# FFF Settings

**Process Name:** Process1

**Select Profile:** New Printer(2) (modified)   [Update Profile] [Save as New] [Remove]

## Auto-Configure for Material

PLA ▼  ⊕  ⊖

## Auto-Configure for Print Quality

Medium ▼  ⊕  ⊖

## General Settings

Infill Percentage: ———————————————————— 20%   ☐ Include Raft   ☐ Generate Support

| Extruder | Layer | Additions | Infill | Support | Temperature | Cooling | G-Code | Scripts | Other | Advanced |
|----------|-------|-----------|--------|---------|-------------|---------|--------|---------|-------|----------|

### Extruder List
(click item to edit settings)

Extruder 1

[Add Extruder]

[Remove Extruder]

## Extruder 1 Toolhead

### Overview

Extruder Toolhead Index   Tool 0 ▼

Nozzle Diameter   0.40   mm

Extrusion Multiplier   0.90

Extrusion Width   ○ Auto   ● Manual   0.40   mm

### Ooze Control

☑ Retraction   Retraction Distance   1.00   mm

Extra Restart Distance   0.00   mm

Retraction Vertical Lift   0.00   mm

Retraction Speed   1800.0   mm/min

☐ Coast at End   Coasting Distance   0.20   mm

☐ Wipe Nozzle   Wipe Distance   5.00   mm

[Hide Advanced]   [Select Models]                    [OK]   [Cancel]

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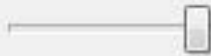
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### Layer Settings

Primary Extruder  [Extruder 1 ▼]

Primary Layer Height  [0.2000]  mm

Top Solid Layers  [3]

Bottom Solid Layers  [3]

Outline/Perimeter Shells  [2]

Outline Direction:  ⦿ Inside-Out   ○ Outside-In

☐ Print islands sequentially without optimization

☐ Single outline corkscrew printing mode (vase mode)

### First Layer Settings

First Layer Height  [90]  %

First Layer Width  [100]  %

First Layer Speed  [50]  %

### Start Points

○ Use random start points for all perimeters

⦿ Optimize start points for fastest printing speed

○ Choose start point closest to specific location

  X: [0.0]  Y: [300.0]  mm

[Hide Advanced]  [Select Models]          [OK]  [Cancel]

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☑ Use Skirt/Brim

| | |
|---|---|
| Skirt Extruder | Extruder 1 ▼ |
| Skirt Layers | 1 |
| Skirt Offset from Part | 4.00 mm |
| Skirt Outlines | 2 |

☐ Use Prime Pillar

| | |
|---|---|
| Prime Pillar Extruder | All Extruders ▼ |
| Pillar Width | 12.00 mm |
| Pillar Location | North-West ▼ |
| Speed Multiplier | 100 % |

*Creates a pillar that is used to prime the extruder after a to*

☐ Use Raft

| | |
|---|---|
| Raft Extruder | Extruder 1 ▼ |
| Raft Layers | 3 |
| Raft Offset from Part | 3.00 mm |
| Separation Distance | 0.14 mm |
| Raft Infill | 85 % |
| ☐ Disable raft base layers | |

☐ Use Ooze Shield

| | |
|---|---|
| Ooze Shield Extruder | All Extruders ▼ |
| Offset from Part | 2.00 mm |
| Ooze Shield Outlines | 1 |
| Sidewall Shape | Waterfall ▼ |
| Sidewall Angle Change | 30 deg |
| Speed Multiplier | 100 % |

[Hide Advanced] [Select Models]          [OK] [Cancel]

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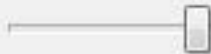
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## General Settings

Infill Percentage: ————————————————— 20%   ☐ Include Raft   ☐ Generate Support

| Extruder | Layer | Additions | **Infill** | Support | Temperature | Cooling | G-Code | Scripts | Other | Advanced |

### General

Infill Extruder [Extruder 1 ▼]

Internal Fill Pattern [Rectilinear ▼]

External Fill Pattern [Rectilinear ▼]

Interior Fill Percentage [20] %

Outline Overlap [15] %

Infill Extrusion Width [100] %

Minimum Infill Length [5.00] mm

Print Sparse Infill Every [1] layers

☐ Include solid diaphragm every [20] layers

### Infill Angle Offsets

[0] ▲▼ deg

[ Add Angle ]

[ Remove Angle ]

```
45
-45
```

☐ Print every infill angle on each layer

[ Hide Advanced ] [ Select Models ]                    [ OK ] [ Cancel ]

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## General Settings

Infill Percentage: [——————|——————] 20%    ☐ Include Raft    ☐ Generate Support

| Extruder | Layer | Additions | Infill | **Support** | Temperature | Cooling | G-Code | Scripts | Other | Advanced |

### Support Material Generation

☐ Generate Support Material

Support Extruder        Extruder 1 ▾

Support Infill Percentage    30   %

Extra Inflation Distance    0.00   mm

Dense Support Layers    0

Dense Infill Percentage    70   %

Print Support Every    1   layers

### Seperation From Part

Horizontal Offset From Part    0.30   mm

Upper Vertical Separation Layers    1

Lower Vertical Separation Layers    1

### Automatic Placement

*Only used if manual support is not defined*

Support Type    Normal ▾

Support Pillar Resolution    4.00   mm

Max Overhang Angle    45   deg

### Support Infill Angles

0   deg    | 0

Add Angle

Remove Angle

| Hide Advanced | Select Models |          | OK | Cancel |

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## Auto-Configure for Print Quality
Medium ▼ ⊕ ⊖

## General Settings

Infill Percentage: ———————————————— 20%   ☐ Include Raft   ☐ Generate Support

| Extruder | Layer | Additions | Infill | Support | **Temperature** | Cooling | G-Code | Scripts | Other | Advanced |

**Temperature Controller List**
(click item to edit settings)

> Extruder 1 Temperature
> Heated Bed

Add Temperature Controller

Remove Temperature Controller

# Heated Bed Temperature

### Overview

Temperature Identifier  | T0 ▼ |

Temperature Controller Type:  ◯ Extruder   ◉ Heated build platform

Relay Temperature Between Each:  ☐ Layer   ☐ Loop

☑ Wait for temperature controller to stabilize before beginning build

### Per-Layer Temperature Setpoints

| Layer | Temperature |
|-------|-------------|
| 1     | 70          |

Add Setpoint

Remove Setpoint

Layer Number  | 1 |

Temperature  | 200 | ºC

Hide Advanced | Select Models | OK | Cancel

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Infill Percentage: ▬▬▬▬▬|▬▬▬▬▬ 20%  ☐ Include Raft  ☐ Generate Support

| Extruder | Layer | Additions | Infill | Support | Temperature | **Cooling** | G-Code | Scripts | Other | Advanced |

### Per-Layer Fan Controls

| Layer | Fan Speed |
|-------|-----------|
| 1 | 0 |
| 2 | 100 |

[ Add Setpoint ]

[ Remove Setpoint ]

Layer Number  1 ▲▼

Fan Speed  60 ▲▼ %

### Speed Overrides

☑ Adjust printing speed for layers below  15.0 ▲▼ sec

Allow speed reductions down to  20 ▲▼ %

### Fan Overrides

☐ Increase fan speed for layers below  45.0 ▲▼ sec

Maximum cooling fan speed  100 ▲▼ %

☐ Bridging fan speed override  100 ▲▼ %

### Fan Options

☐ Blip fan to full power when increasing from idle

[ Hide Advanced ]  [ Select Models ]       [ OK ]  [ Cancel ]

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Medium ▼ ⊕ ⊖

### General Settings

Infill Percentage: ———————————[ ]——————————— 20%  ☐ Include Raft  ☐ Generate Support

| Extruder | Layer | Additions | Infill | Support | Temperature | Cooling | **G-Code** | Scripts | Other | Advanced |

### G-Code Options

☑ 5D firmware (include E-dimension)

☐ Relative extrusion distances

☑ Allow zeroing of extrusion distances (i.e. G92 E0)

☐ Use independent extruder axes

☐ Include M101/M102/M103 commands

☑ Firmware supports "sticky" parameters

☐ Apply toolhead offsets to G-Code coordinates

### Global G-Code Offsets

|  | X-Axis | Y-Axis | Z-Axis |  |
|---|---|---|---|---|
| Offset | 0.00 | 0.00 | 0.00 | mm |

☑ Update Machine Definition

Machine type | Cartesian robot (rectangular volume) ▼

|  | X-Axis | Y-Axis | Z-Axis |  |
|---|---|---|---|---|
| Build volume | 254.0 | Overrides the current Machine Dimensions when lo |  |  |
| Origin offset | 0.0 | 0.0 | 0.0 | mm |
| Homing dir | Min ▼ | Min ▼ | Min ▼ |  |

Flip build table axis  ☑ X  ☑ Y  ☐ Z

Toolhead offsets | Tool 0 ▼  X 0.00  Y 0.00

☑ Update Firmware Configuration

Firmware type | RepRap (Marlin/Repetier/Sprinter) ▼

GPX profile | Replicator 2 (default config) ▼

Baud rate | 250000 ▼ bits/sec

Hide Advanced | Select Models | OK | Cancel

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| Extruder | Layer | Additions | Infill | Support | Temperature | Cooling | G-Code | Scripts | Other | Advanced |

| Starting Script | Layer Change Script | Retraction Script | Tool Change Script | Ending Script |

```
M104 S0 ; turn off extruder
M140 S0 ; turn off bed
M84 ; disable motors
G28
```

← **G28 tells printer to return home when done**

Custom G-Code that is include

### Post Processing

☐ Create .x3g file for MakerBot printers using GPX plugin (see Tools > Firmware Configuration for conversion settings)

　☐ Add celebration at end of build (for .x3g files only)  [Random Song ▼]

☐ Create .makerbot file for 5th Gen MakerBot printers

Additional terminal commands for post processing

[                                                                    ]

Hide Advanced | Select Models | OK | Cancel

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---

| Extruder | Layer | Additions | Infill | Support | Temperature | Cooling | G-Code | Scripts | **Other** | Advanced |

### Speeds

| | | |
|---|---|---|
| Default Printing Speed | 3600.0 | mm/min |
| Outline Underspeed | 50 | % |
| Solid Infill Underspeed | 80 | % |
| Support Structure Underspeed | 80 | % |
| X/Y Axis Movement Speed | 4800.0 | mm/min |
| Z Axis Movement Speed | 1000.0 | mm/min |

### Dimensional Adjustments

| | | |
|---|---|---|
| Horizontal size compensation | 0.00 | mm |

### Filament Properties

| | | |
|---|---|---|
| Filament diameter | 1.7500 | mm |
| Filament price | 46.00 | price/kg |
| Filament density | 1.25 | grams/cm^3 |

### Bridging

| | | |
|---|---|---|
| Unsupported area threshold | 50.0 | sq mm |
| Extra inflation distance | 0.00 | mm |
| Bridging extrusion multiplier | 100 | % |
| Bridging speed multiplier | 100 | % |

Hide Advanced | Select Models | OK | Cancel

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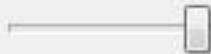
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### Layer Modifications

☐ Start printing at height  [0.00] ▲▼ mm
☐ Stop printing at height  [0.00] ▲▼ mm

### Slicing Behavior

Non-manifold segments: ○ Discard  ● Heal

☐ Merge all outlines into a single solid model

### Thin Wall Behavior

○ Only use perimeters for thin walls
● Allow gap fill when necessary

Allowed perimeter overlap  [10] ▲▼ %

### Ooze Control Behavior

☑ Only retract when crossing open spaces
☑ Force retraction between layers
☐ Minimum travel for retraction  [3.00] ▲▼ mm
☐ Perform retraction during wipe movement
☑ Only wipe extruder for outer-most perimeters

### Movement Behavior

☐ Avoid crossing outline for travel movements

Maximum allowed detour factor  [3.0] ▲▼

### Tool Change Retraction

Tool change retraction distance  [12.00] ▲▼ mm
Tool change extra restart distance  [-0.50] ▲▼ mm
Tool change retraction speed  [600.0] ▲▼ mm/min

[Hide Advanced]  [Select Models]                    [OK]  [Cancel]