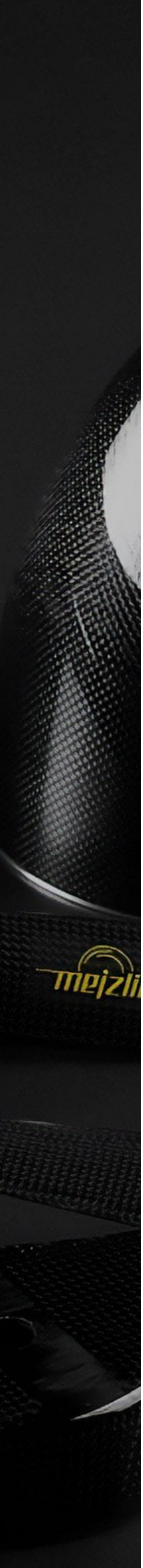


Professional Propulsion Systems

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 CCW and CW (Direction guide)**
Manufacturer:	**Mejzlik**
Diameter:	**22 in**
Pitch:	**12 in**
Mass:	**142 g**
Contact:	**info@mejzlik.eu**

ANALYSIS

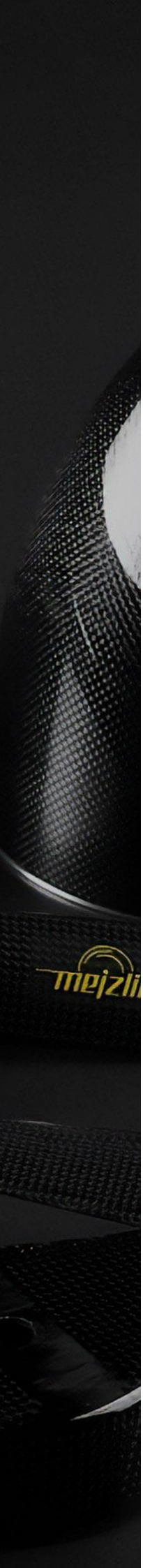
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

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

ID: **0121**

HIRTH ENGINES

mejzlik



PERFORMANCE OF THE SYSTEM

Flight velocity

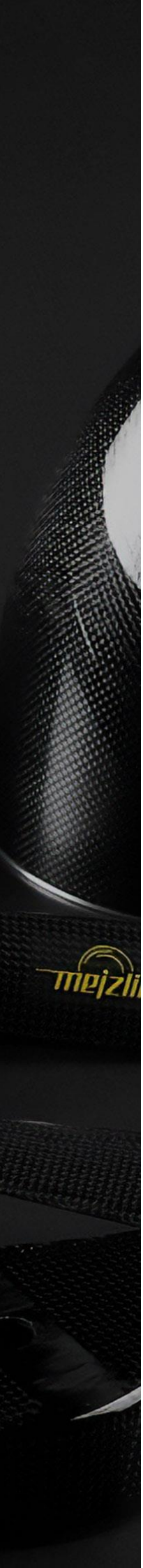
0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	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

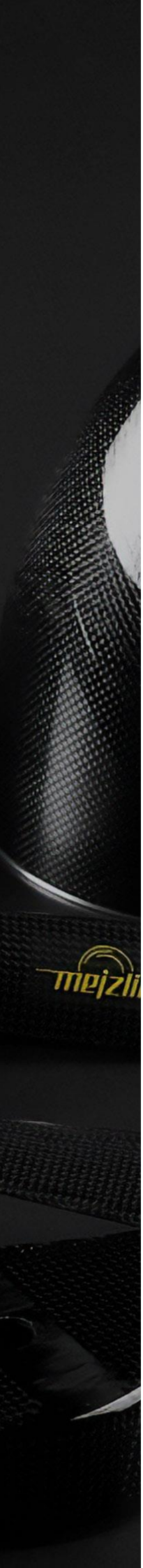
20 m/s

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**

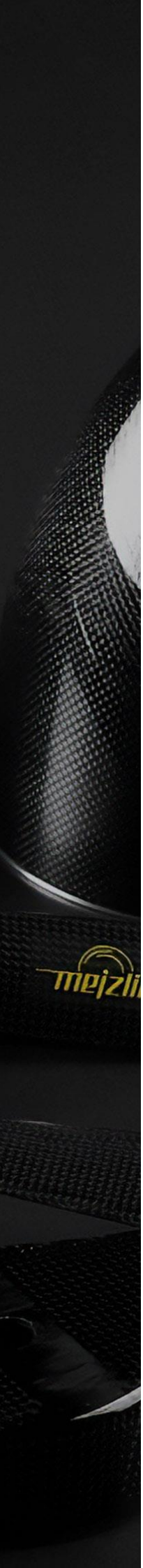


PERFORMANCE OF THE SYSTEM

Flight velocity

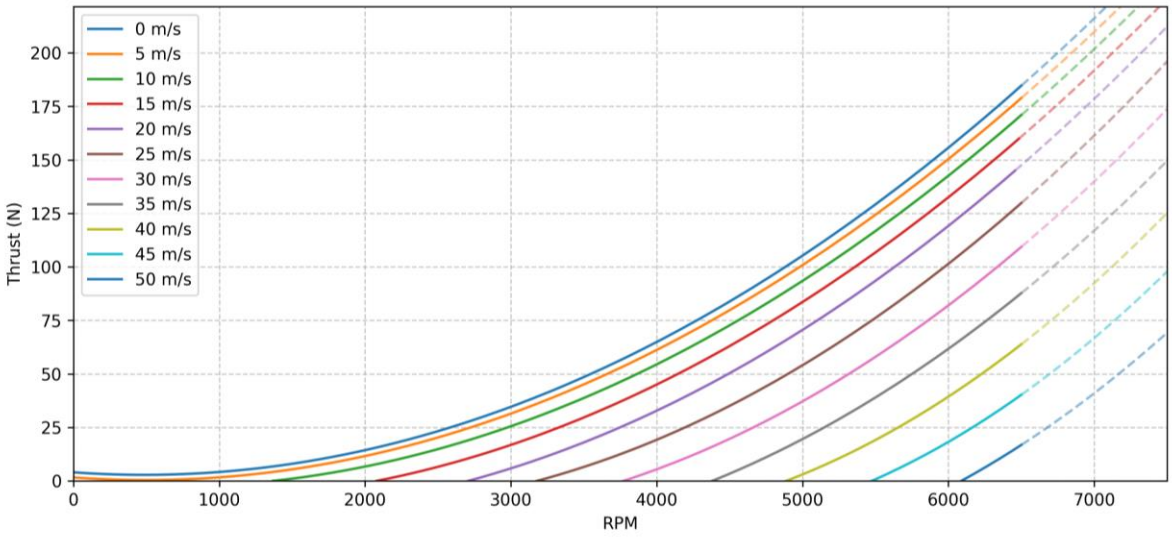
40 m/s

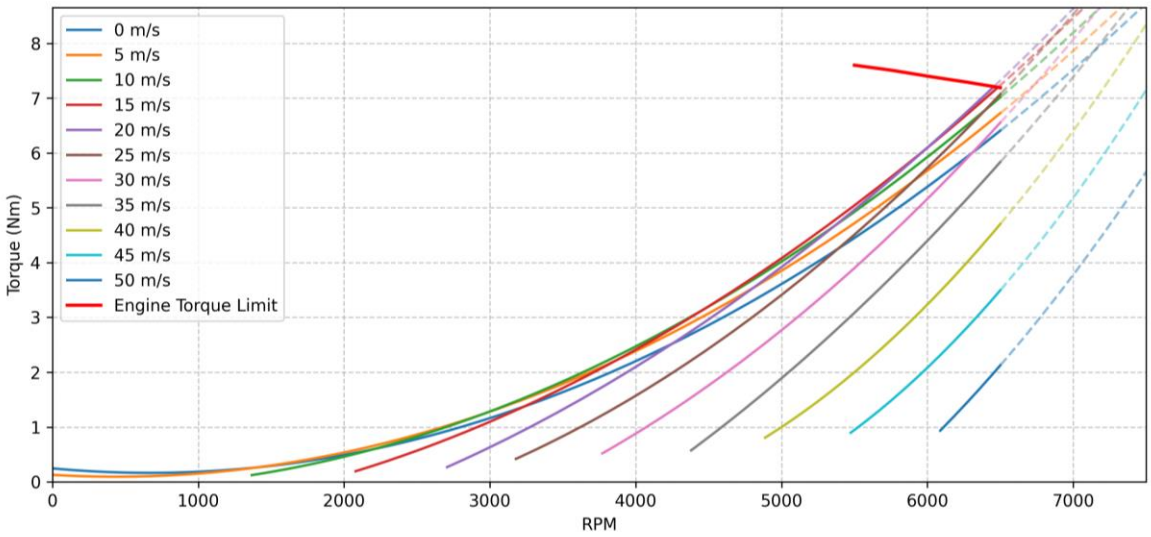
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-5	-0.84	**-88**	—
1800	-9	-0.75	**-141**	—
2600	-14	-0.58	**-157**	—
3400	-18	-0.38	**-134**	—
4200	-13	0	**0**	—
5000	1	0.75	**391**	**14**
5800	31	2.79	**1694**	**74**
6600	70	5.17	**3576**	**78**
7400	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 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: **0121**