Stringing Test

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VIEW IN BROWSER

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Summary

Economical and fast to print stringing test to get your retraction settings right.

3D Printers > Test Models

Tags: test benchmark calibration testprint string calibrationtest 3dprintertest stringing stringingtest

Economical and fast to print string test for quick iteration over different parameters that might influence stringing on your printer.

Printing Parameters

Print this in the layer heigth you want to use or a medium setting, something like 0.2mm. Keep printing speed resonably low to avoid problems with layer cooling and artefacts from to fast movements.

Parameters you want to watch out for and change are (in Pruca Slicer under “Printer Settings”):

- Retraction length
  - ca. 0.5 - 2mm on direct extruders
  - ca. 3 - 10mm on bowden extruders
  - Prusa default is 0.8mm for the MK3S+

    - on my Ender 3 V2 Neo the best setting is 7mm
- Lift Z
    - try 0.4mm and adjust while trying (in 0.05mm steps e.g.)
    - Prusa printers have this on by default
    - on my Ender 3 V2 Neo I get better results without it
- Retraction Speed
    - try 10 - 100mm/s in 10mm/s steps and finetune with 5mm/s steps
    - Prusa default is 35mm/s for the MK3S+
    - on my Ender 3 V2 Neo the best setting is around 30mm/s
    - be careful to not overdo this to avoid separation of the hot, molten filament from the rest
- Wipe while retracting
    - does a small wiggle-move to remove excess filament hanging out of the nozzle before the travel move
    - probably best to turn this on and try changing others parameters before turning wipe off as a measure against stringing
- Retract amount before wipe
    - does what it says
    - might be wise to do some amount of retract on bowden extruders to decrease pressure in the nozzle before wiping
    - Prusa default is 0% for the MK3S+
    - on my Ender 3 V2 Neo it's set to 70%

Your mileage may vary regarding the settings and whats best for your printer. Just try and adjust accordingly. Thats why the model is small and prints fast. It also may vary with filament supplier and even Slicer (Cura, Prusa Slicer, ...). Printing Temperature also plays a role in stringing so it's advisable to print a temperature tower beforehand to see what temperature works best with your filament.

Only adjust one paramter at a time and label your models for comparision (otherwise you will loose track. Been there, done that..)

Take the provided settings from the Prusa MK3S+ for a direct extruder and the Ender 3 V2 ones for bowden extruders as a starting point for your tests and iterate from there. Happy printing :)

Model files

stringing-test.3mf

stringing-test.stl

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