

Extension Cord Spooler Print & Assembly Guide

Two empty filament spools become a carry reel for an extension cord.

PET-G

All-Printed Hardware

No Tools

Built by MakerX Designs · Virginia Beach, VA · makerxdesigns.com · © 2026

Don't throw out your empty filament spools. This kit clamps two of them side by side and gives them a carry handle, so an extension cord winds around both and stays put.

A **base plate** with two posts sits under the spools and a **handle plate** sits on top. Two printed **screws** pass up through the posts, and two knurled **nuts** clamp everything together by hand. Two **bushings** center the top of each spool on its post. Every piece of hardware is printed.



Loaded: one loop of cord around both spools.

You also need

Two empty 1 kg filament spools (not included)

The kit was sized from measurements of 1 kg spools from 16 brands. They run **195–205 mm** across, **58–70 mm** wide, with a **51.5–56 mm** center hole. Check yours against those numbers.

In the download

File	What it is
extension-cord-spooler.3mf	Start here. Every part on three plates, with the tested PET-G profile already set up.
Five .stl files	The base plate, the handle plate, and one screw, nut and bushing. Print two of each piece of hardware.

1 • Print it

Plate	Time	Filament
1 • Handle plate	4 h 43 m	99.68 g
2 • Base plate	4 h 31 m	152.98 g
3 • 2 screws, 2 nuts, 2 bushings	5 h 39 m	100.33 g
Total	14 h 53 m	352.99 g

- 1 Open `extension-cord-spooler.3mf` in any slicer that imports 3MF project files. When it asks whether to load the project's print settings, **say yes**.
- 2 Slice and print all three plates.
- 3 **Check your bed.** The base and the handle plate are both 305 mm long. They fit a 260 mm bed only when laid corner to corner, which is how the 3MF has them.

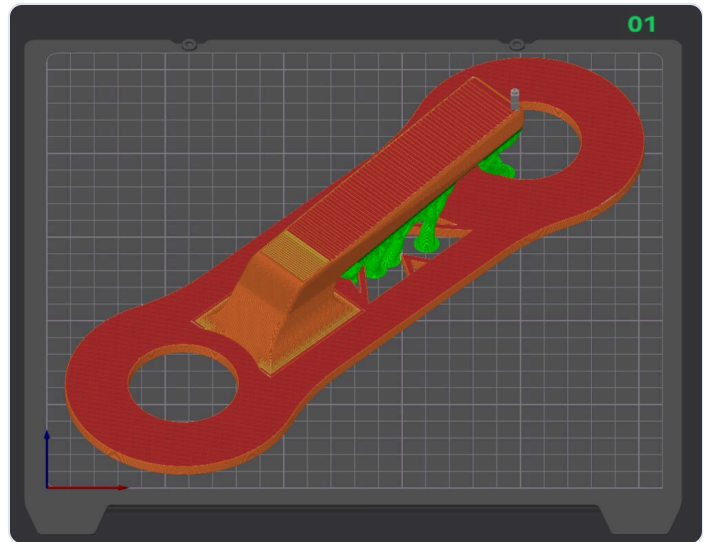


Plate 1: the handle plate lies diagonally. The green tree supports hold up the underside of the carry bar.

Print it in PET-G

My first prototype was PLA, and its handle was weak. I changed the handle's shape and printed the final one in PET-G, which is what the photos show and what the 3MF is set up for.

The profile baked into the 3MF

Using your own profile instead? Match these. Sliced for a 0.4 mm nozzle.

Quality	
Layer height	0.20 mm
First layer	0.20 mm
Walls	3 loops
Top / bottom	5 / 3 layers
Infill	15 % gyroid
Z anti-aliasing	On

Material & plate	
Filament	PET-G
Nozzle temp	250 °C
Bed temp	80 °C, epoxy resin plate
Supports	Tree , auto, 30° threshold
Brim	Auto

Only the handle plate needs supports. The base and the hardware print without any.

2 • Put it together

Peel the supports off the handle plate first. Assembly needs no tools.



Everything you need: the printed parts and two empty spools.



1. Screws up through the posts.



2. A spool over each post.



3. A bushing in each spool.

- 1 **Push a screw up through each post** of the base plate from underneath, so the knurled head sits under the base and the thread sticks out of the top of the post.
- 2 **Lower a spool over each post.** The spools sit side by side with their flanges almost touching.
- 3 **Seat a bushing** in the center hole on top of each spool. Its step drops into the hole and centers the spool on the post.



4. The handle plate goes on over both threads.



5. A knurled nut on each screw, hand tight.

- 4 Lay the handle plate on top, with a screw coming up through each of its holes.
- 5 Spin a knurled nut onto each screw and tighten it by hand until the spools are clamped and no longer move.

3 • Wind it and carry it

- 1 Wrap the cord **around both spools at once**, in one long loop between the flanges, as in the photo on page 1.
- 2 Keep each turn inside the flanges. They are what hold the coil in place.
- 3 Carry it by the bar on the handle plate.



Carried by the handle.

Where precision meets the printer

Thanks for printing this one. If it gives a couple of empty spools a second job and keeps a cord from tangling, that is exactly what it was designed to do.

For years my design world existed entirely behind a screen. As a mechanical engineer I spent countless hours building complex CAD models, but there was always a missing link — the ability to hold an idea in my hands. That changed in January 2026, when I went headfirst into 3D printing. The moment that first layer stuck to the bed, the gap between concept and reality vanished.

Coming from a background where precision is everything, tolerances aren't suggestions to me — they are a religion. I didn't want to print trinkets; I wanted to apply industrial engineering discipline to desktop manufacturing. Every wall count, every layer height and every infill percentage in this guide is a deliberate decision backed by testing. If a part can't handle the environment it was built for, it goes back to the drawing board.

Three principles behind every print

01

Functional Engineering

High-utility, real-world solutions rather than purely decorative models. If it doesn't solve a practical problem, it doesn't leave the workstation.

02

Rigorous Tolerances

Designed in professional CAD with mechanical intent — press-fits that click and assemblies that work straight off the build plate. No sanding, no filing, no guesswork.

03

Bridging the Gap

Industrial structural integrity at maker speed. Proving a desktop printer can produce parts worthy of real engineering applications is what drives every release.

The workshop

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IF THIS ONE EARNED ITS SPOT

A **Like** or a **Favorite** on the model page takes a second and genuinely helps. A **Boost** helps more than either — it is what puts a design in front of makers who would never otherwise come across it. And if you **Follow** me, new models and updates land in your feed as they are released. However you choose to support it, thank you — it is what keeps everything here free to download.

Built one from your own spools? Post a make with a photo — I would love to see which spools you used.

Happy printing. — MakerX Designs · makerxdesigns.com · © 2026