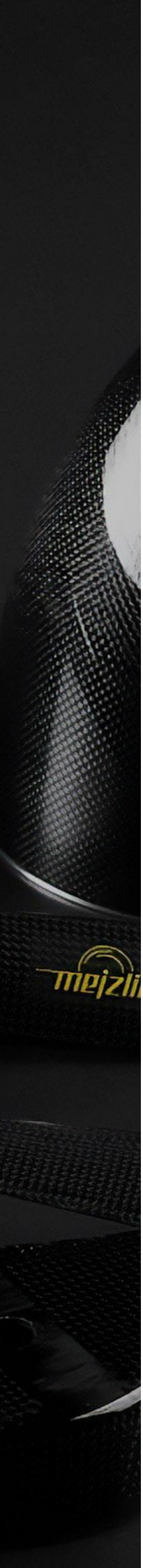


Professional Propulsion Systems

SYSTEM SPECIFICATIONS

ENGINE

Name:	**4202HF**
Manufacturer:	**HIRTH ENGINES**
Type:	**2-cylinder**
Displacement:	**183 cm³**
Max. performance:	**11 kW at 6500 RPM**
Weight:	**11.5 kg**
RPM range:	**2500–6500 RPM**
Running direction:	**Clockwise**

PROPELLER

Name:	**28x12 2B CCW (Direction guide)**
Manufacturer:	**Mejzlik**
Diameter:	**28 in**
Pitch:	**12 in**
Mass:	**230 g**
Contact:	**info@mejzlik.eu**

ANALYSIS

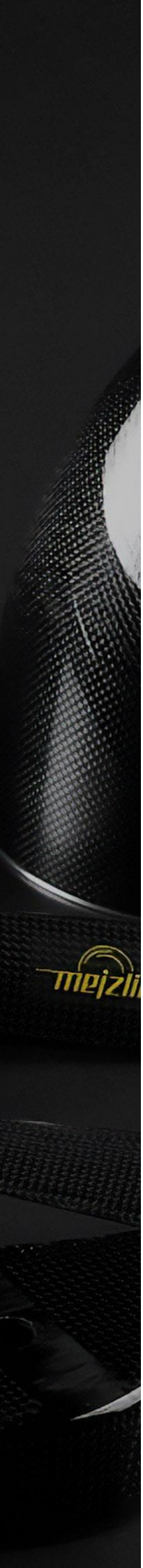
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

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

ID: **0097**

HIRTH ENGINES

mejzlik



PERFORMANCE OF THE SYSTEM

Flight velocity

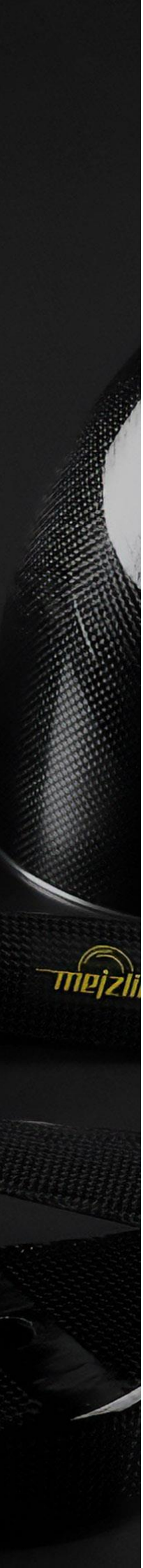
0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	44	1.70	**445**	**0**
2750	54	2.06	**593**	**0**
3000	64	2.48	**779**	**0**
3250	76	2.94	**1000**	**0**
3500	89	3.37	**1237**	**0**
3750	102	3.93	**1542**	**0**
4000	118	4.51	**1890**	**0**
4250	134	5.19	**2310**	**0**
4500	152	5.82	**2744**	**0**
4750	169	6.58	**3271**	**0**
5000	189	7.30	**3822**	**0**
5250	209	8.11	**4456**	**0**
5500	230	9.04	**5206**	**0**
5750	255	9.93	**5981**	**0**
6000	281	10.89	**6844**	**0**
6250	308	12.14	**7947**	**0**
6500	336	13.32	**9068**	**0**

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	29	1.72	**449**	**63**
2750	38	2.15	**619**	**61**
3000	48	2.61	**819**	**58**
3250	59	3.10	**1054**	**56**
3500	71	3.63	**1330**	**53**
3750	84	4.21	**1653**	**51**
4000	98	4.83	**2024**	**48**
4250	113	5.50	**2448**	**46**
4500	129	6.21	**2928**	**44**
4750	147	6.97	**3469**	**42**
5000	165	7.78	**4075**	**41**
5250	186	8.65	**4754**	**39**
5500	207	9.57	**5512**	**37**
5750	229	10.56	**6357**	**36**
6000	253	11.62	**7302**	**35**
6250	278	12.77	**8359**	**33**
6500	306	14.01	**9539**	**32**



PERFORMANCE OF THE SYSTEM

Flight velocity

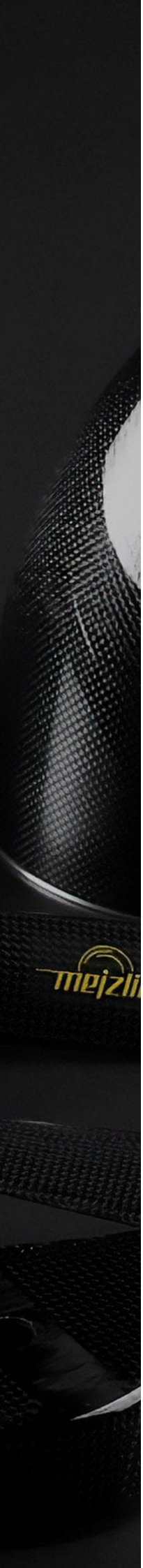
20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	1	0.45	**117**	**17**
2750	9	0.98	**282**	**61**
3000	17	1.54	**484**	**70**
3250	27	2.14	**728**	**73**
3500	37	2.76	**1012**	**73**
3750	49	3.42	**1345**	**73**
4000	62	4.13	**1729**	**71**
4250	76	4.87	**2169**	**70**
4500	91	5.65	**2664**	**68**
4750	107	6.48	**3225**	**67**
5000	125	7.36	**3853**	**65**
5250	144	8.28	**4553**	**63**
5500	164	9.26	**5336**	**61**
5750	186	10.30	**6204**	**60**
6000	208	11.42	**7174**	**58**
6250	233	12.62	**8258**	**56**
6500	259	13.90	**9464**	**55**

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-20	-0.66	**-173**	**—**
2750	-20	-0.74	**-214**	**—**
3000	-17	-0.60	**-189**	**—**
3250	-12	-0.22	**-76**	**—**
3500	-4	0.40	**145**	**—**
3750	6	1.13	**443**	**40**
4000	17	1.93	**809**	**63**
4250	29	2.78	**1237**	**71**
4500	42	3.66	**1726**	**74**
4750	57	4.57	**2275**	**75**
5000	73	5.54	**2899**	**75**
5250	90	6.55	**3599**	**75**
5500	108	7.59	**4372**	**74**
5750	128	8.70	**5240**	**73**
6000	149	9.89	**6212**	**72**
6250	172	11.15	**7297**	**71**
6500	196	12.48	**8492**	**69**



PERFORMANCE OF THE SYSTEM

Flight velocity

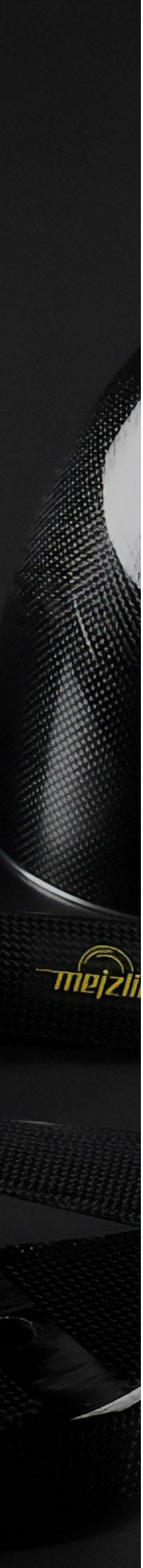
40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-24	-1.10	**-288**	—
2750	-29	-1.25	**-361**	—
3000	-33	-1.37	**-430**	—
3250	-36	-1.52	**-518**	—
3500	-38	-1.67	**-612**	—
3750	-37	-1.84	**-724**	—
4000	-32	-1.50	**-628**	—
4250	-24	-0.91	**-404**	—
4500	-13	-0.02	**-9**	—
4750	-1	0.98	**488**	—
5000	12	2.04	**1070**	**46**
5250	27	3.15	**1733**	**63**
5500	43	4.31	**2483**	**70**
5750	61	5.52	**3324**	**73**
6000	80	6.78	**4262**	**75**
6250	101	8.11	**5311**	**76**
6500	123	9.53	**6486**	**76**

Flight velocity

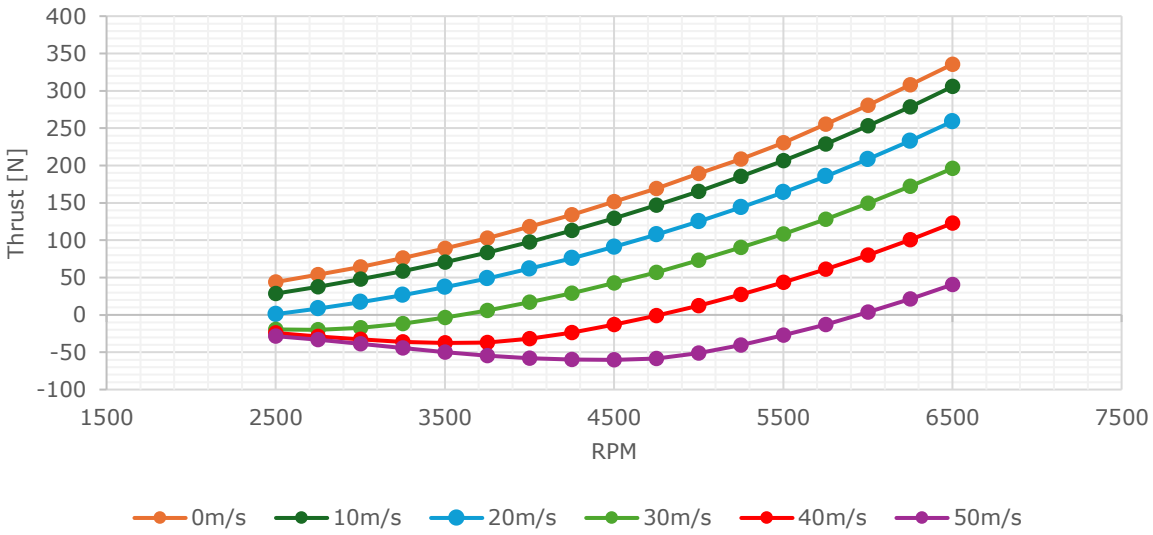
50 m/s

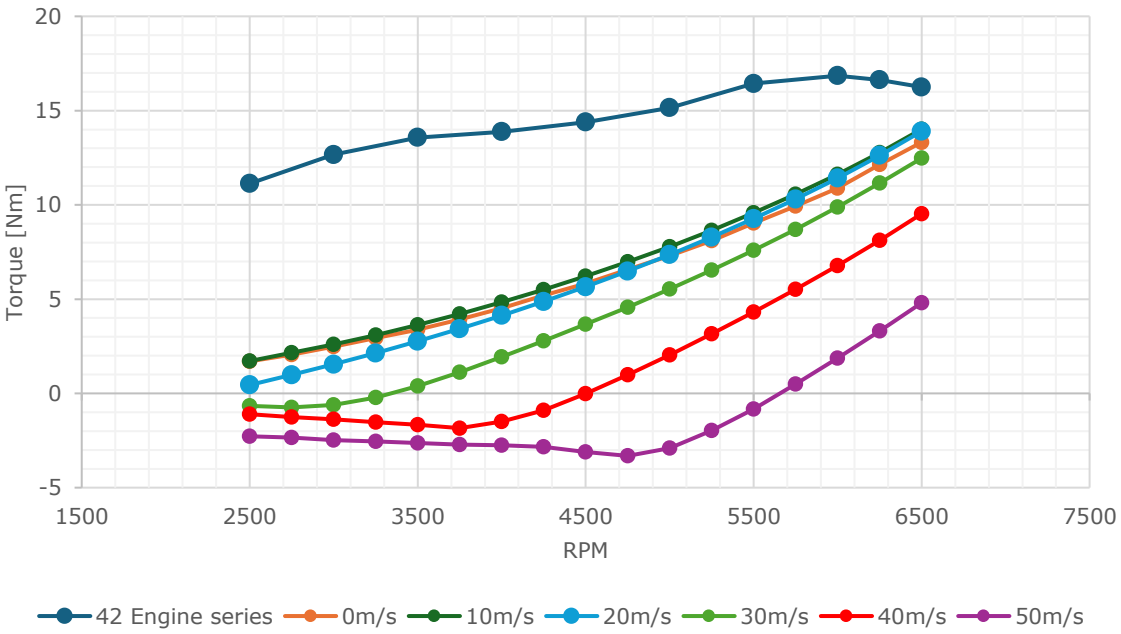
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-29	-2.27	**-594**	—
2750	-33	-2.34	**-675**	—
3000	-39	-2.47	**-778**	—
3250	-44	-2.54	**-864**	—
3500	-50	-2.63	**-963**	—
3750	-55	-2.72	**-1066**	—
4000	-58	-2.75	**-1154**	—
4250	-60	-2.83	**-1259**	—
4500	-60	-3.11	**-1467**	—
4750	-58	-3.31	**-1649**	—
5000	-51	-2.90	**-1520**	—
5250	-40	-1.96	**-1079**	—
5500	-27	-0.84	**-481**	—
5750	-13	0.49	**294**	—
6000	3	1.87	**1176**	**15**
6250	21	3.31	**2163**	**49**
6500	41	4.80	**3269**	**62**



PERFORMANCE OF THE SYSTEM

Hirth 42 series + Mejzlik 28x12
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.

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.