

## **"First Piece Too Short" Error**

"First Piece Too Short" error can appear when you've imported your GCode file into Chroma and are ready to export it to a MSF file.

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## INTRODUCTION

This error can appear when you've imported your GCode file into Chroma<sup>TM</sup> and are ready to export it to a MSF file (*File > Save For Printer*).

This error occurs because the first piece of filament inputted into Palette needs to be long enough to pass through the cutter and reach the outgoing drive. Once the filament is grabbed by the outgoing drive, it is able to retract and extend to control the filament during the splicing sequence. Accounting for a few centimetres as a buffer zone, this minimum distance is 14 cm. If the first piece of filament is too short (<14 cm), Palette is unable to grab this filament at its outgoing drive, so we ask to either increase the number of skirts around the model or increase the size of the model as you have done.

## Step 1 — Increase the Number of Skirts (Cura)

| Dual extrusion                           |       | Support  |         |  |  |
|--|-------|--|---------|--|--|
| Wipe & prime tower volume per layer (mm3 | 3) 15 | Structure type   | Lines N |  |  |
| Retraction                               |       | Overhang angle for support (deg)   | 60      |  |  |
| Minimum travel (mm)                      | 1.5   | Fill amount (%)  | 15      |  |  |
| Enable combing                           | All ~ | Distance X/Y (mm)  | 0.7     |  |  |
| Minimal extrusion before retracting (mm) | 0.02  | Distance Z (mm)  | 0.15    |  |  |
| Z hop when retracting (mm)               | 0.0   | Black Magic  |         |  |  |
| Skirt                                    |       | Spiralize the outer contour  | 8       |  |  |
| Line count                               | 8     | Brim   |         |  |  |
| Start distance (mm)                      | 3.0   | Brim line amount   | 20      |  |  |
| Minimal length (mm)                      | 150.0 | 0-ft   |         |  |  |
| Cool                                     |       | Raft   | 5.0     |  |  |
| Fan full on at height (mm)               | 0.5   | Exera margin (mm)  | 2.0     |  |  |
| Fan speed min (%)                        | 100   | Une spacing (mm)   | 0.2     |  |  |
| Fan speed max (%)                        | 100   | Rase line width (mm)   | 1.0     |  |  |
| Minimum speed (mm/s)                     | 10    | Interface thickness (mm)   | 0.27    |  |  |
| Cool head lift                           |       | Interface line width (mm)  | 0.4     |  |  |
| Infill                                   |       | Airoao   | 0.0     |  |  |
| Solid infill top<br>Solid infill bottom  | NIX   | First Laver Airgap   | 0.22    |  |  |
| Infil overlap (%)                        | 15    | Surface layers   | 2       |  |  |
| Infil prints after perimeters            |       | Surface layer thickness (mm)   | 0.27    |  |  |
|  |       | Surface layer line width (mm)  | 0.4     |  |  |
|  |       | Fix horrible   |         |  |  |
|  |       | Combine everything (Type-A)<br>Combine everything (Type-B)<br>Keep open faces<br>Extensive stitching | M<br>   |  |  |

- To increase the number of skirts in Cura, go to Expert > Open Expert Settings. On that screen, you would increase the Line Count portion under Skirt.
- Please note that this solution will not work with versions after Cura 15. If you're experiencing this issue while using Cura V2 or higher, please email us your GCode.

## Step 2 — Increase the Number of Skirts (S3D)

| ocess Name:                | Process1       |  |                  |                         |                       |              |             |                |                  |
|----------------------------|----------------|--|------------------|-------------------------|-----------------------|--------------|-------------|----------------|------------------|
| lect Profile:              | Type A Machine | Tune A Machines 2014 Series 1 (Palette) (modified) |                  |                         |                       | Undate       | e Profile   | Save as New    | Remove           |
| uto-Configure for Material |                |  |                  | Auto-Configure for Prin | nt Quality            |              | Sure us nem |                |                  |
|                            |                |  |                  |                         |                       |              |             |                |                  |
| PLA                        |                |  |                  |                         | Medium                |              |             |                |                  |
| Seneral Settings           |                |  |                  |                         |                       |              |             |                |                  |
| Infill Percentage:         |                |  |                  |                         |                       |              | 13%         | ] Include Raft | Generate Support |
| Extrudor 1                 | war Additions  | Infill Support                                     | Temperature      | Cooling                 | C-Codo Scripto        | Other        | Advanced    |                |                  |
| Excluder                   | ayer Additions | Ileo Skirt/Brim                                    | Temperature      | cooning                 | Use Prime Pillar      | oulei        | Auvanceu    |                |                  |
|                            |                | Chief Extender                                     | Drimana Extrado  |                         | Drime Dillar Extruder | All Detrudos |             | 8              |                  |
|                            |                | Skirt Laura  | Primary Extrude  | H •                     | Prime Pillar Extruder | 12 00        | 15          | 1              |                  |
|                            |                | Skirt Offset from Bart                             | 1 · ·            |                         | Pillar Voluti         | Horth Most   |             |                |                  |
|                            |                | Skirt Outlines                                     | 4.00 V mm        | ·                       | Speed Multiplier      | 100 A        |             | 8              |                  |
|                            |                | Skirt Oddines                                      | 2                |                         | Speed Multiplier      | 100 +        | 70          |                |                  |
|                            |                | Use Raft   |                  | Use Ooze Shield         |                       |              |             |                |                  |
|                            |                | Raft Extruder                                      | Primary Extruder | n v                     | Ooze Shield Extruder  | All Extrus   | ders *      |                |                  |
|                            |                | Raft Layers  | 3 🗘              |                         | Offset from Part      | 2.00 \$      | mm          |                |                  |
|                            |                | Raft Offset from Part                              | 3.00 🗘 mm        |                         | Ooze Shield Outlines  | 1 🗘          |             |                |                  |
|                            |                | Separation Distance                                | 0.14 🌲 mm        |                         | Sidewall Shape        | Waterfall    |             |                |                  |
|                            |                | Raft Infill  | 85 🌻 %           |                         | Sidewall Angle Change | e 30 🌻       | deg         |                |                  |
|                            |                | Disable raft base                                  | layers           |                         | Speed Multiplier      | 100 🌻        | 96          |                |                  |

- For Simplify3D, please note that Chroma uses the topmost tool assignment/colour for the skirts instead of the bottom. If you need to adjust the number of skirts in a multi-colour print, ensure that the skirt is assigned to the same tool ID as the first extruder at the bottom of the Z-height.
- You can increase the number of skirts in Simplify3D by accessing FFF settings menu > Additions.

If you have any questions, please contact us at <a href="mailto:support@mosaicmfg.com">support@mosaicmfg.com</a>.