

# Professional Propulsion Systems

ID:0069

## System Specifications



**4.88 Kg**

Maximal Thrust



**30"**

Propeller Diameter



**22.2 V**

Voltage



**503 g**

Mass

### Motor

Name:	EC 87 flat UAV
Part number:	668415
Manufacturer:	Maxon
KV [RPM/V]:	144
Mass [g]:	309
Max continuous Current [A]:	23.6
Max peak Current [A]:	48
Contact:	aerospace@maxongroup.com

### ESC

Name:	UAV-ESC 52/30
Part number:	654541
Manufacturer:	Maxon
Mass [g]:	102
Max continuous Current [A]:	30
Max peak Current [A]:	90
Voltage [V]:	9-52.2
Contact:	aerospace@maxongroup.com

### Propeller

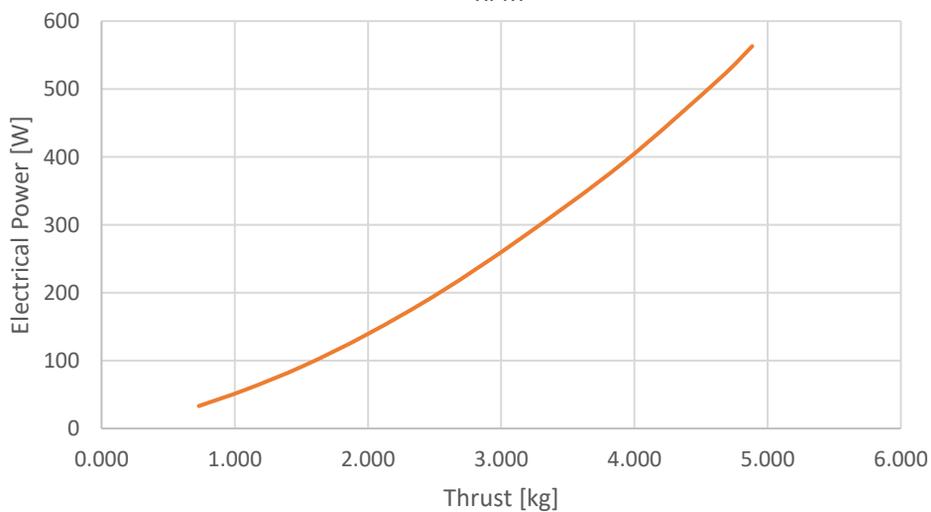
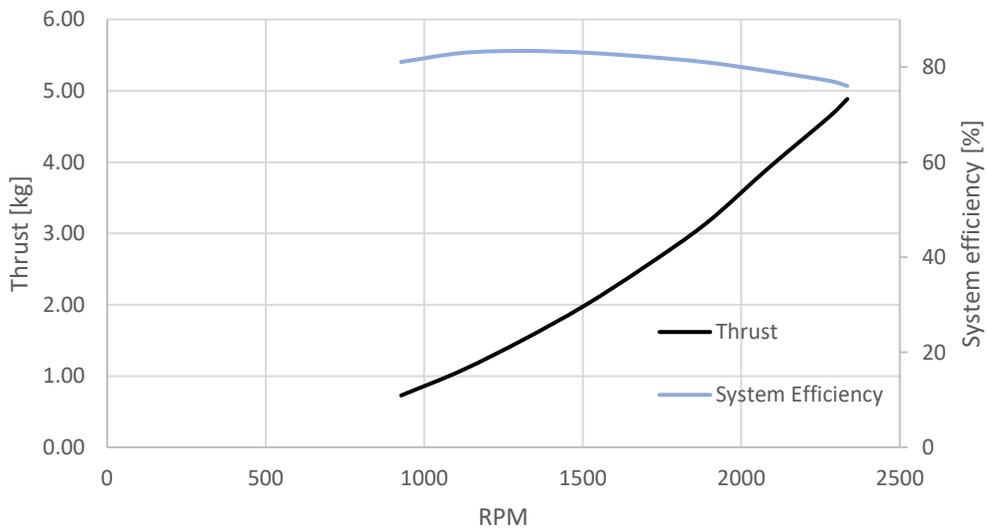
Name:	<a href="#">30x10</a>
Manufacturer:	Mejzlik
Diameter ["]:	30
Pitch ["]:	10
Mass [g]:	92
Contact:	info@mejzlik.eu

# Measurements

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Throttle [%] <sup>[1]</sup>	Rotational Speed [RPM]	Thrust [kg]	Torque [Nm]	Voltage [V]	Current [A]	Mechanical Power [W]	Electrical Power [W]	System Efficiency [%] <sup>[2]</sup>
15	928	0.73	0.28	22.3	1.5	26.9	33.2	81.1
18	1120	1.08	0.41	22.2	2.6	47.7	57.4	83.0
21	1313	1.51	0.56	22.2	4.1	76.8	92.1	83.4
24	1506	1.99	0.73	22.2	6.2	114.8	138.3	83.0
27	1698	2.54	0.93	22.2	9.0	164.8	200.5	82.2
30	1892	3.15	1.15	22.1	12.7	227.2	280.5	81.0
33	2084	3.91	1.42	22.1	17.7	309.3	390.6	79.2
36	2280	4.64	1.67	22.1	23.4	397.9	516.0	77.1
37	2335	4.88	1.75	22.0	25.6	428.5	563.4	76.1

Temperature: 23.2°C, Air Pressure: 993hPa, Relative Humidity: 24%



<sup>[1]</sup>Depends on Maxon ESC parameter settings. Throttle to RPM ratio can be configured individually and does not necessarily correspond to PWM duty cycle.

<sup>[2]</sup>Includes motor efficiency, controller efficiency, wire and connectors losses.