

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:	31x12 EVO LF 2B
Manufacturer:	Mezlik
Diameter:	31 in
Pitch:	12 in
Mass:	252 g
Contact:	info@mezlik.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@mezlik.eu or info@hirthengines.com

ID: **0099**



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	-15	1.70	444	—
2750	-12	1.95	561	—
3000	-6	2.31	725	—
3250	6	3.16	1077	16
3500	23	4.25	1556	44
3750	43	5.42	2129	61
4000	67	6.91	2892	69
4250	93	8.65	3851	73
4500	122	10.58	4986	74
4750	154	12.68	6308	73
5000	189	14.93	7815	72
5250	226	17.33	9526	71
5500	267	19.91	11466	70
5750	311	22.67	13653	68
6000	359	25.66	16126	67
6250	411	28.93	18936	65
6500	467	32.51	22126	63

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	—
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

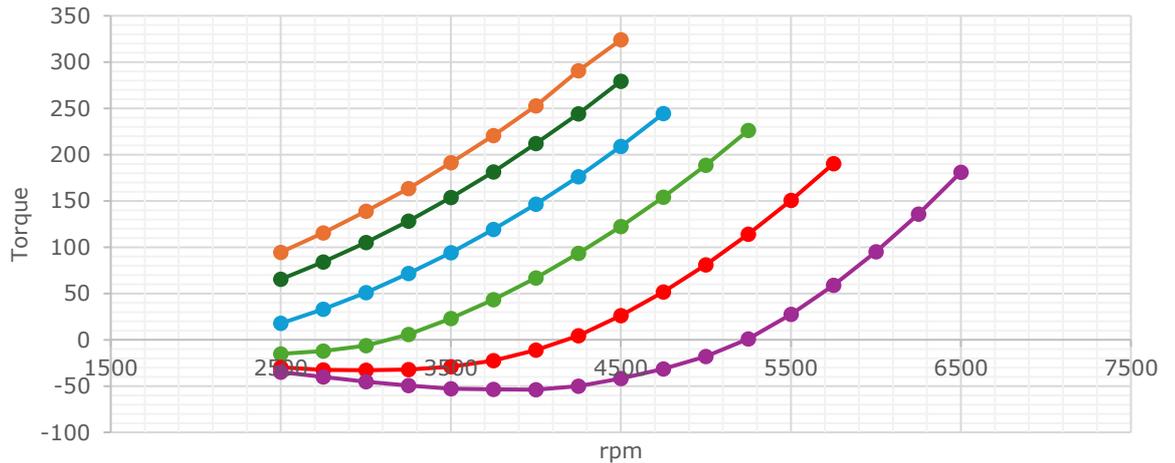
Flight velocity

50 m/s

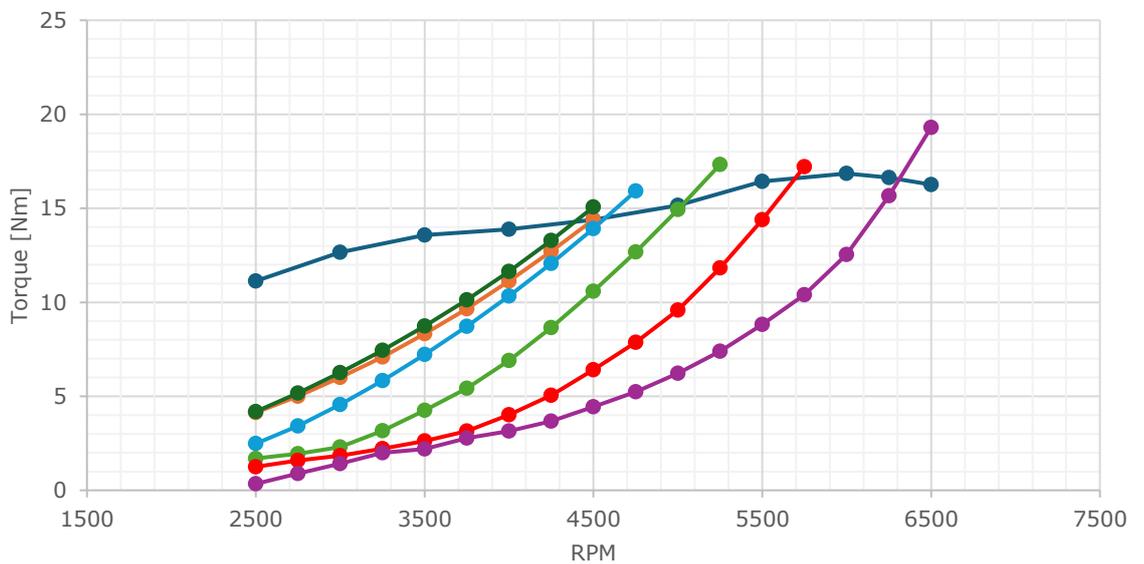
Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2500	-35	0.34	90	—
2750	-40	0.89	255	—
3000	-45	1.41	443	—
3250	-49	2.00	679	—
3500	-53	2.19	803	—
3750	-54	2.77	1089	—
4000	-54	3.15	1321	—
4250	-50	3.67	1633	—
4500	-42	4.44	2091	—
4750	-31	5.24	2608	—
5000	-18	6.23	3262	—
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 + Mejlík 31x12 EVO LF Performance in flight



— 0m/s — 10m/s — 20m/s — 30m/s — 40m/s — 50m/s



— 42 Engine series — 0m/s — 10m/s — 20m/s — 30m/s — 40m/s — 50m/s

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 Mejlík's proprietary simulation software. The greyed out values are above engine limit.