

# VL8015 Propulsion System Specifications

VL8015propulsion system is recommended for (4 arms) VTOL  
with a take-off weight of 25 kg.

## 一、Parameters

Motor Parameters	Item No.	VL8015
	KV (RPM/V)	170
	Voltage (V)	12S
	Idle Current (A/15V)	≤1.9
	Idle RPM (RPM/15V)	2800±10%
	Interphase Resistance (mΩ/25°C)	43±10%
	Max. Current (A)	74
	Three-phase Wires (mm)	Silicone 14#-1000±5
	Encoder Wire (mm) (Measured from the center of the motor)	Shielded Wire - Black-24AWG-5C-210± 10mm-M6 aviation connector
	Ingress protection	IPX5
	Motor Weight (g)	610 (incl. wires) ±10
	Ambient Temperature (°C)	-30 ~ 55
Temperature Monitoring	Thermistor (optional as per FC)	
	Item No.	V80A
	Throttle Range (us)	1100-1940 (Fixed)
	Protocol	DRONECAN/UVACAN

ESC	Control Methods	PWM/CAN
Parameters	Propeller Locking Method	Electronic
	Max. Voltage (V)	60
	Max. Continuous Current (A)	40 (Under certain heat dissipation conditions)
	Max. Current (A/10s)	80 (Under certain heat dissipation conditions)
	Ambient Temperature (°C)	-30 ~ 65
	Ambient Humidity (%)	15 ~ 85
	Storage Temperature (°C)	-40 ~ 65
	Storage Humidity (%)	15 ~ 85
	Standby Power Consumption (mA)	≤50
	Throttle Response Speed (ms)	300
	Throttle Refresh Frequency (Hz)	50~500
	Input Cables (mm)	Silicone wire - red/black-12AWG-180±10mm
	Output Cables (mm)	Silicone wire - orange--14AWG-110±10
	Signal wires (mm)	Shielded cable - Black-OD4.2-5C-450±10mm -JP-3P*2-Black blank white - Green yellow gray
	Encoder wires (mm)	Shielded wire - black-26AWG-5C-450 ±10-M6aviation connector
	Length (mm)	84±1.5
	Width (mm)	34.4±1.5
	Height (mm)	19±1.5

	Weight (g)	110±5
Propeller	Item No.	G26
	Item No. (mm)	660
Parameters	Weight (g)	68±5

## 二、 Test report

<b>VL8015 KV170+V80A+G26</b>						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	44.59	6.53	291	2450	0.89	2944	10.11
42	44.60	7.48	334	2575	0.98	3249	9.74
44	44.60	8.50	379	2696	1.07	3558	9.38
46	44.60	9.62	429	2817	1.17	3879	9.04
48	44.61	10.85	484	2935	1.26	4216	8.72
50	44.61	12.17	543	3052	1.37	4575	8.43
52	44.62	13.62	608	3167	1.47	4962	8.16
54	44.62	15.17	677	3278	1.59	5354	7.91
56	44.64	16.77	748	3391	1.70	5726	7.65
58	44.64	18.53	827	3503	1.82	6121	7.40
60	44.63	20.32	907	3617	1.93	6509	7.18
62	44.62	22.23	992	3726	2.05	6920	6.98
64	44.61	24.26	1082	3835	2.17	7329	6.77
66	44.60	26.47	1180	3940	2.29	7762	6.58
68	44.59	28.73	1281	4044	2.42	8178	6.38
70	44.57	31.20	1391	4145	2.55	8615	6.20

80	44.37	45.81	2032	4635	3.23	10932	5.38
90	44.04	65.64	2891	5093	3.95	13323	4.61
100	43.77	84.17	3684	5278	4.23	14233	3.86

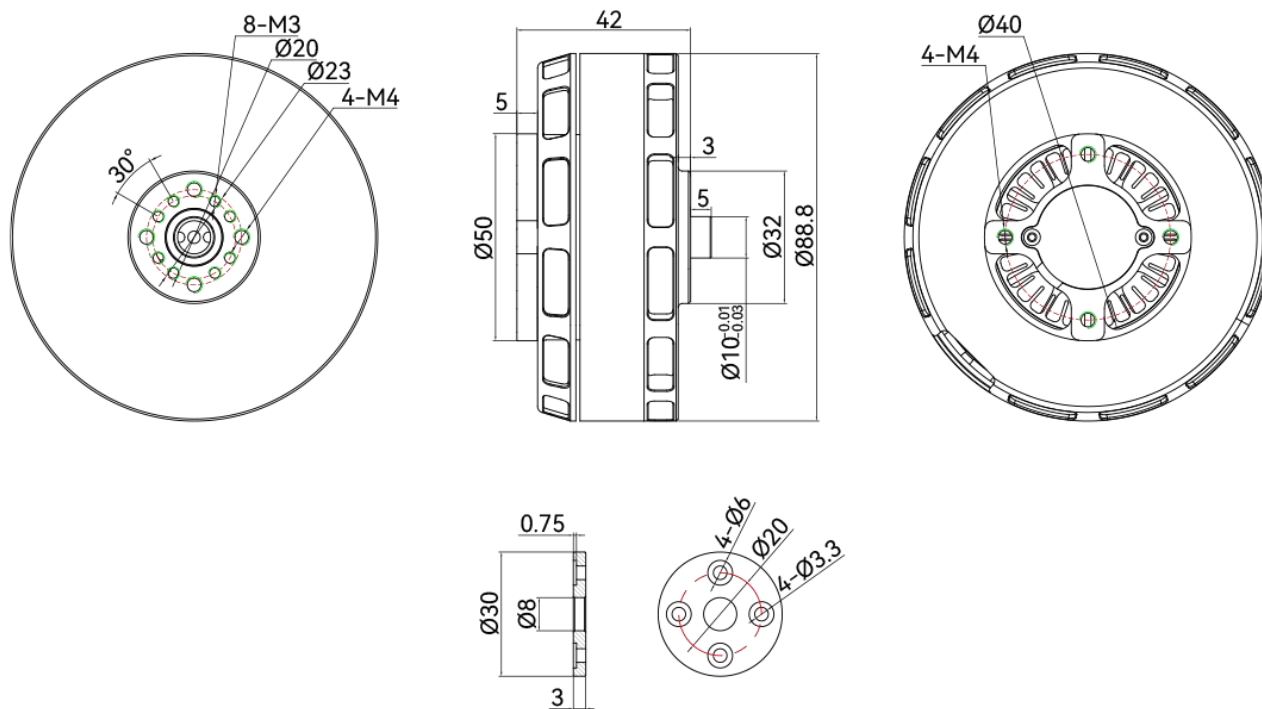
<b>VL8015 KV170+V80A+G26</b>						Ambient temperature	25°C
Throttle	Voltage (V)	Current (A)	Power (W)	RPM (RPM)	Torque (N·m)	Thrust (g)	Efficiency (g/W)
40	50.33	7.98	402	2742	1.10	3722	9.26
42	50.34	9.17	462	2876	1.21	4099	8.88
44	50.37	10.48	528	3010	1.33	4499	8.52
46	50.39	11.88	599	3141	1.45	4916	8.21
48	50.40	13.44	678	3268	1.58	5364	7.92
50	50.41	15.04	758	3398	1.70	5787	7.63
52	50.43	16.80	847	3523	1.83	6228	7.35
54	50.43	18.66	941	3648	1.97	6683	7.10
56	50.44	20.71	1045	3771	2.11	7173	6.87
58	50.43	22.78	1149	3891	2.25	7646	6.65
60	50.43	25.08	1265	4008	2.39	8136	6.43
62	50.42	27.45	1384	4129	2.53	8616	6.23
64	50.40	29.97	1511	4244	2.68	9103	6.03

66	50.37	32.66	1645	4355	2.83	9613	5.84
68	50.34	35.47	1785	4465	2.98	10111	5.66
70	50.30	38.42	1933	4574	3.13	10607	5.49
80	50.18	48.39	2428	4876	3.59	12159	5.01
90	50.00	60.23	3012	5164	4.04	13673	4.54
100	49.80	73.75	3673	5377	4.40	14842	4.04

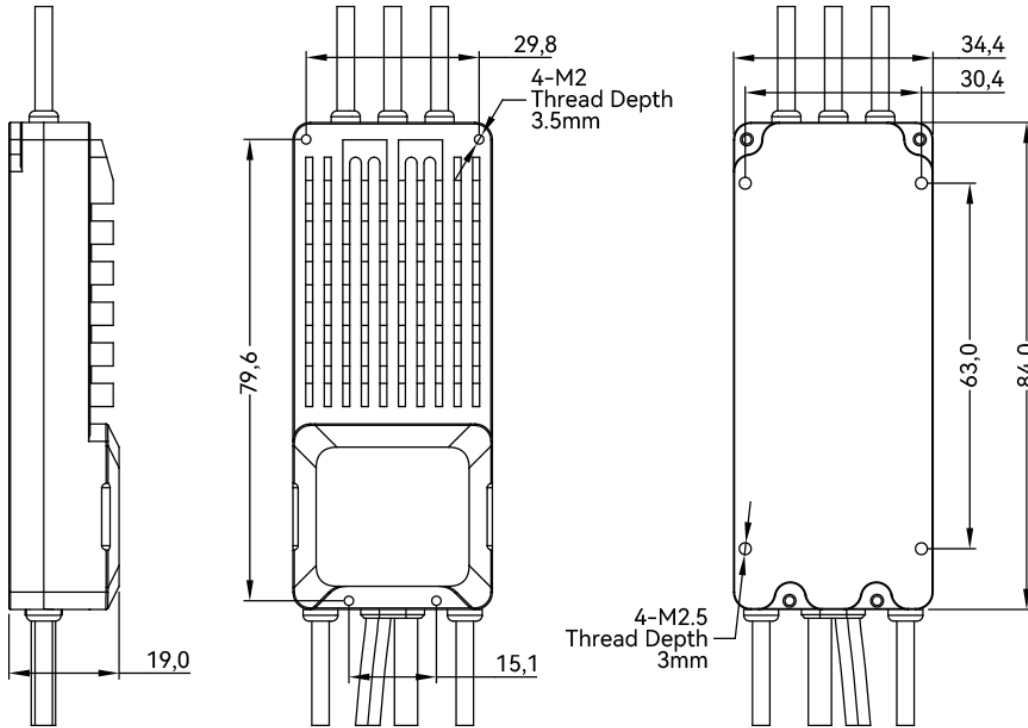
The above data are measured by the professional bench of the laboratory for reference

for model selection only.

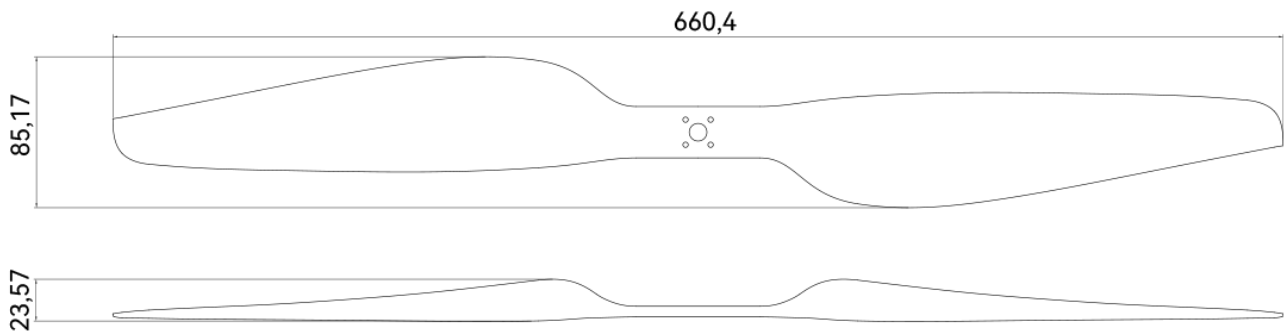
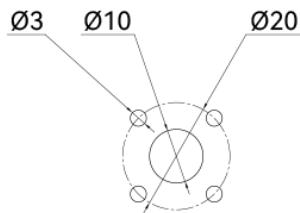
### 三、 Drawings (mm)



【MOTOR】



【ESC】



【PROPELLER】