

Scorpion 800mm

PRINT SETTINGS

200x200x200

These settings were created from results obtained from testing using a **Bowden style printer** with **standard 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.

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 = 150mm/s
Layer height (**LH**) = 0.25mm
Coast distance (**CD**) = 1mm

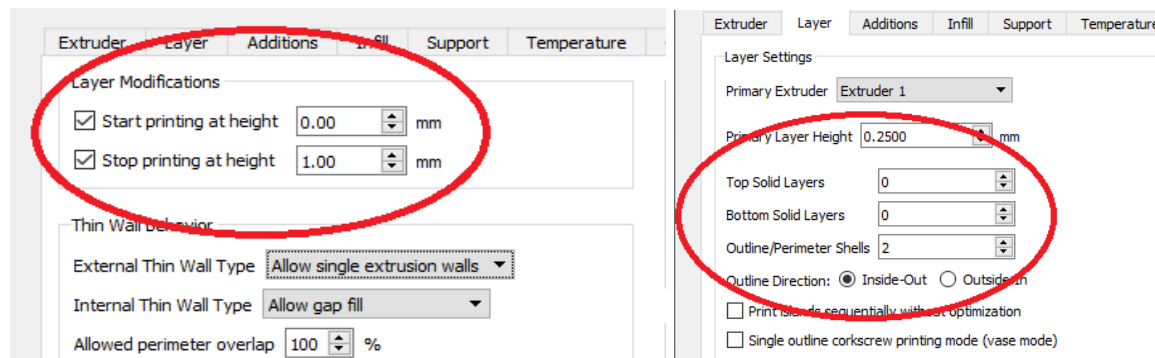
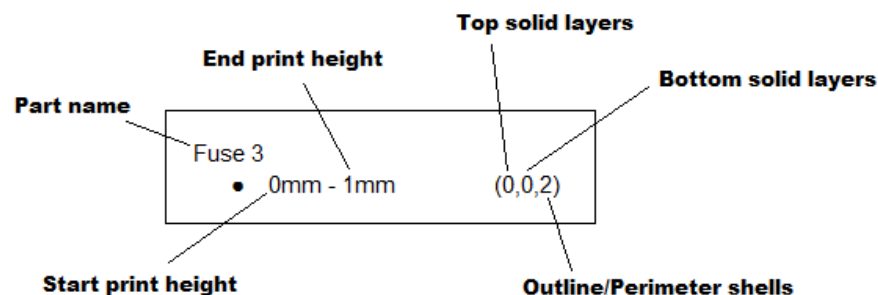
First layer height = 100%
First layer width = 100%
First layer speed = 20%
Print speed = 50mm/s
Outline underspeed = 50%
Solid infill underspeed = 80%
Support structure underspeed = 80%
Cooling fan = 100% for all layers.
Infill percentage (**IF**) is set to 0% unless otherwise stated
Outline direction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

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)

Key for part layer height settings:



FUSELAGE

Fuse 1

- 0mm - 2mm (0,0,2)
- 2mm - 175mm (0,0,1)
- 175mm - end (0,0,2)

Fuse 2

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

Fuse 3

- 0mm - 1mm (0,0,2)
- 1mm - 174mm (0,0,1)
- 174mm - 175.5mm (2,0,1)
- 175.5mm - 198mm (0,0,1)
- 198mm - end (0,0,2)

Fuse 4

- 0mm - 1mm (0,0,2)
- 1mm - 13mm (0,0,1)
- 13mm - 25mm (3,0,1)
- 25mm - 74mm (0,0,1)
- 74mm - 78mm (3,0,1)
- 78mm - 155mm (0,0,1)
- 155mm - end (0,0,2)

Fuse 5

- 0mm - 1mm (0,0,2)
- 1mm - 152mm (0,0,1)
- 152mm - end (0,0,2)

Fuse 6

bed disk required (refer POI)

- 0mm - 3mm (0,12,1)
- 3mm - end (2,0,2)

Canopy front and rear (CLEAR PLA)

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

WINGS

Wing inner section **(s.p > x = 0mm) bed disk required (refer POI)**

- 0mm - 2mm (0,0,2)
- 2mm - 138mm (0,0,1)
- 138mm - end (0,0,2)

Wing outer section **bed disk required (refer POI)**

- 0mm - 2mm (0,0,2)
- 2mm - 118mm (0,0,1)
- 118mm - end (0,0,2)

Wingtips

- 0mm - 2mm (0,0,2)
- 2mm - 34mm (0,0,1)
- 34mm - end (2,0,2)

Servo covers **bed disk required (refer POI)**

- 0mm - end (1,1,1) **EXT = 90%, 100% infill**

STABILIZERS

Vertical stabilizers **(s.p > x = 0mm) bed disk required (refer POI)**

- 0mm - 2mm (0,2,1)
- 2mm - 160mm (0,0,1)
- 160mm - end (3,0,2)

Horizontal stabilizers **(s.p > x = 0mm) bed disk required (refer POI)**

- 0mm - 2mm (0,2,1)
- 2mm - 140mm (0,0,1)
- 140mm - end (3,0,2)

CONTROL SURFACES

Ailerons

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

Elevator control arm and sleeves Refer settings in **Image 1**

- 0mm - 2mm (0,0,2)
- 2mm - 34mm (0,0,1)
- 34mm - end (2,0,2)

Elevator races Refer settings in **Image 1**

- 0mm - 1mm (0,0,1) @ 100% infill
- 1mm - end (0,0,1) @ 0% infill

Image 1

Extruder 1 Toolhead

Overview

Extruder Toolhead Index Tool 0

Nozzle Diameter 0.40 mm

Extrusion Multiplier 0.80

Extrusion Width ☐ Auto ☒ Manual 0.42 mm

Ooze Control

☒ Retraction

☒ Coast at End

☐ Wipe Nozzle

Retraction Distance 9.00 mm

Extra Restart Distance 0.00 mm

Retraction Vertical Lift 0.00 mm

Retraction Speed 100.0 mm/s

Coasting Distance 1.50 mm

Wipe Distance 2.00 mm