Recreator 3D - Quick Start Guide

Scan for Video Guide

1. Clean the PET#1 Bottle. Normal shaped bottles work best, but odd shaped ones can be used. Other containers may also be able to be used, though you will have to experiment.

- Cut the label and avoid damaging the bottle. Cut away from the bottle, not into it. Any cuts or damage to the bottle can easily ruin a proper pull.

- Clean off all the Glue. You can use Orange Deodorizer Spray or Goo-Off applied to a cotton pad. Wipe with pressure and away from the bottle.

> **Circular motions will not remove it, just spread it. If any labels or glue are stubborn to remove, you can use a plastic or a dull spatula to help scrap this off.**
>
> **Some bottle's labels can be removed easily. Some come right off with no glue being used. Normal soda bottles tend to have a single strip of glue and can be easily wiped clean.**
>
> **Some bottles need to be scrapped a little extra. Some more expensive water bottles have excessively glued labels.**
>
> **After removing these labels, you can spray Orange Deodorizer Spray directly onto this glue, using a scraper as well cotton pads to remove it. If it's thick, it's best to scrape and remove excessive glue with a paper towel.**

- Wash the bottle with soapy hot water and rinse it. Dry off the outside with a towel.

- Cut off the bottom of the bottle and dry off the inside with a towel.

- Double check the glue has been thoroughly removed and that your bottle is dry from all water.

> **Your bottle is now ready to be stripped manually by hand or loaded onto The Recreator 3D and stripped while pulling.**

2. Strip the Bottle by Hand or Load to Pull

- Average Pull is 8mm wide. The Average bottle is .30-.35 thickness and should pull without issues into a 1.75mm nozzle. Using a Caliper Ruler, you can gauge the thickness and use the Bottle Thickness Chart to determine a proper strip width based on bottle's thickness.

> **If the strip causes skipping, check that the ratios are correct. Your Motors should also be calibrated for around 1.0 Vref (done inhouse if you purchased). Running pre-pulled strips may help.**

- Cut a starter strip into the bottom of the bottle; enough to feed into the cutter, about 2-3 inches long by 1/4th of an inch wide.

- You can manually strip down a bottle by hand in preparation. The unit can pull precut strips easier. This method is suggested on odd shaped bottles.

> **Or you can load the bottle onto the cutter and pull forward about 12 inches, in preparation to load into the hotend to strip while pulling.**

- Be mindful of any weak cuts before loading, weak cuts will break at the nozzle. Cut clean at loading will help initial pull among loading.

- Cut the strip into a thin guide thread, about 1/6th wide and 3 inches long.

- Thread the strip through the cold 1.75mm nozzle and tension with a pair of pliers. Some users use a thin strip of wire as a guide to easier thread. Attach a binder clip to the strip to lock into place while heating.

- Heat the Printer to 210C, it will not operate under 200C. While heating, hold the thread of filament as it will kick back during heating. Using a binder clip is best for this, locking it in place while heating.

- Once at temp of 210C; slowly with some tension while using needle nose pliers, pull the strip through the nozzle. If your filament snaps, you've pulled too fast, too hard, or the strip had a weak cut. You may have also not fully cut off the initial bottle cut off before the bottle cutter initialized.

- With the pliers, pull the filament forward about 3-4 inches at a time. Do this until you have about 1 foot of filament beyond the spooler.

- Guide the filament onto the left side of the spooler and put it through the locking hole. Continue into the next hole beyond that and the filament will lock in place among the pull. You can also use a drawstring and a slipknot method if it is easier for your methods.

- Now that the filament is loaded onto the spooler, you can run the gcode command.

> **Pressing the SD Card Icon, run the 300mm Suggested Speed gcode file. The average bottle should pull without any issues at this speed.**
>
> **Some bottles can pull faster without issues. Going over 500mm in speed is not suggested as binding and filament deformation has been seen.**

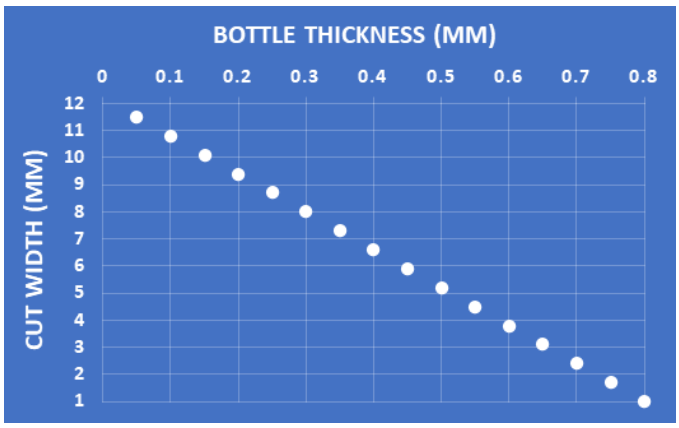
- 300mm Suggested Speed should pull around 25G from a 2L bottle, in about 25 minutes.
Once the unit runs the initial gcode, It will stop and stay at temp. This is done so you can keep pulling if needed...or finish a pull. The gcode can be easily altered for the size of your bottles being pulled.

- Once happy with your pull length, you can cut the filament and continue unloading. BE VERY CAREFUL UNLOADING. The filament WILL WHIP AROUND the spooler. It's VERY SUGGESTED to have on SAFETY GLASSES, as well not having your face around the unit by about 4 feet.

- Power off the unit and unload your filament.

- You can hand spool and store with twist-ties or load it right to your printer for your next print!

Happy Recreating!



Filament from soda bottles suggested slicer settings using CURA 4.8 and Ender 3 clone with Dual Gear Extruders and Dual Cooling:

- **Layer Height.....0.2mm**
- **Nozzle Temp.....260**
- **Bed Temp.....75**
- **Flow.....130%**
- **Initial Layer Flow.....130%**
- **Print Speed 30mm**
- **Fan.....15%**
- **Retraction.....4.5mm**
- **Retraction Speed…....40mm**

- ***STL: https://www.thingiverse.com/thing:763622***

  Slicer Profiles can be found in the Files Section of the Facebook Group:

  https://www.facebook.com/groups/recreator3d/files/