

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
Manufacturer:	Mezlik
Diameter:	32 in
Pitch:	12 in
Mass:	340 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: **0096**



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%

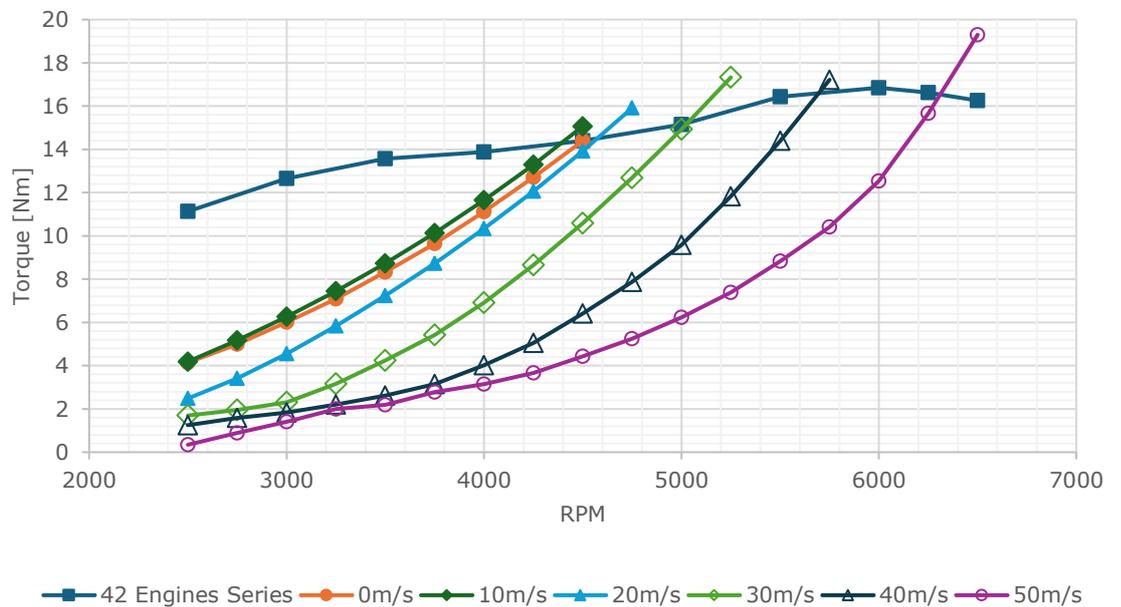
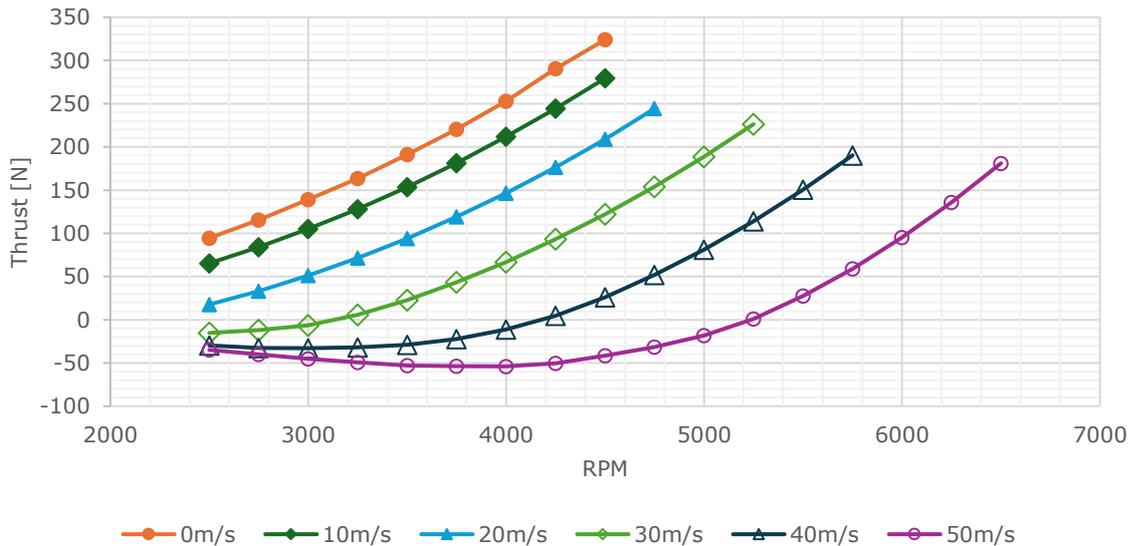
Flight velocity

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