



Ultimate Fan Speed Test



Photogad

[VIEW IN BROWSER](#)

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Summary

Use this to find the perfect fan speed! Works DYNAMICALLY with PRUSA SLICER!



1.60 hrs



1 pcs



0.20 mm



0.40 mm



PLA



12 g



Prusa
MK3/S/S+

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Tags: [prusa](#) [mk3](#) [test](#) [calibration](#) [speed](#) [mk3s](#) [tower](#)
[fan](#) [fix](#) [prusaslicer](#)

Updates:

2/23/2021 - NEW v2 MODEL! Increases overhang length, makes the cones more pointy, adds support to the microcylinder on the left so it does not wobble and cause false testing, and also adding some other new windows and holes. Also added .STEP file.

2/22/2021 - Changed the description to add more detail.

What this does:

Tests your fan speed, from 0% up to 100% in 1% increments.

Why you want this:

Different materials, and even different brands of the same materials, print better with certain fan speeds - including fine detail, bridging performance, surface quality, etc.

Requirements:

- Latest PrusaSlicer
- Use fan/cooling settings in the photo.
- Use an object that is 100mm tall (like the one you can download [here](#)).
- Use 0.20mm layer height.
- Highly suggested to first calibrate your filament temperature **using a temperature tower**.

How to use this:

You can use the supplied gcode and print it directly if you want to print at 215c with PLA. If you want a different temperature, slice the model yourself using the fan/cooling settings in the photo.

Every overhang that sticks out is an extra 10% fan speed, starting from the bottom to the top.

What to look for:

You can look at the quality of the bridging above the “windows” in the print, the quality of the overhangs that stick out, the quality of small details, strings, and the surface quality.

What you want:

You want to pick a fan speed that provides good bridging capabilities, good detail, good surface quality, and has least amount of stringing. Sometimes, you can actually be using too high fan speed which leads to more stringing and worse layer adhesion/part strength. So start from the bottom and choose which looks best, and maybe add an additional 5% fan speed to be safe.

Some materials such as PETG also tend to be more shiny/glossy when printed at higher temperatures or with reduced fan speed. You can create separate profiles in PrusaSlicer for shiny prints.

MY PRINT IS WARPING OR CATCHING AT THE BOTTOM AREAS AND I CAN'T COMPLETE THE TOWER!

Well the bottom starts out with little to no fan, but you should still be able to print it without trouble as long as your temperature is not too high and the ambient temperature in your room is not too high. If you are having printing errors with this test, you are printing too hot or need to move the printer to a cooler room.

Fan recommendation:

I recommend replacing the stock print fan on the Prusa MK3S(+) with the **LDO 5015 Blower Fan**. It is louder but it spins 500rpm faster and blows a

lot more air. With this fan I can run most PLA between 50 to 70 fan speed, where as with the stock Prusa fan I could never go below 90% fan speed.

Please re-mix this:

3D modeling is not my strong suit. I encourage anyone with a better mechanical understanding to take my concept here and create a better object to test fan speed.

I like to modify my printer parts, trying to make them better. Take a look at some of my other projects and designs:

MK3S Y-Axis Motor Mount Ultra

(improved Y-Axis motor mount with better shaft and nuts)

MK3S Z-Axis Tops Improved

(Less vibration and easier Z-Screw Alignment)

D.R.O.P.P.E.R. - PINDA Adjustment & Positioning Tool

(Achieve the perfect SUPERPINDA position)

MMU2S Single Filament Guide Festo M5 Coupler

(Retain your original MK3S spool mounting while still using MMU2S in single color mode)

Nozzle Holder Case Ultra

(Biggest and bestest way to store your extra nozzles).

Ultimate Fan Speed Test

(Determine your best fan speed dynamically)

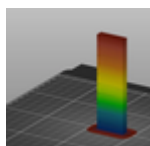
... And more! **Check out my profile** for a full list of my designs.

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<https://www.patreon.com/photogad>

or if you'd prefer to make a one time donation via PayPal, use the donate link next to my name at the top of this page. I'd appreciate it! ☺

This remix is based on



100mm Dynamic Fan Test Tower

by Photogad

Model files



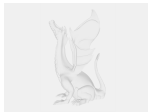
ultimate-fan-test-v2.3mf

📄 If you want to change any settings like print temperature or nozzle sizes, use this file.



ultimate-fan-test-v2.stl

📄 Use this STL if you want to slice your own using the fan speeds in the photo.



ultimate-print-fan-test-tower-v2.step

📄 Use this STEP file if you want to re-mix this object.

Print files



ultimate-fan-test-v2-pla.gcode

🌀 PLA 📏 0.40 mm 📏 0.20 mm ⌚ 1.60 hrs ⚖️ 12 g

🖨️ Prusa MK3S/S+ & MMU2S

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