



M8108 Light

Specification

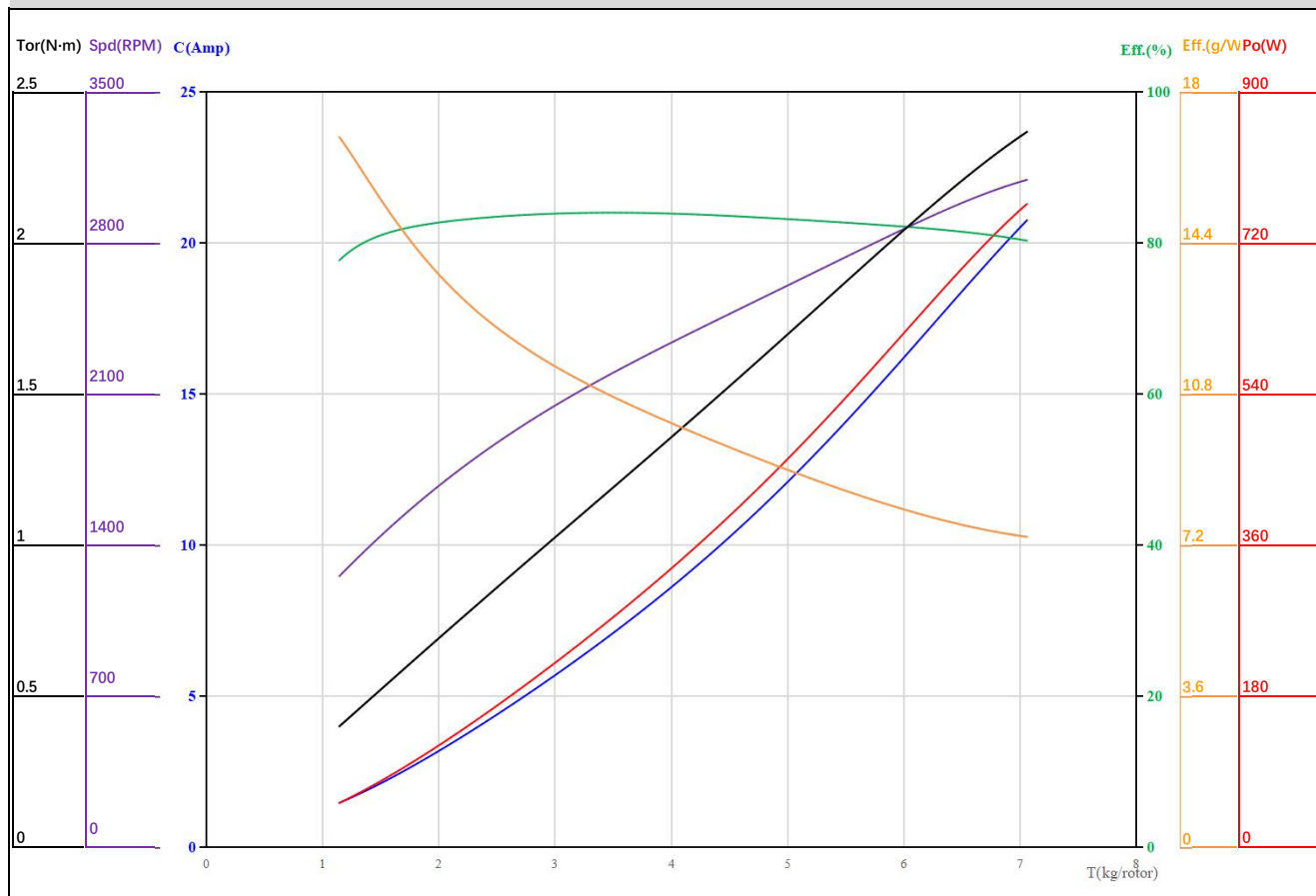
Model	M8108 Light-85/100/150KV	Protection level	IPX5
Motor Size	Φ87.1*H25.4mm	Slot& Pole	36N 42P
Stator Size	Φ81*H8mm	Dynamic balance	≤10mg
Stator process	High standard silicon steel sheet, rust proof, 180°C high temperature resistance paint-coat	Bearing	Water proof bearing
Enamelled wire	200°C	Motor axle diameter	/
Magnet	180°C	Props mounting dimensions	4*M3@D20mm, 4*M4@D23mm
Isolation test	500V AC high voltage resistance test	Motor mounting dimensions	4*M4@D36mm
Rated power input	330W	Rated power output	280.5W

Specification

KV	85KV	100KV	150KV
Battery(LiPo)	LiPo-12S	LiPo-12S	LiPo-6S
No-load current	0.91A	1.19A	1.41A
Maximum current (Non-hermetic Ambient Temperature ≤ 25°C)	20.8A	33.8 A	27.8 A
Max power	950W	1550W	640W
Max thrust	7.2kg	9.2kg	5.5kg
Resistance	239.5mΩ	165.2mΩ	82.8mΩ
Wire Size	16AWG	16AWG	16AWG
Wire length	100mm	100mm	100mm
Weight (With wire)	237.4g	238.3g	242.8g

85KV+MSC 29x9.5 Load performance parameters

Graph



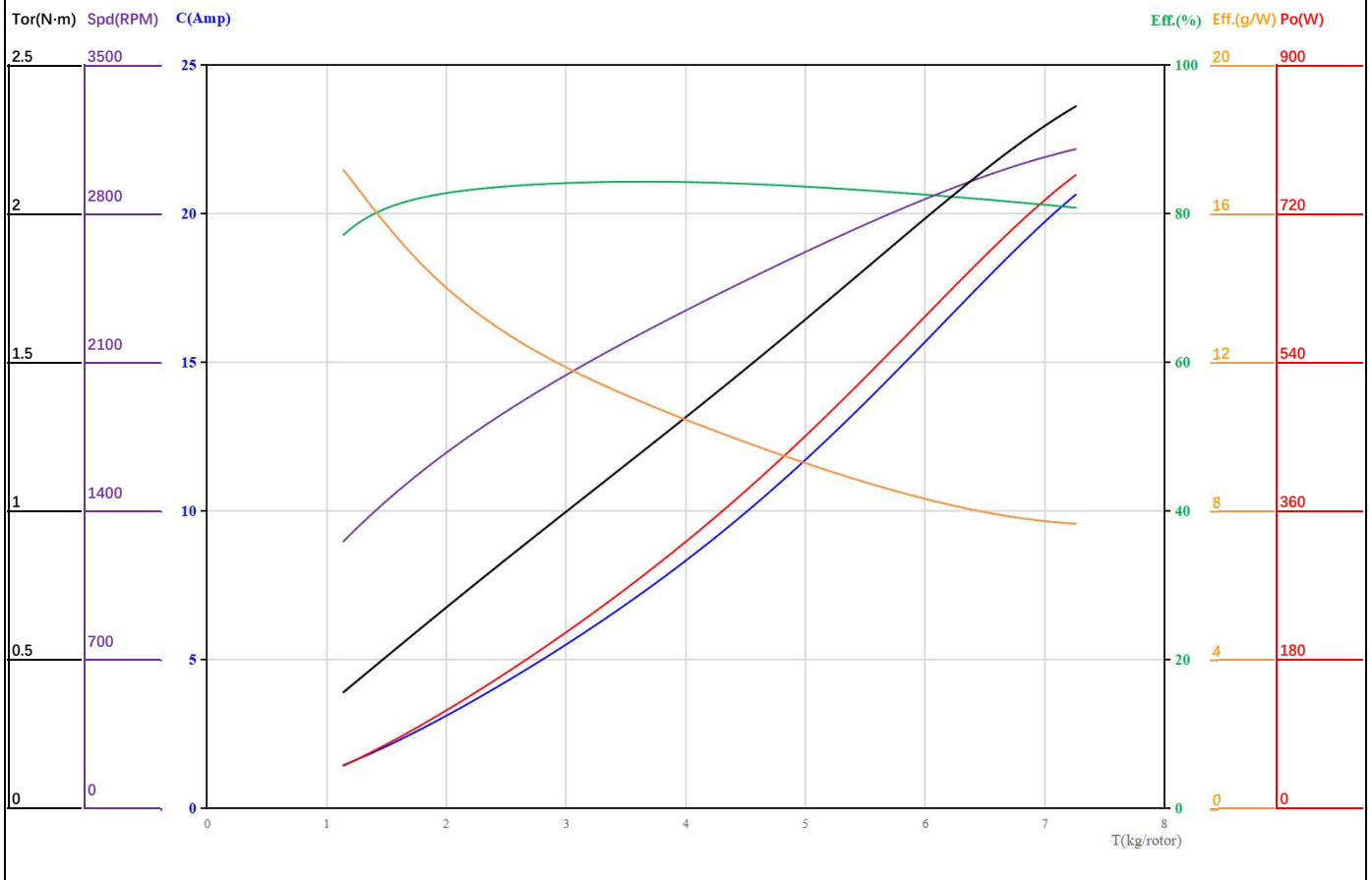
Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N·m)	Power Output(W)	Temperature(°C)
46V (12S LiPo)	MSC 29x9.5	33%	1171	1.5	69.6	1270	16.8	0.41	59.2	66.1
		35%	1285	1.7	78.6	1331	16.3	0.45	66.8	
		37%	1413	1.9	89.4	1398	15.8	0.49	76.0	
		39%	1552	2.2	101.9	1467	15.2	0.54	86.6	
		42%	1778	2.7	123.7	1575	14.4	0.62	105.1	
		45%	2021	3.2	148.8	1683	13.6	0.70	126.5	
		48%	2279	3.8	176.9	1789	12.9	0.79	150.4	
		51%	2549	4.5	207.6	1891	12.3	0.88	176.5	
		54%	2828	5.2	240.8	1989	11.7	0.97	204.7	
		57%	3117	6.0	276.4	2083	11.3	1.06	235.0	
		60%	3412	6.8	314.6	2172	10.8	1.16	267.4	
		63%	3715	7.7	355.5	2259	10.5	1.26	302.2	
		66%	4024	8.7	399.5	2344	10.1	1.36	339.5	
		69%	4339	9.7	446.8	2428	9.7	1.47	379.8	
		72%	4657	10.8	497.7	2512	9.4	1.58	423.1	
		75%	4977	12.0	552.1	2596	9.0	1.69	469.3	
		78%	5296	13.2	609.5	2680	8.7	1.80	518.1	
		81%	5611	14.5	669.0	2763	8.4	1.91	568.7	
		84%	5917	15.8	729.0	2843	8.1	2.01	619.7	
		87%	6208	17.1	787.3	2916	7.9	2.11	669.2	
		90%	6476	18.3	841.4	2979	7.7	2.20	715.2	
		100%	7060	20.7	954.7	3092	7.4	2.37	811.5	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

85KV+MSC 30x9.8 Load performance parameters

Graph



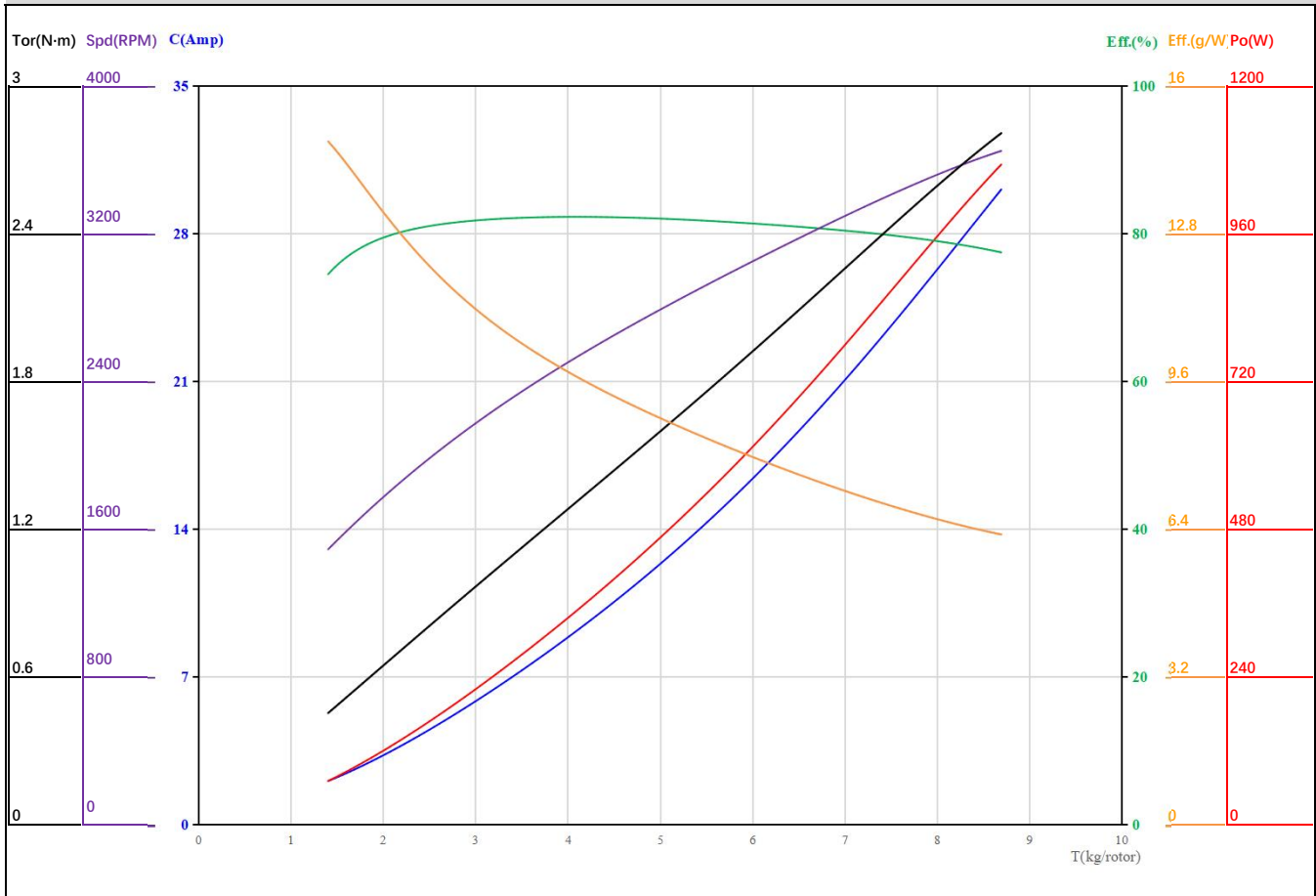
Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N·m)	Power Output(W)	Temperature(°C)
46V (12S LiPo)	MSC 30x9.8	33%	1164	1.5	68.2	1269	17.1	0.40	58.0	69.2
		35%	1274	1.7	76.7	1330	16.6	0.43	65.2	
		37%	1402	1.9	87.2	1397	16.1	0.48	74.2	
		39%	1545	2.2	99.6	1468	15.5	0.52	84.7	
		42%	1780	2.6	121.4	1578	14.7	0.60	103.2	
		45%	2035	3.2	146.4	1688	13.9	0.69	124.5	
		48%	2302	3.8	174.2	1794	13.2	0.77	148.1	
		51%	2578	4.4	204.4	1895	12.6	0.86	173.7	
		54%	2861	5.1	236.7	1993	12.1	0.95	201.2	
		57%	3149	5.9	271.1	2087	11.6	1.04	230.4	
		60%	3443	6.7	307.8	2178	11.2	1.14	261.6	
		63%	3741	7.5	347.0	2267	10.8	1.23	294.9	
		66%	4044	8.5	389.2	2355	10.4	1.33	330.8	
		69%	4353	9.4	434.7	2442	10.0	1.43	369.5	
		72%	4668	10.5	484.0	2529	9.6	1.53	411.4	
		75%	4988	11.7	537.0	2615	9.3	1.64	456.4	
		78%	5312	12.9	593.5	2699	8.9	1.75	504.5	
		81%	5636	14.2	652.9	2781	8.6	1.86	554.9	
		84%	5958	15.5	713.5	2857	8.4	1.97	606.5	
		87%	6271	16.8	773.3	2927	8.1	2.07	657.3	
		90%	6567	18.0	829.3	2988	7.9	2.17	704.9	
		100%	7258	20.6	949.1	3102	7.6	2.36	806.8	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

100KV+MSC 28x9.2 Load performance parameters

Graph



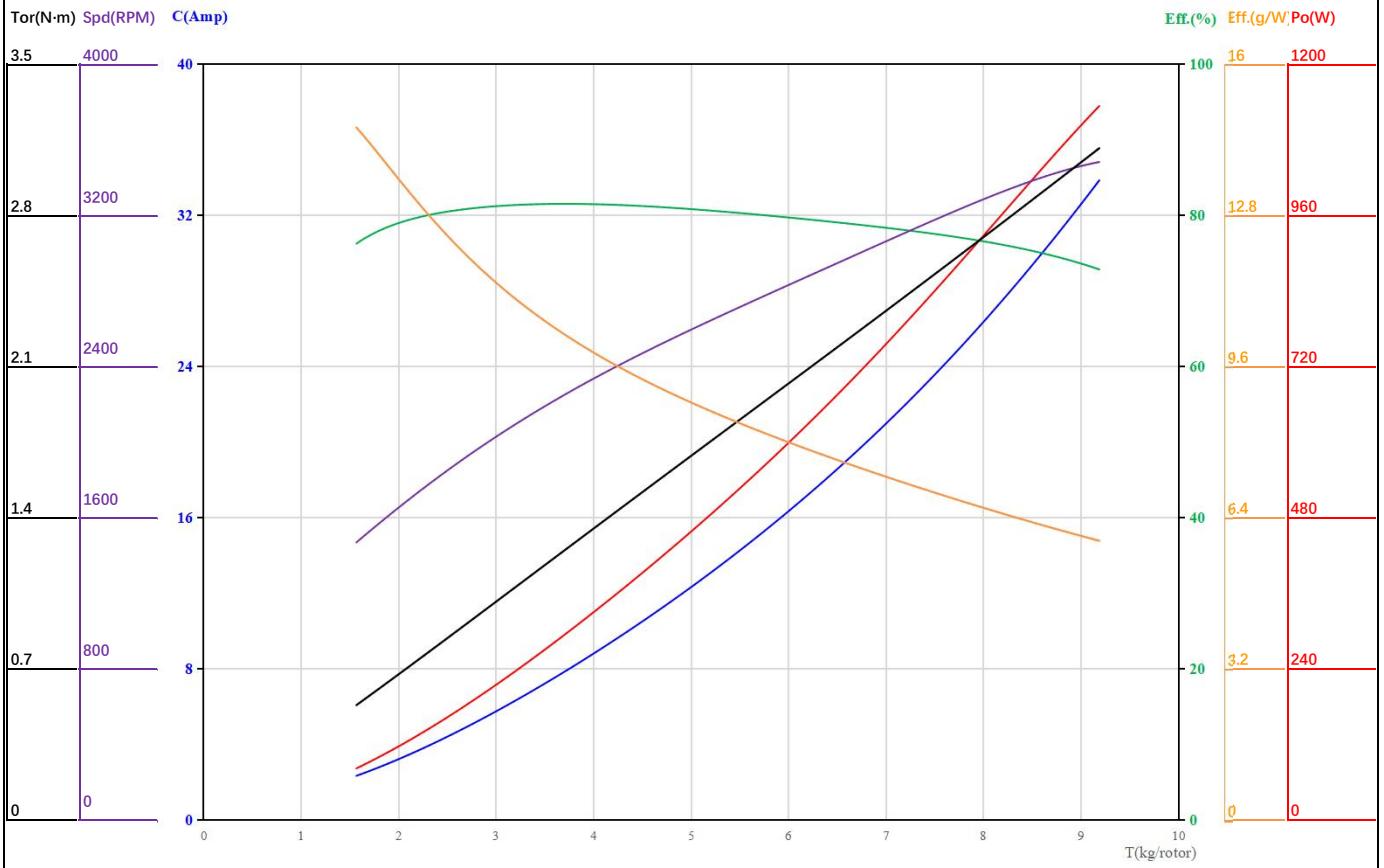
Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N-m)	Power Output(W)	Temperature(°C)
46V (12S LiPo)	MSC 28x9.2	33%	1438	2.1	97.8	1508	14.7	0.46	83.1	73.2
		35%	1599	2.4	111.7	1587	14.3	0.52	94.9	
		37%	1778	2.8	128.5	1672	13.8	0.57	109.2	
		39%	1972	3.2	147.9	1760	13.3	0.64	125.7	
		42%	2281	3.9	181.4	1894	12.6	0.74	154.2	
		45%	2605	4.8	219.3	2024	11.9	0.84	186.4	
		48%	2937	5.7	260.7	2149	11.3	0.95	221.6	
		51%	3273	6.6	305.0	2268	10.7	1.05	259.2	
		54%	3613	7.6	351.9	2381	10.3	1.16	299.1	
		57%	3955	8.7	401.4	2488	9.9	1.27	341.2	
		60%	4301	9.9	454.0	2592	9.5	1.38	385.9	
		63%	4654	11.1	510.2	2692	9.1	1.49	433.7	
		66%	5014	12.4	570.7	2791	8.8	1.60	485.1	
		69%	5383	13.8	636.1	2890	8.5	1.72	540.7	
		72%	5763	15.4	707.4	2988	8.1	1.84	601.3	
		75%	6151	17.1	784.7	3087	7.8	1.97	667.0	
		78%	6547	18.9	868.1	3185	7.5	2.10	737.9	
		81%	6946	20.8	956.6	3282	7.3	2.24	813.1	
		84%	7338	22.8	1048.2	3373	7.0	2.37	890.9	
		87%	7714	24.8	1139.2	3458	6.8	2.50	968.3	
		90%	8059	26.6	1224.7	3530	6.6	2.61	1041.0	
		100%	8693	30.1	1384.4	3647	6.3	2.81	1176.7	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

100KV+MSC 29x9.5 Load performance parameters

Graph



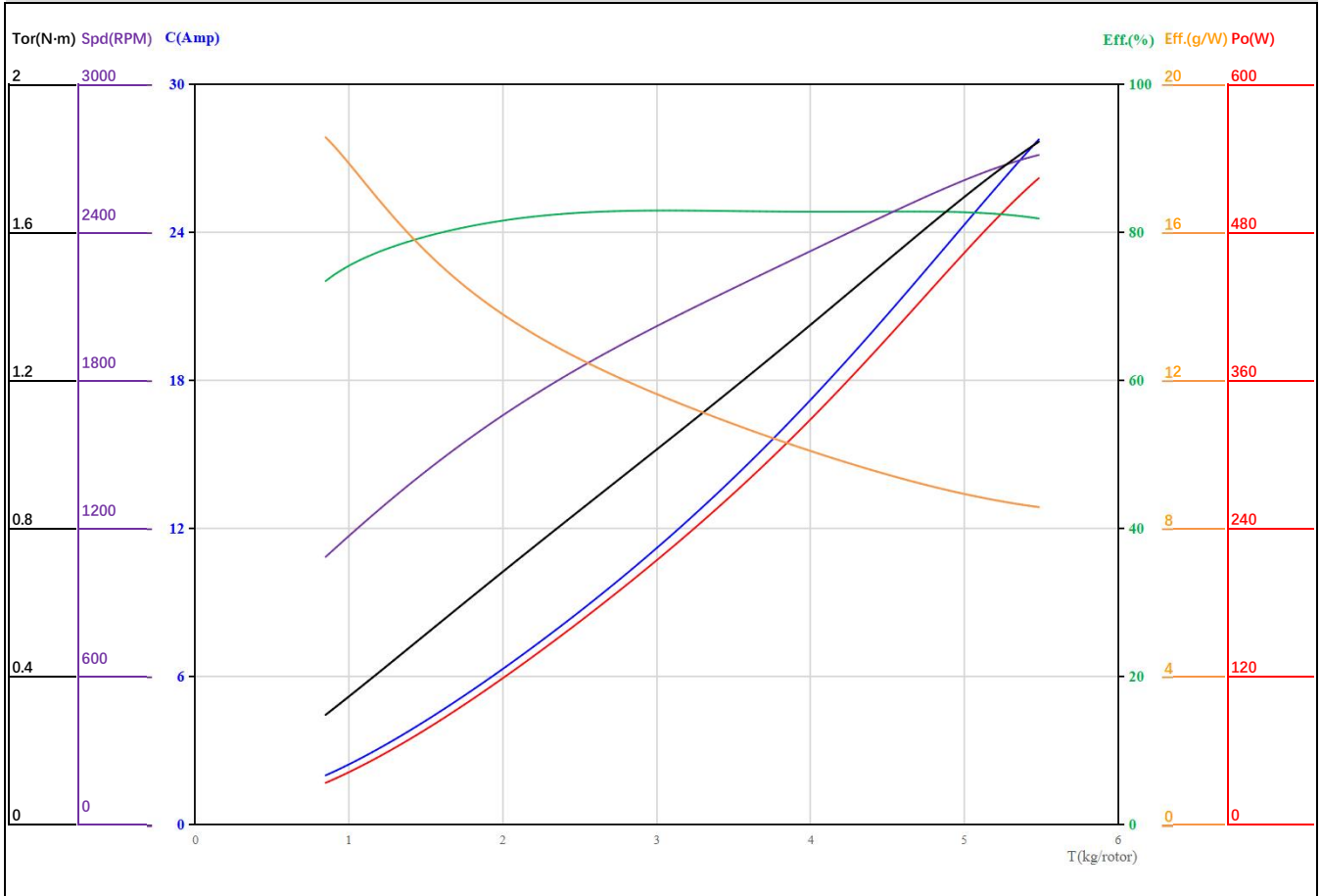
Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N·m)	Power Output(W)	Temperature(°C)
46V (12S LiPo)	MSC 29x9.5	33%	1611	2.4	110.7	1486	14.5	0.54	94.1	77.4
		35%	1795	2.8	127.4	1566	14.1	0.61	108.3	
		37%	1994	3.2	146.9	1649	13.6	0.67	124.9	
		39%	2205	3.7	169.0	1734	13.0	0.74	143.6	
		42%	2537	4.5	206.6	1862	12.3	0.85	175.6	
		45%	2884	5.4	249.1	1987	11.6	0.97	211.8	
		48%	3241	6.4	295.8	2106	11.0	1.09	251.5	
		51%	3604	7.5	346.3	2219	10.4	1.21	294.4	
		54%	3972	8.7	400.3	2326	9.9	1.34	340.3	
		57%	4344	9.9	457.8	2427	9.5	1.46	389.1	
		60%	4720	11.3	518.8	2524	9.1	1.59	441.0	
		63%	5101	12.7	583.8	2617	8.7	1.72	496.2	
		66%	5487	14.2	653.1	2709	8.4	1.85	555.1	
		69%	5878	15.8	727.1	2801	8.1	1.98	618.0	
		72%	6273	17.5	806.2	2892	7.8	2.11	685.3	
		75%	6670	19.4	890.6	2984	7.5	2.24	757.0	
		78%	7068	21.3	980.1	3076	7.2	2.38	833.1	
		81%	7461	23.3	1073.9	3165	6.9	2.51	912.8	
		84%	7842	25.4	1170.4	3249	6.7	2.64	994.9	
		87%	8204	27.5	1267.1	3324	6.5	2.77	1077.0	
		90%	8533	29.6	1359.8	3387	6.3	2.88	1155.8	
		100%	9187	33.8	1556.3	3480	5.9	3.11	1322.9	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

150KV+MSC 28x9.2 Load performance parameters

Graph



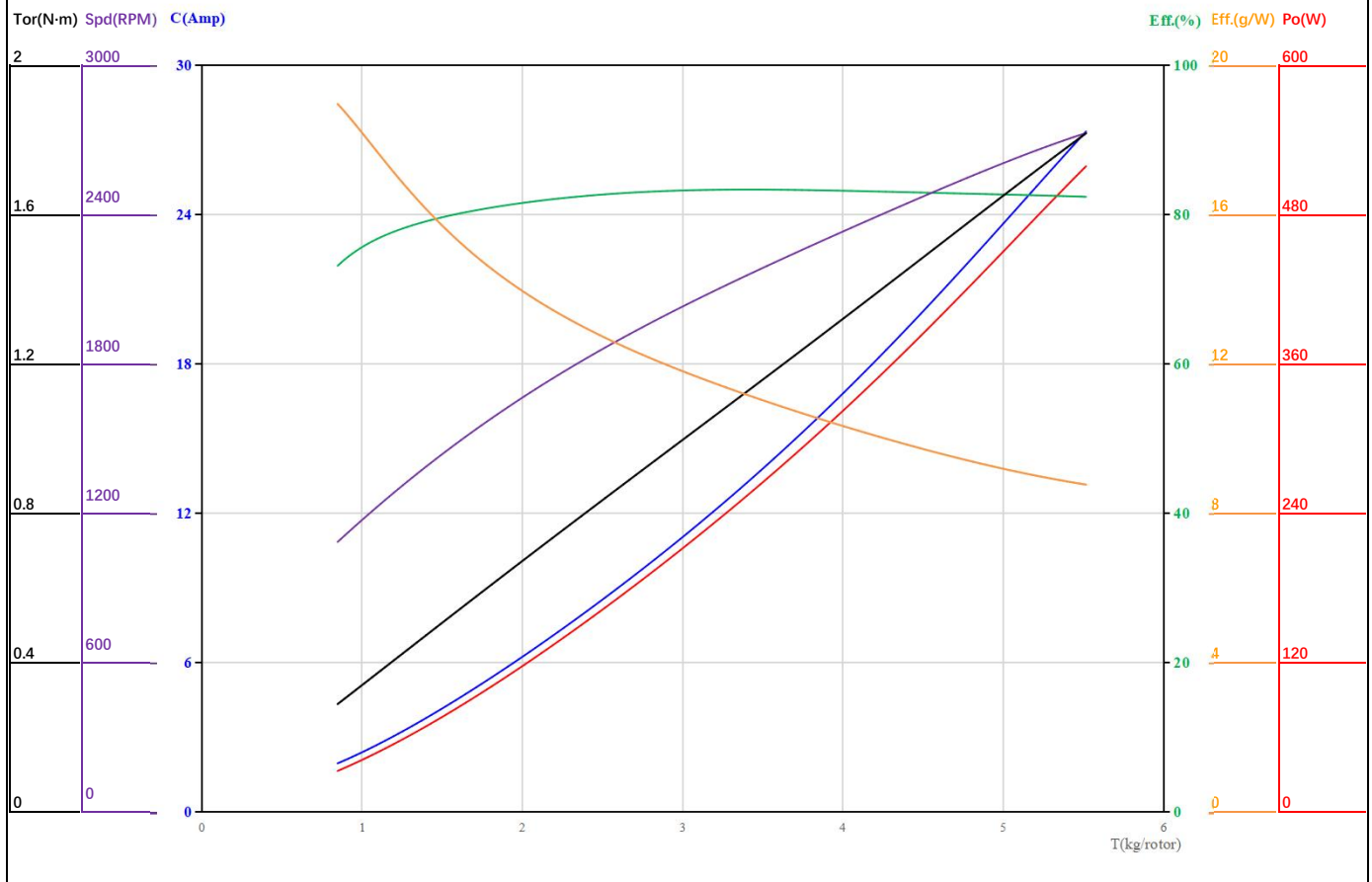
Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N-m)	Power Output(W)	Temperature(°C)
23V (6S LiPo)	MSC 28x9.2	33%	871	2.0	47.2	1096	18.5	0.30	40.1	54.2
		35%	968	2.3	53.7	1151	18.0	0.33	45.7	
		37%	1070	2.7	61.2	1207	17.5	0.37	52.0	
		39%	1178	3.0	69.5	1266	16.9	0.40	59.1	
		42%	1349	3.6	83.6	1355	16.1	0.46	71.1	
		45%	1529	4.3	99.6	1445	15.4	0.52	84.7	
		48%	1720	5.1	117.4	1535	14.6	0.59	99.8	
		51%	1919	5.9	137.0	1623	14.0	0.66	116.4	
		54%	2127	6.9	158.4	1709	13.4	0.72	134.6	
		57%	2344	7.9	181.6	1793	12.9	0.80	154.3	
		60%	2569	9.0	206.7	1875	12.4	0.87	175.7	
		63%	2802	10.1	234.0	1954	12.0	0.95	198.9	
		66%	3043	11.4	263.5	2032	11.5	1.03	224.0	
		69%	3290	12.8	295.3	2109	11.1	1.11	251.0	
		72%	3542	14.3	329.6	2185	10.7	1.19	280.2	
		75%	3798	15.9	366.3	2262	10.4	1.28	311.3	
		78%	4054	17.6	404.9	2339	10.0	1.37	344.2	
		81%	4307	19.3	445.0	2414	9.7	1.46	378.2	
		84%	4554	21.0	485.3	2487	9.4	1.54	412.5	
		87%	4789	22.8	524.7	2554	9.1	1.62	446.0	
		90%	5005	24.3	561.3	2611	8.9	1.70	477.1	
		100%	5483	27.8	640.0	2712	8.6	1.84	544.0	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

150KV+MSC 29x9.5 Load performance parameters

Graph

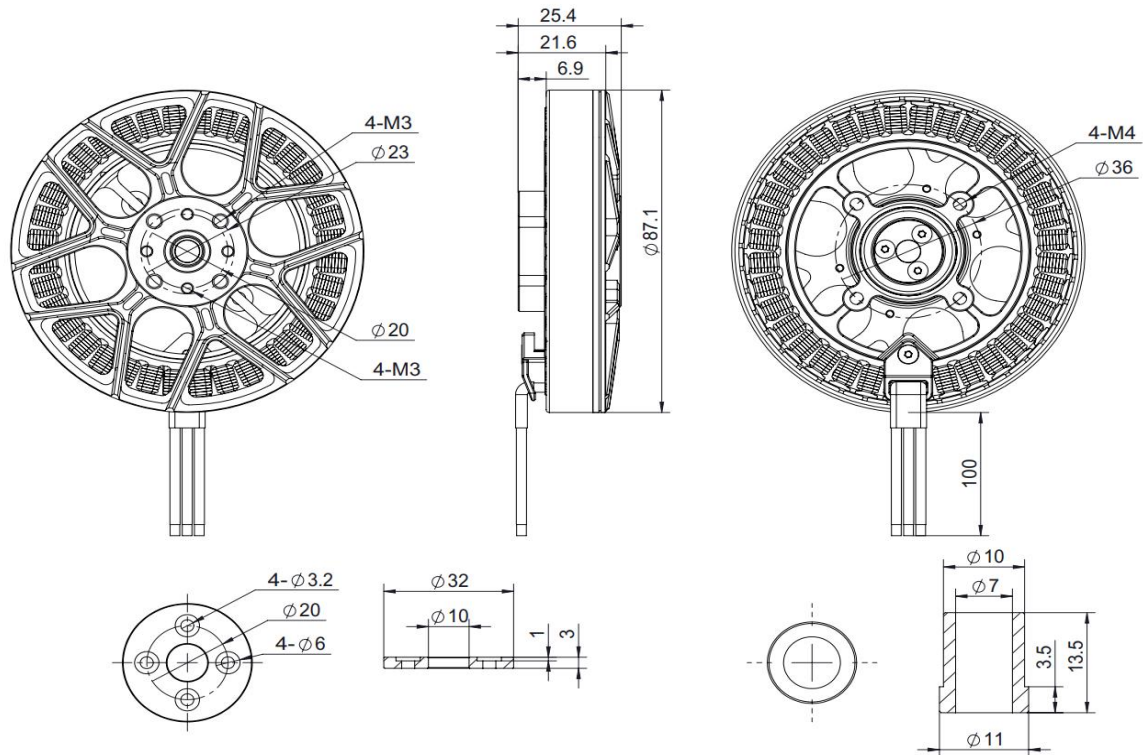


Motor Propeller Pull Test Data

Voltage(V)	Propeller	Throttle(%)	Thrust(g)	Current(A)	Power Input(W)	Speed(RPM)	Efficiency(g/W)	Torque(N·m)	Power Output(W)	Temperature(°C)
23V (6S LiPo)	MSC 29x9.5	33%	869	2.0	46.1	1096	18.9	0.30	39.2	53.6
		35%	963	2.3	52.4	1151	18.4	0.33	44.5	
		37%	1064	2.6	59.6	1208	17.8	0.36	50.7	
		39%	1171	2.9	67.8	1266	17.3	0.40	57.6	
		42%	1341	3.5	81.7	1356	16.4	0.45	69.5	
		45%	1522	4.2	97.6	1447	15.6	0.51	82.9	
		48%	1712	5.0	115.2	1537	14.9	0.58	97.9	
		51%	1911	5.8	134.4	1625	14.2	0.64	114.3	
		54%	2117	6.7	155.4	1711	13.6	0.71	132.1	
		57%	2332	7.7	178.1	1796	13.1	0.78	151.4	
		60%	2555	8.8	202.5	1878	12.6	0.85	172.1	
		63%	2786	9.9	228.9	1958	12.2	0.93	194.6	
		66%	3026	11.2	257.4	2037	11.8	1.00	218.8	
		69%	3273	12.5	288.2	2115	11.4	1.08	245.0	
		72%	3528	13.9	321.4	2193	11.0	1.17	273.2	
		75%	3788	15.5	356.9	2269	10.6	1.25	303.4	
		78%	4050	17.1	394.7	2345	10.3	1.34	335.5	
		81%	4312	18.8	434.1	2419	9.9	1.42	369.0	
		84%	4569	20.6	474.2	2490	9.6	1.51	403.1	
		87%	4814	22.3	513.8	2556	9.4	1.59	436.8	
		90%	5040	23.9	551.1	2615	9.1	1.66	468.4	
		100%	5517	27.3	629.8	2726	8.8	1.82	535.4	

*The above data was measured by HOBBYWING Laboratory at room temperature 25°C, at sea level, with varying throttle input. The motor temperature is measured after running for 10 minutes at 65% throttle, for reference only.

Dimension figure



Recommended application combinations

Motor	M8108 Light
Propeller	MSC 28x9.2/MSC 29x9.5/MSC 30x9.8
ESC	XRotor Pro H60A 14S
Battery	12S LiPo/6S LiPo
Takeoff weight / rotor	2.5~3.5kg
Takeoff weight of quadrotor	10~14kg