

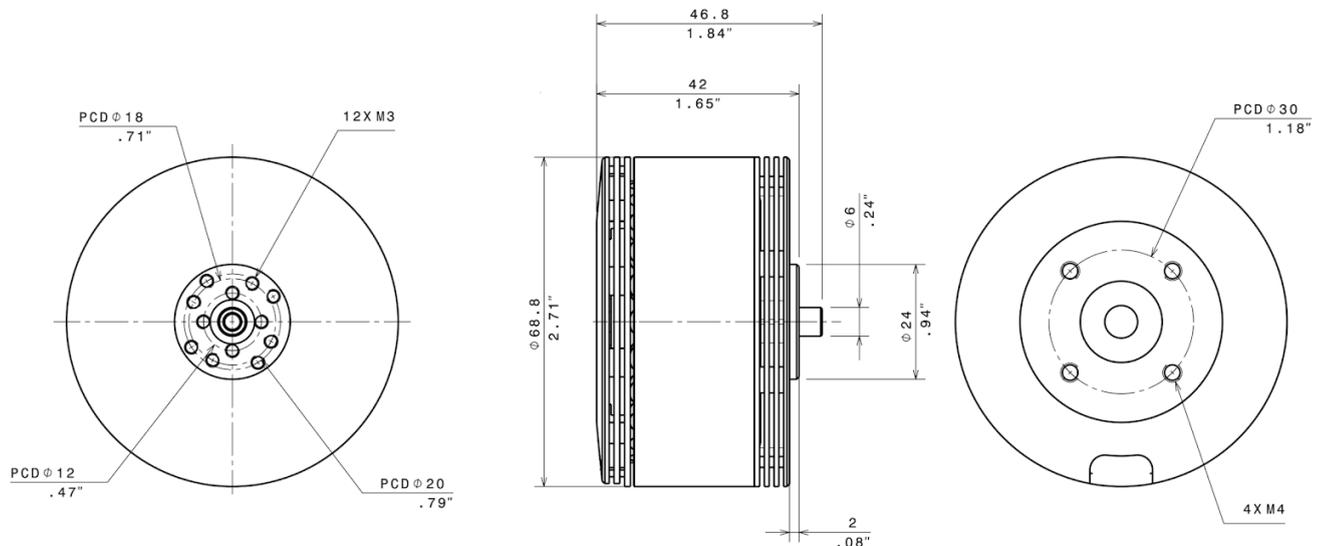
6020 PRO

180 KV

MOTOR SPECIFICATIONS

Kv (Motor Velocity Constant)	180 RPM/V
Kt (Motor Torque Constant)	0.068 Nm/A @ 5291 RPM
Maximum Continuous Current*	47A (180s)
Maximum Continuous Power*	2209W (180s)
Power Density	3.53 W/g (Rated), 6.86 W/g (Maximum)
Voltage Range	44V - 50V (12S LiPo)
I _o (48@V)	2.5A (48@V)
Inductance per phase (Winding Inductance)	0.046 (≈0.03) mH
R _{ph} (Wind Resistance per phase)	0.05 (≈0.03) Ω
Stator Poles	24S
Magnetic Poles	28P
Bearings	Triple 626-2Z Sealed
Stick Out Shaft Diameter	∅ 6 mm
Motor Diameter	∅ 4.8 mm
Motor Length	42 mm
Motor Weight	425 g ± 5 g
Mount Pattern @ 90 deg	4 X M3 @ PCD ∅ 20 mm ↓ 6 mm
Compatible Propeller Size	22 " inch to 26 " inch
Propeller Mount Pattern	8 X M3 @ PCD ∅18mm, ∅20mm ↓6mm, 4 X M3 @ PCD ∅12mm ↓3.8mm

2D CAD



Note: Specifications and drawings may be revised without notice. Vector Technics assumes no liability for reliance on unverified data.
All Dimensions in millimeters [mm]

6020 PRO 180 KV - TEST DATA

Note: The test data provided below is subject to environmental and testing conditions, including but not limited to temperature, humidity, altitude, and the equipment used. Results may vary depending on specific testing parameters and conditions.

Propeller	TM 22 x 6.6 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	37 ° C	Cross-winds: Mild
Test Date:	21-03-2024	Humidity:	24 %			

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	50	2.08	1492	381	0.1	104.0	3.7	61 ° C [@70% 10 min Constant]
1400 - 40	50	3.17	2291	920	0.23	158.5	5.8	
1500 - 50	49.8	6.4	3402	2117	0.53	318.7	6.6	
1600 - 60	49.5	12.87	4514	3940	0.97	637.1	6.2	
1700 - 70	49.2	18.55	5141	5174	1.28	912.7	5.7	
1800 - 80	48.8	25.58	5680	6632	1.62	1248.3	5.3	64 ° C [Maximum]
1900 - 90	48.1	39.57	6584	8737	2.14	1903.3	4.6	
1950 - 95	47.9	44.69	6834	9425	2.34	2140.7	4.4	
2000 - 100	47.6	50.23	7081	10131	2.55	2390.9	4.2	

Propeller	TM 22 x 7.4 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	37 ° C	Cross-winds: Mild
Test Date:	21-03-2024	Humidity:	24 %			

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.7	2	2189	894	0.27	99.4	9.0	62 ° C [@70% 10 min Constant]
1400 - 40	49.5	4.8	3090	1907	0.55	237.6	8.0	
1500 - 50	49.2	10	3993	3396	0.94	492.0	6.9	
1600 - 60	48.8	17	4747	5084	1.36	829.6	6.1	
1700 - 70	48.2	25.9	5428	6706	1.8	1248.4	5.4	
1800 - 80	47.5	38.7	6113	8738	2.32	1838.3	4.8	66 ° C [Maximum]
1900 - 90	46.7	52.8	6669	10586	2.82	2465.8	4.3	
1950 - 95	46.3	58.5	6861	11283	3	2708.6	4.2	
2000 - 100	46.3	58.8	6848	11295	3.03	2722.4	4.1	

Propeller	VT 2408 CFRP_FP			Power Supply / Battery	2 X TB - 22000 mAh 12S	
ESC	TM 80A 12S			Environmental Temp:	32 ° C	Cross-winds: Mild
Test Date:	05-03-2025	Humidity:	19 %			

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.7	1.5	1714	882	0.31	74.6	11.8	72 ° C [@70% 10 min Constant]
1400 - 40	49.4	4.6	2542	2063	0.67	227.2	9.1	
1500 - 50	49	11.1	3428	3830	1.24	543.9	7.0	
1600 - 60	48.4	21.2	4207	6044	1.88	1026.1	5.9	
1700 - 70	47.7	33.4	4839	8126	2.49	1593.2	5.1	
1800 - 80	46.8	48.1	5368	10204	3.13	2251.1	4.5	80 ° C [Maximum]
1900 - 90	45.6	67.8	5839	12141	3.77	3091.7	3.9	
1950 - 95	45	78.8	6055	12939	4.04	3546.0	3.6	
2000 - 100	44.7	84.4	6155	13355	4.16	3772.7	3.5	

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6020 PRO 180 KV - TEST DATA

Note: The test data provided below is subject to environmental and testing conditions, including but not limited to temperature, humidity, altitude, and the equipment used. Results may vary depending on specific testing parameters and conditions.

Propeller	TM 24 x 7.2 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	37 ° C	
Test Date:	21-03-2024	Humidity:	24 %	Cross-winds: Mild		

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.4	0.79	1417	504	0.14	39.0	12.9	67 ° C [@70% 10 min Constant]
1400 - 40	49.3	2.25	2157	1236	0.34	110.9	11.1	
1500 - 50	49.1	6.83	3228	2890	0.77	335.4	8.6	
1600 - 60	48.6	16.21	4297	5239	1.4	787.8	6.7	
1700 - 70	48.3	22.79	4775	6580	1.75	1100.8	6.0	
1800 - 80	47.8	31.44	5291	8059	2.14	1502.8	5.4	
1900 - 90	46.9	49.69	6066	10572	2.81	2330.5	4.5	71 ° C [Maximum]
1950 - 95	46.6	56.54	6276	11367	3.05	2634.8	4.3	
2000 - 100	46.3	63.04	6478	12086	3.24	2918.8	4.1	

Propeller	HW 2480 CFRP_FP			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	TM 80A 12S			Environmental Temp:	32 ° C	
Test Date:	05-03-2025	Humidity:	19 %	Cross-winds: Mild		

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.6	1.6	1731	957	0.32	79.4	12.1	62 ° C [@70% 10 min Constant]
1400 - 40	49.6	4.7	2535	2147	0.68	232.2	9.2	
1500 - 50	49	11.3	3440	4043	1.26	553.7	7.3	
1600 - 60	48.4	21.1	4218	6175	1.88	1021.2	6.0	
1700 - 70	47.6	33.3	4852	8223	2.49	1585.1	5.2	
1800 - 80	46.7	47.1	5389	10196	3.05	2199.6	4.6	
1900 - 90	45.7	64.9	5902	12110	3.62	2965.9	4.1	66 ° C [Maximum]
1950 - 95	45.1	74.8	6126	13013	3.9	3373.5	3.9	
2000 - 100	44.8	80	6236	13466	4.04	3584.0	3.8	

Propeller	SR 24 x 7.2 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	32 ° C	
Test Date:	19-10-2023	Humidity:	49 %	Cross-winds: Mild		

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.5	3.8	2506	1954	0.57	188.1	10.4	78 ° C [@70% 10 min Constant]
1400 - 40	49.4	6.2	2976	2751	0.8	306.3	9	
1500 - 50	48.9	13.1	3838	4628	1.3	640.6	7.2	
1600 - 60	48.4	22.3	4535	6553	1.84	1079.3	6.1	
1700 - 70	47.7	33.1	5135	8454	2.34	1578.9	5.4	
1800 - 80	46.9	46.9	5733	10257	2.83	2199.6	4.7	
1900 - 90	45.9	64.1	6211	12155	3.4	2942.2	4.1	85 ° C [Maximum]
1950 - 95	45.6	70.5	6367	12729	3.59	3214.8	4	
2000 - 100	45.6	70.6	6356	12667	3.59	3219.4	3.9	

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6020 PRO 180 KV - TEST DATA

Note: The test data provided below is subject to environmental and testing conditions, including but not limited to temperature, humidity, altitude, and the equipment used. Results may vary depending on specific testing parameters and conditions.

Propeller	SR 24 x 7.8 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	32 ° C	Cross-winds: Mild
Test Date:	19-10-2023	Humidity:	49 %			

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.4	2.5	2072	1354	0.41	123.5	11	81 ° C [@70% 10 min Constant]
1400 - 40	49.1	6.6	2919	2777	0.82	324.1	8.6	
1500 - 50	48.7	13.7	3763	4647	1.35	667.2	7	
1600 - 60	48.1	23.5	4467	6567	1.91	1130.4	5.8	
1700 - 70	47.4	34.6	5037	8383	2.42	1640	5.1	
1800 - 80	46.6	48.8	5600	10209	2.93	2274.1	4.5	90 ° C [Maximum]
1900 - 90	45.6	65.6	6080	11907	3.42	2991.4	4	
1950 - 95	45.2	73.1	6215	12613	3.64	3304.1	3.8	
2000 - 100	45.1	73.3	6199	12675	3.65	3305.8	3.8	

Propeller	TM 26 x 7.8 CF_FX			Power Supply / Battery	2 x TB - 22000 mAh 12S	
ESC	HW 80A 12S			Environmental Temp:	37 ° C	Cross-winds: Mild
Test Date:	21-03-2024	Humidity:	24 %			

PWM - Throttle%	Voltage	Current (A)	RPM	Thrust (g)	Torque (N*m)	Electrical Power (W)	Efficiency	Temp (Celcius)
1300 - 30	49.7	1.03	1354	825	0.22	51.2	16.1	71 ° C [@70% 10 min Constant]
1400 - 40	49.6	2.99	2049	1776	0.5	148.3	12.0	
1500 - 50	49.3	9.75	3100	4006	1.15	480.7	8.3	
1600 - 60	49	22.22	4031	6852	2.02	1088.8	6.3	
1700 - 70	48.3	32.03	4456	8416	2.47	1547.0	5.4	
1800 - 80	47.9	44.8	4922	10273	3.03	2145.9	4.8	78 ° C [Maximum]
1900 - 90	46.8	69.26	5483	12867	3.82	3241.4	4.0	
1950 - 95	46.3	78.02	5610	13508	4.05	3612.3	3.7	
2000 - 100	45.9	85.51	5696	13902	4.16	3924.9	3.5	

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