



Anticorrosive M6C12 IPE V3 Brushless DC Motor

Our Product Introduction

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Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: M6C12 IPE V3 150KV 170KV 280KV 400KV
- Price: Negotiable



Product Specification

- Motor Model: M6C12 IPE V3.0
- Motor Size: D:72 X 35.4 Mm
- Propeller Mounting Holes: D:12 M3x4, 18 M3x4. 22 M3x4
- Bearing: 696ZZ*2
- Shaft Diameter: IN: 6 Mm
- Number Of Pole Pairs: 14
- Cable Length: 150 Mm 16# Awg(Black) Silicone
- Rotor Balance: ≤5 Mg
- Motor Balance: ≤10 Mg
- Disruptive Test: 500 V
- Highlight: 80KM UAV Transceiver,
80KM Drone Transceiver,
Wireless Access Point UAV Transceiver



More Images



Product Description

Anticorrosive M6C12 IPE V3 Brushless DC Motor

Our ANTIMATTER brand motors are defined as "not ordinary" in the field of multi-rotor motors. We are proud to launch the ANTIMATTER series motors (M6C06, M6C08, M6C10, M6C12) at the end of 2019. We spent a year designing and proving which drone motors are the most efficient with 21-24in props. This is the magic! MAD Components in Poland.

The M6C12 IPE is designed for a payload of 2.5-4kg and supports 6S-12S voltage.

Brushless DC Motor. This is a type of electric motor that operates without brushes, which are components that wear out over time in traditional DC motors. Brushless DC motors are known for their efficiency, longevity, and low maintenance.

M6C12

ENERGY EFFICIENT 150KV
INDUSTRY PROFESSIONAL EDITION

3.0~4.0 kgf

RECOMMENDED
HOVER THRUST

9.4 kgf

MAXIMUM
THRUST

MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS.

OPTIMIZED
WEIGHT 277 g

EFFICIENCY >82%



MAD M6C12 IPE 150KV FLUXER PRO 22x6.6 MATT AMPX 80A (5-14S)

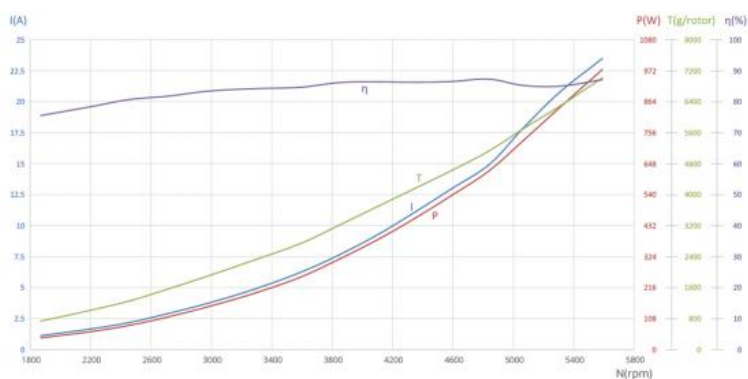
12S

MAX
50°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed

The data above was measured with an input voltage of 48 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.

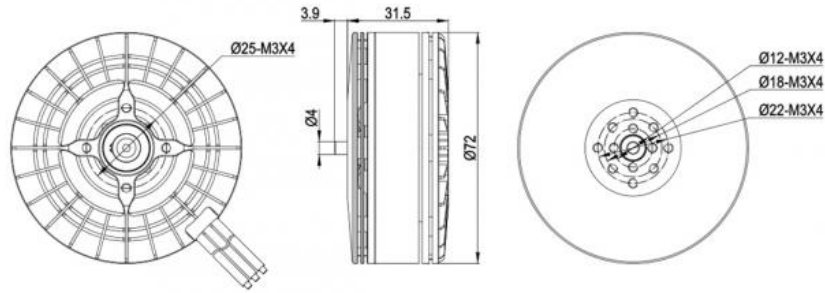


Motor Data

Motor Model	MAD M6C12 IPE V3.0	Number of pole pairs	14
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:72 × 35.4 mm	Magnet Degree	150°C
Degree of Protection	IP45	Cable Length	150 mm 16# Awg(Black) silicone
Centrifugal Heat Dissipation	YES	Rotor Balance	≤5 mg
Propeller Mounting Holes	D:12 M3×4, D:18 M3×4, D:22 M3×4	Motor Balance	≤10 mg
Shaft Diameter	IN: 6 mm	Motor Mounting Holes	D:25 M3×4
Bearing	EZO 696ZZ *2	Disruptive test	500 V
Additional Accessories	M6 Prop Adapter *1, M6 Propeller Plate *1, Ø4-6 Adapter Ring *1, 3.5mm Bullet Connector*3, Heat Shrinkable Tube*3, M3*10mm *4 Motor Screws, M3*6mm *4 Prop Adapter Fixing Screws, M3*12mm *2 Propeller Screws, Sticker*1		

Specifications

RPM/V	150KV	Nominal Voltage	12S lipo battery
No Load Current	0.67A / 20V	Internal resistance	90mΩ
Motor Weight	277 g	Product Boxed Weight	447g (110 x 110 x 55 mm)
Maximum Current	36.2 A	Maximum Power	1725W
Maximum thrust	9.4 kg	Maximum Torque	2.64 Nm
Recommended ESC	MAD AMPX 40A (5-14S) HV	Recommended Propellers	21x6.3, 22x6.6, 24x7.2, 22X7.2
UAV take-off weight	12S-22"/ 9kg--Quadcopter 13.5kg--Hexacopter 18kg--Octocopter	Single rotor take-off weight	3kg ~ 4kg



MAD M6C12 IPE 150KV FLUXER PRO 21x6.3 MATT AMPX 40A (5-14S) HV

12S MAX
46°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N•m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	47.94	1.02	48.7	29.3	0.148	1898	597	60.24	12.3
35	47.96	1.51	71.8	48.9	0.210	2231	871	68.26	12.2
40	47.94	2	95.0	68.5	0.264	2482	1109	72.12	11.7
45	47.95	2.63	125.8	93.9	0.327	2743	1366	74.56	10.9
50	47.95	3.39	162.0	124.9	0.395	3021	1665	77.05	10.3
55	47.94	4.4	210.4	170.0	0.488	3331	2068	80.77	9.8
60	47.94	5.62	269.0	219.1	0.576	3633	2466	81.39	9.2
65	47.93	6.91	330.9	276.0	0.674	3913	2883	83.35	8.7
70	47.88	8.39	401.5	337.9	0.774	4170	3307	84.12	8.2
75	47.87	9.84	470.8	396.9	0.858	4421	3692	84.27	7.8
80	47.86	11.59	554.4	469.7	0.962	4665	4158	84.67	7.5
85	47.87	13.43	642.4	547.2	1.063	4917	4564	85.13	7.1
90	47.85	15.59	745.1	643.4	1.192	5157	5138	86.31	6.9
95	47.8	18.53	885.1	739.9	1.307	5408	5638	83.55	6.4
100	47.77	21.43	1023.1	874.7	1.464	5706	6240	85.45	6.1

MAD M6C12 IPE 150KV FLUXER PRO 22x6.6 MATT AMPX 40A (5-14S) HV

12S MAX
50°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N•m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	47.95	1.12	53.5	40.4	0.206	1871	733	75.51	13.7
35	47.96	1.67	79.8	62.6	0.271	2208	1020	78.41	12.8
40	47.96	2.18	104.3	84.1	0.327	2459	1255	80.69	12.0
45	47.95	2.89	138.3	113.0	0.398	2710	1559	81.74	11.3
50	47.95	3.74	178.9	149.3	0.478	2980	1901	83.39	10.6
55	47.95	4.88	233.4	196.6	0.571	3289	2316	84.18	9.9
60	47.94	6.22	297.7	252.0	0.671	3589	2734	84.61	9.2
65	47.91	7.68	367.5	316.8	0.785	3855	3225	86.17	8.8
70	47.88	9.36	447.6	386.8	0.898	4115	3720	86.36	8.3
75	47.88	11.09	530.3	457.6	1.005	4349	4161	86.25	7.8
80	47.88	12.96	620.0	536.4	1.116	4590	4620	86.47	7.5
85	47.86	14.89	712.2	621.8	1.228	4837	5123	87.26	7.2
90	47.82	17.91	856.1	729.6	1.375	5069	5708	85.19	6.7
95	47.8	20.76	991.8	843.3	1.518	5307	6284	84.98	6.3
100	47.76	23.47	1120.4	975.8	1.668	5589	7010	87.07	6.3

MAD M6C12 IPE 150KV CF FLUXER 22.1x7.4 VTOL AMPX 40A (5-14S) HV

12S MAX
67°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N•m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	47.94	1.31	61.9	43.4	0.228	1821	858	70.23	13.9
35	47.95	2.03	96.9	73.7	0.327	2152	1245	76.13	12.9
40	47.92	2.77	132.4	103.1	0.410	2403	1553	77.89	11.7
45	47.93	3.62	172.8	138.4	0.500	2643	1915	80.07	11.1
50	47.93	4.7	225.0	180.6	0.595	2899	2291	80.22	10.2
55	47.92	6.01	287.8	238.0	0.713	3190	2754	82.68	9.6
60	47.89	7.94	379.8	316.4	0.871	3470	3344	83.27	8.8
65	47.87	9.75	466.3	389.1	0.998	3725	3859	83.4	8.3
70	47.86	11.76	562.5	476.0	1.148	3960	4476	84.59	8.0
75	47.86	13.87	663.0	552.9	1.259	4192	4926	83.34	7.4
80	47.86	16.68	797.6	660.0	1.433	4398	5556	82.72	7.0
85	47.78	18.65	890.8	766.0	1.582	4625	6119	85.95	6.9
90	47.77	22.07	1053.4	875.8	1.725	4849	6640	83.19	6.3
95	47.77	25.44	1214.8	1002.1	1.888	5069	7281	82.47	6.0
100	47.69	28.48	1357.7	1175.1	2.111	5317	8101	86.51	6.0

MAD M6C12 IPE 150KV CF FLUXER 22x7.2 folding AMPX 40A (5-14S) HV

12S MAX
67°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N•m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	47.93	1.27	60.2	41.7	0.216	1842	815	69.27	13.6
35	47.92	1.87	89.0	66.3	0.291	2179	1123	74.59	12.6
40	47.92	2.41	115.2	88.7	0.349	2427	1373	77.06	11.9
45	47.93	3.16	150.8	117.7	0.420	2675	1699	78.02	11.3
50	47.93	4.11	196.2	157.5	0.511	2942	2060	80.21	10.5
55	47.92	5.26	251.9	206.3	0.608	3244	2471	81.89	9.8
60	47.91	6.78	324.4	270.6	0.731	3536	2993	83.39	9.2
65	47.85	8.4	401.3	335.5	0.844	3798	3469	83.54	8.6

70	47.86	10.27	490.9	413.6	0.977	4041	4023	84.22	8.2
75	47.84	12.14	580.3	492.9	1.102	4270	4541	84.9	7.8
80	47.83	14.51	693.3	578.9	1.229	4500	5044	83.47	7.3
85	47.84	16.87	806.6	675.3	1.361	4737	5587	83.69	6.9
90	47.71	19.75	942.1	796.0	1.533	4960	6288	84.57	6.7
95	47.77	23.34	1114.4	903.9	1.661	5197	6796	81.07	6.1
100	47.7	26.18	1248.4	1065.8	1.866	5453	7638	85.34	6.1

MAD M6C12 IPE 150KV HAVOC 22x7.0 folding AMPX 40A (5-14S) HV

12S

MAX
70°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [gf/W]
30	47.94	1.55	73.8	50.7	0.273	1777	984	68.71	13.3
35	47.95	2.42	115.7	86.9	0.394	2109	1425	75.13	12.3
40	47.93	3.37	161.1	121.9	0.495	2352	1809	75.61	11.2
45	47.94	4.38	209.2	163.7	0.605	2587	2199	78.22	10.5
50	47.94	5.62	269.0	212.4	0.717	2830	2619	78.93	9.7
55	47.93	7.36	352.1	282.3	0.871	3096	3171	80.13	9.0
60	47.87	9.44	451.5	366.5	1.041	3361	3742	81.13	8.3
65	47.86	11.53	551.2	450.7	1.192	3612	4300	81.72	7.8
70	47.87	14.18	678.2	550.6	1.375	3824	4915	81.16	7.2
75	47.85	16.83	804.6	643.9	1.524	4035	5495	79.98	6.8
80	47.75	19.7	940.4	746.1	1.679	4245	6034	79.3	6.4
85	47.76	21.92	1046.5	866.5	1.861	4448	6650	82.78	6.4
90	47.76	25.12	1199.4	990.8	2.033	4654	7241	82.56	6.0
95	47.72	30.03	1432.9	1129.8	2.232	4834	7938	78.81	5.5
100	47.7	36.18	1725.3	1334.1	2.520	5055	8805	77.3	5.1

MAD M6C12 IPE 150KV FLUXER PRO 24x7.2 MATT AMPX 40A (5-14S) HV

12S

MAX
80°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [g]	Efficiency [%]	Efficiency [gf/W]
30	47.96	1.56	74.3	58.1	0.313	1776	1084	78.32	14.6
35	47.94	2.49	119.0	96.5	0.438	2104	1568	81.12	13.2
40	47.94	3.46	165.3	135.2	0.550	2346	1982	81.76	12.0
45	47.95	4.46	213.5	176.7	0.653	2584	2361	82.74	11.1
50	47.94	5.82	278.6	230.8	0.781	2822	2829	82.84	10.2
55	47.91	7.67	366.7	307.2	0.952	3082	3445	83.73	9.4
60	47.87	9.89	473.1	394.4	1.128	3341	4095	83.34	8.7
65	47.86	12.22	584.5	486.7	1.297	3583	4711	83.21	8.1
70	47.85	14.6	697.9	581.5	1.461	3802	5275	83.28	7.6
75	47.8	17.56	838.8	684.1	1.631	4006	5884	81.53	7.0
80	47.8	20.51	979.9	795.3	1.812	4192	6532	81.12	6.7
85	47.77	23.63	1128.7	922.5	2.004	4395	7215	81.69	6.4
90	47.71	27.32	1302.8	1049.2	2.185	4587	7860	80.49	6.0
95	47.65	30.53	1454.0	1192.3	2.389	4766	8566	81.96	5.9
100	47.6	35.14	1672.0	1376.9	2.639	4982	9380	82.31	5.6

The above data are the theoretical values when the input voltage is 48V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 35A is non-working zone. 12-35A is short-term (about 10-30s), working zone, and below 12A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

M6C12

ENERGY EFFICIENT 170KV
INDUSTRY PROFESSIONAL EDITION

4.0~5.0 kgf
RECOMMENDED
HOVER THRUST

OPTIMIZED
WEIGHT 277g

10.8 kgf
MAXIMUM
THRUST
MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS

EFFICIENCY >84%



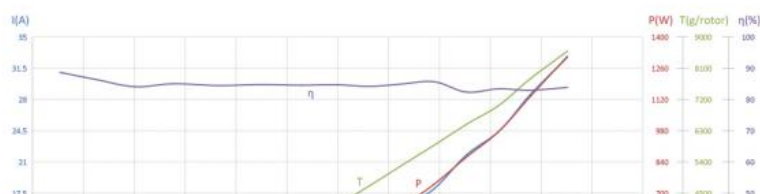
MAD M6C12 IPE 170KV FLUXER PRO 22x6.6 MATT AMPX 60A (5-14S)

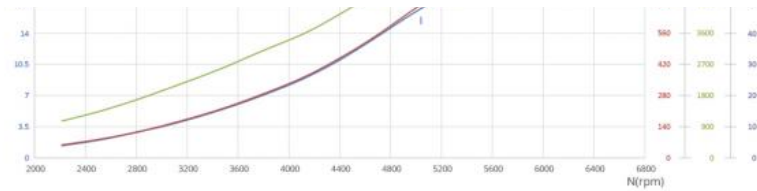
12S

MAX
55°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed
The data above was measured with an input voltage of 48 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.





Specifications

RPM/V	170KV	Nominal Voltage	12S lipo battery
No Load Current	0.89A / 20V	Internal resistance	77mΩ
Motor Weight	277 g	Product Boxed Weight	447g (110 x 110 x 55 mm)
Maximum Current	51.5 A	Maximum Power	2460W
Maximum thrust	10.8 kg	Maximum Torque	3.03 Nm
Recommended ESC	MAD AMPX 60A (5-14S)	Recommended Propellers	21x6.3, 22x6.6, 22x7.0, 22.1x7.4, 24x7.2
UAV take-off weight	12S-22"/ 12kg-Quadcopter 18kg-Hexacopter 24kg-Octocopter	Single rotor take-off weight	4kg ~ 5kg

MAD M6C12 IPE 170KV FLUXER PRO 21x6.3 MATT AMPX 60A (5-14S)

12S MAX
51°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.19	1.27	60.7	51.5	0.220	2239	939	85.02	15.5
35	48.18	1.86	89.2	75.3	0.283	2539	1216	84.4	13.6
40	48.19	2.59	124.3	105.0	0.353	2838	1513	84.51	12.2
45	48.19	3.49	167.5	141.8	0.430	3151	1844	84.63	11.0
50	48.19	4.79	230.2	196.7	0.535	3513	2301	85.42	10.0
55	48.12	6.37	306.2	259.8	0.644	3853	2780	84.79	9.1
60	48.11	8.03	385.8	329.0	0.752	4179	3253	85.23	8.4
65	48.11	9.91	476.2	407.1	0.871	4464	3742	85.43	7.9
70	48.11	11.96	574.7	486.6	0.983	4729	4241	84.61	7.4
75	48.08	13.84	664.8	572.3	1.095	4994	4711	86.04	7.1
80	48.05	16.36	785.9	665.9	1.208	5266	5199	84.69	6.6
85	48.02	19.66	943.9	783.1	1.353	5527	5817	82.92	6.2
90	48	22.3	1069.7	913.7	1.506	5793	6444	85.38	6.0
95	47.94	25.6	1226.7	1034.7	1.632	6057	7021	84.32	5.7
100	47.96	30.88	1481.0	1202.0	1.800	6376	7684	81.13	5.2

MAD M6C12 IPE 170KV FLUXER PRO 22x6.6 MATT AMPX 60A (5-14S)

12S MAX
55°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.19	1.38	66.2	58.7	0.253	2216	1066	88.64	16.1
35	48.17	2.03	97.5	84.1	0.320	2514	1348	86.24	13.8
40	48.17	2.89	138.8	116.6	0.397	2806	1683	84.05	12.1
45	48.17	3.9	187.4	159.4	0.490	3107	2077	85	11.1
50	48.17	5.38	258.8	218.6	0.603	3462	2569	84.41	9.9
55	48.1	7.05	338.8	287.3	0.723	3798	3097	84.75	9.1
60	48.1	8.9	427.8	361.9	0.840	4116	3582	84.52	8.4
65	48.08	10.91	524.0	444.0	0.966	4389	4122	84.68	7.9
70	48.1	13.22	635.2	534.8	1.098	4652	4712	84.16	7.4
75	48.03	15.52	745.1	632.8	1.234	4899	5282	84.89	7.1
80	48	17.95	861.4	738.1	1.367	5156	5871	85.65	6.8
85	48.02	21.8	1046.4	861.8	1.520	5415	6484	82.32	6.2
90	47.98	24.38	1169.1	974.8	1.644	5664	7017	83.35	6.0
95	47.9	28.49	1364.5	1131.8	1.828	5913	7788	82.91	5.7
100	47.87	32.71	1565.2	1312.5	2.020	6206	8587	83.82	5.5

MAD M6C12 IPE 170KV CF FLUXER 22.1x7.4 VTOL AMPX 60A (5-14S)

12S MAX
80°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.23	2.02	96.9	76.9	0.341	2154	1387	79.32	14.3
35	48.24	2.93	140.9	113.2	0.442	2448	1789	80.27	12.7
40	48.22	3.95	190.1	153.7	0.538	2730	2173	80.83	11.4
45	48.22	5.15	247.8	202.5	0.642	3012	2590	81.69	10.5
50	48.17	7.07	339.9	279.6	0.800	3337	3221	82.22	9.5
55	48.15	9.35	449.6	374.1	0.980	3646	3895	83.17	8.7
60	48.15	11.77	566.4	471.5	1.144	3938	4538	83.22	8.0
65	48.13	14.05	675.8	565.1	1.284	4202	5093	83.58	7.5
70	48.07	17.18	825.4	669.3	1.436	4451	5724	81.05	6.9
75	48.04	20.66	992.3	784.5	1.604	4671	6383	79.02	6.4
80	48.07	24.23	1164.3	907.8	1.770	4898	6982	77.92	6.0
85	48.01	28.3	1357.9	1049.3	1.955	5124	7741	77.23	5.7
90	47.97	31.87	1528.1	1185.5	2.117	5347	8318	77.54	5.4
95	47.87	34.72	1661.6	1320.3	2.265	5566	8870	79.43	5.3
100	47.82	41.28	1973.9	1536.5	2.522	5818	9849	77.8	5.0

MAD M6C12 IPE 170KV HAVOC 22x7.0 folding AMPX 60A (5-14S)

12S MAX
86°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	47.89	2.47	118.3	88.1	0.389	2165	1337	76.05	11.6
35	47.86	3.49	167.3	129.3	0.502	2460	1732	78.9	10.6

40	47.84	4.75	227.2	179.4	0.627	2733	2201	80.49	9.9
45	47.81	6.09	291.1	234.3	0.744	3009	2641	82.01	9.2
50	47.76	8.18	390.6	320.1	0.917	3334	3266	83.34	8.5
55	47.7	10.69	509.8	422.2	1.105	3648	3951	84.1	7.9
60	47.63	13.36	636.4	525.7	1.276	3934	4546	83.73	7.2
65	47.56	16.26	773.3	637.2	1.454	4185	5152	83.37	6.7
70	47.5	19.37	920.2	753.1	1.627	4420	5784	82.71	6.4
75	47.42	22.59	1071.0	873.2	1.798	4638	6355	82.25	6.0
80	47.33	26.69	1263.1	1018.4	1.997	4871	7146	81.17	5.7
85	47.24	30.59	1445.1	1158.2	2.180	5073	7815	80.54	5.4
90	47.16	34.75	1638.9	1296.3	2.342	5286	8375	79.34	5.1
95	47.05	39.61	1863.7	1451.2	2.532	5473	9020	77.93	4.8
100	46.96	46.65	2190.7	1659.8	2.767	5728	9890	76.92	4.6

MAD M6C12 IPE 170KV FLUXER PRO 24x7.2 MATT AMPX 60A (5-14S)

12S MAX
113°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	48.23	2.49	119.6	94.6	0.432	2093	1556	79.06	13.0
35	48.21	3.64	175.0	140.1	0.561	2385	2039	80.01	11.7
40	48.21	5	240.6	191.0	0.688	2653	2532	79.37	10.5
45	48.16	6.54	314.7	251.4	0.824	2913	3013	79.83	9.6
50	48.16	8.84	425.3	342.9	1.024	3198	3724	80.56	8.8
55	48.15	11.56	556.2	449.4	1.231	3486	4499	80.74	8.1
60	48.14	14.44	694.7	562.0	1.430	3752	5196	80.86	7.5
65	48.07	17.82	855.8	675.5	1.615	3994	5876	78.88	6.9
70	48.04	20.78	997.6	795.4	1.805	4209	6564	79.68	6.6
75	48.01	24.38	1169.8	925.9	2.005	4410	7284	79.11	6.2
80	47.99	29.13	1397.5	1054.3	2.186	4605	7942	75.4	5.7
85	47.93	32.89	1575.8	1198.3	2.387	4794	8592	76.02	5.5
90	47.85	37.1	1774.5	1342.1	2.577	4974	9271	75.58	5.2
95	47.86	43.17	2065.6	1490.5	2.777	5126	9957	72.12	4.8
100	47.75	51.53	2460.0	1683.4	3.028	5309	10840	68.38	4.4

The above data are the theoretical values when the input voltage is 48V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 52A is non-working zone. 18-52A is short-term (about 10-30s), working zone, and below 18A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

M6C12

ENERGY EFFICIENT 280KV
INDUSTRY PROFESSIONAL EDITION

2.5~3.5 kgf

RECOMMENDED
HOVER THRUST

7.5 kgf



MAXIMUM
THRUST

MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS

OPTIMIZED
WEIGHT 279g

EFFICIENCY >78%



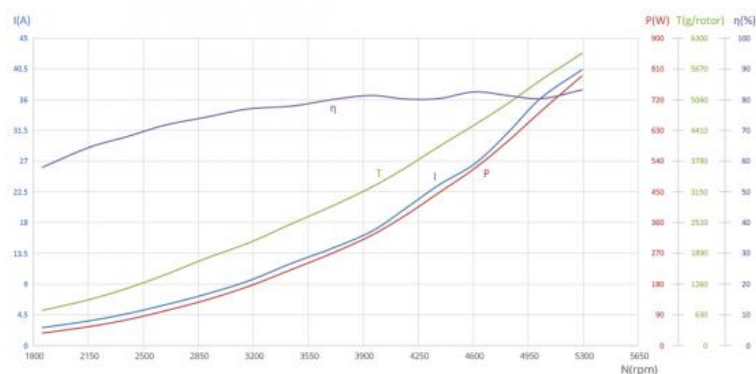
MAD M6C12 IPE 280KV FLUXER PRO 22x6.6 MATT XROTOR Pro 60A (4-6S)

6S MAX
61°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed

The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



Specifications

RPM/V	280KV	Nominal Voltage	6S lipo battery
No Load Current	1.53A/20V	Internal resistance	31mΩ
Motor Weight	279 g	Product Boxed Weight	449 g (110 x 110 x 55 mm)

Maximum Current	58.4 A	Maximum Power	1365W
Maximum thrust	7.5 kg	Maximum Torque	2.11 Nm
Recommended ESC	XROTOR Pro 60A (4-6S)	Recommended Propellers	22x6.6, 22.1x7.4, 22x7, 24x7.2
UAV take-off weight	65-247 11kg--Quadcopter 16.5kg--Hexacopter 22kg--Octocopter	Single rotor take-off weight	2.5kg ~ 3.5kg

MAD M6C12 IPE 280KV FLUXER PRO 22x6.6 MATT XROTOR Pro 60A (4-6S)

6S

MAX
61°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.85	2.61	61.8	35.8	0.184	1858	717	57.96	11.6
35	23.84	3.62	85.7	55.4	0.245	2161	944	64.55	11.0
40	23.85	4.64	110.0	74.8	0.298	2395	1168	67.91	10.6
45	23.84	5.9	140.1	100.3	0.364	2632	1440	71.6	10.3
50	23.84	7.47	177.7	131.9	0.436	2893	1777	74.2	10.0
55	23.78	9.45	224.2	172.7	0.521	3168	2097	76.95	9.4
60	23.77	12.05	285.8	222.7	0.617	3446	2497	77.87	8.7
65	23.75	14.27	338.4	270.8	0.698	3707	2865	80.02	8.5
70	23.73	16.76	397.2	323.1	0.780	3957	3250	81.32	8.2
75	23.71	20.15	477.3	382.7	0.876	4174	3653	80.13	7.7
80	23.68	23.47	555.5	446.4	0.974	4379	4073	80.31	7.3
85	23.64	26.62	628.5	518.7	1.075	4610	4524	82.5	7.2
90	23.61	31.2	736.2	598.8	1.186	4822	4964	81.29	6.7
95	23.58	36.24	853.9	686.0	1.302	5032	5443	80.29	6.4
100	23.51	40.37	948.8	788.8	1.424	5291	5985	83.14	6.3

MAD M6C12 IPE 280KV CF FLUXER 22.1x7.4 VTOL XROTOR Pro 60A (4-6S)

6S

MAX
71°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.86	2.94	69.7	43.1	0.230	1787	864	61.79	12.4
35	23.87	4.18	99.2	67.1	0.308	2083	1109	67.58	11.2
40	23.86	5.46	129.8	92.2	0.379	2324	1383	71	10.7
45	23.87	7.01	166.9	123.6	0.462	2554	1705	74	10.2
50	23.79	8.9	211.2	159.9	0.547	2790	2062	75.66	9.8
55	23.79	11.5	273.2	210.8	0.663	3036	2498	77.09	9.1
60	23.78	14.32	340.1	268.5	0.777	3300	2955	78.89	8.7
65	23.75	18.07	428.6	334.8	0.903	3539	3444	78.05	8.0
70	23.71	20.87	494.3	394.3	1.000	3766	3804	79.73	7.7
75	23.69	24.73	585.3	463.0	1.118	3954	4258	79.07	7.3
80	23.65	28.94	683.8	529.6	1.221	4144	4653	77.41	6.8
85	23.63	33.41	788.7	619.6	1.366	4331	5227	78.51	6.6
90	23.56	37.87	891.7	696.8	1.468	4533	5609	78.13	6.3
95	23.54	43.58	1025.4	795.0	1.612	4709	6119	77.52	6.0
100	23.45	50.05	1173.1	920.2	1.780	4938	6784	78.39	5.8

MAD M6C12 IPE 280KV HAVOC 22x7.0 folding XROTOR Pro 60A (4-6S)

6S

MAX
74°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.86	3.13	74.1	46.8	0.263	1700	890	63.08	12.0
35	23.86	4.58	108.9	75.5	0.361	2001	1239	69.32	11.4
40	23.86	6.13	145.5	104.8	0.447	2241	1547	71.95	10.6
45	23.84	7.96	189.2	140.0	0.541	2470	1880	73.94	9.9
50	23.78	10.21	242.4	181.2	0.647	2674	2262	74.7	9.3
55	23.79	12.98	308.2	233.3	0.765	2912	2680	75.66	8.7
60	23.77	16.48	391.4	298.4	0.901	3163	3214	76.19	8.2
65	23.71	20	473.6	369.6	1.044	3382	3709	77.99	7.8
70	23.7	24.11	570.9	437.9	1.162	3600	4108	76.65	7.2
75	23.63	28.3	668.4	517.8	1.308	3779	4589	77.42	6.9
80	23.61	32.73	772.1	591.6	1.427	3960	5025	76.56	6.5
85	23.55	38.03	895.1	674.8	1.558	4137	5469	75.36	6.1
90	23.53	44.26	1040.6	769.4	1.704	4313	5957	73.9	5.7
95	23.45	49.18	1153.2	859.5	1.831	4483	6375	74.49	5.5
100	23.36	56.88	1327.9	991.3	2.028	4668	7088	74.63	5.3

MAD M6C12 IPE 280KV FLUXER PRO 24x7.2 MATT XROTOR Pro 60A (4-6S)

6S

MAX
77°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.86	3.23	76.4	48.5	0.276	1683	892	63.49	11.7
35	23.86	4.77	113.0	78.1	0.378	1976	1264	69.1	11.2
40	23.86	6.51	154.9	112.4	0.482	2228	1637	72.54	10.6
45	23.81	8.42	200.0	148.2	0.580	2441	2008	74.09	10.0
50	23.79	10.64	252.7	188.9	0.680	2653	2359	74.71	9.3
55	23.79	13.6	323.0	246.3	0.816	2883	2866	76.21	8.9
60	23.77	17.31	411.0	310.8	0.956	3104	3368	75.57	8.2
65	23.72	21.27	504.3	381.3	1.091	3337	3848	75.57	7.6
70	23.71	25.44	602.7	455.1	1.228	3540	4352	75.46	7.2
75	23.64	29.54	697.8	533.5	1.370	3719	4834	76.42	6.9
80	23.62	33.97	801.8	612.4	1.505	3886	5359	76.34	6.7
85	23.57	40.41	952.0	697.4	1.643	4054	5819	73.22	6.1
90	23.52	45.57	1071.2	788.3	1.786	4215	6380	73.56	6.0
95	23.46	51.78	1214.4	883.9	1.929	4377	6877	72.76	5.7
100	23.36	58.44	1364.7	1010.3	2.113	4566	7460	73.98	5.5

The above data are the theoretical values when the input voltage is 24V, for reference only. In the case of room temperature of 25°C and no additional

cooling device, the current over 58A is non-working zone. 21-58A is short-term (about 10-30s), working zone, and below 21A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

M6C12

ENERGY EFFICIENT 400KV
INDUSTRY PROFESSIONAL EDITION

2.5~3.5 kgf

RECOMMENDED
HOVER THRUST

OPTIMIZED
WEIGHT 281 g

7.5 kgf



MAXIMUM
THRUST

MAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONS

EFFICIENCY >75%



MAD M6C12 IPE 400KV FLUXER PRO 20x6.0 MATT AMPX 80A (5-14S)

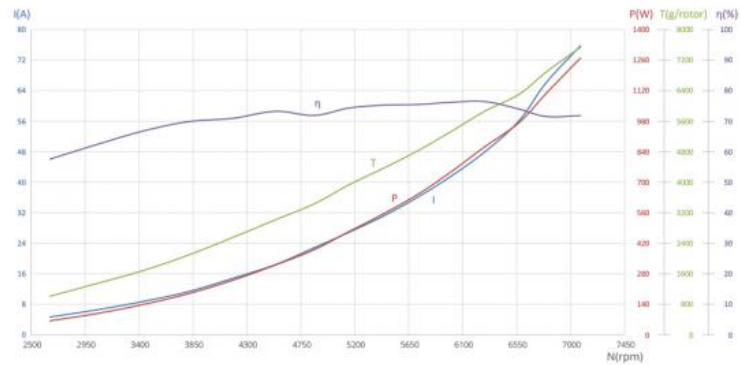
6S

MAX
62°C

Analytical Graph of Motor Operation

I - Current, P - Input Power, η - Electrical Efficiency, T - Thrust, N - Rotational Speed

The data above was measured with an input voltage of 24 V, at a temperature of 25°C and sea level. The rotational speed was adjusted by the throttle.



Specifications

RPM/V	400KV	Nominal Voltage	6S lipo battery
No Load Current	2.5A / 20V	Internal resistance	20mΩ
Motor Weight	281 g	Product Boxed Weight	451 g (110 x 110 x 55 mm)
Maximum Current	75.7 A	Maximum Power	1766W
Maximum thrust	7.5 kg	Maximum Torque	1.71 Nm
Recommended ESC	MAD AMPX 80A (5-14S)	Recommended Propellers	18x6.1, 18.1x7.2, 19x5.7, 20x6.0
UAV take-off weight	65-207/ 12kg--Quadcopter 18kg--Hexacopter 24kg--Octocopter	Single rotor take-off weight	2.5kg ~ 3.5kg

MAD M6C12 IPE 400KV FLUXER PRO 18x6.1 MATT AMPX 80A (5-14S)

6S

MAX
46°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.96	3.8	90.5	51.5	0.179	2747	796	56.87	8.8
35	23.95	5.31	126.7	78.4	0.237	3167	1066	61.87	8.4
40	23.95	7.2	171.9	114.4	0.303	3606	1339	66.51	7.8
45	23.88	9.59	228.7	158.9	0.375	4047	1689	69.45	7.4
50	23.87	12.16	289.7	208.9	0.450	4435	2059	72.08	7.1
55	23.87	15.24	363.1	265.7	0.531	4782	2428	73.11	6.7
60	23.81	18.38	437.2	322.9	0.604	5107	2780	73.8	6.4
65	23.8	20.96	498.5	387.7	0.682	5432	3145	77.74	6.3
70	23.77	25.49	605.4	463.3	0.772	5733	3562	76.48	5.9
75	23.74	30.98	734.8	543.9	0.857	6059	3972	73.99	5.4
80	23.7	34.57	819.0	637.6	0.954	6385	4404	77.81	5.4
85	23.61	38.99	919.8	737.8	1.054	6684	4874	80.18	5.3
90	23.56	47.06	1108.2	848.5	1.163	6970	5370	76.53	4.8
95	23.53	53.09	1248.6	967.9	1.274	7254	5849	77.48	4.7
100	23.44	62.14	1455.8	1131.8	1.425	7587	6514	77.7	4.5

MAD M6C12 IPE 400KV CF FLUXER 18.1x7.2 VTOL AMPX 80A (5-14S)

6S

MAX
47°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.96	4.3	102.4	58.7	0.208	2693	923	57.32	9.0
35	23.95	6.08	145.1	90.8	0.280	3096	1217	62.57	8.4
40	23.9	8.35	199.0	131.5	0.358	3506	1559	66.02	7.8

45	23.88	10.73	255.6	179.7	0.441	3892	1906	70.24	7.5
50	23.88	13.94	332.5	238.9	0.535	4263	2330	71.81	7.0
55	23.85	17.47	416.2	297.0	0.616	4607	2670	71.32	6.4
60	23.81	20.89	496.6	368.8	0.716	4922	3127	74.24	6.3
65	23.79	24.07	572.2	446.3	0.812	5247	3522	77.95	6.2
70	23.75	29.21	693.0	529.4	0.917	5515	3991	76.37	5.8
75	23.71	35.32	837.1	620.2	1.021	5801	4430	74.04	5.3
80	23.65	39.89	943.1	714.6	1.116	6116	4863	75.74	5.2
85	23.57	44.92	1058.2	824.7	1.230	6404	5297	77.93	5.0
90	23.57	52.7	1241.4	937.6	1.341	6677	5795	75.49	4.7
95	23.5	60.57	1422.9	1058.3	1.460	6923	6296	74.38	4.4
100	23.38	69.64	1628.0	1213.7	1.599	7250	6853	74.51	4.2

MAD M6C12 IPE 400KV FLUXER PRO 19x5.7 MATT AMPX 80A (5-14S)

6S

MAX
52°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.97	4.01	95.7	53.7	0.188	2726	751	56.16	7.9
35	23.96	5.58	133.2	80.1	0.243	3148	1032	60.08	7.7
40	23.93	7.5	179.0	116.2	0.310	3584	1357	64.9	7.6
45	23.9	10.06	239.8	164.3	0.391	4013	1735	68.46	7.2
50	23.89	12.82	305.9	216.0	0.470	4393	2128	70.59	7.0
55	23.9	15.58	371.9	272.7	0.549	4742	2510	73.29	6.8
60	23.82	18.43	438.5	333.6	0.628	5075	2901	76.03	6.6
65	23.8	22.49	534.9	405.1	0.718	5389	3355	75.67	6.3
70	23.77	26.63	632.5	478.2	0.801	5701	3756	75.56	5.9
75	23.72	30.19	715.6	564.9	0.897	6012	4221	78.89	5.9
80	23.67	36.06	853.0	659.0	0.995	6327	4697	77.22	5.5
85	23.65	42.34	1000.9	768.1	1.107	6624	5186	76.71	5.2
90	23.57	47.72	1124.5	862.9	1.189	6932	5597	76.69	5.0
95	23.52	51.88	1219.4	984.2	1.302	7217	6103	80.67	5.0
100	23.41	61.05	1428.7	1144.3	1.451	7533	6785	80.04	4.7

MAD M6C12 IPE 400KV FLUXER PRO 20x6.0 MATT AMPX 80A (5-14S)

6S

MAX
62°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.94	4.68	111.8	64.4	0.232	2657	1012	57.56	9.1
35	23.94	6.53	156.0	97.3	0.305	3044	1341	62.31	8.6
40	23.89	8.75	208.6	139.4	0.388	3435	1685	66.77	8.1
45	23.87	11.32	269.7	188.5	0.472	3811	2089	69.83	7.7
50	23.86	14.9	355.2	252.3	0.575	4192	2565	70.98	7.2
55	23.79	18.43	437.8	320.8	0.675	4541	3019	73.23	6.9
60	23.8	22.89	544.3	391.6	0.769	4865	3439	71.89	6.3
65	23.73	26.85	636.7	473.3	0.878	5150	3931	74.29	6.2
70	23.71	31.13	737.5	555.2	0.975	5439	4365	75.24	5.9
75	23.67	36.22	856.7	646.8	1.077	5733	4837	75.46	5.6
80	23.61	41.83	987.3	752.6	1.195	6015	5350	76.21	5.4
85	23.54	48.04	1130.6	864.3	1.313	6288	5869	76.4	5.2
90	23.47	55.93	1311.8	971.1	1.413	6565	6293	74	4.8
95	23.42	65.99	1545.1	1106.0	1.555	6794	6880	71.53	4.5
100	23.33	75.74	1766.3	1269.1	1.711	7082	7535	71.82	4.3

The above data are the theoretical values when the input voltage is 24V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 76A is non-working zone. 27-76A is short-term (about 10-30s), working zone, and below 27A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

Our Services

1. We provide 1 Year Warranty. Buy with confidence.
2. If you are not satisfied when you receive your item, please return it within 14 days for a replacement or money back. Please contact me before you return it.
3. If item is defective in 3 months, We will send you a replacement without extra charger, or offer refund after we receive the defective item.
4. If item is defective after 3 months, you can still send it back to us. We will send you a new one after receiving the defective item. But you have to pay the extra shipping fee.



FAQ

Q1: Do you support OEM/ODM?

A1: Yes. We can print your logo on the product.

Q2: About samples.

A2: Under normal circumstances, samples will be ready within 7 days, and 10-20 days for OEM/ODM orders. Sample fee and shipping will be charged.

Q3: What is the delivery time?

A3: For regular orders, we can ship within 15 days, for OEM/ODM, we can ship within 25-45 days (depending on the quantity). In the event of delays, we will notify you in advance of the status and resolution.

Q4: What is the minimum order quantity?

A4: There is no MOQ for wholesale (1 piece accepted), including OEM/ODM.

Q5: What are your payment terms?

A5: L/C.TT100%.

Q6: Can you reduce the shipping cost?

A6: When calculating the shipping cost for you, we always choose the cheapest and safest express. Although we have partnerships with shipping companies, we can't keep costs down because it's not us who get paid. If you think it's expensive for you. You can always make your own choice.

Q7: Return policy.

A7: If you want to replace the received item, you must contact us within 7 days after receiving the item. Returned items should be in their original condition and you should pay for additional shipping.



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