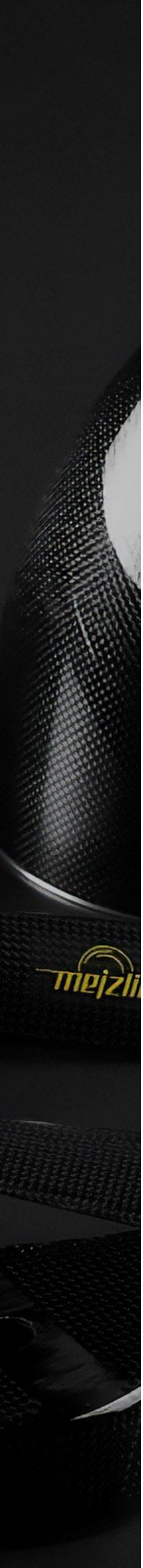


Professional Propulsion Systems

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:	**32x12 2B CCW (Direction guide)**
Manufacturer:	**Mejzlik**
Diameter:	**32 in**
Pitch:	**12 in**
Mass:	**340 g**
Contact:	**info@mejzlik.eu**

ANALYSIS

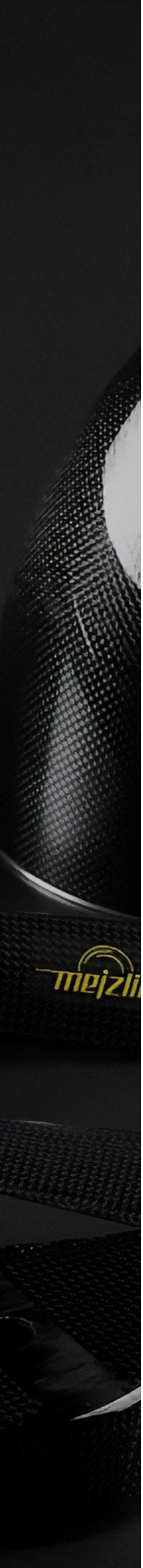
Need expert guidance on analyzing your flight performance?
Our team provides a comprehensive analysis of RPM calculations, motor and propeller efficiency, including customized propeller selection recommendations to ensure your system achieves maximum efficiency.

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

ID: **0096**

HIRTH ENGINES

mejzlik



PERFORMANCE OF THE SYSTEM

Flight velocity

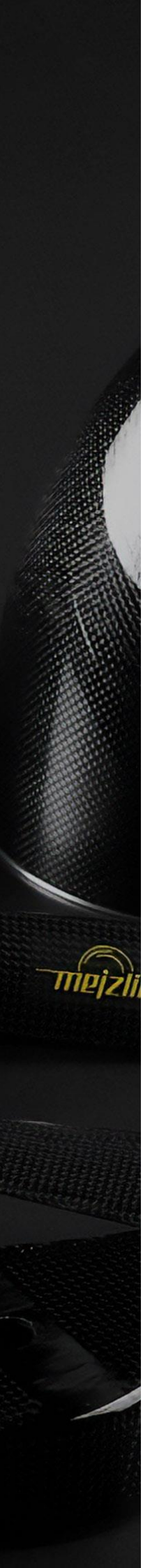
0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	95	4.14	**1083**	**0**
2750	116	5.00	**1439**	**0**
3000	139	6.00	**1886**	**0**
3250	163	7.09	**2414**	**0**
3500	191	8.32	**3050**	**0**
3750	221	9.65	**3788**	**0**
4000	253	11.12	**4659**	**0**
4250	291	12.71	**5657**	**0**
4500	324	14.39	**6782**	**0**
4750	369	16.22	**8068**	**0**
5000	414	18.05	**9449**	**0**
5250	452	20.62	**11338**	**0**
5500	510	22.92	**13201**	**0**
5750	557	25.44	**15321**	**0**
6000	616	28.51	**17911**	**0**
6250	677	31.86	**20855**	**0**
6500	741	35.62	**24242**	**0**

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	65	4.19	**1096**	**60%**
2750	84	5.17	**1490**	**56%**
3000	105	6.26	**1965**	**53%**
3250	128	7.44	**2533**	**51%**
3500	154	8.73	**3200**	**48%**
3750	181	10.12	**3975**	**46%**
4000	212	11.65	**4879**	**43%**
4250	244	13.29	**5913**	**41%**
4500	279	15.06	7099	39%
4750	317	16.99	8449	38%
5000	358	19.07	9987	36%
5250	401	21.34	11730	34%
5500	448	23.80	13707	33%
5750	500	26.49	15951	31%
6000	555	29.43	18492	30%
6250	614	32.65	21372	29%
6500	674	36.22	24653	27%



PERFORMANCE OF THE SYSTEM

Flight velocity

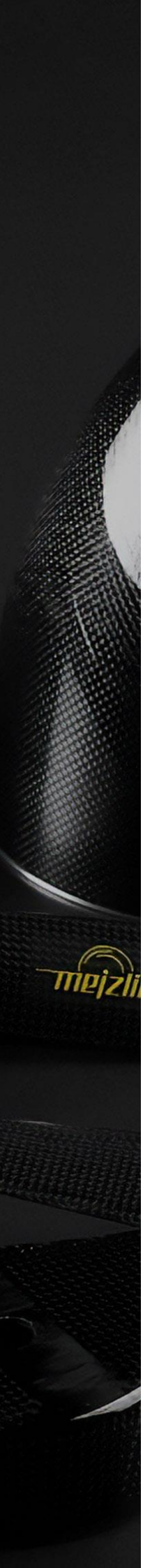
20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	18	2.48	**650**	**54%**
2750	33	3.41	**983**	**67%**
3000	51	4.55	**1430**	**71%**
3250	72	5.84	**1987**	**72%**
3500	94	7.23	**2650**	**71%**
3750	119	8.72	**3425**	**70%**
4000	146	10.33	**4328**	**68%**
4250	176	12.06	**5366**	**66%**
4500	209	13.92	**6559**	**64%**
4750	244	15.92	**7917**	**62%**
5000	283	18.07	**9461**	**60%**
5250	324	20.40	**11213**	**58%**
5500	369	22.91	**13193**	**56%**
5750	417	25.63	**15432**	**54%**
6000	469	28.59	**17964**	**52%**
6250	525	31.84	**20840**	**50%**
6500	585	35.40	**24099**	**49%**

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	18	2.48	**650**	**54%**
2750	33	3.41	**983**	**67%**
3000	51	4.55	**1430**	**71%**
3250	72	5.84	**1987**	**72%**
3500	94	7.23	**2650**	**71%**
3750	119	8.72	**3425**	**70%**
4000	146	10.33	**4328**	**68%**
4250	176	12.06	**5366**	**66%**
4500	209	13.92	**6559**	**64%**
4750	244	15.92	**7917**	**62%**
5000	283	18.07	**9461**	**60%**
5250	324	20.40	**11213**	**58%**
5500	369	22.91	**13193**	**56%**
5750	417	25.63	**15432**	**54%**
6000	469	28.59	**17964**	**52%**
6250	525	31.84	**20840**	**50%**
6500	585	35.40	**24099**	**49%**



PERFORMANCE OF THE SYSTEM

Flight velocity

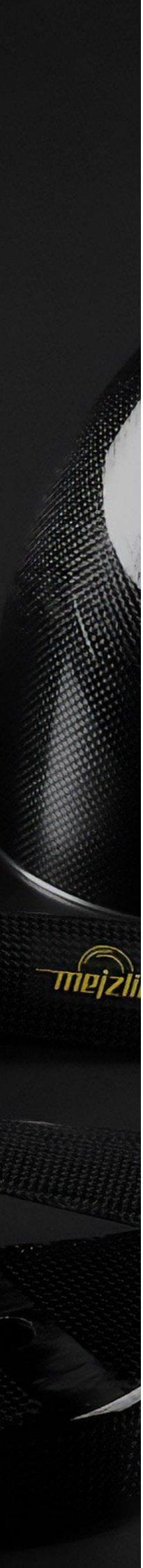
40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-30	1.25	**327**	—
2750	-33	1.59	**457**	—
3000	-33	1.84	**577**	—
3250	-32	2.21	**752**	—
3500	-29	2.62	**961**	—
3750	-22	3.14	**1235**	—
4000	-11	4.02	**1682**	**-26%**
4250	4	5.06	**2250**	**8%**
4500	26	6.41	**3022**	**35%**
4750	52	7.87	**3913**	**53%**
5000	81	9.58	**5017**	**65%**
5250	114	11.82	**6501**	**70%**
5500	151	14.39	**8287**	**73%**
5750	190	17.22	**10367**	**73%**
6000	233	20.26	**12731**	**73%**
6250	281	23.59	**15441**	**73%**
6500	332	27.19	**18507**	**72%**

Flight velocity

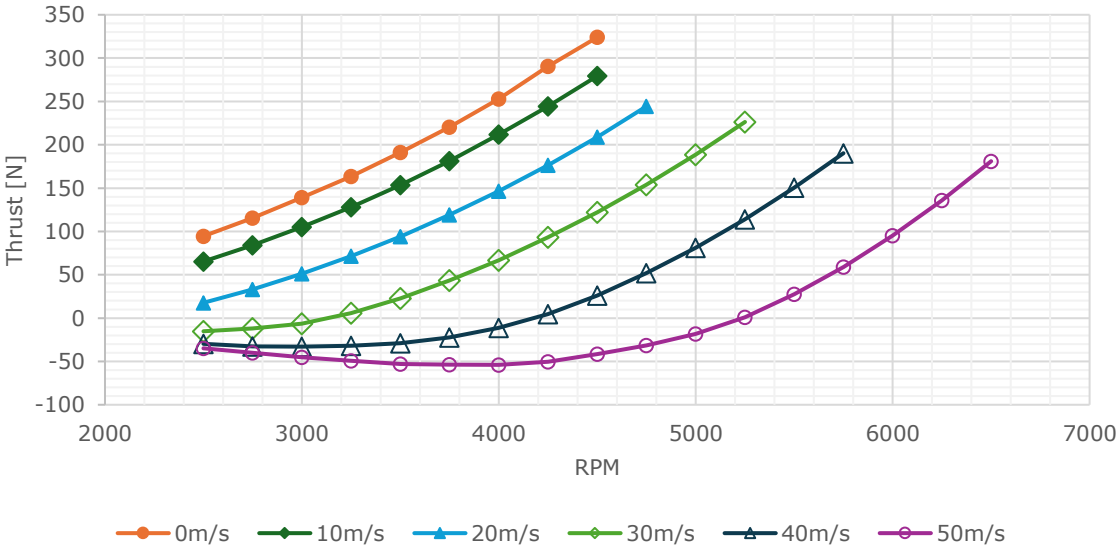
50 m/s

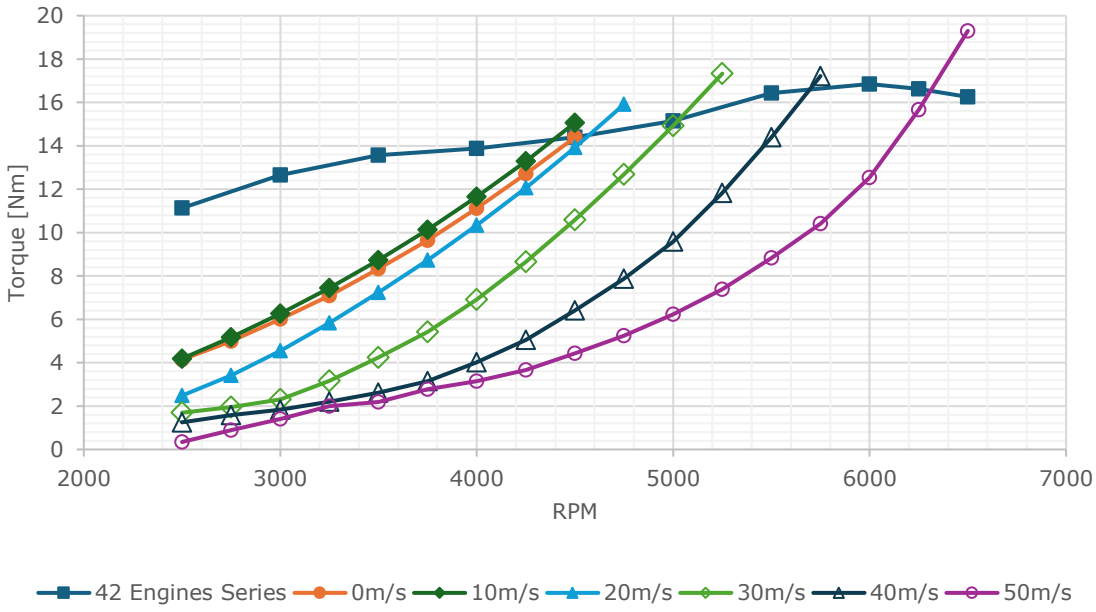
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-35	0.34	**90**	—
2750	-40	0.89	**255**	—
3000	-45	1.41	**443**	—
3250	-49	2.00	**679**	—
3500	-53	2.19	**803**	—
3750	-54	2.77	**1089**	—
4000	-54	3.15	**1321**	—
4250	-50	3.67	**1633**	—
4500	-42	4.44	**2091**	—
4750	-31	5.24	**2608**	—
5000	-18	6.23	**3262**	**-28%**
5250	1	7.39	**4063**	**1%**
5500	27	8.83	**5085**	**27%**
5750	59	10.40	**6265**	**47%**
6000	95	12.53	**7875**	**60%**
6250	136	15.67	**10255**	**66%**
6500	181	19.30	13137	69%



PERFORMANCE OF THE SYSTEM

Hirth 42 series + Mejzlik 32x12
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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