PROPELLER
22x8.1 2B MC

PN: 2220810, 2220811
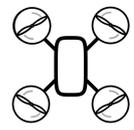

*Illustrative image only
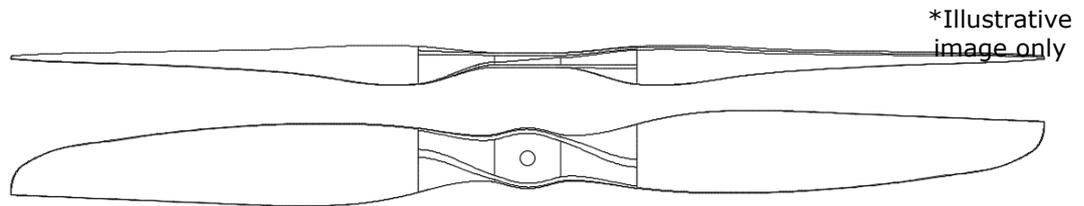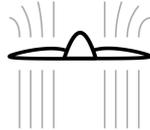
36 g Mass	10.9 kgf Max Thrust	22.0" Diameter	Multicopter

Engine/Motor type:	Electric
Rotation direction:	Counter-clockwise and Clockwise available (Direction Guide)
Mass [g]:	36 ± 5.0%
Moment of inertia [kgm^2][1]:	4.07e-04
Core diameter [mm]:	25 (Drilling guide)
Limit hover RPM[2]:	6400
Limit forward speed [m/s]:	25
Working temperature [°C]:	from -20°C to 110°C
Production method:	Prepreg
Tests performed[3]:	Static Performance Test, Overspin Test, Endurance Test, Centrifugal Load Test, Tip Deflection Test

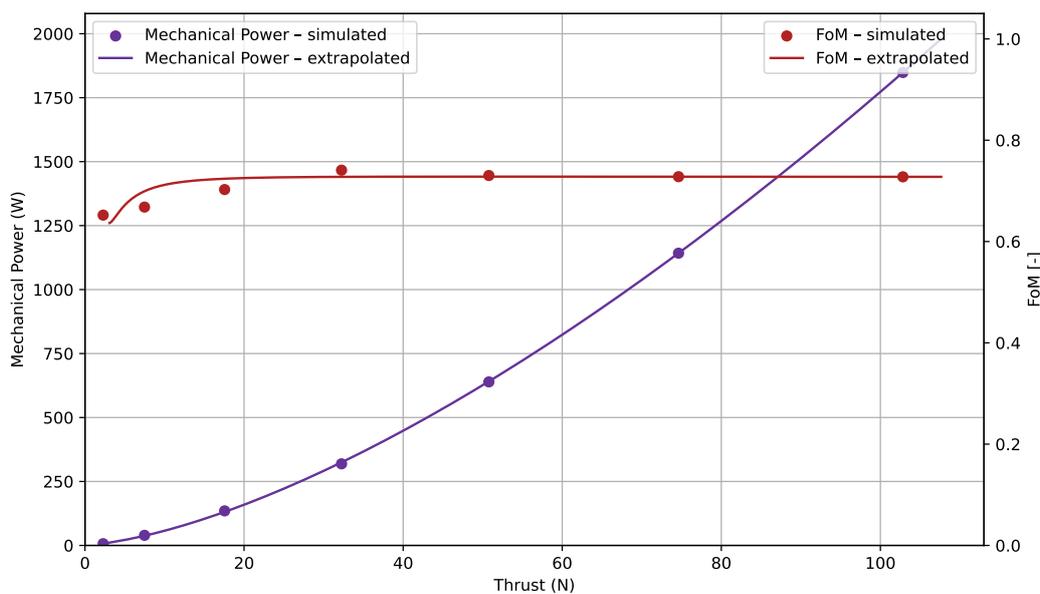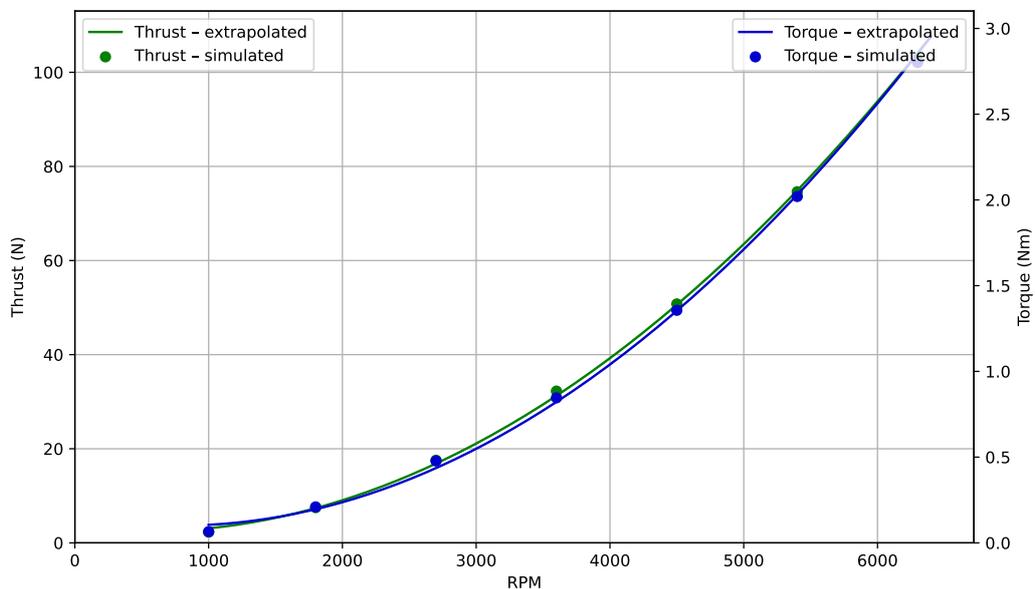[1] Moment of inertia is measured.
[2] RPM is limited by tip speed; forward speed reduces the limit.
[3] Tests performed on a sample propeller.

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

Static Performance Data

Simulated data

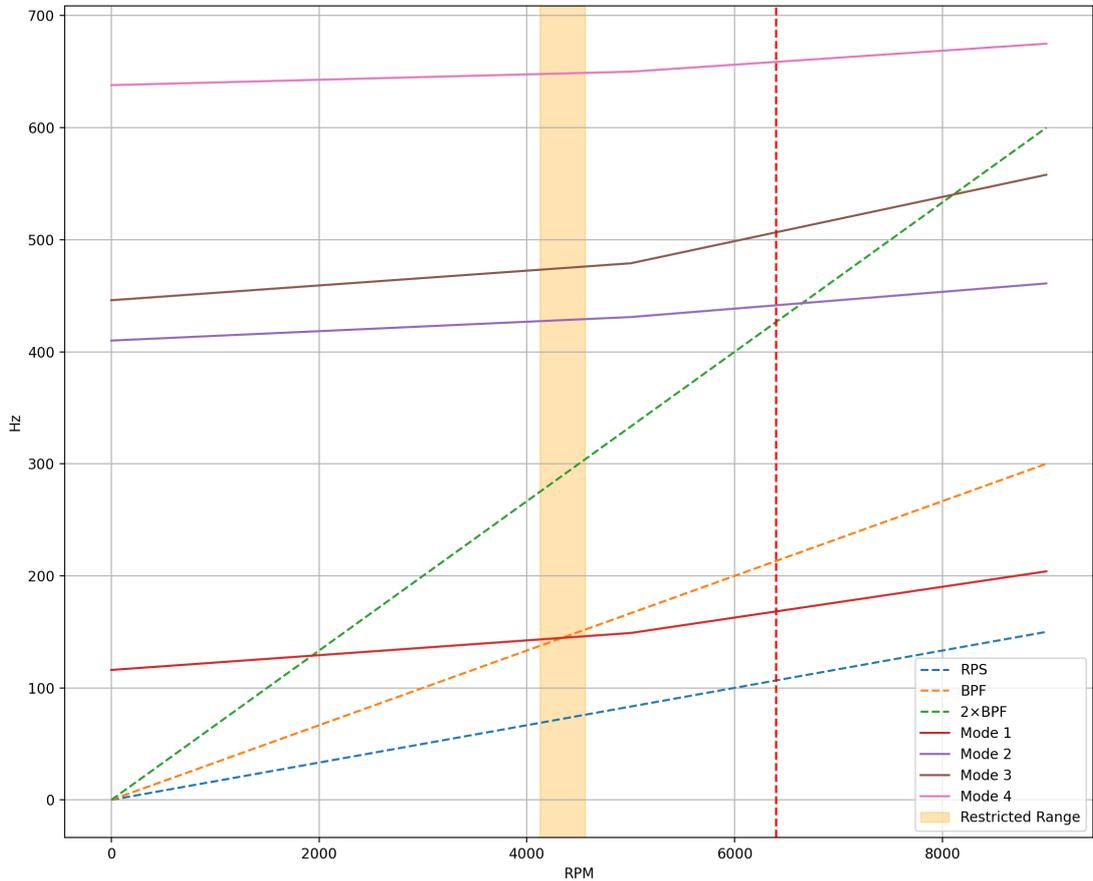Thrust (RPM): $3.045e-06 \cdot RPM^2 + -3.170e-03 \cdot RPM + 3.217e+00$

Torque (RPM): $8.994e-08 \cdot RPM^2 + -1.380e-04 \cdot RPM + 1.532e-01$

Mechanical power (RPM): $\dfrac{2\pi \cdot Torque[Nm] \cdot RPM}{60}$

Formulas used to calculate FOM : $\quad C_T = \dfrac{T}{\rho \, RPS^2 \, D^4} \qquad C_P = \dfrac{P_{mech}}{\rho \, RPS^3 \, D^5} \qquad FOM = \sqrt{\dfrac{2}{\pi}} \dfrac{C_T^{3/2}}{C_P}$

Natural frequencies

Simulated data

Intersection	Restricted RPM ranges[1]
RPS - Mode 1	-
BPF - Mode 1	4120-4560[2]

[1] Longterm use at these RPM should be avoided, as these RPM can lead to higher vibrations and possible damage to the propeller. Short-term use or crossing of this range to reach higher operational rpm is allowed.

[2] Data is simulated using Finite Element Analysis (FEA).