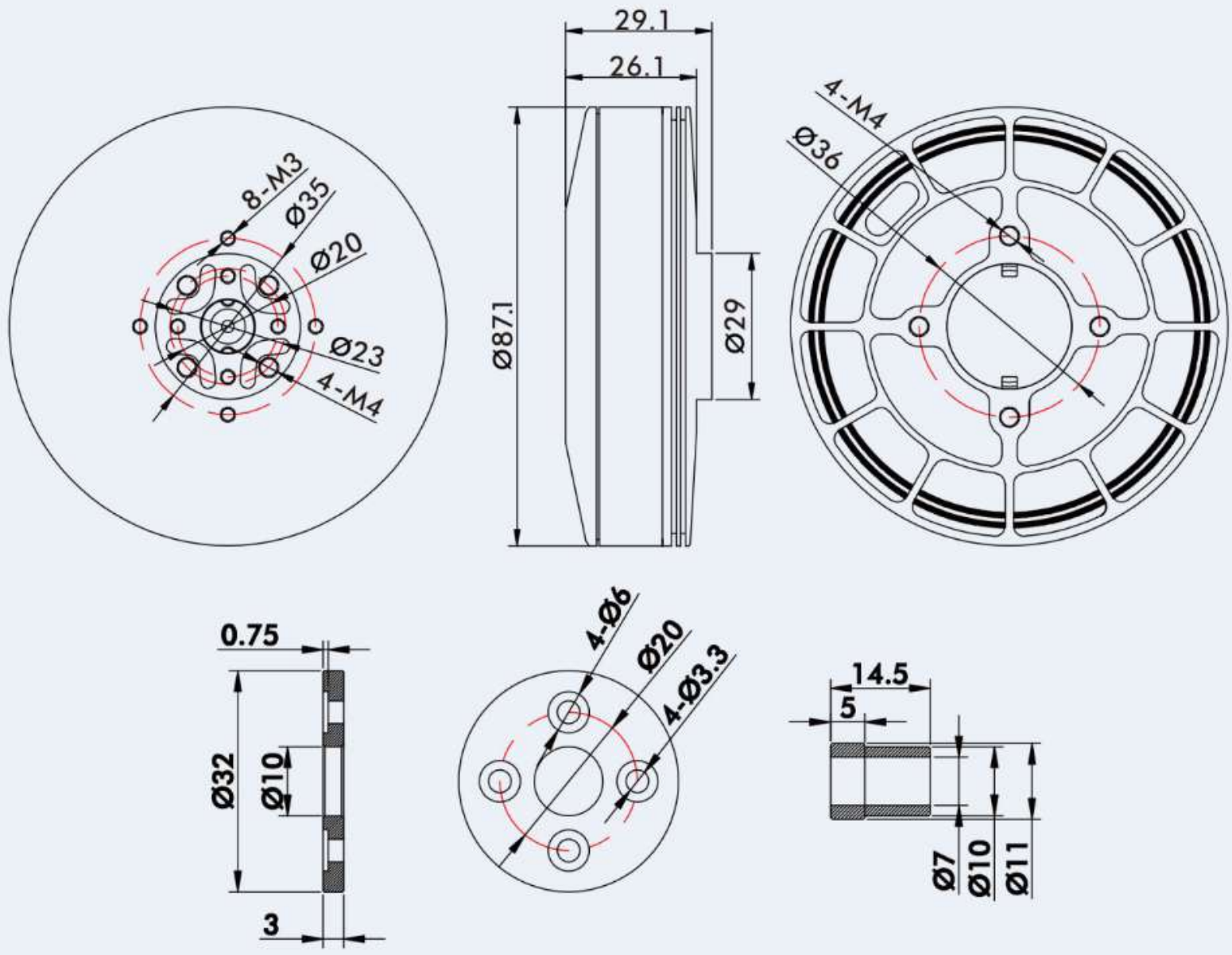


# Product Drawing



## Specifications

Diameter	87.1mm
Height	29.1mm
Shaft Diameter	15mm
Configuration	36N42P
Lead Spec	90mm
Ingress Protection Level	IP45
Packing Size	130*111*50.6mm

KV	85	Rated Voltage (Lipo)	12S
Motor Weight (Incl. Cable)	277g	Propeller Recommendation	28-29"
Idle Current ( 18V )	0.5A	Quadcopter ( 28CF )	10kg
Internal Resistance	225±5mΩ	Hexacopter ( 28CF )	15kg
Peak Current ( 180s )	19.1A	Octocopter ( 28CF )	20kg
Max. Power ( 180s )	916.8W		

KV	100	Rated Voltage (Lipo)	12S
Motor Weight (Incl. Cable)	272g	Propeller Recommendation	27-28"
Idle Current ( 18V )	0.7A	Quadcopter ( 28CF )	14kg
Internal Resistance	170±5mΩ	Hexacopter ( 28CF )	21kg
Peak Current ( 180s )	29.3A	Octocopter ( 28CF )	28kg
Max. Power ( 180s )	1406.4W		

KV	150	Rated Voltage (Lipo)	6S / 12S
Motor Weight (Incl. Cable)	273g	Propeller Recommendation	28-30" / 22"
Idle Current ( 18V )	1A	Quadcopter ( 28CF )	8kg
Internal Resistance	85±5mΩ	Hexacopter ( 28CF )	12kg
Peak Current ( 180s )	29.7A / 26.5A	Octocopter ( 28CF )	16kg
Max. Power ( 180s )	712.8W / 1272W		

KV	190	Rated Voltage (Lipo)	6S
Motor Weight (Incl. Cable)	277g	Propeller Recommendation	28-29"
Idle Current ( 18V )	1.3A	Quadcopter ( 28CF )	12kg
Internal Resistance	48±3mΩ	Hexacopter ( 28CF )	18kg
Peak Current ( 180s )	43.7A	Octocopter ( 28CF )	24kg
Max. Power ( 180s )	1048.8W		

Test Report										
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV85	12S(48V)	T-MOTOR G28*9.2" CF	40%	1465	0.45	1.80	1584	86	16.96	88 (Ambient Temperature:26.9°C )
			42%	1572	0.48	2.00	1631	96	16.38	
			44%	1717	0.53	2.30	1692	110	15.55	
			46%	1852	0.58	2.60	1748	125	14.84	
			48%	1997	0.6	2.90	1810	139	14.35	
			50%	2140	0.66	3.20	1872	154	13.93	
			52%	2256	0.68	3.40	1928	163	13.82	
			54%	2378	0.71	3.70	1988	178	13.39	
			56%	2528	0.77	4.10	2047	197	12.85	
			58%	2757	0.84	4.60	2124	221	12.49	
			60%	2957	0.9	5.10	2190	245	12.08	
			62%	3027	0.91	5.30	2232	254	11.9	
			64%	3171	0.95	5.70	2287	274	11.59	
			66%	3307	1	6.20	2349	298	11.11	
			68%	3448	1.04	6.60	2384	317	10.88	
			70%	3662	1.08	7.10	2439	341	10.75	
			75%	4043	1.17	8.20	2570	394	10.27	
			80%	4468	1.28	9.50	2680	456	9.8	
90%	5248	1.47	12.20	2917	586	8.96				
100%	6352	1.8	16.50	3200	792	8.02				
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV85	12S(48V)	T-MOTOR G29*9.5" CF	40%	1696	0.53	2.10	1547	101	16.83	HOT (Ambient Temperature:27.6°C )
			42%	1829	0.59	2.40	1607	115	15.88	
			44%	1959	0.63	2.70	1654	130	15.12	
			46%	2119	0.68	3.00	1720	144	14.72	
			48%	2248	0.69	3.20	1767	154	14.64	
			50%	2412	0.78	3.70	1837	178	13.58	
			52%	2610	0.81	4.00	1906	192	13.59	
			54%	2759	0.86	4.40	1958	211	13.06	
			56%	2885	0.89	4.70	2001	226	12.79	
			58%	3193	1.01	5.50	2100	264	12.09	
			60%	3285	1.03	5.80	2139	278	11.8	
			62%	3429	1.07	6.20	2184	298	11.52	
			64%	3561	1.09	6.50	2236	312	11.41	
			66%	3740	1.15	7.10	2285	341	10.97	
			68%	3953	1.28	7.70	2332	370	10.7	
			70%	4094	1.26	8.20	2394	394	10.4	
			75%	4517	1.39	9.50	2506	456	9.91	
			80%	4961	1.49	11.00	2626	528	9.4	
90%	5875	1.69	14.00	2858	672	8.74				
100%	7130	2.09	19.10	3104	917	7.78				



Test Report										
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV85	12S(48V)	T-MOTOR G28*9.2" CF	40%	1465	0.45	1.80	1584	86	16.96	88 (Ambient Temperature:26.9°C )
			42%	1572	0.48	2.00	1631	96	16.38	
			44%	1717	0.53	2.30	1692	110	15.55	
			46%	1852	0.58	2.60	1748	125	14.84	
			48%	1997	0.6	2.90	1810	139	14.35	
			50%	2140	0.66	3.20	1872	154	13.93	
			52%	2256	0.68	3.40	1928	163	13.82	
			54%	2378	0.71	3.70	1988	178	13.39	
			56%	2528	0.77	4.10	2047	197	12.85	
			58%	2757	0.84	4.60	2124	221	12.49	
			60%	2957	0.9	5.10	2190	245	12.08	
			62%	3027	0.91	5.30	2232	254	11.9	
			64%	3171	0.95	5.70	2287	274	11.59	
			66%	3307	1	6.20	2349	298	11.11	
			68%	3448	1.04	6.60	2384	317	10.88	
			70%	3662	1.08	7.10	2439	341	10.75	
			75%	4043	1.17	8.20	2570	394	10.27	
			80%	4468	1.28	9.50	2680	456	9.8	
90%	5248	1.47	12.20	2917	586	8.96				
100%	6352	1.8	16.50	3200	792	8.02				
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV85	12S(48V)	T-MOTOR G29*9.5" CF	40%	1696	0.53	2.10	1547	101	16.83	HOT (Ambient Temperature:27.6°C )
			42%	1829	0.59	2.40	1607	115	15.88	
			44%	1959	0.63	2.70	1654	130	15.12	
			46%	2119	0.68	3.00	1720	144	14.72	
			48%	2248	0.69	3.20	1767	154	14.64	
			50%	2412	0.78	3.70	1837	178	13.58	
			52%	2610	0.81	4.00	1906	192	13.59	
			54%	2759	0.86	4.40	1958	211	13.06	
			56%	2885	0.89	4.70	2001	226	12.79	
			58%	3193	1.01	5.50	2100	264	12.09	
			60%	3285	1.03	5.80	2139	278	11.8	
			62%	3429	1.07	6.20	2184	298	11.52	
			64%	3561	1.09	6.50	2236	312	11.41	
			66%	3740	1.15	7.10	2285	341	10.97	
			68%	3953	1.28	7.70	2332	370	10.7	
			70%	4094	1.26	8.20	2394	394	10.4	
			75%	4517	1.39	9.50	2506	456	9.91	
			80%	4961	1.49	11.00	2626	528	9.4	
90%	5875	1.69	14.00	2858	672	8.74				
100%	7130	2.09	19.10	3104	917	7.78				

Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV100	12S(48V)	T-MOTOR G27*8.8" CF	40%	1976	0.67	3.10	1919	149	13.28	87 (Ambient Temperature:27.81 °C)
			42%	2130	0.71	3.40	1972	163	13.05	
			44%	2430	0.82	4.10	2108	197	12.35	
			46%	2504	0.85	4.40	2154	211	11.86	
			48%	2660	0.89	4.80	2221	230	11.55	
			50%	2894	0.97	5.40	2302	259	11.17	
			52%	3090	1.02	5.90	2381	283	10.91	
			54%	3281	1.08	6.50	2439	312	10.52	
			56%	3439	1.11	6.90	2502	331	10.38	
			58%	3593	1.15	7.40	2573	355	10.12	
			60%	3774	1.19	7.90	2635	379	9.95	
			62%	4026	1.29	8.80	2720	422	9.53	
			64%	4220	1.32	9.30	2773	446	9.45	
			66%	4365	1.35	9.80	2823	470	9.28	
			68%	4532	1.41	10.50	2874	504	8.99	
			70%	4673	1.43	11.00	2938	528	8.85	
			75%	5129	1.55	12.70	3064	610	8.41	
80%	5635	1.7	14.80	3214	710	7.93				
90%	6715	1.97	19.20	3494	922	7.29				
100%	8164	2.42	26.00	3777	1248	6.54				

Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV100	12S(48V)	T-MOTOR G28*9.2" CF	40%	2243	0.77	3.50	1896	168	13.35	95 (Ambient Temperature:27.81 °C)
			42%	2401	0.82	3.90	1964	187	12.83	
			44%	2555	0.85	4.20	2020	202	12.67	
			46%	2881	0.99	5.10	2144	245	11.77	
			48%	3008	1.01	5.40	2190	259	11.6	
			50%	3231	1.08	6.00	2268	288	11.22	
			52%	3370	1.16	6.70	2339	322	10.48	
			54%	3624	1.21	7.20	2415	346	10.49	
			56%	3803	1.25	7.70	2462	370	10.29	
			58%	4033	1.33	8.50	2540	408	9.88	
			60%	4201	1.35	8.90	2581	427	9.83	
			62%	4353	1.4	9.50	2647	456	9.55	
			64%	4593	1.49	10.40	2694	499	9.2	
			66%	4791	1.53	11.00	2755	528	9.07	
			68%	4988	1.58	11.70	2812	562	8.88	
			70%	5153	1.6	12.20	2858	586	8.8	
			75%	5696	1.76	14.30	3002	686	8.3	
80%	6171	1.87	16.20	3122	778	7.94				
90%	7329	2.21	21.40	3379	1027	7.13				
100%	8716	2.73	29.30	3709	1406	6.2				

Note: Motor temperature is motor surface temperature @80% throttle running 10mins.

(Date above based on benchtest are for reference only, comparison with that of other motor types is not recommended.)

Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV150	6S(24V)	T-MOTOR G28*9.2" CF	40%	1176	0.4	2.90	1383	70	16.9	71 (Ambient Temperature:26.9°C)
			42%	1237	0.41	3.10	1444	74	16.63	
			44%	1353	0.44	3.50	1497	84	16.11	
			46%	1465	0.48	3.90	1545	94	15.65	
			48%	1561	0.51	4.30	1587	103	15.13	
			50%	1648	0.52	4.60	1640	110	14.93	
			52%	1785	0.57	5.20	1708	125	14.3	
			54%	1905	0.6	5.60	1750	134	14.17	
			56%	2006	0.63	6.10	1811	146	13.7	
			58%	2153	0.67	6.70	1856	161	13.39	
			60%	2227	0.68	7.00	1899	168	13.26	
			62%	2334	0.71	7.50	1938	180	12.97	
			64%	2450	0.74	8.10	1984	194	12.6	
			66%	2549	0.77	8.60	2023	206	12.35	
			68%	2726	0.85	9.60	2082	230	11.83	
			70%	2877	0.87	10.30	2135	247	11.64	
			75%	3149	0.94	11.80	2238	283	11.12	
			80%	3479	1.02	13.60	2352	326	10.66	
90%	4058	1.16	17.30	2557	415	9.77				
100%	4879	1.4	23.00	2798	552	8.84				
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV150	6S(24V)	T-MOTOR G29*9.5" CF	40%	1296	0.45	3.20	1363	77	16.88	87 (Ambient Temperature:27.6°C)
			42%	1416	0.48	3.60	1419	86	16.39	
			44%	1509	0.5	3.90	1454	94	16.12	
			46%	1654	0.55	4.40	1501	106	15.66	
			48%	1728	0.56	4.70	1554	113	15.32	
			50%	1833	0.6	5.20	1610	125	14.69	
			52%	2006	0.65	5.80	1652	139	14.41	
			54%	2128	0.68	6.30	1698	151	14.07	
			56%	2243	0.72	6.90	1756	166	13.54	
			58%	2357	0.77	7.60	1804	182	12.92	
			60%	2486	0.79	8.00	1849	192	12.95	
			62%	2612	0.82	8.60	1884	206	12.66	
			64%	2707	0.84	9.10	1941	218	12.39	
			66%	2862	0.88	9.80	1989	235	12.17	
			68%	2995	0.92	10.50	2020	252	11.88	
			70%	3142	0.98	11.50	2071	276	11.38	
			75%	3469	1.06	13.20	2188	317	10.95	
			80%	3774	1.15	15.20	2284	365	10.35	
90%	4536	1.34	19.80	2484	475	9.55				
100%	5378	1.61	26.20	2712	629	8.55				



Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV150	6S(24V)	T-MOTOR G30*10.5" CF	40%	1551	0.54	3.80	1321	91	17.01	103 (Ambient Temperature:29.5°C)
			42%	1684	0.59	4.30	1374	103	16.32	
			44%	1766	0.6	4.60	1418	110	16	
			46%	1850	0.63	5.00	1457	120	15.42	
			48%	1991	0.69	5.70	1513	137	14.55	
			50%	2132	0.73	6.20	1560	149	14.33	
			52%	2256	0.76	6.70	1603	161	14.03	
			54%	2420	0.81	7.40	1663	178	13.63	
			56%	2536	0.84	7.90	1699	190	13.38	
			58%	2676	0.87	8.50	1743	204	13.12	
			60%	2816	0.91	9.20	1793	221	12.75	
			62%	2923	0.94	9.80	1838	235	12.43	
			64%	3097	1	10.70	1886	257	12.06	
			66%	3229	1.05	11.50	1924	276	11.7	
			68%	3334	1.07	12.10	1967	290	11.48	
			70%	3475	1.11	12.90	2007	310	11.22	
			75%	3917	1.24	15.40	2120	370	10.6	
			80%	4237	1.33	17.50	2204	420	10.09	
90%	5020	1.55	22.80	2383	547	9.17				
100%	5912	1.83	29.70	2573	713	8.29				
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV150	12S(48V)	T-MOTOR P22*6.6" CF	40%	1702	0.46	3.30	2925	158	10.74	56 (Ambient Temperature:29.1°C)
			42%	1839	0.5	3.70	3017	178	10.35	
			44%	1987	0.52	4.00	3134	192	10.35	
			46%	2121	0.55	4.40	3234	211	10.04	
			48%	2267	0.57	4.80	3340	230	9.84	
			50%	2376	0.6	5.20	3431	250	9.52	
			52%	2511	0.62	5.60	3531	269	9.34	
			54%	2717	0.69	6.30	3659	302	8.98	
			56%	2879	0.71	6.80	3765	326	8.82	
			58%	3022	0.73	7.20	3840	346	8.74	
			60%	3218	0.78	7.90	3984	379	8.49	
			62%	3397	0.82	8.60	4074	413	8.23	
			64%	3538	0.85	9.20	4188	442	8.01	
			66%	3696	0.88	9.80	4275	470	7.86	
			68%	3826	0.9	10.30	4333	494	7.74	
			70%	3967	0.92	10.80	4427	518	7.65	
			75%	4439	1.02	12.80	4686	614	7.22	
			80%	4879	1.08	14.40	4886	691	7.06	
90%	5921	1.32	19.60	5373	941	6.29				
100%	7243	1.62	26.50	5924	1272	5.69				



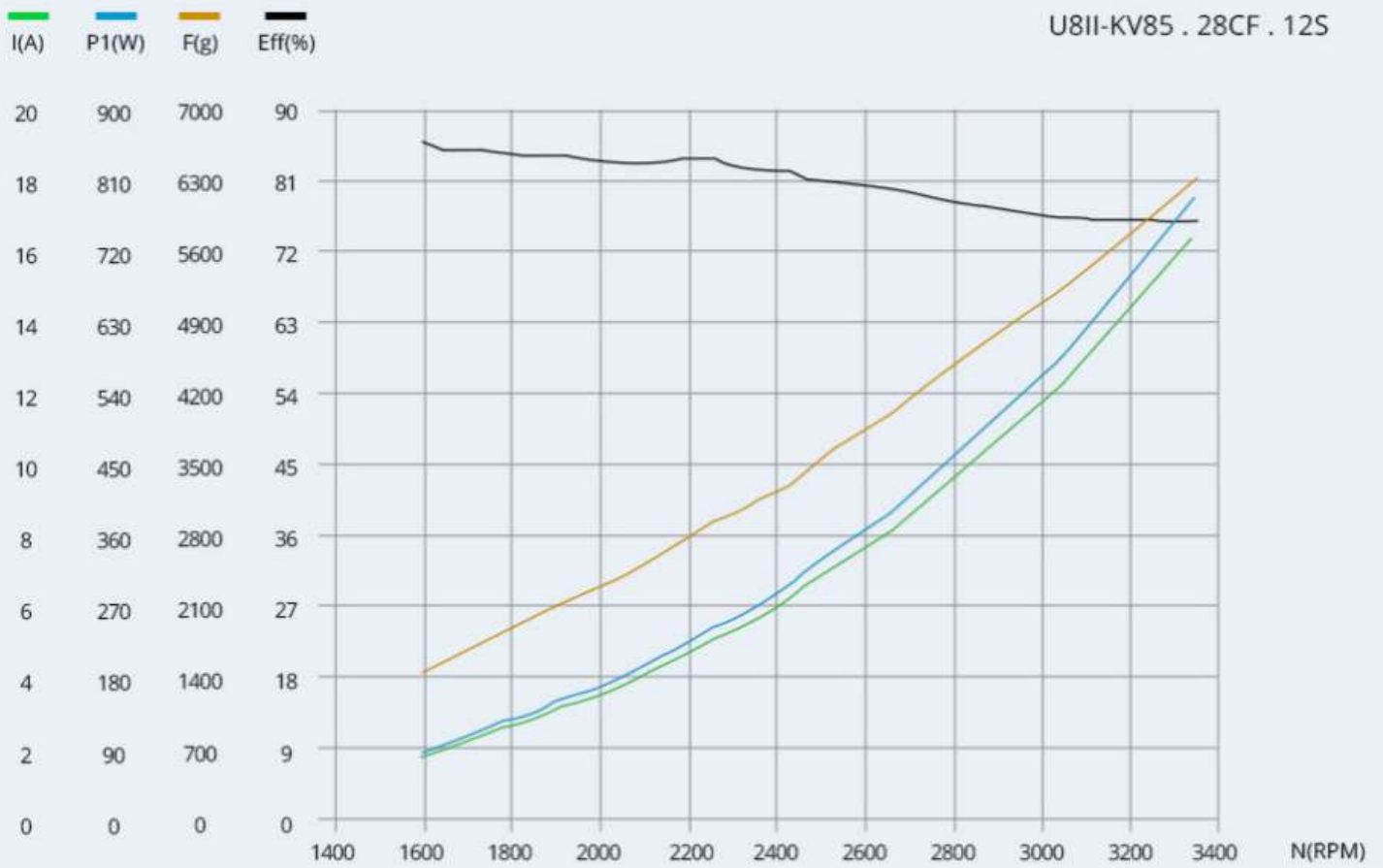
Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV190	6S(24V)	T-MOTOR G28*9.2" CF	40%	1662	0.54	4.80	1632	115	14.43	95 (Ambient Temperature:27.3°C )
			42%	1806	0.58	5.40	1709	130	13.94	
			44%	1951	0.62	6.00	1745	144	13.55	
			46%	2134	0.68	6.80	1828	163	13.08	
			48%	2254	0.69	7.20	1892	173	13.04	
			50%	2401	0.75	8.10	1953	194	12.35	
			52%	2566	0.8	8.90	2022	214	12.01	
			54%	2774	0.87	10.00	2093	240	11.56	
			56%	2892	0.88	10.50	2144	252	11.48	
			58%	3081	0.94	11.60	2210	278	11.07	
			60%	3208	0.97	12.40	2252	298	10.78	
			62%	3389	1.03	13.50	2312	324	10.46	
			64%	3502	1.04	14.10	2358	338	10.35	
			66%	3623	1.08	15.00	2394	360	10.06	
			68%	3801	1.1	15.80	2441	379	10.02	
			70%	3934	1.16	17.00	2497	408	9.64	
			75%	4376	1.25	19.60	2620	470	9.3	
80%	4816	1.36	22.60	2776	542	8.88				
90%	5563	1.56	29.00	2972	696	7.99				
100%	6761	1.88	38.70	3248	929	7.28				

Type	Voltage (V)	Propeller	Throttle	Thrust (g)	Torque (N*m)	Current (A)	RPM	Power (W)	Efficiency (g/W)	Operating Temperature (°C)
U8II KV190	6S(24V)	T-MOTOR G29*9.5" CF	40%	1879	0.64	5.60	1616	134	13.98	HOT (Ambient Temperature:27.9°C )
			42%	2035	0.68	6.20	1662	149	13.68	
			44%	2173	0.73	6.90	1722	166	13.12	
			46%	2328	0.75	7.50	1775	180	12.93	
			48%	2486	0.8	8.30	1828	199	12.48	
			50%	2627	0.85	9.10	1899	218	12.03	
			52%	2812	0.89	9.90	1955	238	11.84	
			54%	2961	0.93	10.70	2008	257	11.53	
			56%	3195	1.01	12.00	2073	288	11.09	
			58%	3344	1.06	13.00	2129	312	10.72	
			60%	3502	1.13	14.20	2174	341	10.28	
			62%	3669	1.13	14.70	2223	353	10.4	
			64%	3833	1.21	16.20	2286	389	9.86	
			66%	4005	1.24	17.10	2348	410	9.76	
			68%	4214	1.3	18.40	2400	442	9.54	
			70%	4365	1.34	19.50	2432	468	9.33	
			75%	4782	1.44	22.50	2541	540	8.86	
80%	5184	1.53	25.40	2662	610	8.5				
90%	6026	1.73	32.20	2866	773	7.8				
100%	7334	2.13	43.70	3125	1049	6.99				

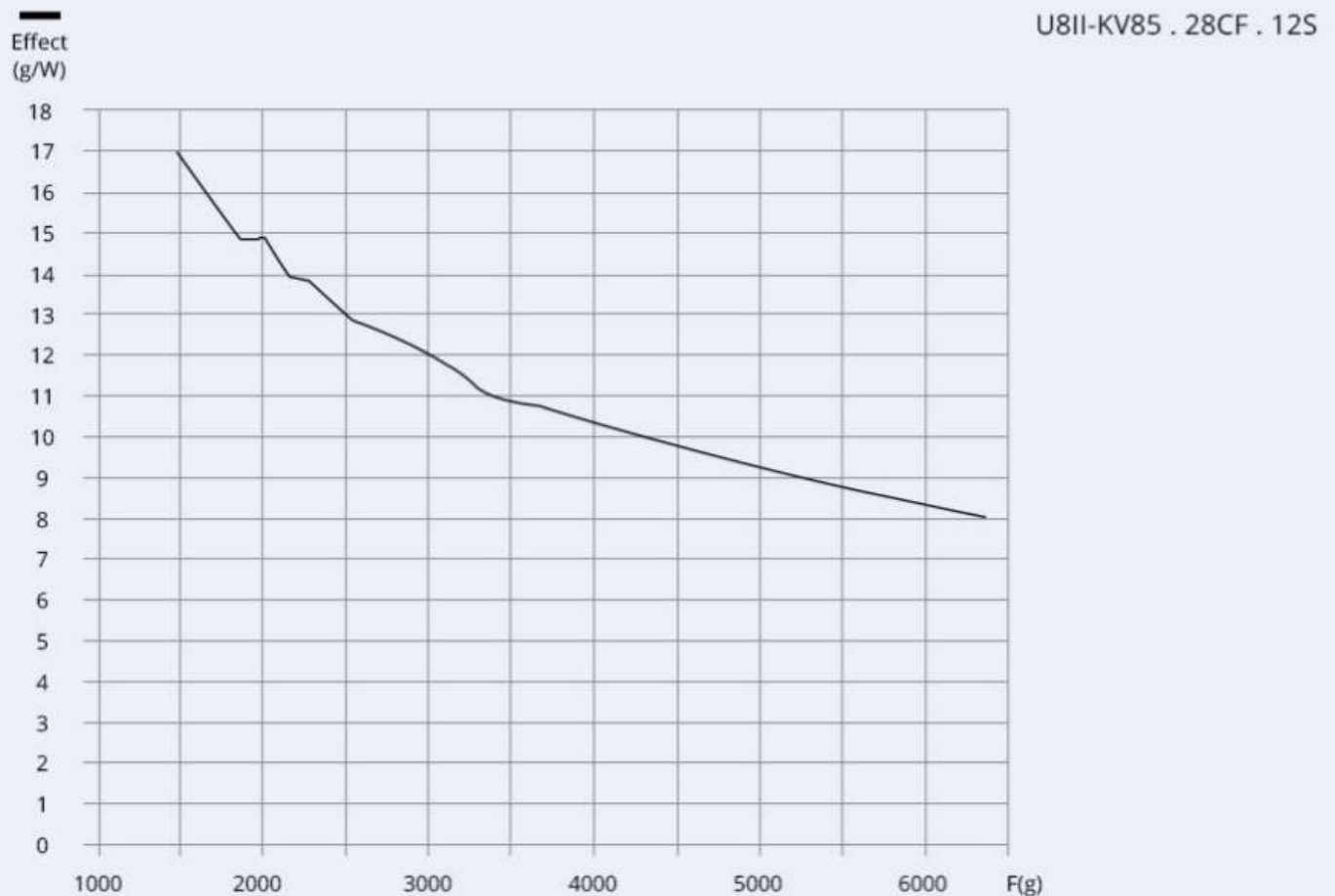
Note: Motor temperature is motor surface temperature @100% throttle running 10mins.

(Date above based on benchtest are for reference only, comparison with that of other motor types is not recommended.)

# Analytical Graph of Motor Operation

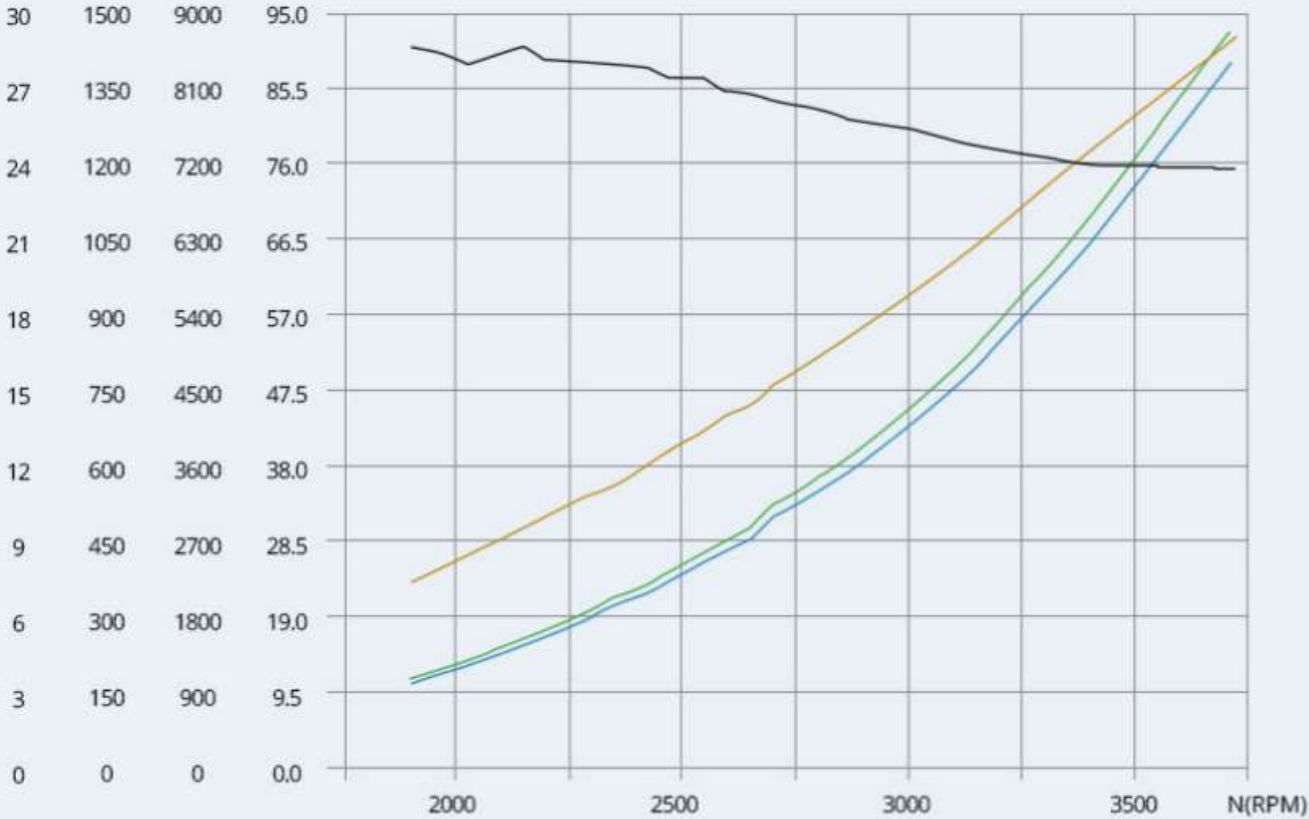


Thrust, Efficiency, Input power & Current -RPM Graph



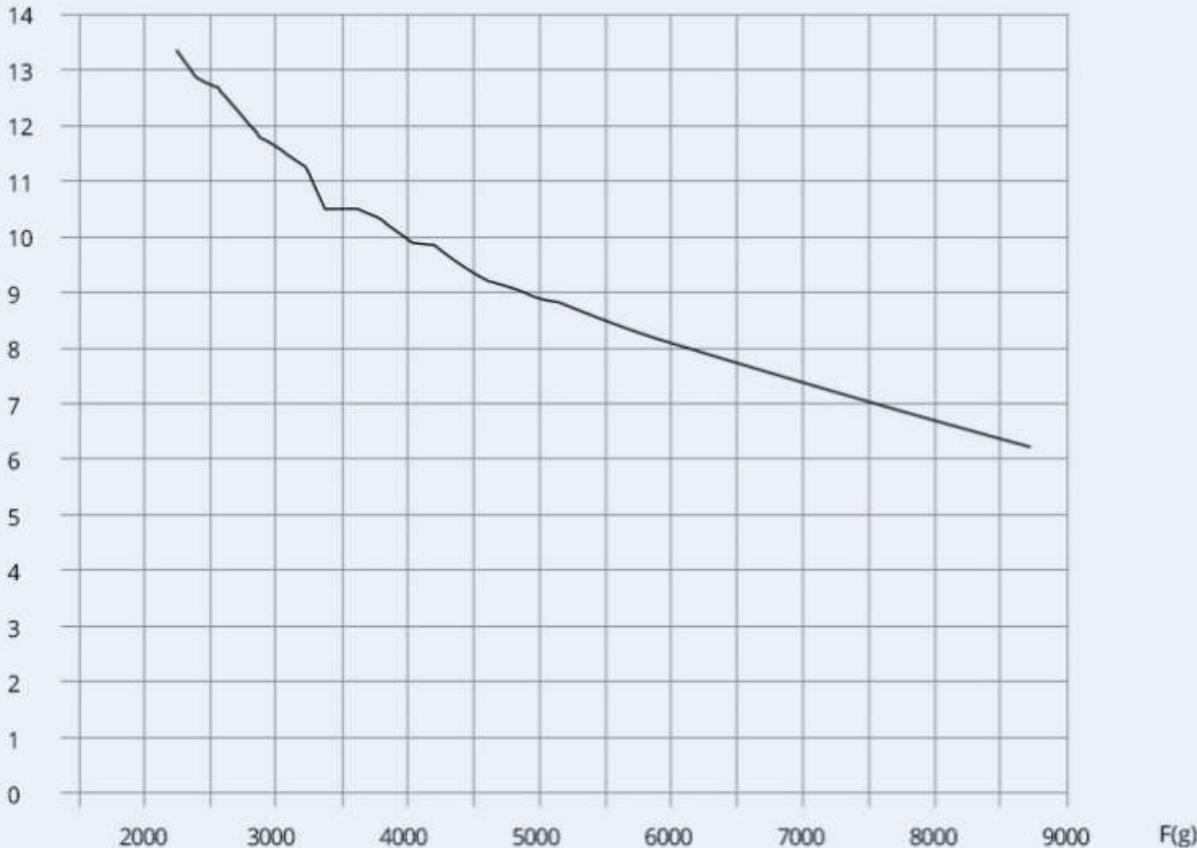
Efficiency -Thrust Graph

I(A) P1(W) F(g) Eff(%)



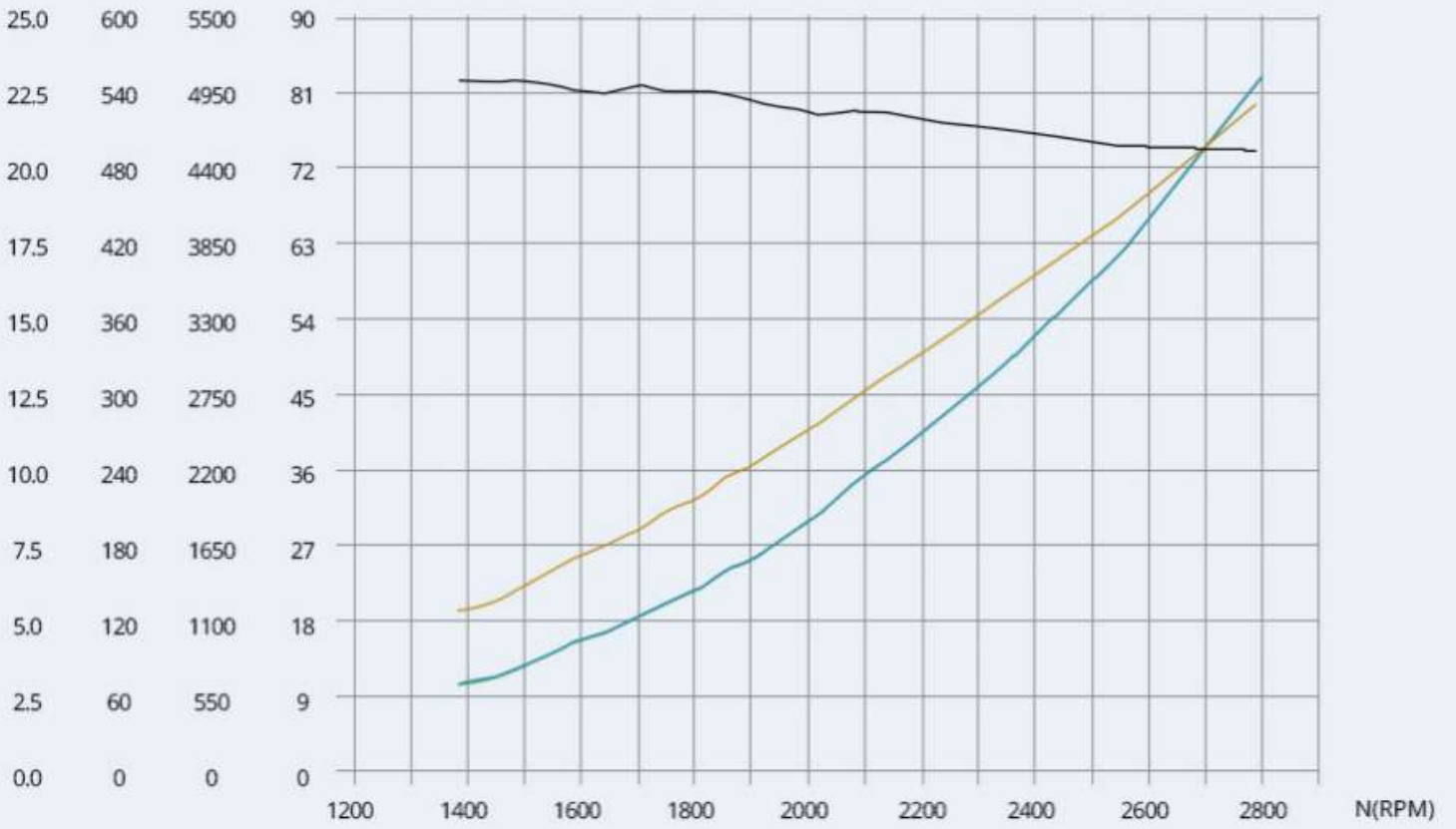
Thrust, Efficiency, Input power & Current -RPM Graph

Effect (g/W)



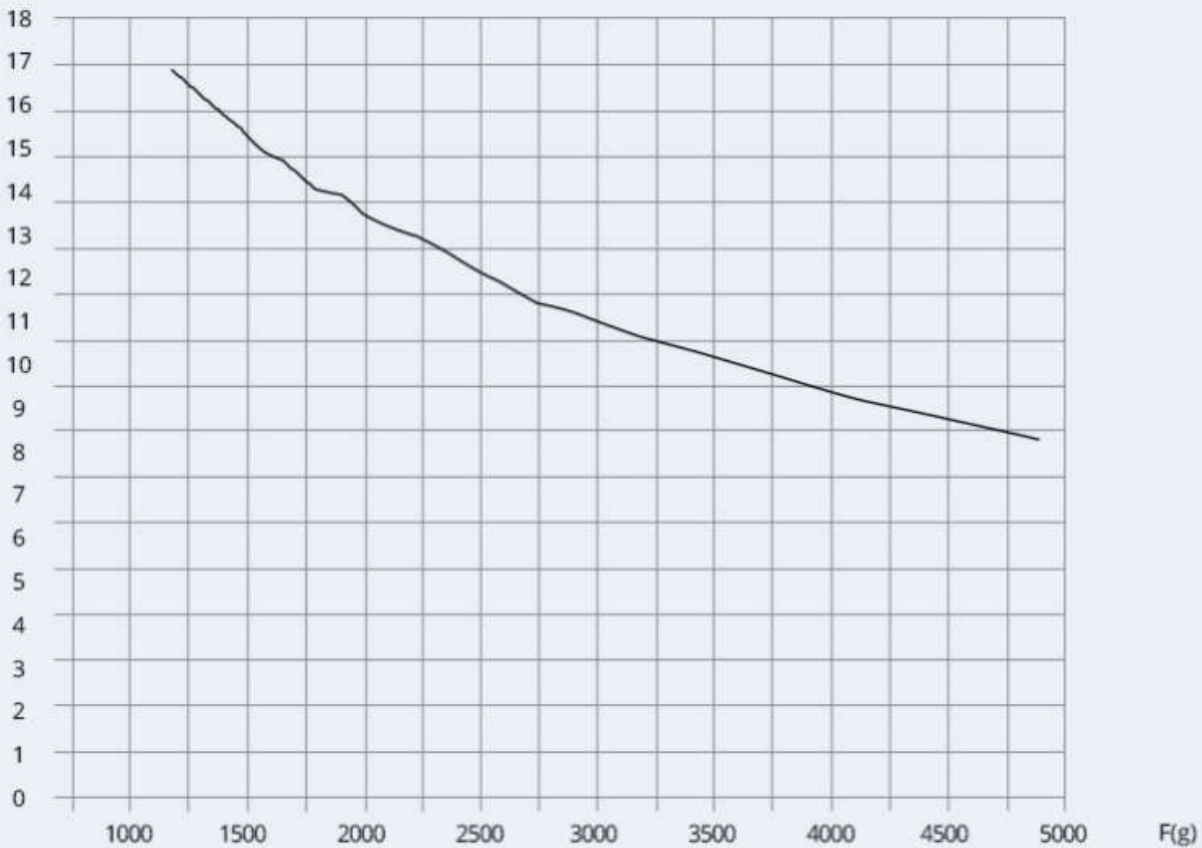
Efficiency -Thrust Graph

I(A) P1(W) F(g) Eff(%)



Thrust, Efficiency, Input power & Current -RPM Graph

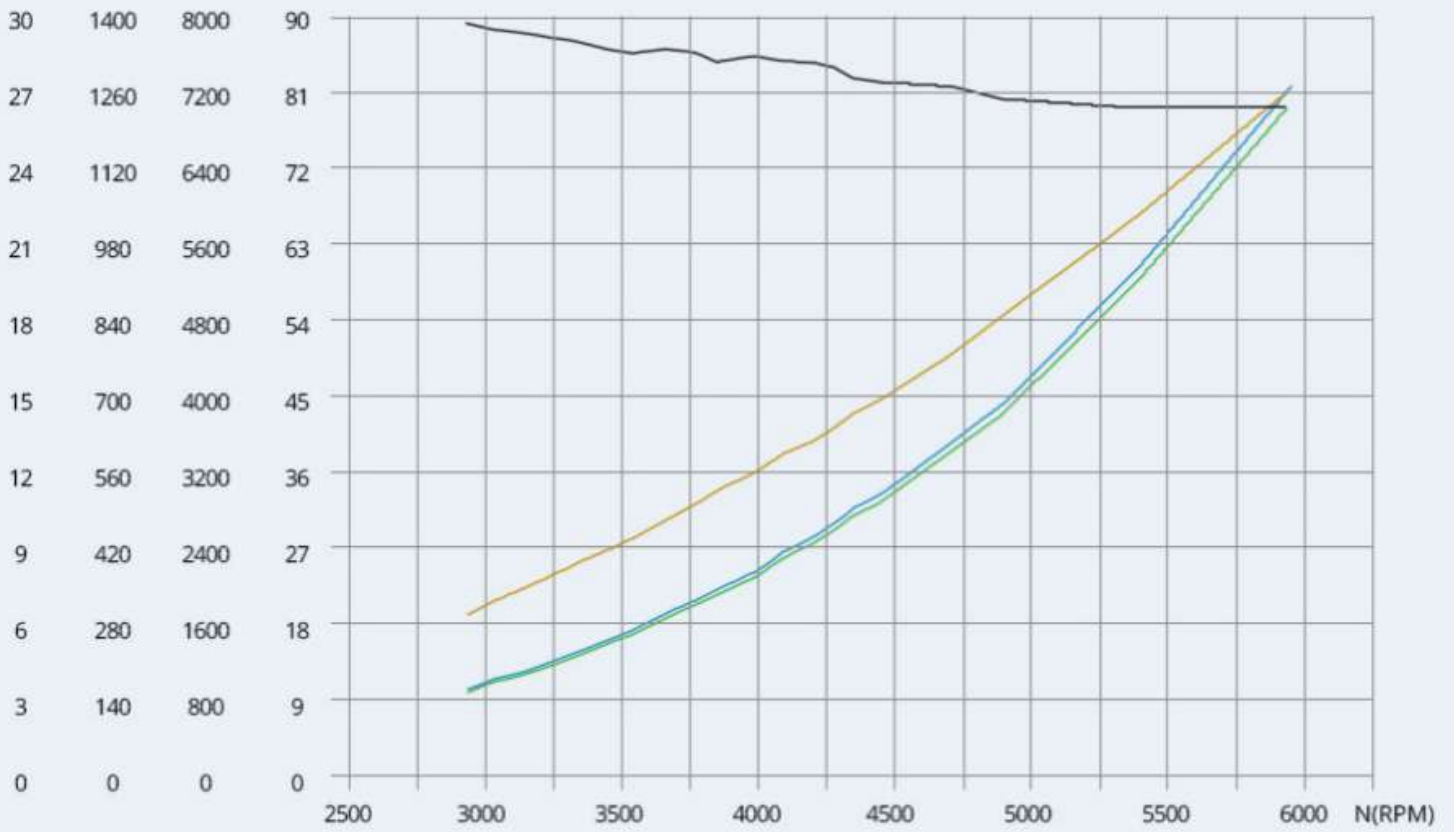
Effect (g/W)



Efficiency -Thrust Graph

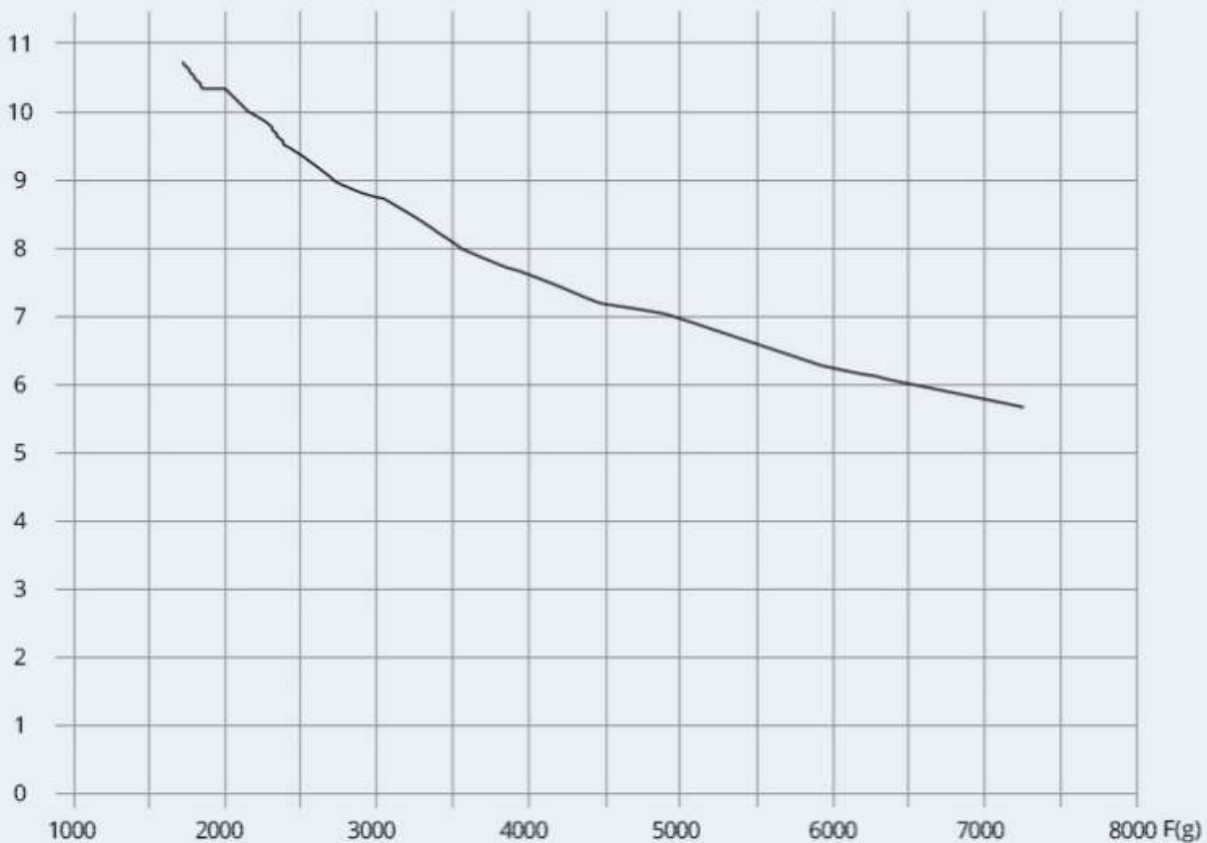


I(A) P1(W) F(g) Eff(%)



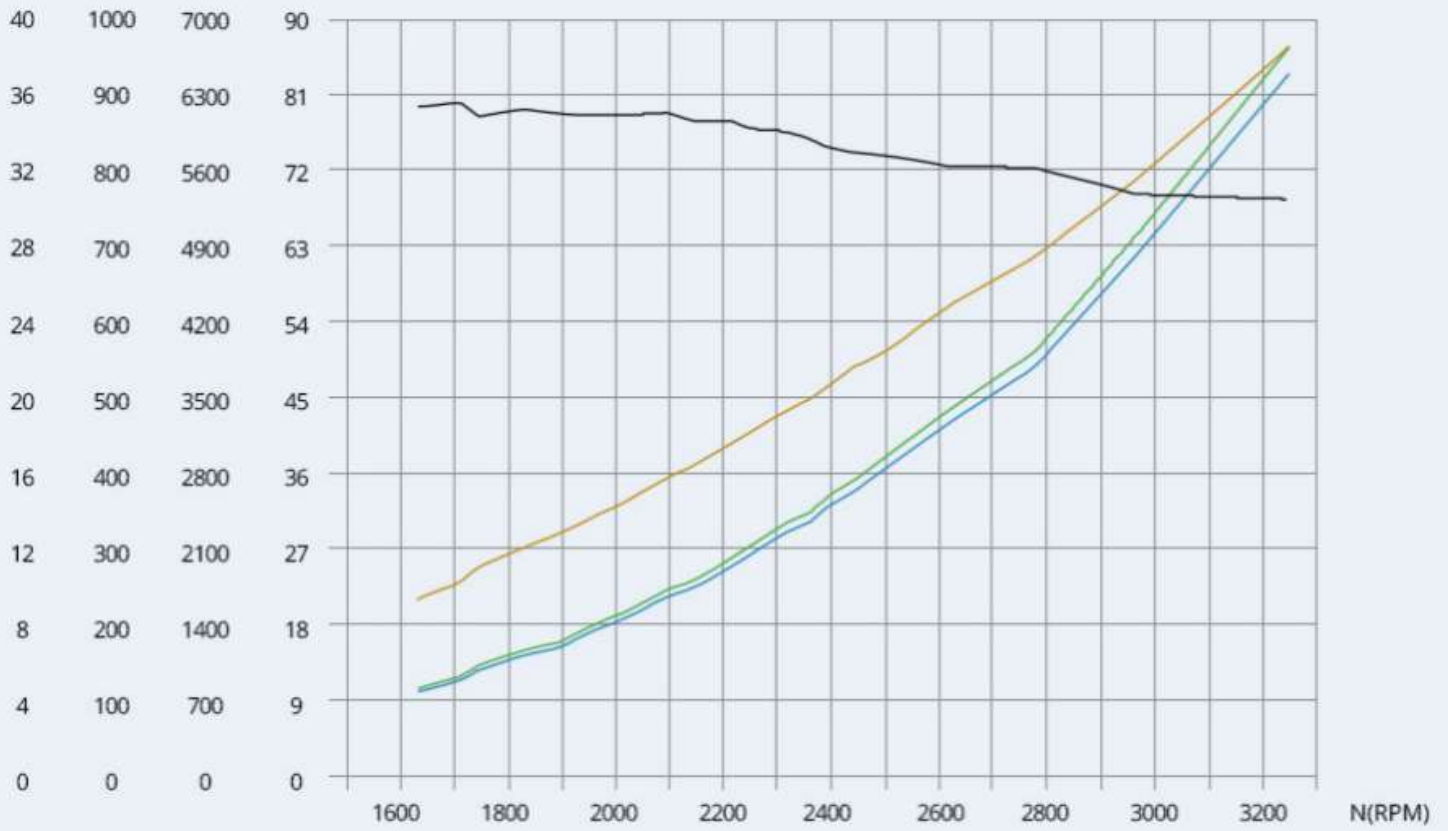
Thrust, Efficiency, Input power & Current -RPM Graph

Effect (g/W)



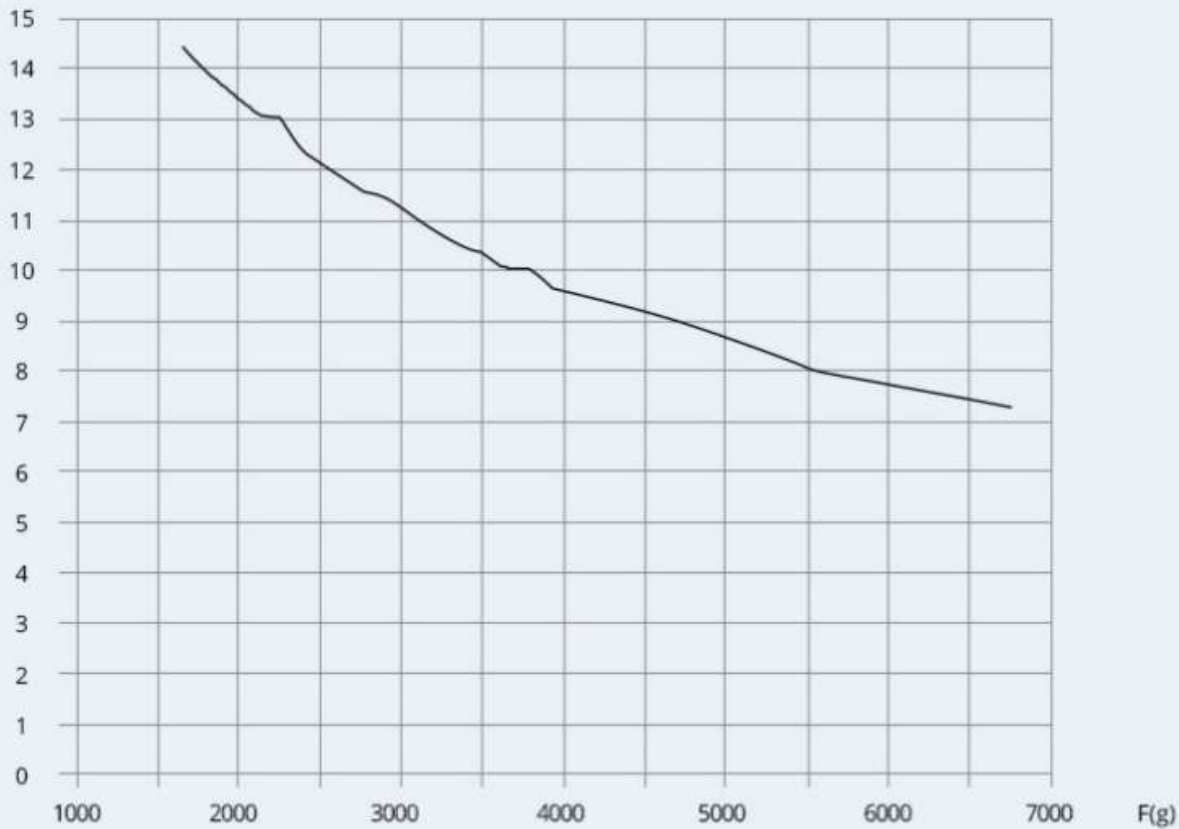
Efficiency -Thrust Graph

I(A) P1(W) F(g) Eff(%)



Thrust, Efficiency, Input power & Current -RPM Graph

Effect (g/W)



Efficiency -Thrust Graph

## Contents



Motor × 1



Parts Bag × 1

Please check that your package contains all the above items before use. If something is missing, please contact online customer service or leave message to [onlinesales@tmotor.com](mailto:onlinesales@tmotor.com)