# PROPELLER
# 21x13.5 2B E L

PN: 421136

*Illustrative image only
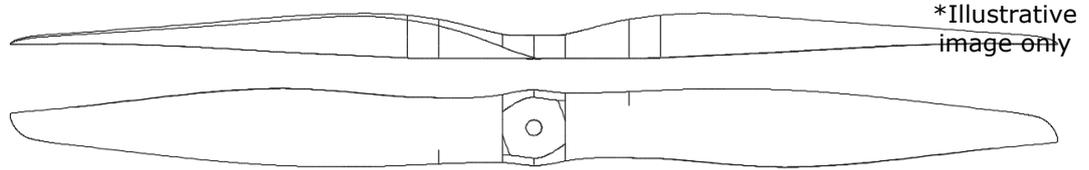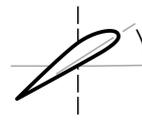
| 41 g Mass | 21.0" Diameter | 13.5" Pitch | Fixed wing |
|---|---|---|---|

| | |
|---|---|
| Engine/Motor type: | Electric |
| Rotation direction: | Counter-clockwise (Direction Guide) |
| Mass [g]: | $41 \pm 10.0\%$ |
| Moment of inertia [kgm$^2$][1]: | 9.72e-04 |
| Core diameter [mm]: | 23.5 (Drilling guide) |
| Limit RPM[2]: | 8500 |
| Working temperature [°C]: | from -20°C to 60°C |
| Production method: | Wet layup |

[1] Moment of inertia is only an estimation: $I = \frac{1}{24} \cdot mass \cdot diameter^2 \cdot n^o of blades$
[2] RPM is limited by tip speed; forward speed reduces the limit.

For more information or custom propeller options, contact info@mejzlik.eu.
Operation manual: Propeller Maintenance and Repair Manual

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# Dynamic Performance Data

## Simulated data - at 6600 RPM
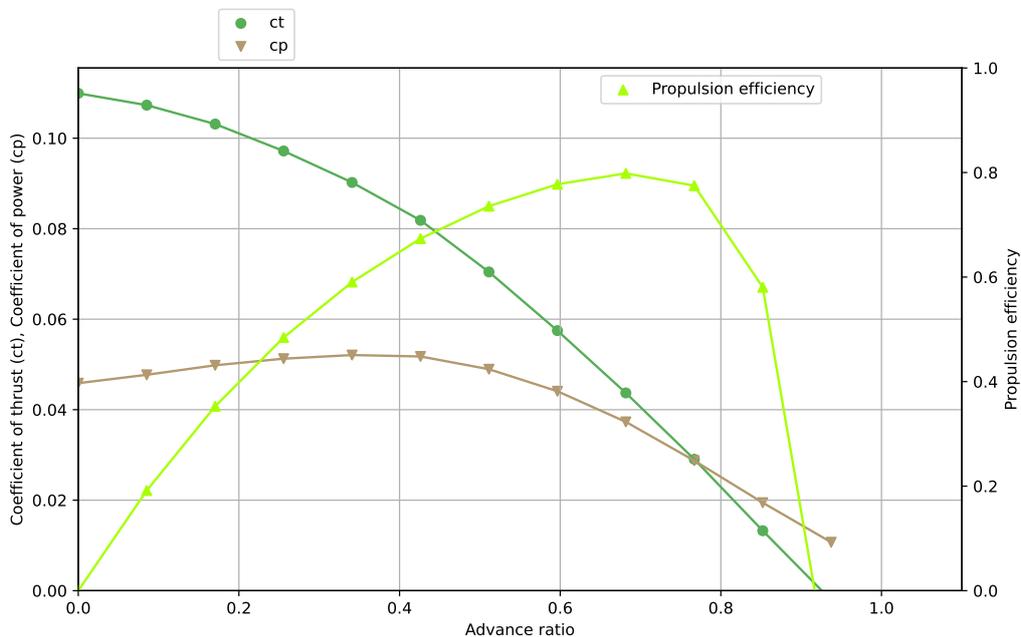


| v_inf | Ct | Cp | Propulsion efficiency | Advance ratio |
|--------|---------|--------|----------------------|---------------|
| 0.0 | 0.1099 | 0.0459 | 0.0 | 0.0 |
| 5.0 | 0.1073 | 0.0477 | 0.1916 | 0.0852 |
| 10.0 | 0.1031 | 0.0498 | 0.3527 | 0.1704 |
| 15.0 | 0.0972 | 0.0513 | 0.4844 | 0.2556 |
| 20.0 | 0.0902 | 0.0521 | 0.5904 | 0.3409 |
| 25.0 | 0.0819 | 0.0518 | 0.6736 | 0.4261 |
| 30.0 | 0.0704 | 0.0489 | 0.7356 | 0.5113 |
| 35.0 | 0.0575 | 0.0441 | 0.7776 | 0.5965 |
| 40.0 | 0.0437 | 0.0373 | 0.7983 | 0.6817 |
| 45.0 | 0.029 | 0.0287 | 0.7748 | 0.7669 |
| 50.0 | 0.0132 | 0.0194 | 0.5804 | 0.8522 |
| 55.0 | -0.0021 | 0.0107 | -0.1839 | 0.9374 |

$$C_T = \frac{T}{\rho\, RPS^2\, D^4} \qquad C_P = \frac{P_{mech}}{\rho\, RPS^3\, D^5} \qquad \eta = \frac{C_T \cdot J}{C_P} \qquad J = \frac{v_{inf}}{n \cdot D}$$