



V505S PRO IPE V3 Brushless DC Motor

Our Product Introduction

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Basic Information

- Place of Origin: Guangdong, China
- Brand Name: GS
- Model Number: V505S PRO IPE V3 150KV 170KV 270KV 320KV 380KV 420KV
- Price: Negotiable



Product Specification

- Motor Model: V505S PRO IPE V3.0
- Stator: Anticorrosive
- Motor Size: D:56 X37.4 Mm
- Propeller Mounting Holes: D:12 M3x4, D:15 M3x4
- Bearing: EZ0 696ZZ*2
- Number Of Pole Pairs: 14
- Cable Length: 150 Mm 16# Awg(Black) Silicone
- Rotor Balance: ≤ 5 Mg
- Motor Balance: ≤ 10 Mg
- Motor Mounting Holes: D:25 M3x4
- Disruptive Test: 500 V
- Highlight: **Powered Tethered Drone Systems, 420V Tethered Drone Systems, 420V tethered uav systems**



More Images



V505S PRO IPE V3 Brushless DC Motor

V505S PRO 270KV/320KV As the hot motors in the field ,becasue it's darling of 8-16kg VTOL Aircraft,at same time V505S PRO KV150 is also the best power solution for the quadcopter with take-off weight of 8-14kg.

High Efficiency: Designed for superior efficiency, providing longer operation times and reduced energy consumption.

High Torque: Offers significant torque, suitable for demanding tasks.

Durability: Built for longevity with fewer wear-prone parts compared to brushed motors.

Precision Control: Supports accurate control over speed and position.

Cooling System: Enhanced cooling systems to prevent overheating during high power output operations.

V505S PRO

ENERGY EFFICIENT 150KV
INDUSTRY PROFESSIONAL EDITION

2.0~3.0 kgf

RECOMMENDED
HOVER THRUST

6.4 kgf

MAXIMUM
THRUST

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

OPTIMIZED
WEIGHT

247g

EFFICIENCY >84%



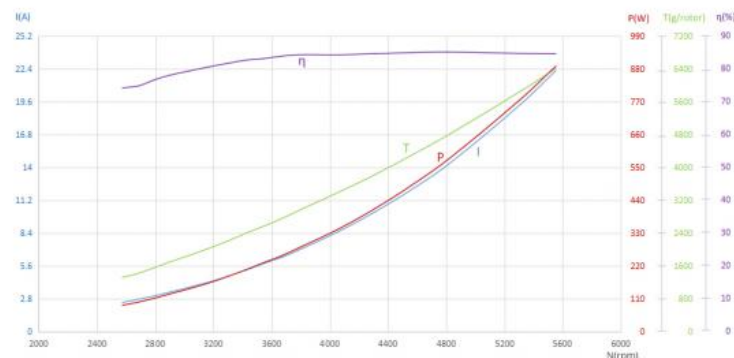
MAD V505S PRO IPE 150KV FLUXER PRO 22x6.6 MATT AMPX 40A (5-14S) HV

12S MAX
120°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.

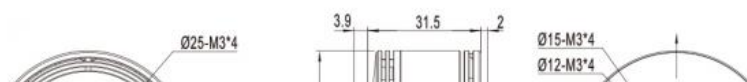


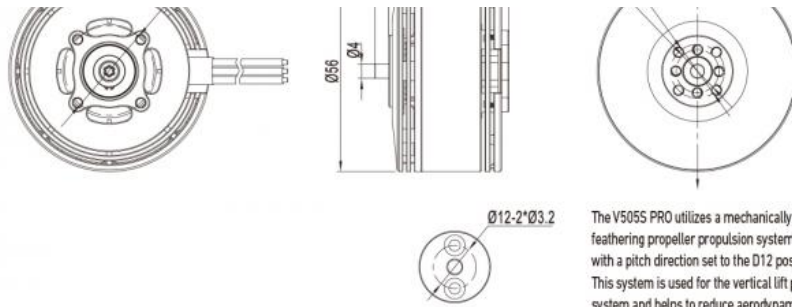
Motor Data

Motor Model	MAD V505S PRO IPE V3.0	Number of pole pairs	14
Stator	TAIWAN / Anticorrosive	Varnished wire Degree	180°C
Motor Size	D:56 × 37.4 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:15 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	Propeller Plate *1, Ø4-6 Adapter Ring *1, 3.5mm Bullet Connector*3, Heat Shrinkable Tube*3, M3*8mm *4 Motor Screws, M3*10mm *2 Propeller Screws, Bullet propeller seat*1, Sticker*2		

Specifications

RPM/V	150 KV	Nominal Voltage	12S lipo battery
No Load Current	0.7A/20V	Internal resistance	129mΩ
Motor Weight	247 g	Product Boxed Weight	410g (110 x 110 x 50 mm)
Maximum Current	22.2 A	Maximum Power	1052W
Maximum thrust	6.4 kg	Maximum Torque	1.5 Nm
Recommended ESC	MAD AMPX 40A (5-14S) HV	Recommended Propellers	20x6.0, 22x6.6
UAV take-off weight	12S-22"/ 10kg--Quadcopter 15kg--Hexacopter 20kg--Octocopter	Single rotor take-off weight	2kg ~ 3kg





MAD V505S PRO IPE 150KV

FLUXER PRO 20X6.0 MATT

AMPX 40A (5-14S) HV

12S

MAX
86°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	48.41	0.71	34.4	21.1	0.112	1803	416	61.3	12.1
35	48.41	1.05	50.8	35.4	0.158	2140	616	69.7	12.1
40	48.39	1.37	66.3	49.3	0.196	2401	726	74.4	10.9
45	48.38	1.72	83.2	63.5	0.228	2660	889	76.3	10.7
50	48.37	2.21	106.9	85.1	0.279	2911	1124	79.6	10.5
55	48.35	2.81	135.9	112.4	0.334	3214	1368	82.7	10.1
60	48.33	3.64	175.9	149.4	0.405	3523	1627	84.9	9.2
65	48.3	4.56	220.2	191.9	0.481	3809	1961	87.1	8.9
70	48.27	5.57	268.9	233.8	0.547	4081	2261	86.9	8.4
75	48.24	6.49	313.1	276.3	0.608	4339	2516	88.2	8.0
80	48.2	7.69	370.7	329.2	0.687	4576	2849	88.8	7.7
85	48.16	8.94	430.6	386.4	0.765	4823	3206	89.7	7.4
90	48.11	10.45	502.7	453.4	0.854	5070	3458	90.2	6.9
95	48.07	11.99	576.4	519.9	0.934	5316	3802	90.2	6.6
100	48.01	13.79	662.1	594.1	1.024	5540	4157	89.7	6.3

MAD V505S PRO IPE 150KV

FLUXER PRO 22x6.6 MATT

AMPX 40A (5-14S) HV

12S

MAX
120°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
40	48	2.49	119.5	88.6	0.330	2575	1319	74.16	11.0
42	47.99	2.77	132.9	99.4	0.350	2685	1423	74.76	10.7
44	47.98	3.05	146.3	112.1	0.380	2793	1554	76.58	10.6
46	47.98	3.39	162.7	127.0	0.420	2905	1703	78.06	10.5
48	47.96	3.78	181.3	143.7	0.450	3031	1857	79.28	10.2
50	47.95	4.22	202.3	162.9	0.490	3166	2024	80.52	10.0
52	47.93	4.72	226.2	184.6	0.530	3297	2206	81.61	9.8
54	47.91	5.24	251.0	207.3	0.580	3422	2394	82.58	9.5
56	47.89	5.82	278.7	231.6	0.620	3548	2570	83.09	9.2
58	47.87	6.36	304.5	255.2	0.660	3673	2759	83.82	9.1
60	47.85	6.94	332.1	279.7	0.710	3784	2945	84.24	8.9
65	47.8	8.54	408.2	343.8	0.810	4061	3395	84.23	8.3
70	47.74	10.23	488.4	412.9	0.910	4313	3828	84.55	7.8
75	47.67	12.11	577.3	490.1	1.030	4562	4297	84.90	7.4
80	47.6	14.24	677.8	576.6	1.140	4813	4789	85.06	7.1
90	47.43	19.37	918.7	777.7	1.400	5311	5852	84.65	6.4
100	47.31	22.23	1051.7	888.5	1.530	5553	6401	84.48	6.1

The above data are the theoretical values when the input voltage is 48 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 22A is non-working zone. 5-22A is short-term (about 10-30s), working zone, and below 5A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

V505S PRO

ENERGY EFFICIENT 170KV
INDUSTRY PROFESSIONAL EDITION

1.5~2.0 kgf

RECOMMENDED
HOVER THRUST

5.7 kgf



MAXIMUM
THRUST

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

OPTIMIZED
WEIGHT 248g

EFFICIENCY >77%



MAD V505S PRO IPE 170KV FLUXER PRO 20X6.0 MATT AMPX 40A (5-14S) HV

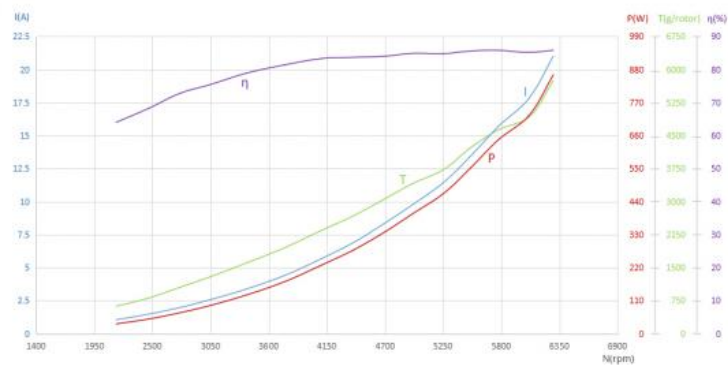
12S

MAX
120°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	170 KV	Nominal Voltage	12S lipo battery
No Load Current	0.95A / 30V	Internal resistance	86mΩ
Motor Weight	248 g	Product Boxed Weight	412g (110 x 110 x 50 mm)
Maximum Current	21 A	Maximum Power	1004W
Maximum thrust	5.7 kg	Maximum Torque	1.30 Nm
Recommended ESC	MAD AMPX 40A (5-14S) HV	Recommended Propellers	20x6.0
UAV take-off weight	12S-20"/ 8kg--Quadcopter 12kg--Hexacopter 16kg--Octocopter	Single rotor take-off weight	1.5kg ~ 2kg

MAD V505S PRO IPE 170KV FLUXER PRO 20X6.0 MATT AMPX 40A (5-14S) HV

12S

MAX
120°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	48.4	1.05	50.8	32.5	0.144	2158	622	64	12.3
35	48.39	1.47	71.1	48.5	0.188	2463	807	68.2	11.4
40	48.38	1.98	95.8	69.7	0.241	2763	1054	72.8	11.0
45	48.36	2.56	123.8	93.4	0.293	3044	1287	75.4	10.4
50	48.34	3.38	163.4	128.9	0.363	3392	1606	78.9	9.8
55	48.3	4.41	213.0	173.3	0.441	3752	1952	81.4	9.2
60	48.27	5.67	273.7	227.9	0.531	4098	2343	83.3	8.6
65	48.23	6.91	333.3	279.1	0.605	4405	2680	83.7	8.0
70	48.18	8.32	400.9	336.9	0.686	4690	3049	84	7.6
75	48.13	9.8	471.7	400.6	0.770	4968	3415	84.9	7.2
80	48.09	11.42	549.2	465.7	0.847	5250	3720	84.8	6.8
85	48.03	13.46	646.5	553.1	0.958	5513	4228	85.6	6.5
90	47.95	15.69	752.3	645.7	1.068	5773	4627	85.8	6.2
95	47.89	17.76	850.5	724.4	1.142	6057	4906	85.2	5.8
100	47.79	21.01	1004.1	862.0	1.308	6293	5747	85.8	5.7

The above data are the theoretical values when the input voltage is 48 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 21A is non-working zone, 7-21A is short-term (about 10-30s), working zone, and below 7A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

V505S PRO

ENERGY EFFICIENT 270KV
INDUSTRY PROFESSIONAL EDITION

3.0~3.5 kgf

RECOMMENDED
HOVER THRUST

8.6 kgf



MAXIMUM
THRUST

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

OPTIMIZED
WEIGHT

247g

EFFICIENCY >76%



MAD V505S PRO IPE 270KV FLUXER PRO 17x5.8 MATT AMPX 80A (5-14S)

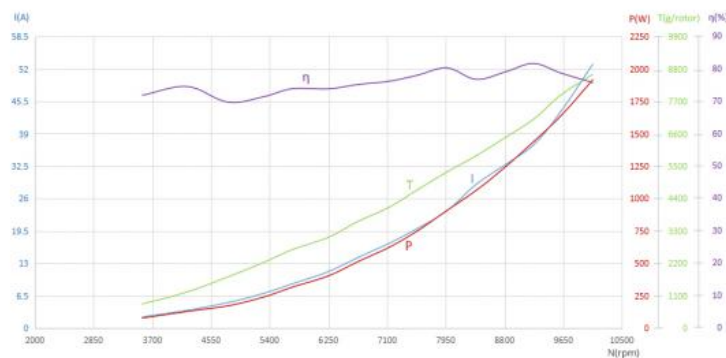
12S

MAX
103°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	270 KV	Nominal Voltage	12S lipo battery
No Load Current	1.6A/20V	Internal resistance	42.5mΩ
Motor Weight	247 g	Product Boxed Weight	411g (110 x 110 x 50 mm)
Maximum Current	53 A	Maximum Power	2529W
Maximum thrust	8.6 kg	Maximum Torque	1.8 Nm
Recommended ESC	MAD AMPX 80A ESC (5-14S)	Recommended Propellers	17x5.8
UAV take-off weight	12S-17" 12kg-Quadcopter 18kg-Hexacopter 24kg-Octocopter	Single rotor take-off weight	3kg ~ 3.5kg

MAD V505S PRO IPE 270KV FLUXER PRO 17x5.8 MATT AMPX 80A (5-14S)

12S

MAX
103°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	48.21	2.27	108.7	78.1	0.210	3557	821	71.92	7.6
35	48.22	3.59	172.9	129.0	0.293	4205	1231	74.58	7.1
40	48.21	5.2	250.2	174.6	0.346	4813	1757	69.72	7.0
45	48.21	6.99	336.6	240.5	0.432	5314	2235	71.44	6.6
50	48.16	8.93	429.3	317.6	0.529	5734	2673	73.94	6.2
55	48.14	11.34	545.6	403.3	0.617	6247	3085	73.87	5.7
60	48.14	14.27	686.6	517.0	0.738	6692	3639	75.25	5.3
65	48.12	17.04	819.2	624.7	0.837	7132	4110	76.23	5.0
70	48.04	20	960.3	750.2	0.950	7538	4696	78.07	4.9
75	48.05	23.5	1128.5	906.7	1.088	7962	5297	80.35	4.7
80	47.97	28.92	1386.7	1065.5	1.212	8395	5864	76.81	4.2
85	47.92	32.91	1576.5	1249.0	1.352	8822	6490	79.19	4.1
90	47.89	36.76	1760.2	1438.6	1.490	9220	7095	81.69	4.0
95	47.82	43.46	2077.9	1637.4	1.626	9614	7912	78.76	3.8
100	47.76	52.96	2528.9	1916.8	1.816	10078	8618	75.8	3.4

The above data are the theoretical values when the input voltage is 48 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 53A is non-working zone, 17-53A is short-term (about 10-30s), working zone, and below 17A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

V505S PRO

ENERGY EFFICIENT 320KV



INDUSTRY PROFESSIONAL EDITION

2.0~3.0 kgf

RECOMMENDED
HOVER THRUST

7 kgf

MAXIMUM
THRUSTMAXIMUM THRUST MAY DEPEND ON
BATTERY LEVEL, PROPELLER TYPE,
AIR PRESSURE AND OTHER CONDITIONSOPTIMIZED
WEIGHT

249g

EFFICIENCY >81%



MAD V505S PRO IPE 320KV FLUXER PRO 22x6.6 MATT XROTOR Pro 60A (4-6S)

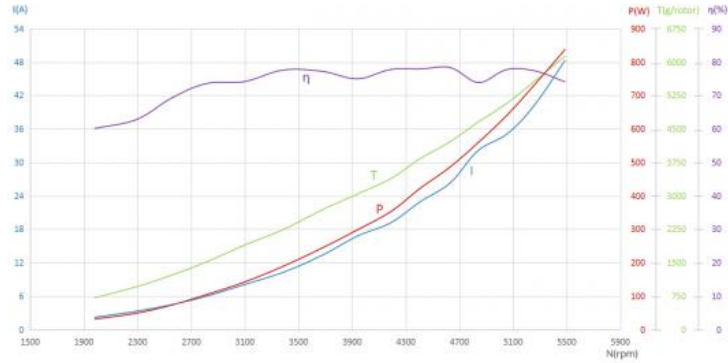
6S

MAX
89°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	320 KV	Nominal Voltage	6S lipo battery
No Load Current	2.2A/20V	Internal resistance	.49mΩ
Motor Weight	249 g	Product Boxed Weight	413g (110 x 110 x 50 mm)
Maximum Current	62.7 A	Maximum Power	1456W
Maximum thrust	7 kg	Maximum Torque	1.9 Nm
Recommended ESC	XROTOR Pro 60A (4-6S)	Recommended Propellers	20x6.0, 22x6.6, 22x7.0
UAV take-off weight	6S-22" 9kg--Quadcopter 13.5kg--Hexacopter 18kg--Octocopter	Single rotor take-off weight	2kg ~ 3kg

MAD V505S PRO IPE 320KV FLUXER PRO 20x6.0 MATT XROTOR Pro 60A (4-6S)

6S

MAX
66°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	23.84	1.71	40.4	32.6	0.149	2090	475	81.07	11.8
35	23.85	2.49	58.9	48.2	0.193	2384	672	81.87	11.4
40	23.85	3.4	80.6	65.5	0.235	2659	863	81.26	10.7
45	23.85	4.49	106.5	87.1	0.284	2932	1061	81.72	10.0
50	23.83	5.95	141.3	116.1	0.341	3253	1320	82.16	9.3
55	23.78	7.82	185.3	156.3	0.417	3579	1632	84.28	8.8
60	23.76	10.04	237.9	200.3	0.492	3889	1971	84.13	8.3
65	23.76	12.16	288.2	246.9	0.565	4171	2273	85.65	7.9
70	23.75	14.34	340.3	297.4	0.640	4438	2585	87.37	7.6
75	23.71	17.05	403.6	350.5	0.714	4688	2895	86.82	7.2
80	23.67	20.56	486.1	406.6	0.786	4940	3248	83.65	6.7
85	23.66	23.64	558.8	473.6	0.872	5190	3618	84.77	6.5
90	23.62	26.66	629.3	546.1	0.959	5441	3957	86.78	6.3
95	23.59	31.59	744.7	614.3	1.032	5682	4269	82.47	5.7
100	23.55	37.44	881.2	716.9	1.148	5963	4763	81.32	5.4

MAD V505S PRO IPE 320KV FLUXER PRO 22x6.6 MATT XROTOR Pro 60A (4-6S)

6S

MAX
89°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	23.85	2.22	52.5	31.6	0.152	1983	713	60.12	13.6
35	23.84	3.29	77.8	48.8	0.204	2289	959	62.72	12.3
40	23.84	4.5	106.7	74.0	0.276	2560	1224	69.28	11.5
45	23.83	5.98	142.1	104.5	0.355	2814	1518	73.53	10.7
50	23.78	8.04	190.7	141.4	0.437	3094	1886	74.1	9.9
55	23.75	10.34	245.2	190.4	0.536	3393	2249	77.6	9.2
60	23.73	13.36	316.5	244.4	0.634	3680	2687	77.17	8.5
65	23.75	16.78	397.8	298.4	0.723	3942	3041	74.97	7.6
70	23.67	19.19	453.7	352.8	0.804	4190	3386	77.73	7.5
75	23.66	22.86	540.5	421.1	0.913	4405	3825	77.88	7.1
80	23.61	26.22	618.7	485.0	1.001	4628	4206	78.34	6.8
85	23.57	32.2	758.6	560.4	1.105	4846	4661	73.85	6.1
90	23.53	35.09	825.1	641.3	1.211	5057	5074	77.73	6.2
95	23.49	40.06	940.3	728.3	1.324	5254	5550	77.42	5.9
100	23.41	48.26	1128.8	836.8	1.456	5488	6126	74.07	5.4

MAD V505S PRO IPE 320KV HAVOC 22*7.0in folding propeller XROTOR Pro 60A (4-6S)

6S

MAX
96°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.84	2.82	66.6	47.4	0.242	1874	876	71.2	13.2
35	23.83	4.63	110.0	80.6	0.349	2204	1263	73.27	11.5
40	23.83	6.31	149.9	114.2	0.445	2452	1617	76.19	10.8
45	23.77	8.48	201.0	152.0	0.540	2688	1965	75.57	9.8
50	23.75	10.92	259.0	197.5	0.645	2924	2344	76.25	9.1
55	23.76	14.01	332.2	252.2	0.755	3191	2746	75.85	8.3
60	23.71	17.77	420.8	315.8	0.876	3442	3213	75.02	7.6
65	23.68	21.24	502.3	385.3	1.005	3661	3683	76.7	7.3
70	23.64	26.16	617.9	452.8	1.116	3875	4102	73.26	6.6
75	23.59	30.43	717.5	530.0	1.249	4052	4583	73.87	6.4
80	23.55	34.72	817.0	603.5	1.357	4248	4922	73.86	6.0
85	23.48	40.63	953.5	686.3	1.485	4414	5437	71.97	5.7
90	23.43	45.46	1064.8	760.9	1.580	4598	5853	71.48	5.5
95	23.39	50.81	1187.8	845.1	1.702	4742	6279	71.1	5.3
100	23.24	62.66	1456.0	964.3	1.869	4927	6957	66.2	4.8

The above data are the theoretical values when the input voltage is 24 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 63A is non-working zone. 21-63A 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.

V505S PRO

ENERGY EFFICIENT 380KV
INDUSTRY PROFESSIONAL EDITION

1.5~2.0 kgf

RECOMMENDED
HOVER THRUST

OPTIMIZED
WEIGHT 243g

5.1 kgf



MAXIMUM
THRUST

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

EFFICIENCY >80%



MAD V505S PRO IPE 380KV FLUXER PRO 18x6.1 MATT XROTOR Pro 60A (4-6S)

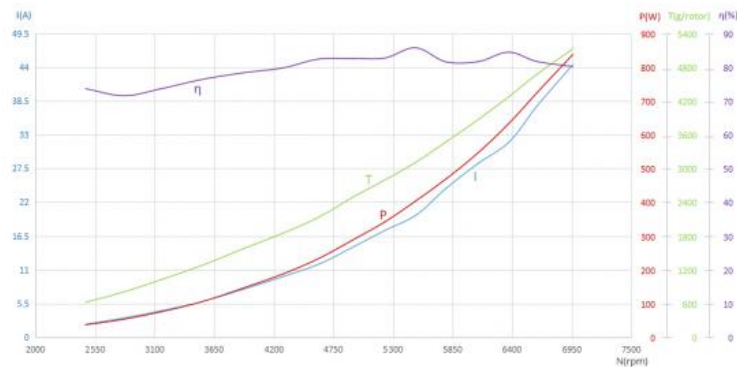
6S

MAX
86°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	380 KV	Nominal Voltage	6S lipo battery
No Load Current	2.8A/20V	Internal resistance	30mΩ
Motor Weight	243 g	Product Boxed Weight	407g (110 x 110 x 50 mm)
Maximum Current	44.5 A	Maximum Power	1044W
Maximum thrust	5.1 kg	Maximum Torque	1.2 Nm
Recommended ESC	XROTOR Pro 60A (4-6S)	Recommended Propellers	17x5.8, 18x6.1
UAV take-off weight	6S-18" 7kg-Quadcopter 10.5kg-Hexacopter 14kg-Octocopter	Single rotor take-off weight	1.5kg ~ 2kg

MAD V505S PRO IPE 380KV FLUXER PRO 17x5.8 MATT XROTOR Pro 60A (4-6S)

6S

MAX
64°C

Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [gf/W]
30	23.88	1.97	46.6	30.6	0.118	2486	508	66.33	11.0
35	23.87	2.81	66.6	45.7	0.153	2855	672	68.68	10.1
40	23.87	3.82	90.5	66.0	0.196	3219	867	72.9	9.6
45	23.86	5.18	123.4	93.1	0.246	3621	1086	75.46	8.8
50	23.86	6.67	158.8	122.1	0.292	3999	1328	76.84	8.4

22	23.06	0.22	239.4	120.0	0.247	427.2	189.1	77.76	7.2
60	23.8	10.56	250.8	197.5	0.401	4708	1875	78.71	7.5
65	23.79	12.34	293.2	240.4	0.456	5036	2150	81.97	7.3
70	23.77	15.01	356.5	287.1	0.513	5347	2424	80.49	6.8
75	23.71	17.76	420.4	334.7	0.565	5656	2676	79.57	6.4
80	23.7	21.38	506.3	399.3	0.640	5961	3025	78.86	6.0
85	23.68	23.67	559.8	471.4	0.719	6265	3365	84.2	6.0
90	23.61	28.41	670.1	540.7	0.785	6580	3658	80.67	5.5
95	23.62	33.05	780.1	623.0	0.866	6868	4040	79.9	5.2
100	23.53	37.33	878.1	729.4	0.965	7221	4505	83.09	5.1

MAD V505S PRO IPE 380KV FLUXER PRO 18x6.1 MATT XROTOR Pro 60A (4-6S)

6S

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	23.86	2.11	49.8	36.5	0.142	2462	620	73.66	12.5
35	23.87	3.14	74.5	53.3	0.181	2816	806	71.58	10.8
40	23.86	4.3	102.0	75.2	0.228	3157	1022	73.62	10.0
45	23.84	5.77	137.1	104.7	0.283	3530	1272	76.35	9.3
50	23.83	7.78	185.1	145.1	0.354	3914	1570	78.35	8.5
55	23.8	9.9	235.2	187.9	0.419	4289	1853	79.85	7.9
60	23.79	11.94	283.5	233.9	0.484	4619	2139	82.46	7.5
65	23.78	14.66	348.1	287.7	0.558	4926	2486	82.6	7.1
70	23.75	17.39	412.6	341.6	0.625	5223	2795	82.76	6.8
75	23.7	19.84	469.6	403.1	0.699	5506	3106	85.78	6.6
80	23.71	24.36	576.9	470.8	0.776	5796	3481	81.56	6.0
85	23.64	28.35	669.7	547.4	0.859	6088	3874	81.7	5.8
90	23.61	31.72	748.3	632.4	0.949	6365	4273	84.46	5.7
95	23.52	37.67	885.7	724.3	1.044	6628	4674	81.73	5.3
100	23.49	44.45	1043.9	837.9	1.150	6960	5129	80.23	4.9

The above data are the theoretical values when the input voltage is 24 V, for reference only. In the case of room temperature of 25°C and no additional cooling device, the current over 15A is non-working zone, 15-44A is short-term (about 10-30s), working zone, and below 63A is sustainable working zone. In actual use, please control the motor running time according to the working environment temperature and heat dissipation conditions.

V505S PRO

ENERGY EFFICIENT 420KV
INDUSTRY PROFESSIONAL EDITION

2.0~3.0 kgf

RECOMMENDED
HOVER THRUST

6.3 kgf

MAXIMUM
THRUST

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

OPTIMIZED
WEIGHT 253g

EFFICIENCY >77%



MAD V505S PRO IPE KV420 FLUXER PRO 18x6.1 MATT XROTOR Pro 60A (4-6S)

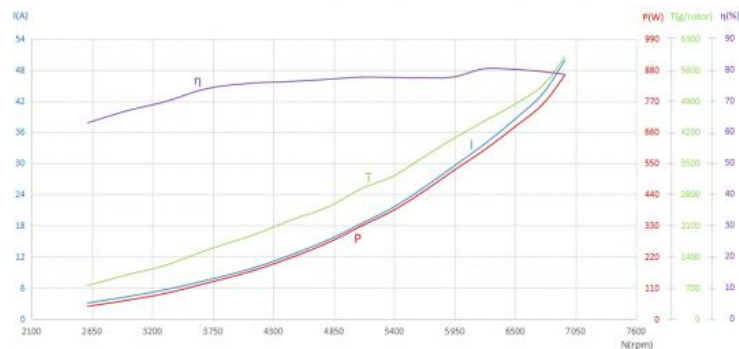
6S

MAX
94°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	420 KV	Nominal Voltage	6S lipo battery
No Load Current	3A/20V	Internal resistance	25mΩ
Motor Weight	253 g	Product Boxed Weight	417g (110 x 110 x 50 mm)
Maximum Current	55.3 A	Maximum Power	1237W
Maximum thrust	6.3 kg	Maximum Torque	1.3 Nm
Recommended ESC	XROTOR Pro 60A (4-6S)	Recommended Propellers	18x6.1, 18.1x7.2
UAV take-off weight	65-18" 9kg-Quadcopter 13.5kg-~Hexacopter 18kg-~Octocopter	Single rotor take-off weight	2kg ~ 3kg

MAD V505S PRO IPE KV420 FLUXER PRO 18x6.1 MATT XROTOR Pro 60A (4-6S)								6S	MAX 94℃
Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	23.75	3.06	72.8	44.2	0.162	2611	751	63	10.7
35	23.72	4.31	102.3	66.1	0.212	2979	994	66.92	10.1
40	23.68	5.63	133.3	90.2	0.259	3319	1205	69.8	9.3
45	23.64	7.47	176.5	126.7	0.327	3698	1550	73.97	9.1
50	23.58	9.71	228.9	168.7	0.393	4103	1874	75.71	8.4
55	23.52	12.41	292.0	217.7	0.465	4470	2229	76.28	7.8
60	23.44	15.23	356.9	269.5	0.536	4799	2516	76.99	7.2
65	23.36	18.37	429.1	327.9	0.614	5101	2927	77.65	6.9
70	23.27	21.6	502.6	384.9	0.681	5399	3220	77.52	6.5
75	23.17	25.19	583.7	448.7	0.757	5660	3627	77.47	6.3
80	23.06	29.34	676.6	522.8	0.841	5936	4049	77.7	6.0
85	22.95	33.71	773.7	597.7	0.917	6222	4450	80.37	6.0
90	22.82	38.28	873.8	675.1	0.994	6486	4808	80.15	5.7
95	22.7	43.34	983.6	757.5	1.072	6748	5246	79.45	5.5
100	22.51	49.81	1121.1	860.5	1.182	6951	5890	78.52	5.4

MAD V505S PRO IPE KV420 FLUXER PRO 18.1x7.2 MATT XROTOR Pro 60A (4-6S)								6S	MAX 101℃
Throttle [%]	Voltage [V]	Current [A]	Input Power [W]	Output Power [W]	Torque [N·m]	RPM	Thrust [gf]	Efficiency [%]	Efficiency [g/W]
30	23.74	3.43	81.4	52.3	0.193	2586	858	66.94	11.0
35	23.71	4.7	111.4	74.2	0.242	2925	1087	69.01	10.1
40	23.67	6.23	147.5	103.3	0.304	3243	1378	72.37	9.7
45	23.62	8.31	196.3	144.1	0.380	3624	1726	75.47	9.0
50	23.55	11.05	260.2	195.0	0.464	4018	2112	76.83	8.3
55	23.47	14.01	328.9	249.2	0.543	4384	2488	77.41	7.7
60	23.38	17.3	404.4	308.6	0.627	4701	2852	77.6	7.2
65	23.3	20.71	482.5	368.9	0.705	4994	3199	77.47	6.7
70	23.19	24.55	569.5	435.1	0.788	5270	3576	77.06	6.3
75	23.08	28.75	663.6	508.5	0.881	5513	4035	76.9	6.1
80	22.97	32.78	753.1	576.0	0.951	5782	4355	79.31	6.0
85	22.82	38.18	871.3	666.3	1.058	6015	4930	79.34	5.9
90	22.68	43.97	997.1	762.9	1.168	6238	5460	78.86	5.6
95	22.54	49.05	1105.6	838.0	1.234	6484	5826	77.62	5.4
100	22.35	55.32	1236.7	929.5	1.326	6695	6285	76.35	5.2

The above data are the theoretical values when the input voltage is 24 V, for reference only. In the case of room temperature of 25℃ and no additional cooling device, the current over 55A is non-working zone, 21-55A 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.

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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