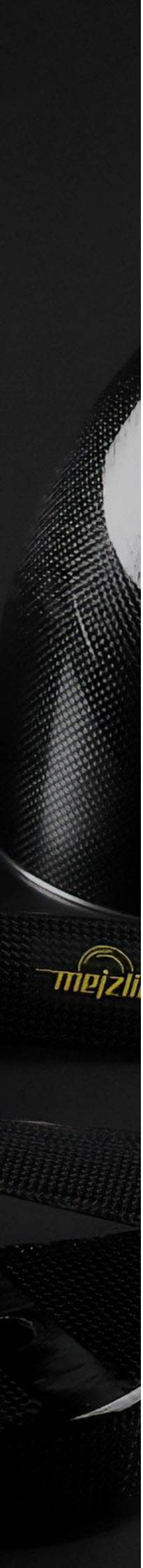


Professional Propulsion Systems

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 3B**
Manufacturer:	**Mejzlik**
Diameter:	**24 in**
Pitch:	**12 in**
Mass:	**206 g**
Contact:	**info@mejzlik.eu**

ANALYSIS

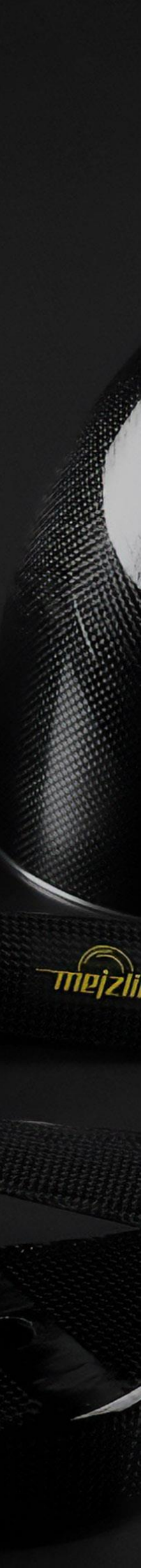
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

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

ID: **0122**

HIRTH ENGINES

mejzlik



PERFORMANCE OF THE SYSTEM

Flight velocity

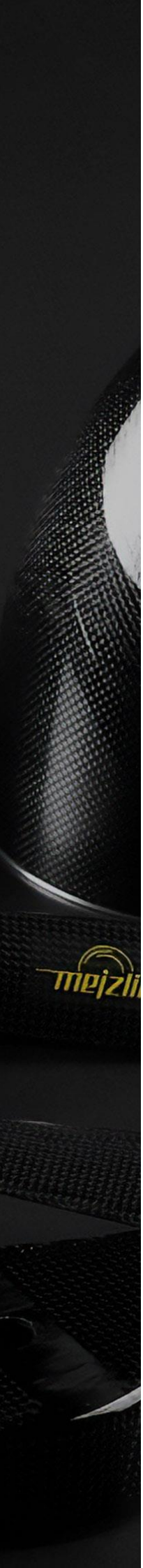
0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	5	0.19	**20**	**0**
1800	15	0.61	**116**	**0**
2600	34	1.32	**359**	**0**
3400	59	2.26	**804**	**0**
4200	93	3.52	**1548**	**0**
5000	133	5.05	**2645**	**0**
5800	181	6.93	**4207**	**0**
6600	239	9.29	**6418**	**0**
7400	311	12.22	**9471**	**0**

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-2	-0.02	**-2**	**—**
1800	5	0.42	**80**	**60**
2600	22	1.31	**356**	**62**
3400	48	2.44	**869**	**55**
4200	79	3.81	**1676**	**47**
5000	119	5.49	**2874**	**41**
5800	167	7.53	**4573**	**36**
6600	224	9.96	**6883**	**33**
7400	292	12.85	**9961**	**29**



PERFORMANCE OF THE SYSTEM

Flight velocity

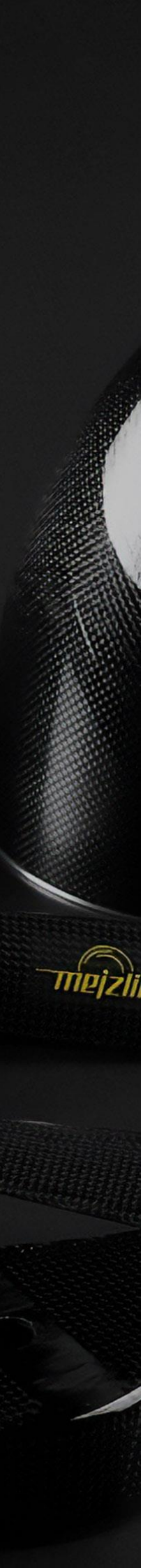
20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-4	-0.21	**-22**	**—**
1800	-8	-0.06	**-12**	**—**
2600	-3	0.27	**73**	**—**
3400	18	1.52	**540**	**68**
4200	48	3.09	**1357**	**70**
5000	86	4.98	**2605**	**66**
5800	132	7.19	**4366**	**61**
6600	187	9.77	**6750**	**56**
7400	251	12.75	**9881**	**51**

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-6	-0.62	**-64**	**—**
1800	-11	-0.46	**-87**	**—**
2600	-18	-0.23	**-63**	**—**
3400	-14	0.05	**18**	**—**
4200	6	1.27	**561**	**30**
5000	39	3.21	**1681**	**69**
5800	81	5.54	**3366**	**72**
6600	133	8.26	**5707**	**70**
7400	195	11.43	**8855**	**66**

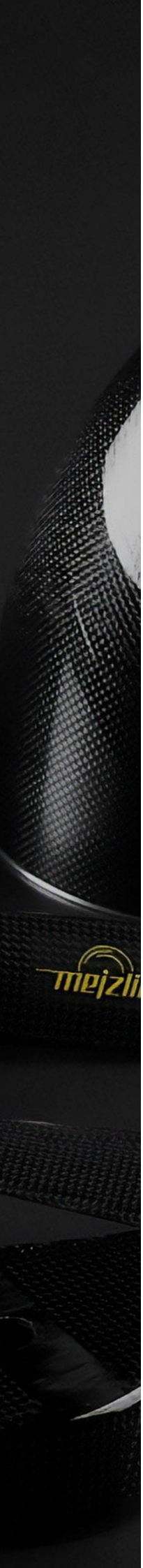


PERFORMANCE OF THE SYSTEM

Flight velocity

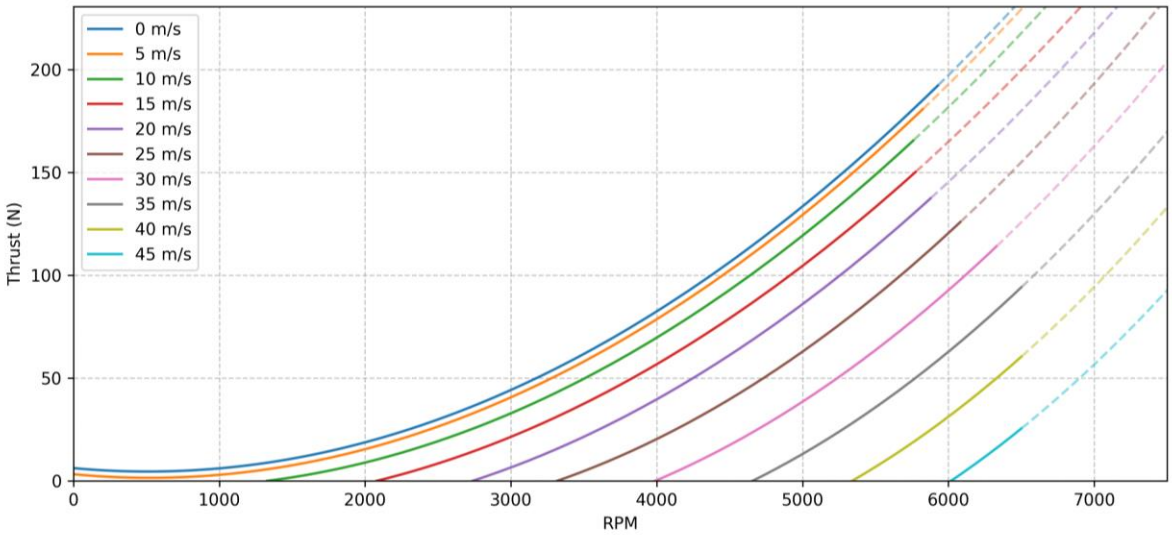
40 m/s

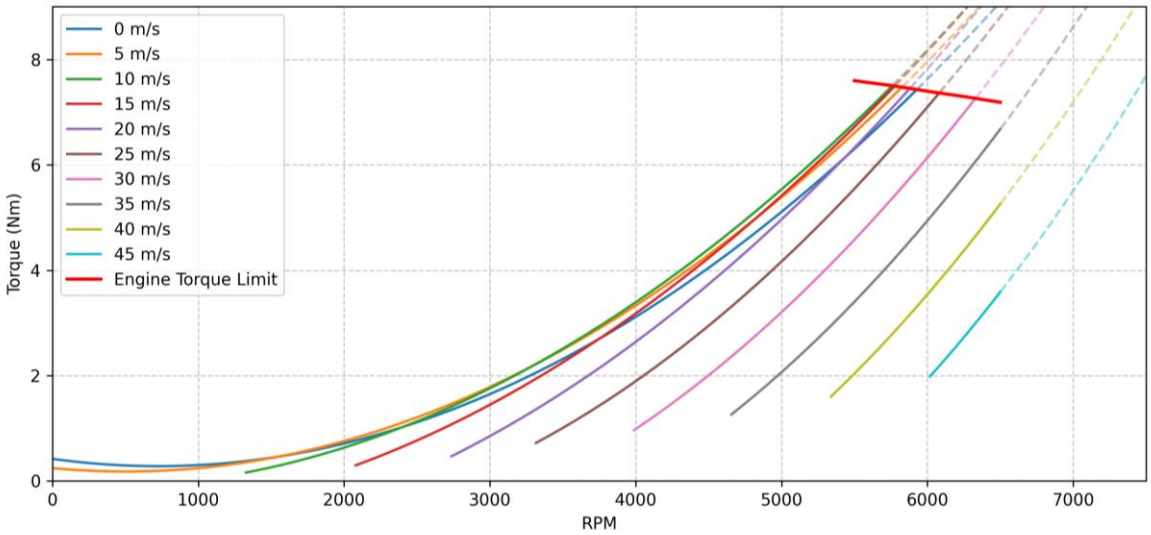
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-9	-1.21	**-126**	—
1800	-14	-1.07	**-202**	—
2600	-23	-0.82	**-223**	—
3400	-31	-0.5	**-178**	—
4200	-30	-0.18	**-79**	—
5000	-13	0.77	**402**	—
5800	21	2.87	**1744**	**47**
6600	67	5.67	**3919**	**68**
7400	125	8.89	**6886**	**73**



PERFORMANCE OF THE SYSTEM

Hirth 4103 + Mejzlik 24x12 3B
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: **0122**