

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:	27x10 2B CCW (Direction guide)
Manufacturer:	Mejzlik
Diameter:	27 in
Pitch:	10 in
Mass:	219 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: **0125**



PERFORMANCE OF THE SYSTEM

Flight velocity

0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	5	0.19	20	0
1700	14	0.56	100	0
2400	31	1.15	289	0
3100	55	1.97	640	0
3800	84	3.02	1200	0
4500	120	4.3	2025	0
5200	164	5.89	3207	0
5900	214	7.86	4856	0
6600	275	10.08	6966	0

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-2	0.07	7	—
1700	4	0.37	66	53
2400	17	1.08	272	64
3100	38	2.01	653	58
3800	65	3.15	1254	52
4500	99	4.54	2138	46
5200	140	6.2	3378	41
5900	189	8.21	5070	37
6600	246	10.59	7316	34

PERFORMANCE OF THE SYSTEM

Flight velocity

20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-3	-0.11	-11	—
1700	-6	0.1	18	—
2400	-4	0.36	91	—
3100	9	1.03	335	51
3800	31	2.26	900	70
4500	61	3.78	1779	69
5200	98	5.55	3020	65
5900	143	7.62	4706	61
6600	197	10.06	6956	57

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-5	-0.4	-42	—
1700	-8	-0.16	-28	—
2400	-13	0.14	36	—
3100	-12	0.48	155	—
3800	-6	0.66	263	—
4500	14	1.84	866	50
5200	46	3.69	2011	69
5900	86	5.91	3649	71
6600	135	8.47	5851	69

PERFORMANCE OF THE SYSTEM

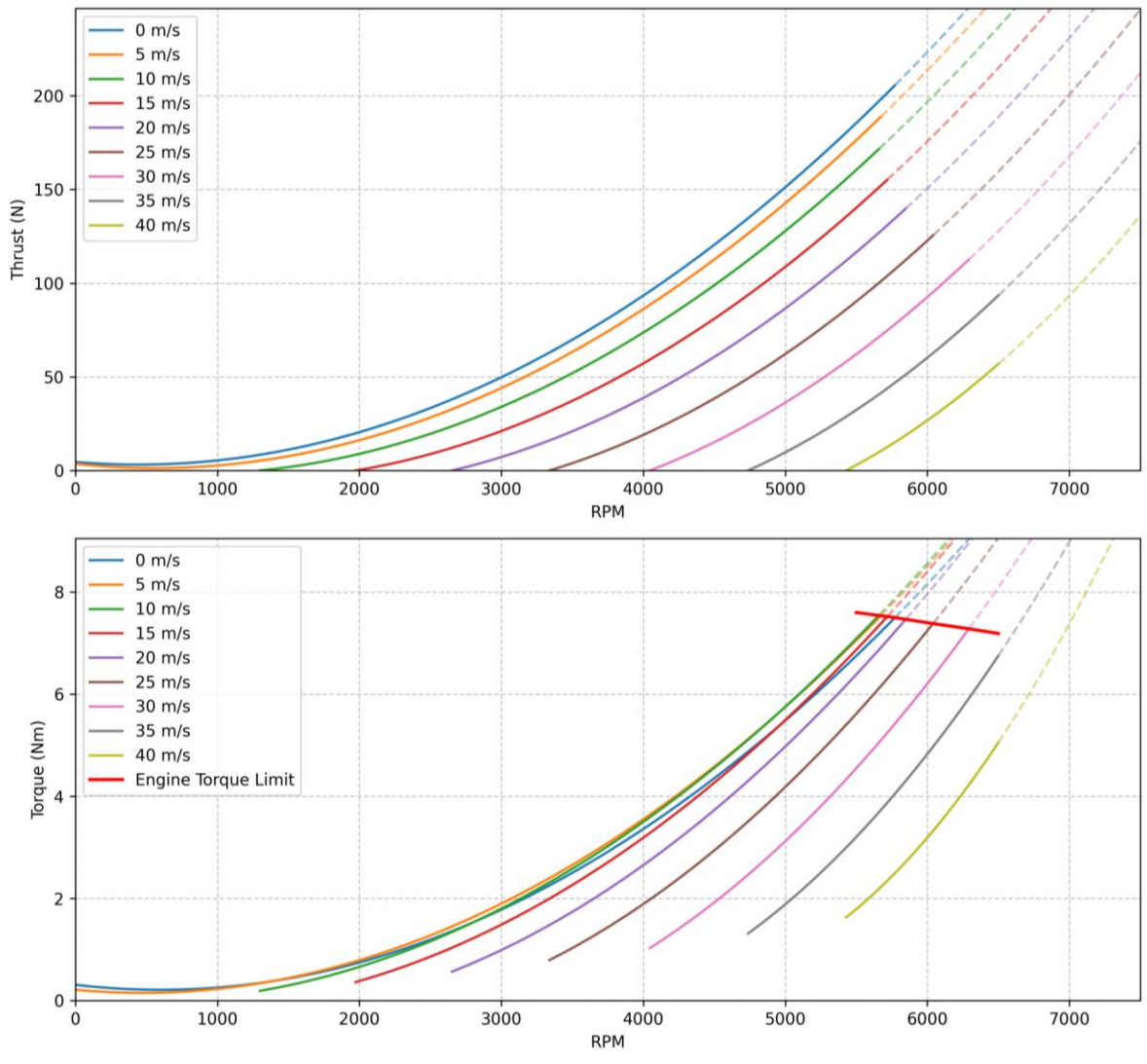
Flight velocity

40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-7	-0.77	-81	—
1700	-10	-0.53	-95	—
2400	-16	-0.31	-79	—
3100	-22	0.14	44	—
3800	-23	0.62	248	—
4500	-21	0.72	339	—
5200	-8	1.17	639	—
5900	21	2.87	1776	48
6600	64	5.48	3788	67

PERFORMANCE OF THE SYSTEM

Hirth 4103 + Mejzlik 27x10 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 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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