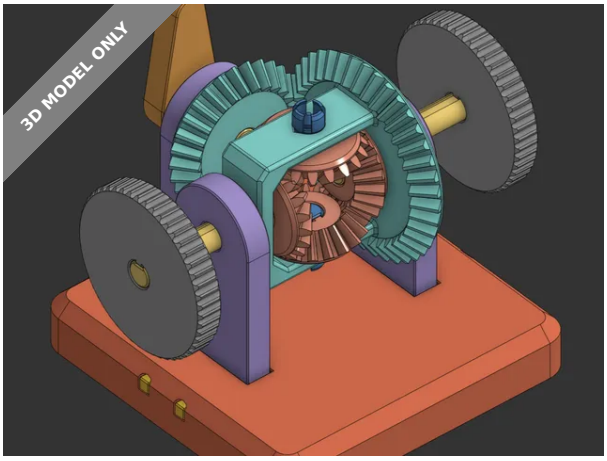

Differential Gearbox Display

Alex

VIEW IN BROWSER

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Summary

A small model of a differential drive for education.

Gadgets > Other Gadgets

Differential Drive Gearbox

A cool model of a differential gearbox, this is just a standalone design.

I wanted to learn about how differential drives work, so I made this, its an interesting design, it should not need any hardware, all 3D printed.

Its a rather bare bones design, only having the parts that it needs. It has 2 mock wheels on the ends to simulate the resistance that the drive may face, and has a simple crank to power it.

Printing

Only support material is needed for the housing, using more may be difficult to remove. The parts file has all of the parts oriented properly. You should use brims on the rods and pins to make sure they stand up straight

Assembly

Reference the assembly for greater detail

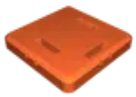
- Insert the Mounting brackets to the base, face the ring inwards

- Secure these with the square pins
- Snap the pins into 2 of the bevel gears, and into the housing
- Rotate the 2 bevel gears into the housing
- Slide the long rods through the side brackets all the way through to the gears.
- Mesh the driver bevel gear and crank to finish the design.

Model files

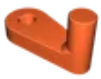
Parts (STEP) 13 files

arm.step



base.step

bevel-20t.step

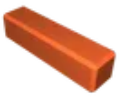


crank.step

driver-28t.step

housing.step

pin-long.step



pin-short.step

rod-long.step

rod-short.step

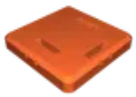
snap.step

spacer.step

wheel.step

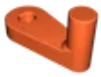
Parts (STL) 13 files

arm.stl



base.stl

bevel-20t.stl

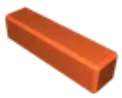


crank.stl

driver-28t.stl

housing.stl

pin-long.stl



pin-short.stl

rod-long.stl

rod-short.stl

snap.stl

spacer.stl

wheel.stl

partsv4.stl

assembly.stl

assembly.step

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