

Phantom 4000mm

PRINT SETTINGS

These settings were created from results obtained from testing using a **Direct drive style printer** with **PLA+** filament. If using other styles of printer or brands of filament, the results could vary. Adjusting the flow rate and retraction settings may be required. Some parts may need “Bed disks” to assist adhesion to the bed. They can be viewed in the “Part orientation images” (**POI**) folder.

Settings for PLA parts:

Nozzle temp = 205c
Bed temp = 45c
Nozzle diameter = 0.4mm
Extruder multiplier (**EXT**)r = 1.0 or 100%
Extrusion width = .042
Retraction distance (**RD**) = 8mm
Extra restart distance (**ERD**) = 0.1mm
Retraction speed = 100mm/s
Coast at end (**C**) = 1mm
Wipe nozzle (**W**)= 2mm
Layer height (**LH**) = 0.25mm

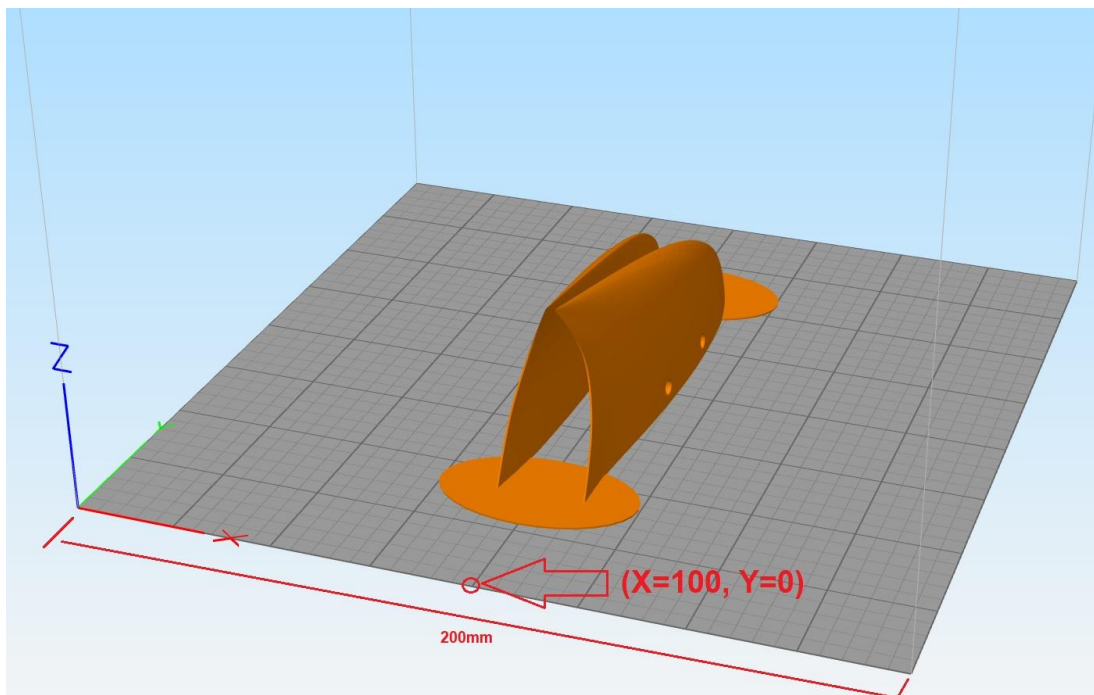
First layer height = 100%
First layer width = 100%
First layer speed = 20%
Print speed = 60mm/s
Outline underspeed = 50%
Solid infill underspeed = 80%
Support structure underspeed = 80%
Cooling fan = 100% for all layers.
Infill percentage (**IF**) is set to 0% unless otherwise stated
Outline direction = inside to outside (**I > O**)

Unless otherwise stated, the start point for each layer is set to Y=0mm and x=100mm.

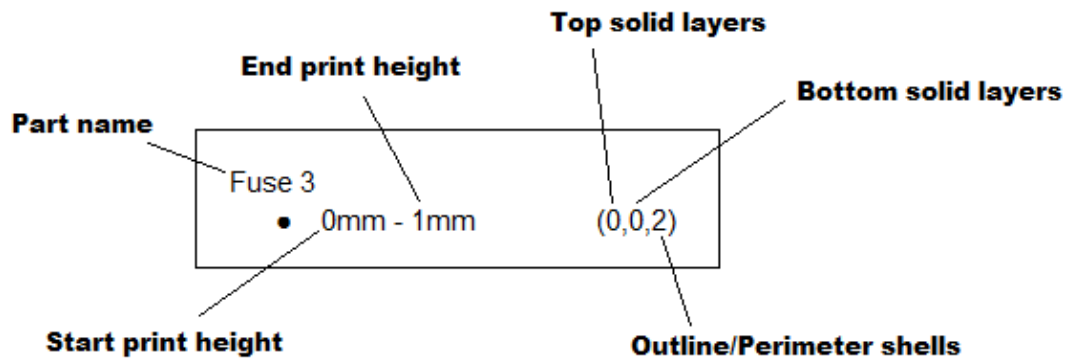
- 100mm on “x” axis for 200mm X 200mm bed (middle of the “x” axis)

Eg **s.p x=100mm** (start point is 100mm along “x” axis)

This helps control the seam and make sure that it is located at the trailing edge of the part or along a sharp corner



Key for part layer height settings:

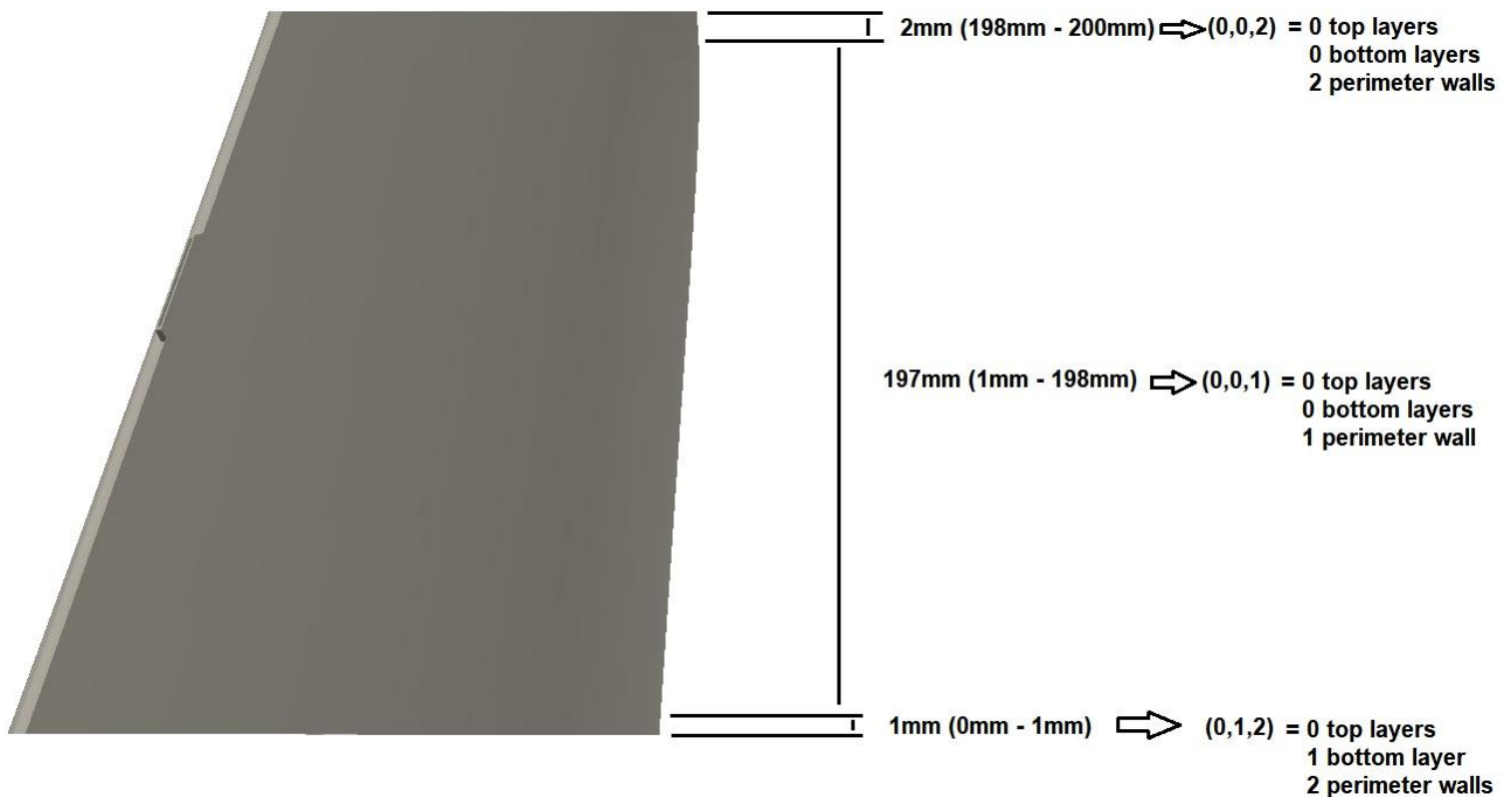


Example of part

The following example shows how a generic wing section with a **height of 200mm** should be sliced to give maximum bond strength at the joins.

Wing 1

- 0mm - 1mm (0,1,2)
- 1mm - 198mm (0,0,1)
- 198mm- end (0,0,2)



FUSELAGE

Cowling

- 0mm - end (0,0,3)

Fuse 1

- 0mm - 4mm (0,16,1)
- 4mm - 158mm (0,0,1)
- 158mm - end (0,0,2)

Fuse 2

- 0mm - 1mm (0,0,2)
- 1mm - 139mm (0,0,1)
- 139mm - end (0,0,2)

Fuse 3

- 0mm - 1mm (0,0,2)
- 1mm - 144mm (0,0,1)
- 144mm - end (0,0,2)

Fuse 4

- 0mm - 1mm (0,0,2)
- 1mm - 139mm (0,0,1)
- 139mm - end (0,0,2)

Fuse 5

- 0mm - 1mm (0,0,2)
- 1mm - 103mm (0,0,1)
- 103mm - end (0,0,2)

Fuse 6

- 0mm - 1mm (0,0,2)
- 1mm - 188mm (0,0,1)
- 188mm - end (0,0,2)

Fuse 7

- 0mm - 1mm (0,0,2)
- 1mm - 142mm (0,0,1)
- 142mm - end (2,0,1)

Battery cover front and rear

- 0mm - 1mm (0,0,2)
- 1mm - end (0,0,1)

WINGS

Wing 1	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,3,1)	
• 1mm - 146mm (0,0,1)		
• 146mm - end	(0,0,2)	
Wing 2	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,0,2)	
• 1mm - 148mm (0,0,1)		
• 148mm - end	(0,0,2)	
Wing 3	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,0,2)	
• 1mm - 188mm (0,0,1)		
• 188mm - end	(0,0,2)	
Wing 4	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,0,2)	
• 1mm - 188mm (0,0,1)		
• 188mm - end	(0,0,2)	
Wing 5	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,0,2)	
• 1mm - 169mm (0,0,1)		
• 169mm - end	(0,0,2)	
Wing 6,7,8,9,10	bed disk required (refer POI)	s.p x=300mm
• 0mm - 1mm	(0,0,2)	
• 1mm - 193mm (0,0,1)		
• 193mm - end	(0,0,2)	
•		
Wing 11	bed disk required (refer POI)	
• 0mm - 1mm	(0,0,2)	
• 1mm - end	(0,0,1)	
RDS Aileron	bed disk required (refer POI)	
• 0mm - 1mm	(0,0,2)	
• 1mm - 193mm (0,0,1)		
• 193mm - end	(0,0,2)	
Standard Aileron	bed disk required (refer POI)	
• 0mm - 2mm	(0,8,1)	
• 2mm - 193mm (0,0,1)		
• 193mm - end	(0,0,2)	

RDS Flap	bed disk required (refer POI)	
• 0mm - 1mm	(0,0,2)	
• 1mm - 193mm	(0,0,1)	
• 193mm - end	(0,0,2)	
Standard Flap	bed disk required (refer POI)	
• 0mm - 2mm	(0,8,1)	
• 2mm - 193mm	(0,0,1)	
• 193mm - end	(0,0,2)	
RDS components		LH = 0.1mm, IF = 100%
• 0mm - end	(0,0,1)	EXT = 0.95 or 95%,
RDS servo covers		LH = 0.2mm, IF = 100%
• 0mm - end	(0,0,1)	EXT = 0.95 or 95%, RD = 7mm, W = 2mm

PROPELLER

Propeller spinner		LH = 0.15mm, IF = 30%
• 0mm - end	(1,1,1)	EXT = 0.9 or 90%, RD = 7mm,
Propeller hub		LH = 0.25mm, IF = 100%
• 0mm - end	(1,1,1)	EXT = 0.95 or 95%,
Propeller blade		bed disk required (refer POI) IF = 100%
• 0mm - end	(1,1,1)	EXT = 0.95 or 95%, RD = 7mm, LH = 0.1mm,

TAIL

V-tail hub

- 0mm - 1mm (0,0,2)
- 1mm - 49mm (0,0,1)
- 49mm - 53mm (0,0,3)
- 53mm - 95mm (0,0,1)
- 95mm - end (3,0,2)

V-tail Stabilizer inner **bed disk required (refer POI)**

- 0mm - 1mm (0,2,2)
- 1mm - 134mm (0,0,1)
- 134mm - end (0,0,2)

V-tail Stabilizer middle **bed disk required (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 177mm (0,0,1)
- 177mm - end (0,0,2)

V-tail Stabilizer outer **bed disk required (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - 35mm (0,0,1)
- 35mm - end (3,0,2)

Elevators inner **bed disk required (refer POI)**

- 0mm - 2mm (0,8,1)
- 2mm - 153mm (0,0,1)
- 153mm - end (0,0,2)

Elevators outer **bed disk required (refer POI)**

- 0mm - 1mm (0,0,2)
- 1mm - end (0,0,1)

Bed disk

- 0mm - end (0,1,1)