

# Propeller Design Research and Specifications

Date: 9/6/24

## Meeting goals

- Research into manufacturing options
  - Metal
  - Resin
  - ASA
- Research into propeller design
- Research into counter-rotating propellers

## Meeting Notes

### LINKS:

[https://bblades.com/props-](https://bblades.com/props-101/#:~:text=Rake%20is%20the%20amount%20of,outboard%20propellers%20is%2015%20degrees.-Propeller 101)

[101/#:~:text=Rake%20is%20the%20amount%20of,outboard%20propellers%20is%2015%20degrees.-Propeller 101](https://bblades.com/props-101/#:~:text=Rake%20is%20the%20amount%20of,outboard%20propellers%20is%2015%20degrees.-Propeller 101)

<https://fliteboard.com/products/flite-air-pro-acai?variant=43220266189000> - eFoil with diff. propellers

<https://bit.ly/4e8DVso> - Tentative motor

[CAESES Video Tutorials > CAESES - Design software](#)

<https://web.mit.edu/2.016/www/handouts/2005Reading10.pdf> - MIT paper on propellers

### Manufacturing

3D-printing for prototype and later have the propeller milled

### **Propeller design**

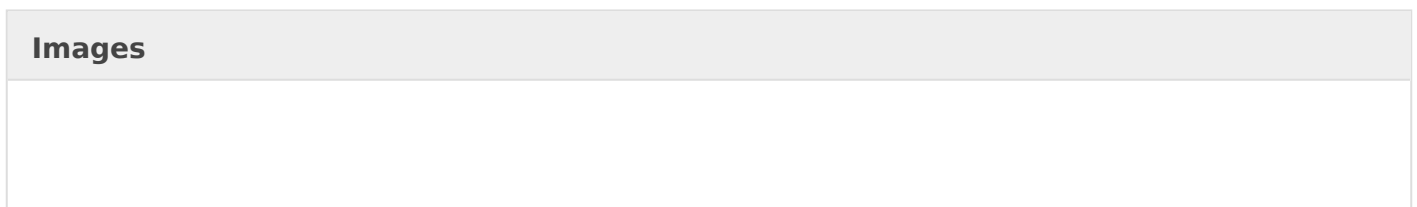
We were brainstorming about the use of 2 or 3 blades due to the size of the boat. Depending on the actual power needed to lift the hydrofoil out of the water we could reduce the amount of blades used on a counter rotating prop. Since the efficiency of the counter rotating prop design is more efficient, maybe it is possible to reduce the amount of blades from 6 to 4 on the shaft.

### **Counter-rotating propellers**

What was completed?

What is in progress?

What is the goal for the next meeting?



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Revision #1

Created 6 May 2026 00:24:43 by Caicheng Li

Updated 6 May 2026 00:25:03 by Caicheng Li