

## KANTHAL® ADDITIVE MANUFACTURING DESIGN GUIDELINE

FOR KANTHAL® AM100

This design guideline serves as a general recommendation when designing for 3D printing of Kanthal® AM100. The results may differ based on actual designs. It is also recommended to consider specific application conditions when designing.

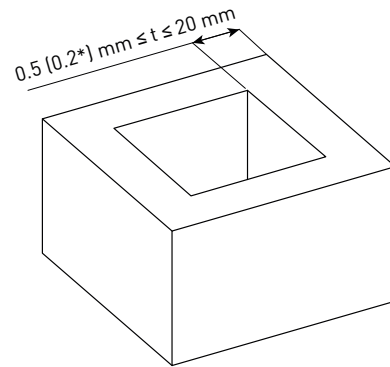
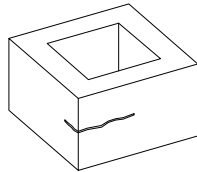
### WALL THICKNESS (t)

**MAXIMUM: 20 MM**

**MINIMUM: 0.5 MM (0.2 MM\*)**

\*0.5 mm is recommended for minimum thickness, however it is possible to use 0.2 mm depending on the application.

Larger wall thickness has higher risk of crack formation.

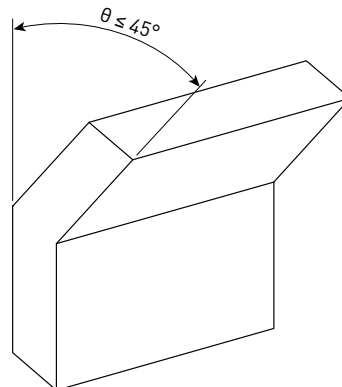
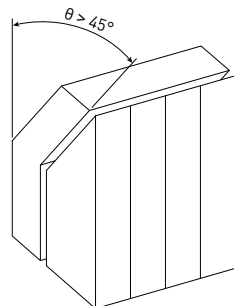
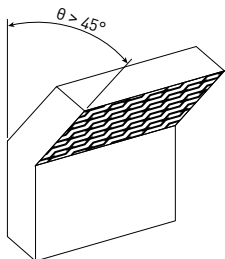


### OVERHANG ANGLES

**MAXIMUM: 45°**

Overhangs larger than 45° will render rough surfaces.

Overhang larger than 45° can be achieved by adding supporting structure, which can later be removed.



## HOLES AND CHANNELS

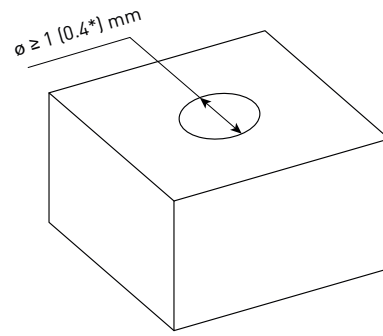
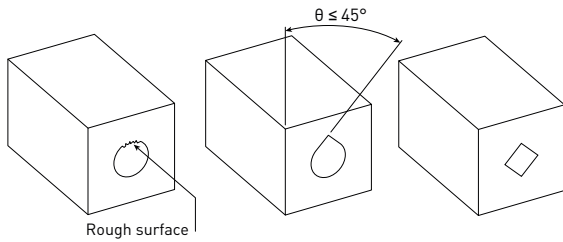
### VERTICAL

#### MINIMUM DIAMETER: 1 MM (0.4 MM\*)

\*1 mm is recommended for minimum hole diameter, however it is possible to use 0.4 mm depending on the application.

### HORIZONTAL

Horizontal holes and channels are not recommended due to the effect of overhang. It is recommended to follow 45° overhang rules. If needed, it is recommended to design cross sections in teardrop or diamond shapes.



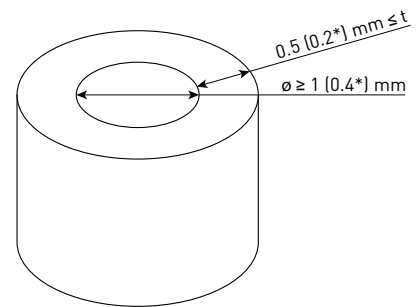
## THIN WALL TUBES

#### MINIMUM WALL THICKNESS: 0.5 MM (0.2 MM\*)

\*0.5 mm is recommended for minimum thickness, however it is possible to use 0.2 mm depending on the application.

#### MINIMUM INNER DIAMETER: 1 MM (0.4 MM\*)

\*1 mm is recommended for minimum hole diameter, however it is possible to use 0.4 mm depending on the application.



## EDGES/CORNERS

#### AVOID SHARP EDGES IF POSSIBLE

Smooth transition is recommended for better corrosion resistance and lower risk of crack formation.

