

V1.25

Corrected Parametric Equation — Gears Introduced

PURPOSE

— New housing and rotor — completely redoing parametric equation

HOUSING

Print Quality: 7/10

Overall Width: 64mm

Overall Height: 48.7mm

Generating Radius R: 28mm

Eccentricity e: 4mm

K Ratio: 7

Issues: Massive friction from PLA on PLA

Rating: 7/10

ROTOR

Print Quality: 7/10

Apex Radius: 28mm

Apex-to-Apex Chord: 48.5mm

Apex Spacing: 120 degrees

Issues: Slight movement from rotor in housing

Rating: 7/10

GEARS

Mesh Quality: Good — very little slippage

Binding: None

Notes: Gears work but could be slightly small

Rating: 6/10

MOTION TEST

Rotor Rotates: Yes

Full Orbit: Yes

Smoothness: 7/10

LESSONS LEARNED

- Correct parametric formula confirmed
 - Gears could be slightly larger
 - PLA on PLA friction is a major issue requiring lubrication
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CHANGES FOR NEXT VERSION

- Add eccentric shaft
 - Add hand crank
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