TwistFlyer™

PULL-STRING FLYER · BY MIRTHSTEAD CREATIONS

5+ AGES

Pull. Spin. Soar.

Engineered to fly higher with less pull. Rotor science learned from NASA research, built into a pull-string flyer.



Typical toy rotors use steep, flat blades. The TwistFlyer™ rotor is shaped with a high-lift propeller design method published by NASA researchers. Each blade is twisted and tapered so air moves evenly across the whole rotor. The result: it climbs higher with a gentler pull.

~7 g	~20 ft	3	PETG
FEATHERWEIGHT ROTOR	TEST-FLIGHT CLIMB	ROTORS IN EVERY KIT	TOUGH, FLEXIBLE BUILD

- **NASA-inspired rotor.** The blade shape follows a published NASA method for high-lift propeller design.
- **Featherweight rotor.** At about 7 grams, it spins up quickly with an easy pull.
- **Tough PETG-HF construction.** Printed in durable PETG for impact resistance.
- **Twisted, curved blades.** The pitch changes smoothly from hub to tip, so every part of the blade does useful work.
- **Protective outer ring.** A light ring around the blade tips adds stiffness and keeps the tips covered.
- **Smooth gear drive.** The geared pull strip turns your pull into fast, steady spin.

✓ **Hand-inspected & flight-tested.** Every component is inspected by hand and tested before it is sold.

Made in St. Louis, MO by Mirthstead Creations LLC

info@twistflyer.com · twistflyer.com



EVERYTHING YOU NEED TO FLY

The Starter Kit

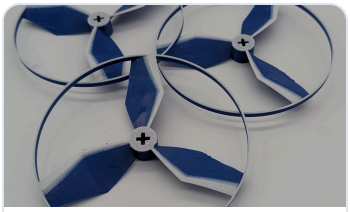
- 3 **TwistFlyer™ rotors** with protective outer ring
- 1 **Launcher assembly:** handle, gear drive and TwistStrip™ pull strip
- 1 **Spare gear assembly,** ready to swap in

Starter Kit $60

Family Set: two Starter Kits for $96 (save 20%)

BUILD YOUR FLEET

Add-Ons



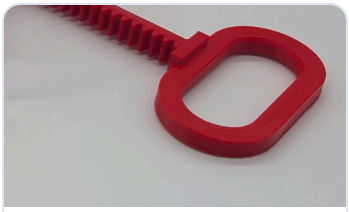
3-Rotor Set
Three more rotors, shown in blue, so every flyer in the family has their own.

$9



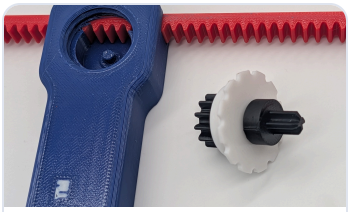
Glow 3-Rotor Set
Glow-in-the-dark rotors. Charge them in the light, then keep flying at dusk.

$15



Replacement TwistStrip™
A spare pull strip for the bag, or a second one for taking turns.

$8



Replacement Gear
A complete gear assembly that swaps right into the launcher.

$5

Custom colors are available on select components.

Groups & wholesale: custom orders for classrooms, teams, parties and events, with names available. Email info@twistflyer.com for pricing.

QUICK START

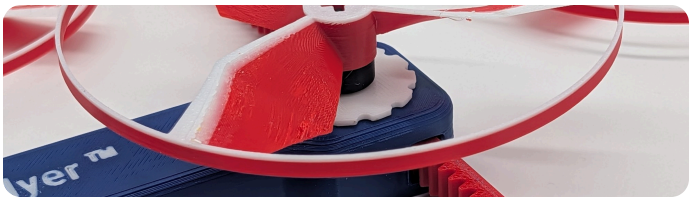
How to Fly

1. Slide the TwistStrip™ through the launcher so its teeth mesh with the gear.
2. Press a rotor firmly onto the gear spindle, **white side up**.
3. Outdoors, hold the handle level and aim up, away from faces, people and pets.
4. Pull the strip out in one quick, smooth motion. Watch it climb.

+ Pull feels rough? A drop of silicone grease on the gear and strip teeth helps.

THE SCIENCE, SIMPLY

Why It Flies Higher



When a rotor pushes air down, the air pushes the rotor up. A steep, flat blade pushes unevenly: too hard near the tip and barely at all near the center. TwistFlyer™ blades are shaped so each section pushes air down at about the same speed. Less wasted energy means more of your pull becomes height.

⚠ **WARNING:** **CHOKING HAZARD – Small parts. Not for children under 3 yrs.** Adult supervision recommended. Even though PETG is safe, **never put any part in your mouth.** If a child swallows a part, get medical help right away; **if a pet swallows a part, seek immediate veterinary attention.** Fly outdoors in a large open space, away from power lines, trees and roads. Never launch toward faces, people or animals. Do not try to catch a spinning rotor. **Not for indoor use** – rotors leave the launcher at high speed and can break against walls and ceilings. Inspect rotors before each flight; replace any that are cracked or bent. **Never climb trees, ladders or roofs, or run into a street, to retrieve a rotor** – ask an adult. Use is subject to the terms at twistflyer.com/policies.

Ready to fly? Order at twistflyer.com

Made in St. Louis, MO · orders@twistflyer.com · info@twistflyer.com

© 2026 Mirthstead Creations LLC. TwistFlyer™ and TwistStrip™ are trademarks of Mirthstead Creations LLC. Rotor design inspired by published NASA research: Patterson, Borer & German, "A Simple Method for High-Lift Propeller Conceptual Design," NASA Langley Research Center, 2016. TwistFlyer™ is not affiliated with, sponsored by, or endorsed by NASA. Made in small batches on the latest 3D printers, so no two pieces are exactly alike; fine layer lines, slight color variation and small cosmetic marks are normal. Every component is hand-tested, so your TwistFlyer™ arrives in optimal flying condition.