

Professional Propulsion Systems

SYSTEM SPECIFICATIONS

ENGINE



Name:	4103
Manufacturer:	HIRTH ENGINES
Type:	2-cylinder
Displacement:	100 cm³
Max. performance:	5 kW at 6500 RPM
Weight:	3.4 kg
RPM range:	2500–6500 RPM
Running direction:	Clockwise

PROPELLER



Name:	24x12 2B
Manufacturer:	Mezlik
Diameter:	22 in
Pitch:	12 in
Mass:	142 g
Contact:	info@mezlik.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@mezlik.eu or info@hirthengines.com

ID: **0121**



PERFORMANCE OF THE SYSTEM

Flight velocity

0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	4	0.13	13	0
1800	12	0.42	79	0
2600	26	0.89	243	0
3400	47	1.59	567	0
4200	72	2.49	1094	0
5000	105	3.58	1873	0
5800	144	4.91	2982	0
6600	190	6.55	4527	0
7400	244	8.58	6648	0

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-1	-0.01	-1	—
1800	3	0.29	55	59
2600	16	0.93	254	64
3400	36	1.77	629	58
4200	62	2.78	1223	51
5000	94	4.01	2098	45
5800	132	5.46	3315	40
6600	176	7.19	4972	35
7400	229	9.26	7177	32

PERFORMANCE OF THE SYSTEM

Flight velocity

20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-3	-0.13	-14	—
1800	-5	-0.07	-13	—
2600	-2	0.14	39	—
3400	15	1.18	420	73
4200	39	2.43	1070	73
5000	71	3.93	2060	69
5800	109	5.63	3421	64
6600	153	7.55	5221	59
7400	205	9.76	7562	54

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-4	-0.42	-44	—
1800	-7	-0.32	-61	—
2600	-11	-0.22	-60	—
3400	-7	0.06	21	—
4200	10	1.09	477	61
5000	37	2.79	1462	77
5800	72	4.69	2850	76
6600	115	6.87	4745	73
7400	167	9.34	7240	69

PERFORMANCE OF THE SYSTEM

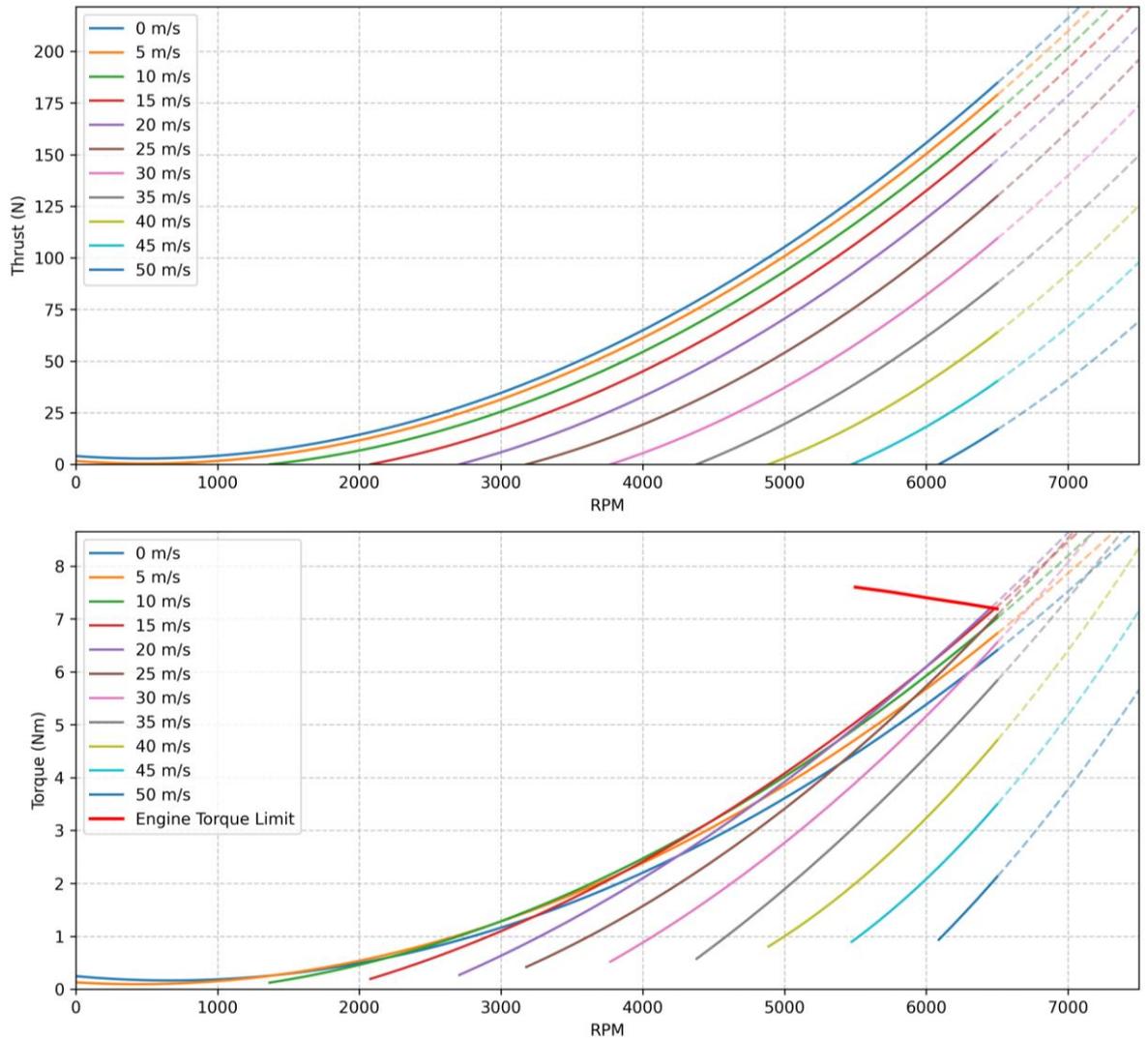
Flight velocity

40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-5	-0.84	-88	—
1800	-9	-0.75	-141	—
2600	-14	-0.58	-157	—
3400	-18	-0.38	-134	—
4200	-13	0	0	—
5000	1	0.75	391	14
5800	31	2.79	1694	74
6600	70	5.17	3576	78
7400	118	7.85	6080	77

PERFORMANCE OF THE SYSTEM

Hirth 4103 + Mejzlik 24x12 2B 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 Mejzli's 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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