

Professional Propulsion Systems

SYSTEM SPECIFICATIONS

ENGINE



Name:	4201
Manufacturer:	HIRTH ENGINES
Type:	2-cylinder, two stroke
Displacement:	183 cm³
Max. performance:	11 kW at 6500 RPM
Weight:	5.7 kg
RPM range:	1800–6500 RPM
Running direction:	Clockwise

PROPELLER



Name:	29x12 3B CCW (Direction guide)
Manufacturer:	Mezlik
Diameter:	29 in
Pitch:	12 in
Mass:	342 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

PERFORMANCE OF THE SYSTEM

Flight velocity

0 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	9	0.41	42	0
1600	23	1.05	177	0
2200	47	2.12	489	0
2900	85	3.72	1130	0
3500	129	5.53	2026	0
4100	179	7.70	3306	0
4800	249	10.78	5416	0
5400	320	14.04	7939	0
6100	424	18.63	11901	0

Flight velocity

10 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1000	-2	0.21	22	—
1600	6	0.78	130	49
2200	28	2.04	469	61
2900	65	3.92	1190	54
3500	105	5.92	2168	48
4100	155	8.33	3576	43
4800	226	11.73	5896	38
5400	298	15.17	8577	35
6100	396	19.91	12721	31

PERFORMANCE OF THE SYSTEM

Flight velocity

20 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
1700	-7	0.60	108	—
2200	-1	1.17	270	—
2800	17	2.28	669	50
3300	44	3.87	1336	66
3900	86	6.28	2566	67
4400	128	8.62	3973	64
4800	167	10.72	5390	62
5000	188	11.85	6206	60
5500	246	14.93	8599	57
6100	326	19.18	12254	53

Flight velocity

30 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
2600	-14	1.37	374	—
3000	-9	1.96	616	—
3400	1	2.64	941	4
3900	23	4.00	1632	43
4300	50	5.62	2532	59
4700	83	7.61	3745	67
4800	93	8.17	4105	68
5200	132	10.50	5719	69
5600	177	13.13	7702	69
6100	239	16.79	10723	67

PERFORMANCE OF THE SYSTEM

Flight velocity

40 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
3400	-25	2.32	826	—
3800	-19	3.09	1230	—
4100	-11	3.78	1624	—
4400	-1	4.47	2058	—
4700	12	5.19	2552	19
4800	18	5.56	2794	26
5100	37	6.65	3550	41
5400	61	8.11	4586	53
5700	91	10.01	5974	61
6100	137	12.76	8149	67

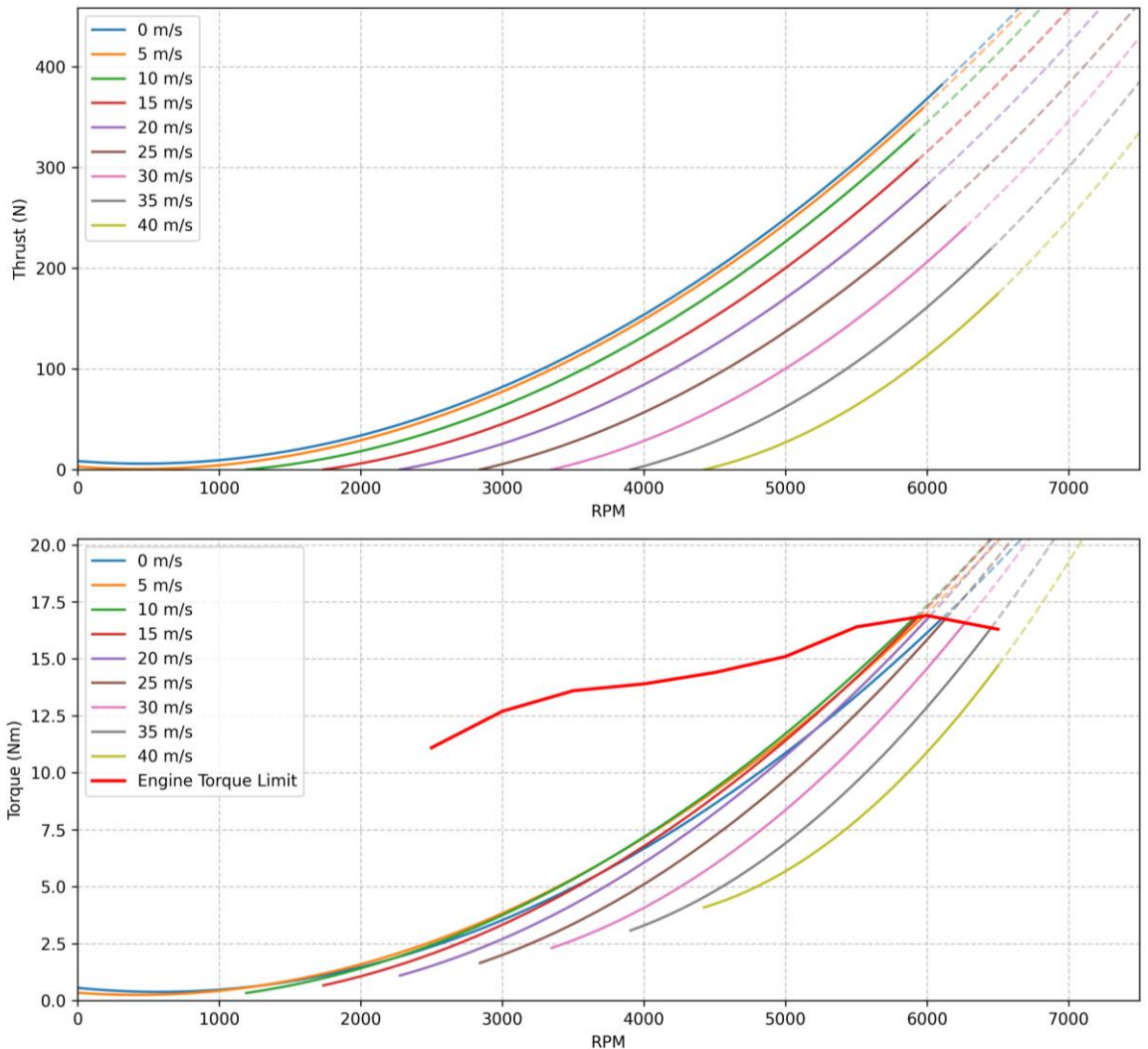
Flight velocity

50 m/s

Rotational Speed [RPM]	Thrust [N]	Torque [Nm]	Mechanical Power [W]	Propulsion efficiency [%]
4300	-38	3.86	1736	—
4500	-36	4.33	2039	—
4700	-32	4.71	2319	—
4800	-30	4.95	2487	—
5000	-24	5.51	2884	—
5200	-17	6.02	3276	—
5400	-8	6.59	3724	—
5600	2	7.16	4197	2
5800	14	7.90	4797	15
6100	37	9.28	5931	31

PERFORMANCE OF THE SYSTEM

Hirth 4201 + Mejzlik 29x12 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: **0110**