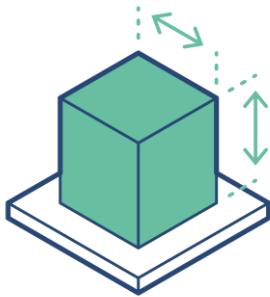


# MICRO 3D PRINTING GUIDELINES

At IPFL, we recognize the intricacies of micro-manufacturing and understand that each project brings its unique challenges and requirements. To facilitate the creation of the highest quality microscale parts using our BMF microArch® 3D printers, we've compiled a set of guidelines that serve as a foundation for your designs.



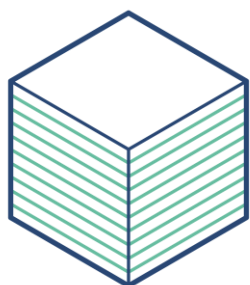
01  
MAXIMUM  
PART SIZE

2µm Resolution	10µm Resolution
50 x 50 x 50 mm	100 x 100 x 75 mm



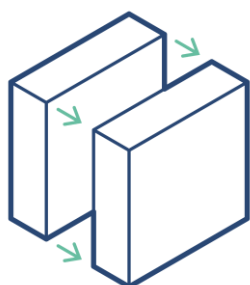
02  
MINIMUM  
PART SIZE

2µm Resolution	10µm Resolution
5 x 5 x 5 µm	10 x 10 x 10 µm



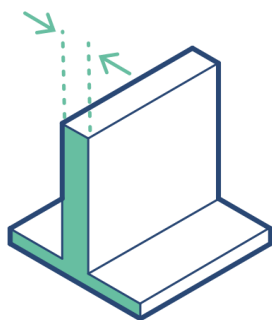
03  
LAYER  
HEIGHT

2µm Resolution	10µm Resolution
2 - 10 µm	10 - 40 µm



04  
PART-TO-PART  
SPACING

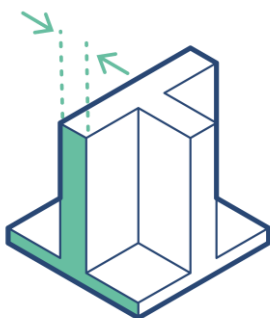
2µm Resolution	10µm Resolution
50 µm	50 µm



# 05

MINIMUM WALL THICKNESS (UNSUPPORTED)

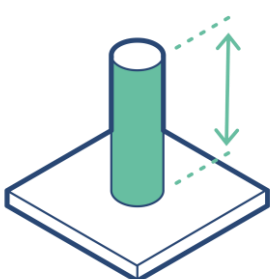
2 $\mu$ m Resolution	10 $\mu$ m Resolution
50 $\mu$ m	50 $\mu$ m



# 06

MINIMUM WALL THICKNESS (SUPPORTED)

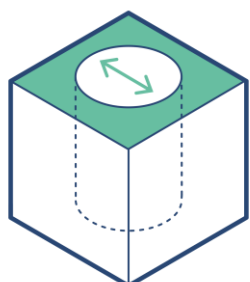
2 $\mu$ m Resolution	10 $\mu$ m Resolution
20 $\mu$ m	20 $\mu$ m



# 07

ASPECT RATIO FOR PINS & PILLARS

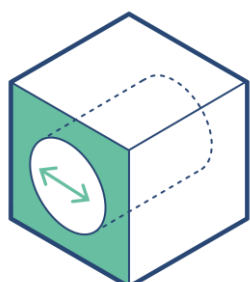
2 $\mu$ m Resolution	10 $\mu$ m Resolution
100:1 for $> \varnothing 0.1$ mm	100:1 for $> \varnothing 0.1$ mm



# 08

MINIMUM HOLE DIAMETER (VERTICAL)

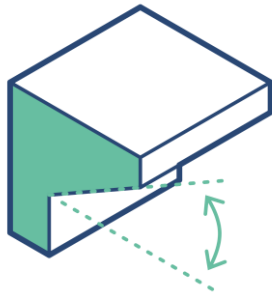
2 $\mu$ m Resolution	10 $\mu$ m Resolution
40 $\mu$ m	40 $\mu$ m



# 09

MINIMUM HOLE DIAMETER (HORIZONTAL)

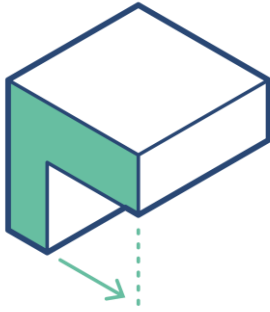
2 $\mu$ m Resolution	10 $\mu$ m Resolution
100 $\mu$ m	100 $\mu$ m



# 10

MINIMUM  
UNSUPPORTED  
OVERHANG  
ANGLE

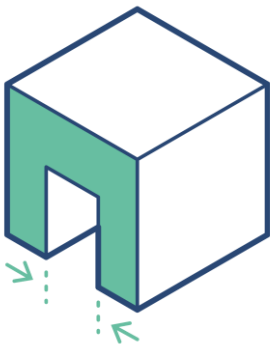
2 $\mu$ m Resolution	10 $\mu$ m Resolution
20°	20°



# 11

MAXIMUM  
NON-BRIDGED  
OVERHANG  
LENGTH

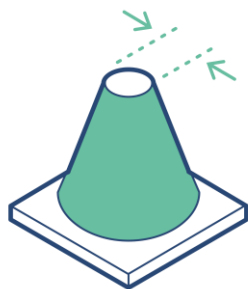
2 $\mu$ m Resolution	10 $\mu$ m Resolution
0.5 mm	0.5 mm



# 12

MAXIMUM  
BRIDGED  
OVERHANG  
LENGTH

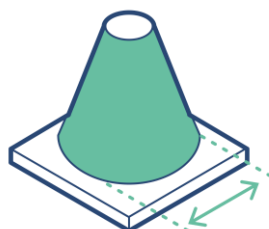
2 $\mu$ m Resolution	10 $\mu$ m Resolution
1.5 mm	1.5 mm



# 13

CONE TOP  
DIAMETER

2 $\mu$ m Resolution	10 $\mu$ m Resolution
80 - 200 $\mu$ m	80 - 200 $\mu$ m



# 14

CONE BASE  
DIAMETER

2 $\mu$ m Resolution	10 $\mu$ m Resolution
0.1 - 1 mm	0.1 - 1 mm