



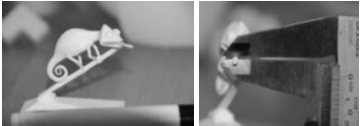
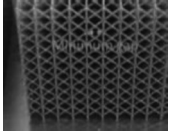



Portfolio

# Printing & Design guidelines

# Printing Guidelines

The minimum printable features in plane XY and Z

Minimum printable features	Dimension	Empirical Examples
Minimum hole diameter at 1mm thickness	0,5 mm	
Minimum shaft diameter at 10mm height	0,5 mm	
Minimum printable font	6pt	
Minimum printable feature or detail	0,1 mm width	
Minimum clearance at 1mm thickness Minimum slit between walls	0,5 mm	
Minimum Engraving	0,8 mm	

# Printing Guidelines

## Design Guidelines

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### Dimensional accuracy

The dimensional accuracy +/- 0.2 mm up to 100 mm and 0.2% above that value.

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### Wall thickness

The minimum wall thickness depends on the aspect ratio:

Recommended Minimum Wall thickness	0,3 mm – 0,5 mm(*)
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(\*) recommended to increase thickness from this value or add ribs or fillets in order to reinforce the parts.

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### Minimum gap between assembly parts

Recommended to have gaps of at least 0.4mm (+/-0.2mm of tolerance of each part) in the interface areas that should fit together, in order to assure the correct assembly.

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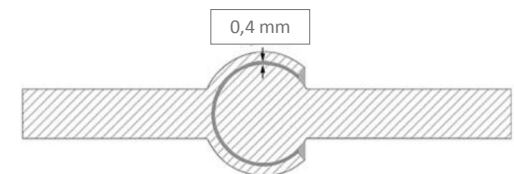
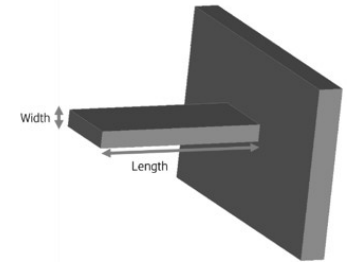
### Minimum spacing and clearance between parts

Assembly parts that minimum clearance between of 0.4mm

Parts with very thick walls above 50mm should have a higher gap in order to assure proper performance.

$$\text{Aspect ratio} = \frac{\text{length}}{\text{width}}$$

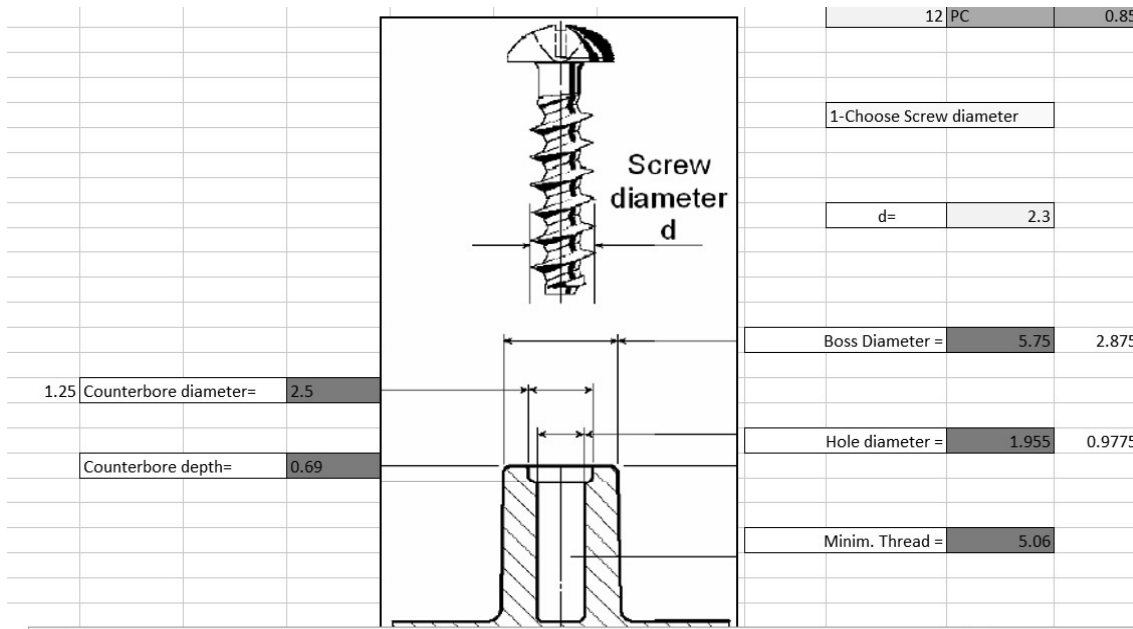
$$\text{Aspect ratio} = 1$$



# Design Guidelines

## Nuts and screws

Tolerance of +/-0.2mm of screws and nuts to design it.



### BOSS DESIGN RECOMMENDATIONS

The criteria for optimum hole diameter is to obtain the maximum clamp load during the installation process. A good starting point in determining the proper hole diameter is

$$d = 0.8 \times d_1$$

Specific applications will require some modifications to allow for the flexural modulus of the material, molding conditions, mold tool design, feed distance from gate, weld lines, structural heterogeneity and amount of reground material.

In order to ensure optimal performance, we recommend testing on initial samples. Please contact an Infastech applications engineer for assistance.

