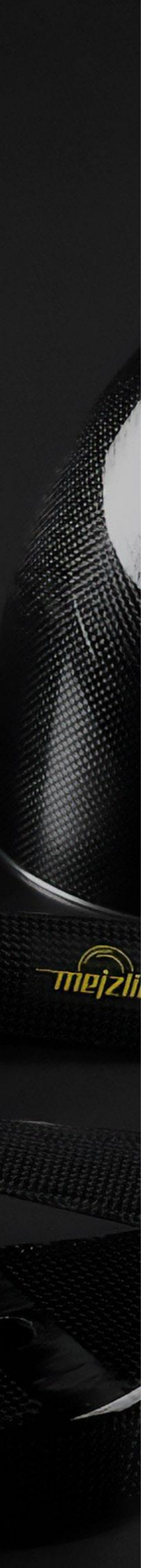


Professional Propulsion Systems

SYSTEM SPECIFICATIONS

ENGINE

Name:	**4201**
Manufacturer:	**HIRTH ENGINES**
Type:	**2-cylinder, two stroke**
Displacement:	**183 cm³**
Max. performance:	**11 kW at 6500 RPM**
Weight:	**5.7 kg**
RPM range:	**1800–6500 RPM**
Running direction:	**Clockwise**

PROPELLER

Name:	**30.5x13.5 2B Q**
Manufacturer:	**Mejzlik**
Diameter:	**30.5 in**
Pitch:	**13.5 in**
Mass:	**293 g**
Contact:	**info@mejzlik.eu**

ANALYSIS

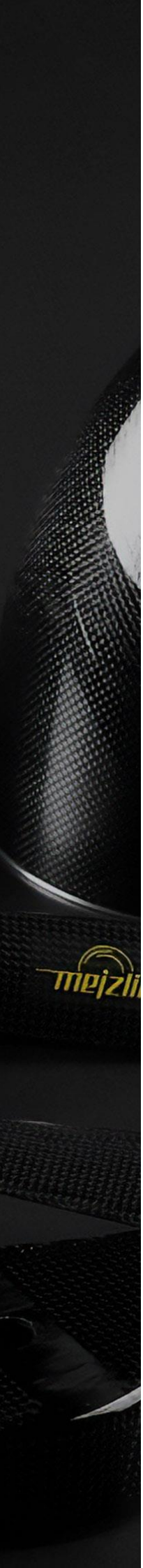
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

Please reach out to us at **info@mejzlik.eu** or **info@hirthengines.com**

ID: **0112**

HIRTH ENGINES

mejzlik



PERFORMANCE OF THE SYSTEM

Flight velocity

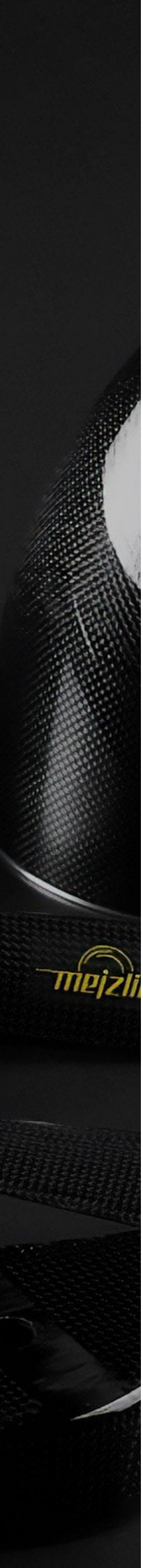
0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	10	0.43	**45**	**0**
1600	27	1.12	**188**	**0**
2200	53	2.12	**489**	**0**
2800	86	3.47	**1017**	**0**
3400	128	5.24	**1867**	**0**
4000	180	7.30	**3056**	**0**
4600	244	9.91	**4773**	**0**
5200	316	13.01	**7086**	**0**
5800	403	16.44	**9982**	**0**

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-3	-0.02	**-2**	**—**
1600	10	0.83	**138**	**73**
2200	32	2.04	**469**	**67**
2800	62	3.55	**1041**	**59**
3400	100	5.41	**1926**	**52**
4000	148	7.66	**3210**	**46**
4600	205	10.37	**4993**	**41**
5200	274	13.59	**7401**	**37**
5800	354	17.42	**10579**	**33**



PERFORMANCE OF THE SYSTEM

Flight velocity

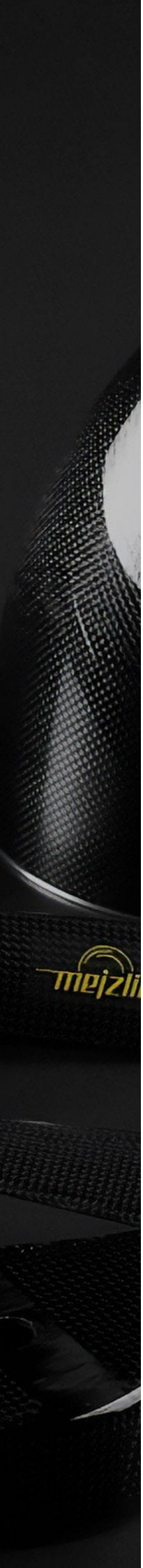
20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-6	-0.26	**-28**	**—**
1600	-11	-0.15	**-25**	**—**
2200	-3	0.22	**50**	**—**
2800	22	2.00	**585**	**75**
3400	56	4.14	**1473**	**76**
4000	99	6.62	**2771**	**71**
4600	151	9.51	**4582**	**66**
5200	215	12.90	**7027**	**61**
5800	291	16.85	**10237**	**57**

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-8	-0.82	**-86**	**—**
1600	-15	-0.65	**-108**	**—**
2200	-23	-0.52	**-119**	**—**
2800	-24	-0.72	**-212**	**—**
3400	0	0.75	**268**	**—**
4000	37	3.53	**1479**	**74**
4600	84	6.71	**3233**	**78**
5200	141	10.35	**5636**	**75**
5800	210	14.50	**8806**	**72**



PERFORMANCE OF THE SYSTEM

Flight velocity

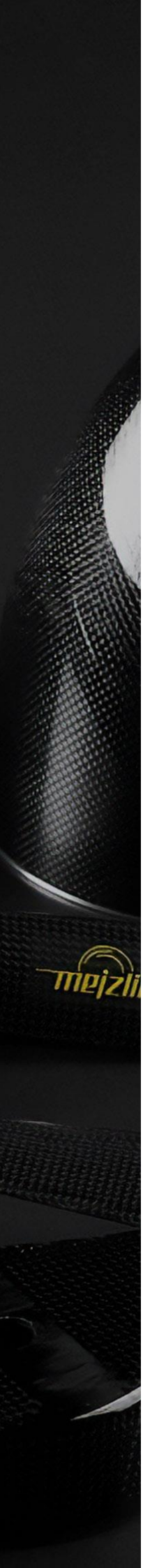
40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-12	-1.73	**-181**	—
1600	-19	-1.69	**-283**	—
2200	-30	-1.59	**-366**	—
2800	-44	-1.74	**-509**	—
3400	-49	-1.92	**-683**	—
4000	-32	-1.57	**-659**	—
4600	5	1.61	**774**	**27**
5200	55	5.52	**3008**	**73**
5800	117	9.95	**6041**	**77**

Flight velocity

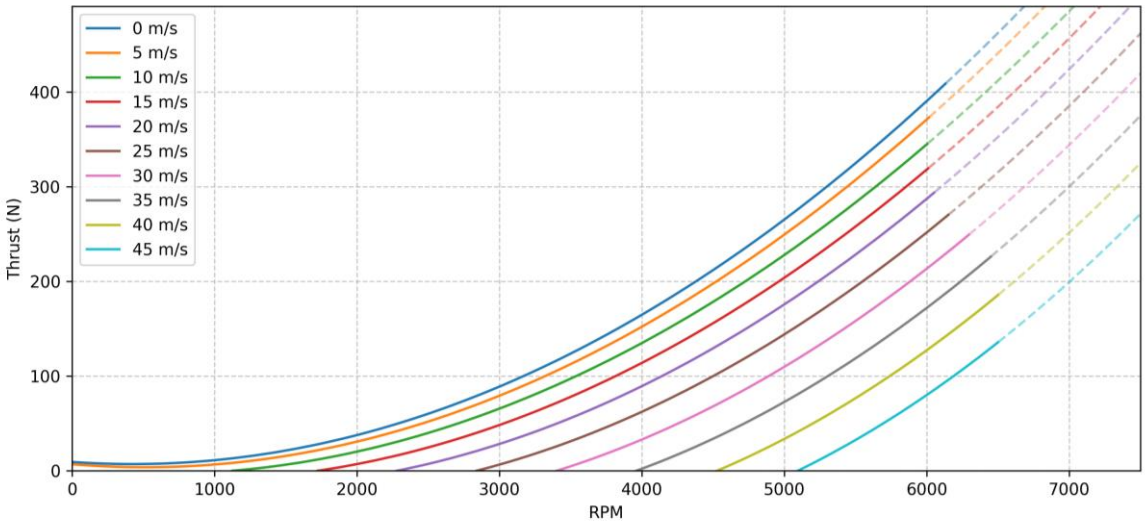
50 m/s

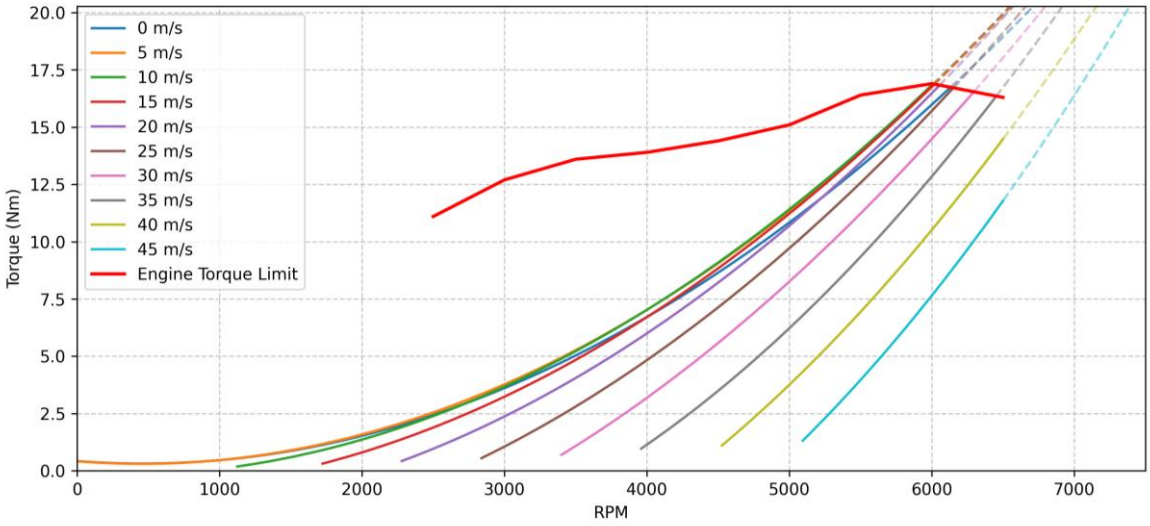
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-15	-3.08	**-322**	—
1600	-24	-3.08	**-516**	—
2200	-35	-3.16	**-728**	—
2800	-52	-3.37	**-987**	—
3400	-71	-3.69	**-1315**	—
4000	-82	-4.06	**-1701**	—
4600	-72	-4.07	**-1959**	—
5200	-38	-1.63	**-890**	—
5800	13	2.89	**1753**	**38**



PERFORMANCE OF THE SYSTEM

Hirth 4201 + Mejzlik 30.5x13.5 2B Q
Performance in flight





NOTE

Data presented in this product sheet are a combination of measurements of engine performance (RPM, torque), which is complemented with propeller data, simulated in Mejzliks proprietary simulation software. The greyed out values are above engine limit.

Data is valid for 0m ISA. Propeller performance simulation accuracy can diverge at higher tip speeds (above 0.7 Mach). Propeller is structurally safe to operate below Mach 1 tip speed.

ID: **0112**