

PiM-Like

3D printing design principles



SUPPORTED WALLS

Walls that are connected to the layer below on at least two sides. Minimum recommended thickness: 0.8 mm.



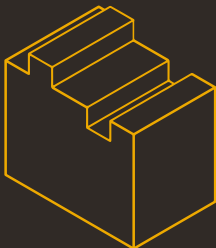
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Walls that are not connected to the layer below on less than two sides. Minimum recommended thickness: 0.8 mm.



PRINTING SUPPORT STRUCTURE & OVERHANGS

The maximum angle a wall can be printed at without requiring support. Maximum recommended angle: 45°.



EMBOSSSED & ENGRAVED DETAILS

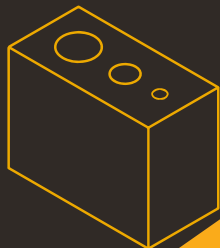
Features on the model that are raised or recessed below the model surface. Minimum recommended dimensions: 0.6 mm wide & 2 mm high.



HORIZONTAL BRIDGES

The span a technology can print without the need for support.

Maximum recommended length: 10 mm.



HOLES

The minimum diameter for a hole to be printed successfully.

Minimum recommended diameter: 0.5 mm.



The minimum diameter for a hole to be printed successfully. The distance between two holes should be at least 1.5 times the diameter of the larger hole. Minimum recommended assembly play: 0.5 mm.

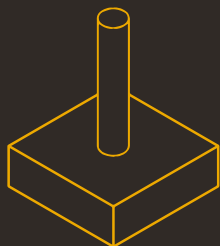
Minimum recommended diameter: 0.5 mm.



MINIMUM FEATURES

The recommended minimum size of a feature to ensure it will not fail to print.

Minimum recommended size: 2 mm.



PIN DIAMETER

The minimum diameter a pin can be printed at.

Minimum recommended diameter: 3 mm.



ESCAPE HOLES & HOLLOW STRUCTURES

The minimum diameter of escape holes to allow for the removal of build material.

Minimum recommended hole size: 4 mm.



TOLERANCE

The expected tolerance (accuracy) of a specific technology.

of a specific technology.

General data:

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SOURCES

- EMPA

- 3D HUBS

- INTERNATIONAL COMMITTEE FOR THE CHARACTERIZATION AND TERMINOLOGY OF CARBON