

Professional Propulsion Systems

SYSTEM SPECIFICATIONS

MOTOR + ESC



Name:	MD1508P
Manufacturer:	Industrial Technology Research Institute
Part number	-
KV [RPM/V]:	80
Max. voltage:	50 V
Base module mass:	2300 g
Max continuous current:	240 A

PROPELLER



Name:	48x16.4 2B MC D-Box (Direction guide)
Manufacturer:	Mejzlik
Diameter:	48 in
Pitch:	16.4 in
Mass:	474 g
Contact:	info@mejzlik.eu

ANALYSIS



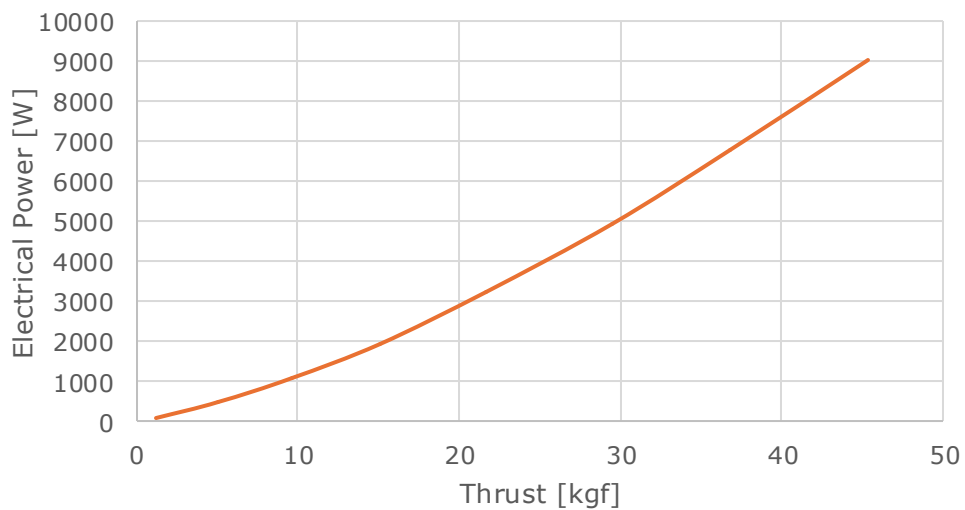
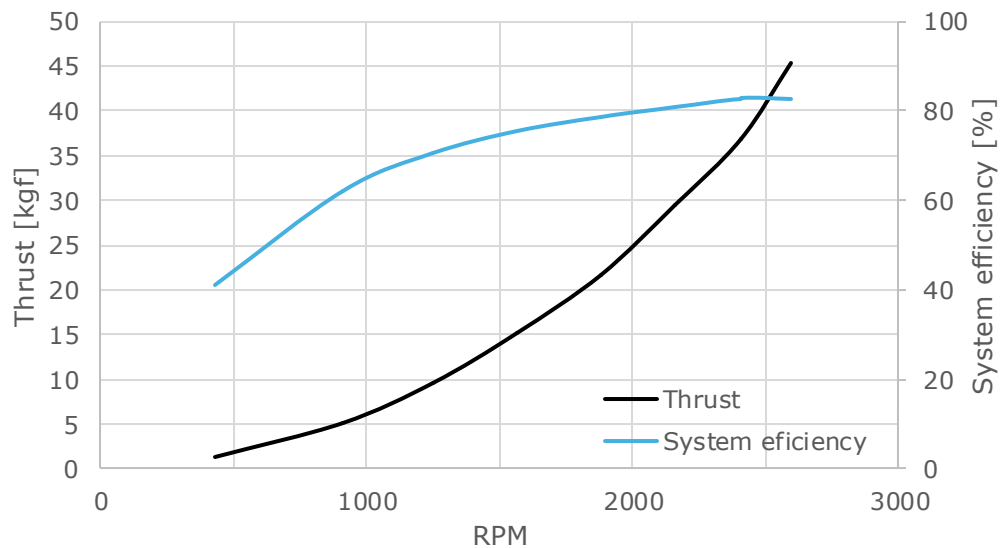
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

Please reach out to us at info@mejzlik.eu or cindylou@itri.org.tw

MEASURED DATA

PWM [μs]	Rotational Speed [RPM]	Thrust [kgf]	Torque [Nm]	Voltage [V]	Current [A]	Mechanical Power [W]	Electrical Power [W]	System Efficiency [%] ^[1]
1150	429	1.23	1.05	49.76	2.2	46.7	109.7	41.2
1244	910	5.13	3.15	49.54	9.9	299.4	488.3	62.2
1338	1251	9.65	5.76	49.17	21.9	754.2	1076.3	70.5
1432	1561	15.11	8.93	48.62	40.0	1459.6	1942.7	75.4
1527	1878	21.67	12.97	47.79	68.1	2552.5	3252.8	78.7
1621	2162	29.51	17.60	46.71	106.0	3986.9	4949.9	80.7
1715	2407	36.81	22.21	45.50	149.2	5600.2	6785.9	82.8
1810	2594	45.35	27.38	44.10	204.9	7439.6	9033.5	82.5

Air density: 1.193 kg/m³



^[1] Includes motor efficiency, controller efficiency, wire and connectors losses.