



The Recreator 3D : MK6 DIY BOM - Turn PET1 plastic bottles into 3D filament



JRT3D

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Summary

Turn PET1 plastic bottles into 3D filament. The Recreator 3D : MK6 Fun Size

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- IF YOU JUST BOUGHT a PARTS KIT from KB-3D.com → please go to the following download page for the MK6 : Fun Size KB-3D Build Kit : <https://www.printables.com/model/1246713-the-recreator-3d-mk6-fun-size-a-kb-3dcom-build-kit>

If you are here otherwise to DIY and source your own parts - please follow and use the below files and guides...

The Recreator3D.com -MK6 : FUN SIZE

- Turning PET1 Bottles into Filament with Repurposed 3D Printers

We're not just recycling—we're **recreating**. At [Recreator3D.com](https://recreator3d.com), we're transforming **PET1 plastic bottles** into **high-quality 3D printing filament** using **pultrusion technology**. But that's not all—we're also **repurposing old 3D printer parts**, like Ender 3 frames, extruders, and motion systems, to build **custom pultrusion units**. Instead of tossing outdated machines, we're using them to power the recycling process itself.

Want to get started? [Recreator3D.com/quickstart](https://recreator3d.com/quickstart) is your go-to resource. Whether you're looking for **how-tos**, **community builds**, or **project history**, everything you need is right there.

Looking to connect? Join the conversation, share your work, or get support from others working with **PET1 pultrusion and recycled 3D printer parts**:

Facebook Group: facebook.com/groups/recreator3d

Discord Server: discord.gg/jwPQqRsv6T

We're giving waste a second life—**come be part of it**.

[Recreator3D.com](https://recreator3d.com) - Less Waste. More Prints.

MK6: Fun Size — December 24, 2022

The **MK6: Fun Size** emerged as a more compact and affordable DIY parts kit, designed to reduce the size of the **MK5** by **1/3rd** and incorporate the **MK4 spooler** into a smaller frame. This blend of **old and new technologies** makes it perfect for home filament production while maintaining high performance.

The MK6's smaller frame size, combined with a **dual-gear single motor** and a **build volume of 165 x 165 x 180 mm** (6.5 x 6.5 x 7

inches), allows users to create high-quality **PET#1 filament** at home with ease. The **smaller format** also made the MK6 **easy to ship affordably**, as well as provided a **smaller footprint** for **3D printing the parts**, making it accessible for hobbyists and makers.

This design is ideal for smaller **3D printers** like the **Ender 3** and **Prusa Mini**, which can easily print the MK6 parts, further reducing the overall cost for users.

LDO played a key role in helping the project gain **reach within the RepRap community** and provided **initial encouragement** for the MK6's development toward a potential **kit release**. Their support helped inspire the drive for making the MK6 smaller and more accessible to a wider audience.

The MK6 design was refined with valuable feedback from the **Recreator 3D community** and **beta testing**, with **Nick Jones** contributing to the refinement of the **build manual** based on his experience with the **MK4 spooler** design.

Key Differences:

- **1/3rd the size of the MK5:** The MK6 is a **more compact** version of the MK5, reducing the overall footprint.
- **MK4 spooler integration:** The **MK4 spooler** was integrated for reliable spooling performance in a smaller unit.
- **Dual-gear motor:** Features a **dual-gear single motor** for enhanced spooling capability.
- **Smaller build volume:** A **build volume of 165 x 165 x 180 mm** (6.5 x 6.5 x 7 inches) suitable for small printers like the **Ender 2 Pro**.
- **Easy shipping & small footprint:** The **smaller format** made it more affordable to ship, while also reducing the **footprint** for 3D printing parts, making it accessible to more users.
- **Compatible with smaller printers:** **Ender 3** and **Prusa Mini** can easily print MK6 parts, lowering costs for users.
- **LDO's support:** **LDO** helped expand the MK6's **reach within the RepRap community** and provided encouragement to develop it into a potential kit.
- **Community-driven development:** The MK6's design benefited greatly from feedback and collaboration from the **Recreator 3D community**, with **Nick Jones** refining the **build manual**.

Please find the Parts Files Below as well the Written Documents live BUILD video!

FRENCH BUILD VIDEO can be found here:

and French Operations Video here:

Join Our Groups to Stay Up To Date!

- FACEBOOK: <https://www.facebook.com/groups/recreator3D>
- DISCORD: <https://discord.gg/vn2CH72bMq>
- FACEBOOK FRENCH: <https://www.facebook.com/groups/recreator3dfrance>

The Recreator 3D's purpose is to Recreate PET#1 recyclable plastic bottles into useable 3D filament.

The smallest, most compact, and portable pultrusion unit seen within the community. It's ability to strip, reform, color, and spool all in one continuous pull cycle.

This community kit should inspire most households and community team leaders.

The Recreator 3D will be 100% free as a community build.

I wanted to further adapt PET#1 recycling to be more accessible to every person even easier. With this goal; we'll reshape our future's recycling methods, One bottle at a time!

JRT

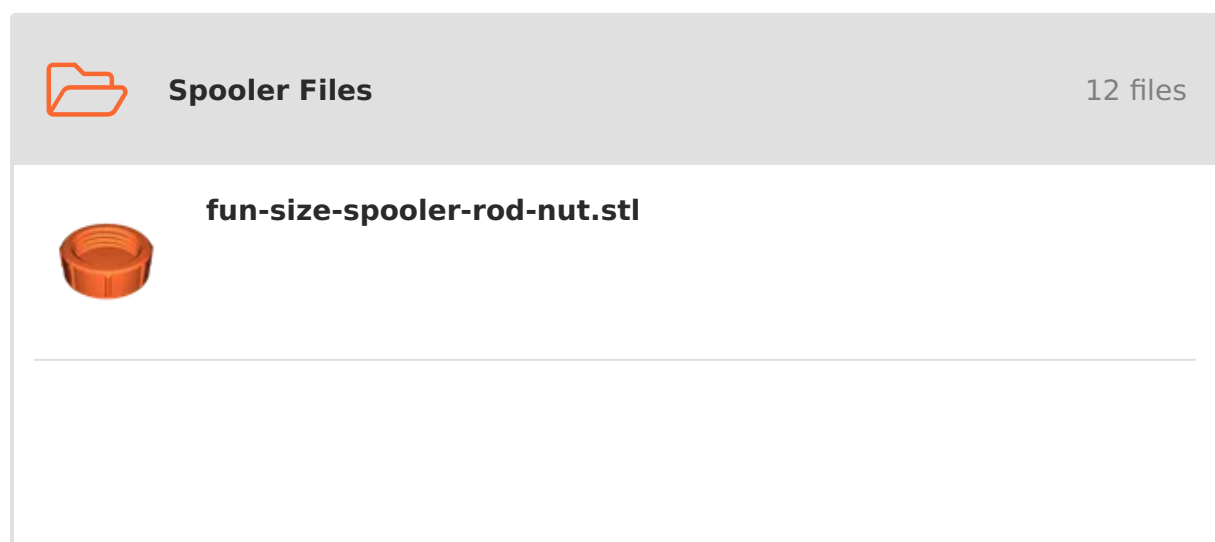
Joshua R. Taylor

<http://jrt3d.com/>

<http://recreator3d.com/>

<http://recycle3d.xyz/>

Model files





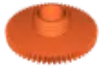
fun-size-spooler-front.stl



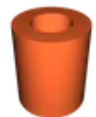
fun-size-spooler-front-core-cover.stl



fun-size-spooler-core.stl



fun-size-spooler-main-gear.stl



fun-size-spooler-dual-gear-2-offset.stl



fun-size-spooler-dual-gear-1-offset.stl



fun-size-spooler-dual-gear-1.stl



fun-size-spooler-dual-gear-2.stl



fun-size-spooler-motor-gear.stl



fun-size-spooler-back.stl

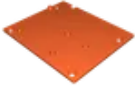


fun-size-spooler-rod.stl



Top Files

4 files



fun-size-top-board-mount-ender-3.stl



fun-size-top-back-plate-mount.stl



fun-size-top-2020-profile_x2.stl



fun-size-top-handle-optional.stl



Base Files

9 files



fun-size-base-bottle-cap-lcd-knob-by-loskexos.stl



fun-size-base-lcd-sign.stl



fun-size-base-lcd-mount.stl



fun-size-base-front-lcd.stl



fun-size-base-right.stl



fun-size-base-left.stl



fun-size-base-bottom.stl



fun-size-base-back.stl



fun-size-base-feet_x4-optional.stl



Mini Spooler Files

6 files



fun-size-base-mini-spool-holder-optional.stl



mini-spooler-enclosure-top.stl

☐ (optional)



mini-spooler-top.stl



mini-spooler-bottom.stl

☐ (optional)



mini-spooler-enclosure-bottom.stl

☐ (optional)



mini-spooler-turn-knob-optional.stl

☐ Optional

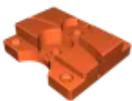


Bottle Cutter V3

7 files



community-bottle-cutter-top-8mm-pennies.stl



community-bottle-cutter-top-75mm-pennies.stl



community-bottle-cutter-middle.stl



community-bottle-cutter-bottom.stl



bottle-cutter-retractable-wond-topper.stl



bottleweight-top.stl



bottleweight-botton.stl



Recently Added Additional Files

1 file



mk6_2020_cap.stl



Older Retired Files

2 files



fun_size_-_base_-_mini_spool_holder-optional.stl



fun-size-top-wire-harness-not-needed.stl

☐ This file is now Optional and not needed - Ender 3 Mount has revisioned to not need this part

Other files



therecreator3d_mk6_fun_size-printed-parts-list-v3-0... .pdf



2025-recreator3d-mk6-fun-size-bom-and-build-notes-v... .pdf



the-recreator3dcom-quick-start-guide-v3-03_28_2025.pdf



therecreator3d_mk6_fun_size_operations_manual-v3-03... .pdf



therecreator3d_mk6_fun_size_sd-_card_gcode.zip



retractable-wand.txt

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