



Geneva Mechanism Drives Concentric Vases



PhDGoSlowAncient

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Summary

The Geneva Mechanism demonstrates the momentary rotation to the Vase Mode cylinders that slide in and out.



8.10 hrs



3 pcs



0.20 mm



0.40 mm



PLA



64 g



Creality
Ender 3 V2

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The Geneva drive or Maltese cross is a mechanism that translates a continuous rotation into intermittent rotation. The classic use of the design was in the movie projector. Each frame is advanced quickly and then retained in that position for a short time. This rendition rotates a pair of Vase Mode printed cylinders that slide in and out.

Thy cylinders have a design clearance (tolerance) of 1.5 mm. The cylinder designs are based on the instructional by Vladimir Murano (@DesktopMakes).

The DC motor is a servo motor that was modified to turn continuously by removing the servo controls and pin-stop.

Amazon parts:

DC servo motor: MG995, about \$20 for four pieces

Battery holder: CR2032 battery holder, \$6 for 6 pieces

M3 mm bolts: M3 stainless steel button head hex socket head cap bolts, nuts & wrench: \$11.

Other:

Scrap wood

Model files



1m5-tab.3mf



1m4-coupling.3mf



1m2-geneva-driven.3mf



1m3-bracket.3mf



1m1-geneva-driver.3mf



1m6-inner-vase.3mf



1m7-outer-vase.3mf

Print files

ce3_1m6-inner-vase.gcode



🌀 PLA 🌀 0.40 mm ≡ 0.20 mm ⌚ 1.00 hrs ⚖️ 9 g

ce3_1m7-outer-vase.gcode



🌀 PLA 🌀 0.40 mm ≡ 0.20 mm ⌚ 1.10 hrs ⚖️ 10 g

ce3_1m1-geneva-driver.gcode



🌀 PLA 🌀 0.40 mm ≡ 0.20 mm ⌚ 6.00 hrs ⚖️ 45 g

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