

Belt Hanger Print & Use Guide

Four belts, two bars, one hook — onto the closet rod you already own.

No Supports

One Plate, Under an Hour

Pre-Configured 3MF



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

A belt drawer is where belts go to tangle. This hangs them instead: one hook over the rod you already own, two bars, four open slots, every buckle in plain sight — printed flat, in one piece, in under an hour.

In the download

File	What it is
<code>makerx-belt-hanger.3mf</code>	Start here. One plate, laid out, with the tested profile traveling with it.
<code>makerx-belt-hanger.stl</code>	The raw mesh, for your own slicer. Already lying flat — no rotation needed.

1 · Check it fits your rod

Nothing here is adjustable, so spend thirty seconds with a tape measure first. Every number below is taken off the model.

The part	
Overall size	137 × 184 × 10 mm · 4 belt slots on two bars
On the plate	28.5 g PLA · 9.56 m · 58 m 37 s
Hook	drops over a rod up to 38 mm across; seats one up to 50 mm

That covers almost every closet

A timber or steel closet rod runs 32–35 mm and a wire-shelf rail is thinner still, so the hook as printed drops straight over both — as it does over a garment rack or an over-the-door bar.

2 • Slice it

- 1 Open `makerx-belt-hanger.3mf` in Creality Print — or any slicer that imports 3MF project files.
- 2 When you are asked whether to load the project's print settings, **say yes** — that is the whole point of the 3MF.
- 3 Confirm your printer and filament are selected, then slice. Nothing else needs touching. Using the STL instead? Drop it on the plate as-is — already flat and face up.

★ Leave supports off

The hanger is a flat 10 mm-thick profile lying on its side, so there is not one overhang in the print — the hook included. Supports would only scar the visible face.

3 • The profile baked into the 3MF

Using your own profile instead? Match these — all sliced and print-tested on a Creality Hi with a 0.4 mm nozzle.

Quality	
Layer height	0.20 mm (first layer 0.20)
Nozzle	0.4 mm
Walls	2 loops
Top / bottom	5 / 3 layers
Infill	15 % gyroid
Seam	Aligned

Plate adhesion	
Supports	Off
Brim	Outer only, 5 mm
Brim gap	0.4 mm

Material & speed	
Filament	PLA (tested on Creality CR-PLA)
Nozzle temp	220 °C (first layer 220)
Bed temp	60 °C
Outer wall	150 mm/s
Inner wall	300 mm/s
Infill	270 mm/s

Other materials

PLA is all this part needs — the arms carry a couple of kilos in bending, not impact. Reach for PETG or PLA+ only if the closet gets genuinely hot; slow the outer wall if you do.

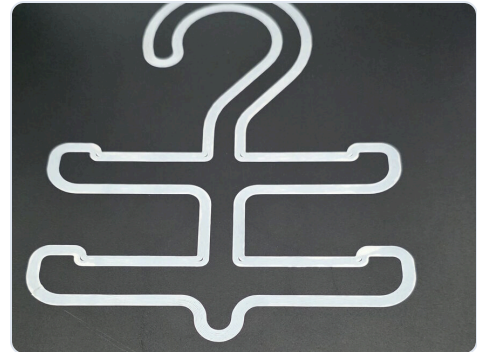
4 • Before you hit print

- ☐ Bed clean and the first layer squashing properly — this print is almost all perimeter, so the first layer decides the whole job.
- ☐ Supports confirmed **off**.
- ☐ Brim present. The hook tip and the four arm ends are the first things that will curl, and the 5 mm outer brim is what stops them.
- ☐ Around 29 g of filament left on the spool.

5 • Off the plate

There is nothing to assemble and nothing to glue — the hanger comes off the plate finished. Two minutes of tidying is all it asks for.

- 1 Let the plate cool before you touch it. Warm PLA is soft, and the arms are long enough to take a set if you lever them.
- 2 Flex the plate and lift the part off. Peel the brim away from a corner; at a 0.4 mm gap it normally lets go in one continuous piece.
- 3 Run a fingernail or a deburring blade around the bottom edge, especially inside the four slots where a whisker of brim likes to hide.
- 4 Check the four arm tips. Those upturned lips are what keep a belt from sliding off, so they want to be clean and square.



The brim, left behind. That thin outline is what held the hook tip and the four arm ends flat for an hour.

6 • Hang it and load it

Drop the hook over the rod and let it hang. Load it like this:

- **One belt per slot, buckle to the front.** Lay the belt over a bar with the buckle on the near side and the tail hanging — you pick belts by their buckle, so that is what should be facing you.
- **Fill it evenly, heaviest low.** Two slots on the upper bar, two on the lower. Spreading the load left and right keeps the hanger square on the rod, and a thick work belt on the bottom bar keeps the center of gravity where you want it.
- **Thin belts can double up.** Narrow dress and chain belts happily share a slot; four slots does not have to mean only four belts.
- **Take one out without disturbing the rest.** The slots open at the front, so a belt lifts straight out — and the lipped arm ends stop its neighbors traveling while you do it.



Three loaded, one slot spare. Buckles forward, tails down, nothing tangled.

7 • Making it yours

- **Resizing.** Scale the STL **X, Y and Z together** so the hook keeps its shape — and remember that scaling changes the hook opening too, so re-check it against your rod.
- **One per plate.** At 137 × 184 mm the hanger fills a good part of a 260 mm bed, so print them one at a time. At under an hour each, a set of four is an afternoon.
- **Color.** The MakerX mark faces up as it prints, so a fine acrylic paint pen wiped back flat picks it out cleanly — or swap filament mid-print for a two-tone hanger with no seam to hide.

Where precision meets the printer

Thanks for printing this one. If it earned a permanent spot in your closet, 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

Mechanical engineering degree · SolidWorks precision modeling · two Creality Hi printers · Virginia Beach, Virginia · every design free to download.

A note on sharing

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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.

Hanging something this one doesn't quite suit — ties, scarves, a rod that is wider than 50 mm? Leave a comment on the model. That is where the next version starts.

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