



Gridfinity Carousel - Motorized



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[VIEW IN BROWSER](#)

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Summary

Motorized version of the Gridfinity Carousel with gears to keep everything level

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Now you can get the **Gridfinity Carousel** with 100% more motors and gears! The design is based on the **Bookwheel** mechanism by Agostino Ramelli.

The Carousel has a total of 50 Gridfinity squares and can fit bins up to 7 units tall (49 mm), yielding a significant storage density improvement over the previous version. Choose which side you want the switch on and print the appropriate Motor Cleat file (they're just mirrored). All other parts remain the same.

All fasteners will thread directly into the plastic, no threaded inserts or post processing required. Most fasteners will need to be of the SHCS (Socket Head Cap Screw) variety since they are countersunk below the surface.

The model is designed to work with a variety of wall systems by changing out the Cleat Adapters. **The model is provided with French Cleat adapters.** An adapter start part is included in the files for those who want to make adapters for other wall systems.

Similarly, the **power cover is a separate piece** so it can be changed out for different power supply plugs. Included are models for a single 5.5 mm barrel jack and a double 5.5 mm barrel jack for daisy chaining multiple carousels together off of one power supply. A start part with no openings is included in the files for those who want to make their own power covers.

All parts will fit on an Ender3 or equivalent print bed (205x205 mm minimum). 10% infill throughout. No support required anywhere except the two cutouts on the Motor Cleat. If your printer is good with long bridges you may not even need that support.

The motor side includes mounting points for a Raspberry Pi Zero, H-Bridge, and DC-DC power converter. Maybe someone wants to use them to make a smart system to present a specific carriage :)

Printed parts

- 1x - Geared Wheel
- 1x - Ungeared Wheel
- 1x - Wheel Brace (See Nov 2, 2024 update)
- 5x - Carriage
- 5x - Carriage Gear
- 5x - Idler Gear
- 5x - Idler Gear With Axle
- 1x- Motor Cleat (left or right)
- 1x - Support Cleat
- 1x - Electrical Cover
- 2x - French Cleat Adapter
- 2x - Foot Adapter (See Nov 2, 2024 update)
- 1x - Power Cover
- 1x - Drive Gear
- 1x - Stationary Gear

Purchased parts

- 54x - M3-8 SHCS
- 2x - M8-20 SHCS
- 10x - **683ZZ bearings**
- 2x - **608ZZ bearings**
- 1x - **12v geared motor**
- 1x - **12v 2A power supply**
- 1x - **5.5mm barrel jack**

- 1x - **Rocker Switch**

Tools

- 2.5 mm Allen Wrench
- 6 mm Allen Wrench
- Clippers
- Emery Stick
- Soldering Iron

Updates:

- June 3, 2024 - Parts list and video incorrectly specified 605ZZ bearings, should be 608ZZ.
- November 2, 2024
 - Replaced 3x Wheel Braces with one solid Wheel Brace for improved torsion resistance.
 - Added Long Foot Adapter that spans both cleats to better stabilize the assembly, especially when used on a table top instead of wall system. Requires printing diagonally on a 256x256 minimum bed or splitting into smaller parts.
 - Increased depth of Drive Gear bore hole by 1 mm to prevent rubbing on Idler Gear.
 - Updated Motor Cleats (left and right) (missed Support Cleat, see next update) with deeper holes for feet fasteners and slots to drop M3 nuts if extra reinforcement is needed.
 - Added STEP files for Motor Cleats (left and right) and Geared Wheel
- January 5, 2025
 - Updated Support Cleat as intended to do with Nov 2 update but missed. Thanks for pointing it out, @ramblingjordan!

Model files

geared-wheel.stl



ungeared-wheel.stl





whee-brace.stl



carriage.stl



carriage-gear.stl



idler-gear.stl



idler-gear-with-axle.stl



motor-cleat-right.stl



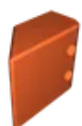
motor-cleat-left.stl



support-cleat.stl



electrical-cover.stl



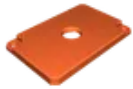
french-cleat-adapter.stl



foot-adapter.stl



long-foot-adapter.stl



power-cover-barrel.stl



power-cover-2-barrel.stl



drive-gear.stl



stationary-gear.stl



power-cover-start-part.stl

power-cover-start-part.step



adapter-start-part.stl

adapter-start-part.step

motor-cleat-left.step

motor-cleat-right.step

support-cleat.step

geared-wheel.step

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