

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 CCW (Direction guide)
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**



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

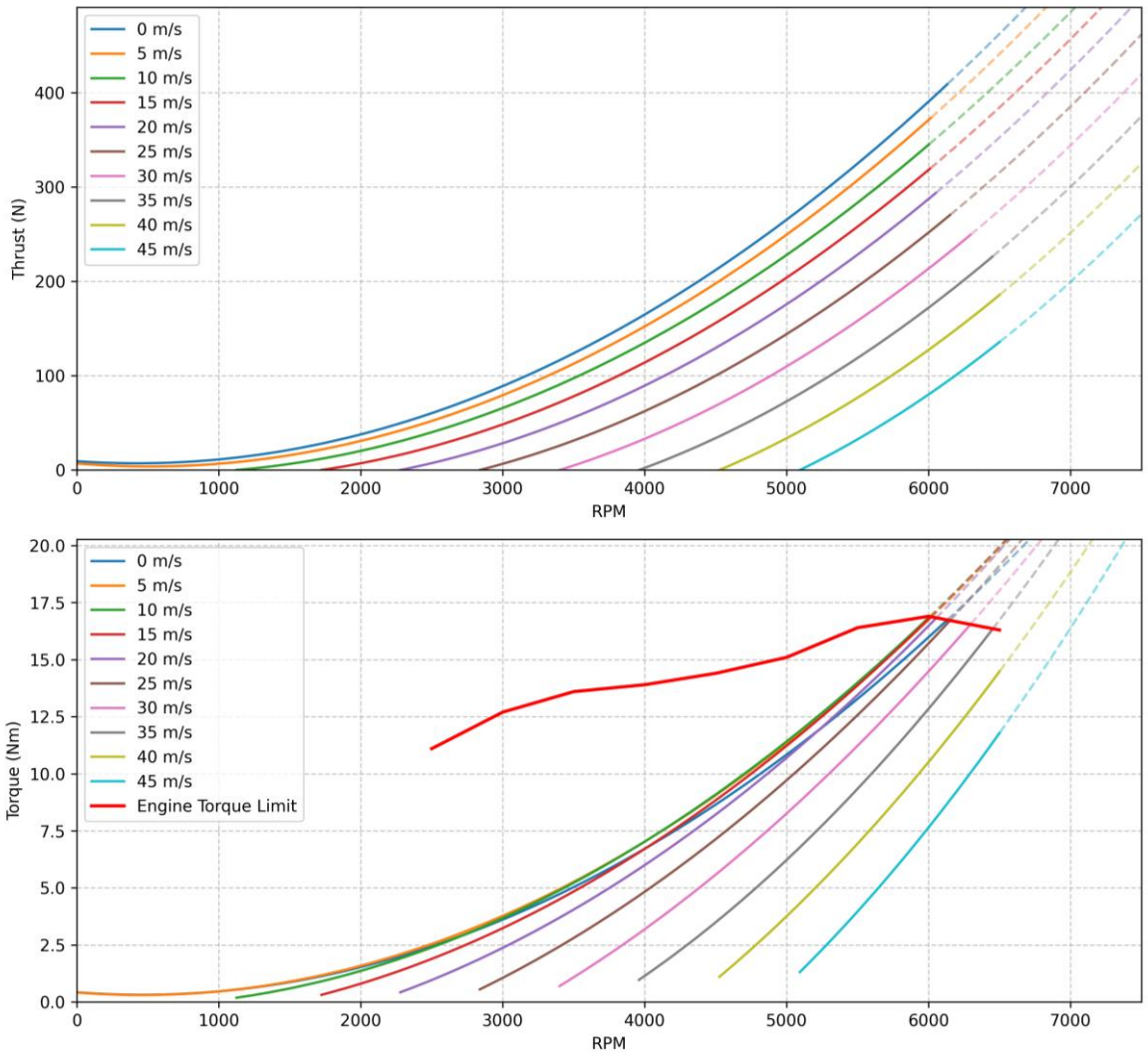
Flight velocity

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.

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