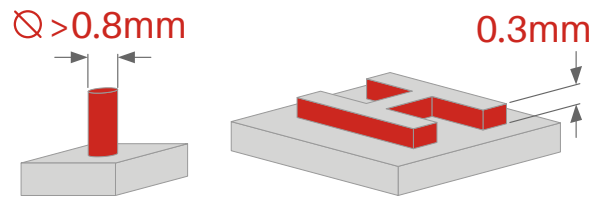
HOLES & SLOTS:

We recommend a minimum of 0.5mm but the larger the better especially as wall thickness or depth increases.



PINS & EMBOSSED FEATURES:

Pins $\geq 0.8\text{mm}$ but even then risk breaking.
Embossed features $\geq 0.3\text{mm}$.



Text & Engraved Details:

Are at risk of closing up if not designed with $0.5\text{mm} >$ minimum height.

