

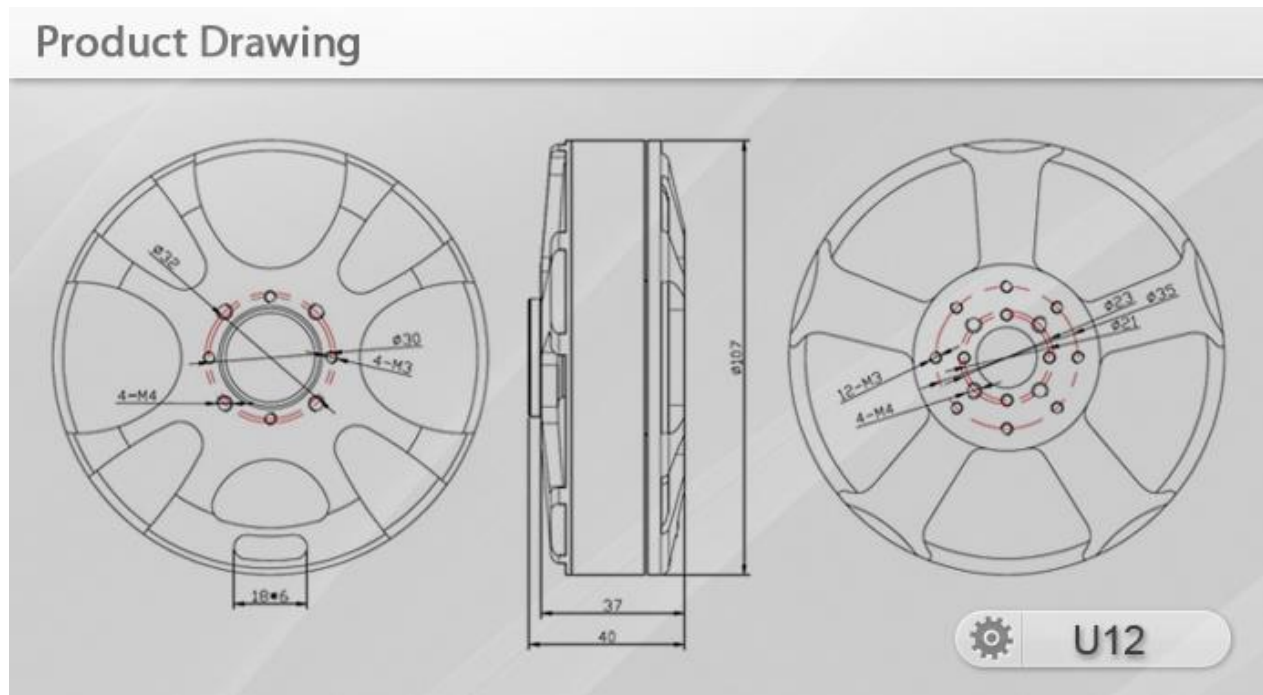
Tables engine performance: Rc Tigermotor

Hover flight: 4 engines

U-power U12

Reference: U-POWER SERIES MOTORS > Efficiency Type

http://www.rctigermotor.com/html/2016/Efficiency-Type_0106/306.html



Specifications:

KV.....	90
Configu-ration.....	36N40P
Shaft Diameter.....	15mm
Motor Dimension (Dia.*Len).....	$\Phi 107 \times 37$ mm
Weight (g).....	794g
Idle current(10)@10v(A).....	1.2A
No.of Cells (Lipo).....	6-12S
Max Continuous current (A)180S.....	50A
Max Continuous Power (W)180S.....	2500W
Internal resistance.....	47m Ω

Table of performance for different propellers and throttle:

Item No.	Volts (V)	Prop	Throttle	Amps (A)	Watts (W)	Thrust (G)	RPM	Efficiency (G/W)	Torque (N*m)	Operating temperature (°C)	
U12 KV90	48	T-MOTOR 29*9.5CF (3PCS)	50%	6.60	316.94	3449	2687	10.88	1.333	65.3°C	
			55%	8.73	419.04	4023	3007	9.60	1.621		
			60%	10.43	500.64	4713	3185	9.41	1.823		
			65%	12.73	611.04	5313	3452	8.70	2.053		
			75%	19.43	932.64	7385	3965	7.92	2.76		
			85%	25.32	1215.36	8803	4352	7.24	3.372		
		T-MOTOR 30*10.5CF	50%	5.99	287.52	3112	1814	10.82	1.107	67.5°C	
			55%	8.03	385.44	3963	2005	10.28	1.408		
			60%	9.71	466.08	4696	2186	10.08	1.649		
			65%	11.73	563.04	5329	2342	9.46	1.904		
			75%	17.03	817.44	7081	2670	8.66	2.532		
			85%	22.80	1094.40	8481	3433	7.75	3.103		
		T-MOTOR 32*11CF	50%	7.59	364.32	4030	1802	11.06	1.58	79.8°C	
			55%	10.24	491.52	5112	2005	10.40	1.945		
			60%	12.31	590.88	5791	2133	9.80	2.18		
			65%	15.32	735.36	6702	2291	9.11	2.515		
			75%	21.53	1033.44	8903	2611	8.61	3.222		
			85%	29.07	1395.36	10855	2879	7.78	4.019		
				100%	42.59	2044.32	13587	3255	6.65	5.132	

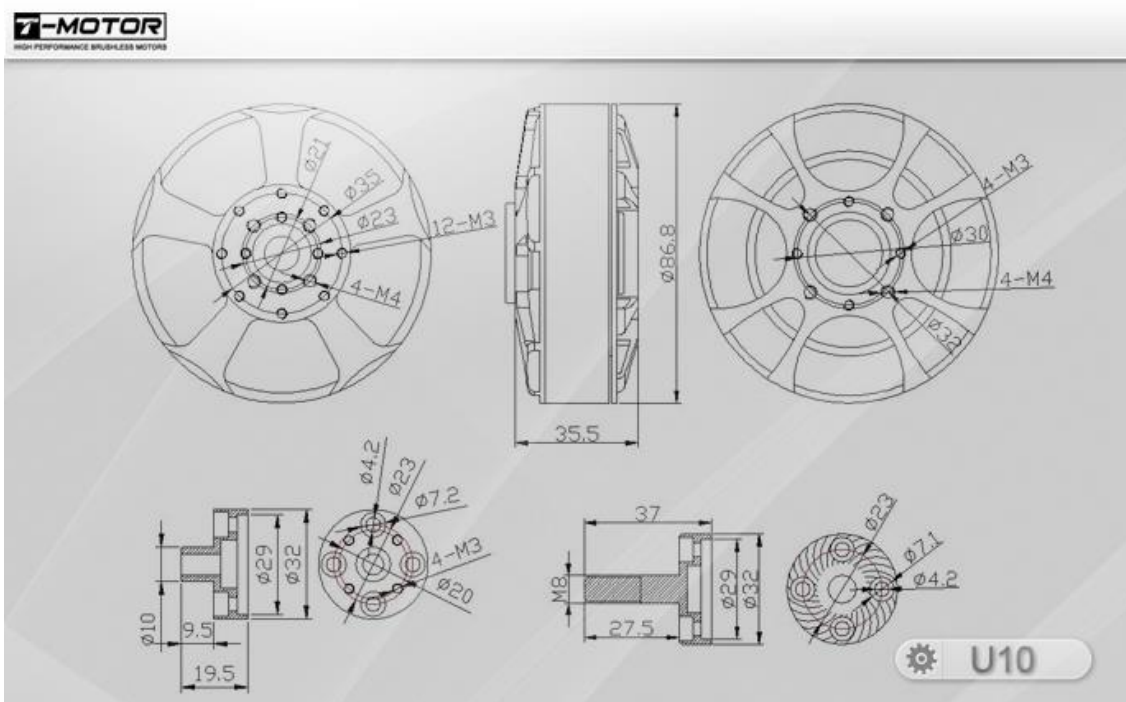
Notes: The test condition of temperature is motor surface temperature in 100% throttle while the motor run 10 min.

Cruise flight: 1 engine

U-power U10

Reference: U-POWER SERIES MOTORS > Efficiency Type

http://www.rctigermotor.com/html/2016/Efficiency-Type_0106/306.html



Specifications:

KV.....100
 Configuration.....36N42P
 Shaft Diameter.....15mm
 Motor Dimensions (Dia.*Len)..... Φ 86.8x35.5mm
 Weight (g).....400g
 Idle current (10@10v(A).....1.4A
 No.of Cells (Lipo).....6-12S
 Max Continuous current (A)180S.....35A
 Max Continuous Power (W)180S.....1500W
 Max. Efficiency current.....(3-20A)>89%
 Internal resistance.....95m Ω

Table of performance for different propellers and throttle:

Item No.	Volts (V)	Prop	Throttle	Amps (A)	Watts (W)	Thrust (G)	RPM	Efficiency (G/W)	Torque (N*m)	Operating temperature (°C)
U10 KV80	40 (10S)	T-MOTOR 26*8.5CF	50%	1.9	76	1146	1550	15.08	0.362	47°C
			55%	2.3	92	1347	1681	14.64	0.428	
			60%	3	120	1633	1865	13.61	0.512	
			65%	3.7	148	1921	2015	12.98	0.594	
			75%	5.4	216	2545	2308	11.78	0.792	
			85%	7.3	292	3121	2562	10.69	0.96	
		T-MOTOR 27*8.8CF	50%	2.1	84	1300	1552	15.48	0.433	51°C
			55%	2.6	104	1535	1673	14.76	0.507	
			60%	3.4	136	1860	1841	13.68	0.61	
			65%	4.3	172	2178	1990	12.66	0.709	
			75%	6.2	248	2848	2270	11.48	0.92	
			85%	8.6	344	3606	2545	10.48	1.143	
		T-MOTOR 28*9.2CF	50%	2.3	92	1448	1503	15.74	0.481	56°C
			55%	3	120	1762	1650	14.68	0.582	
			60%	3.8	152	2102	1806	13.83	0.687	
			65%	4.9	196	2498	1961	12.74	0.821	
			75%	7.1	284	3280	2237	11.55	1.064	
			85%	9.8	392	4055	2500	10.34	1.32	
		T-MOTOR 29*9.5CF	50%	2.7	108	1660	1496	15.37	0.568	59°C
			55%	3.4	136	1950	1647	14.34	0.665	
			60%	4.4	176	2335	1780	13.27	0.791	
			65%	5.4	216	2710	1934	12.55	0.912	
			75%	8	320	3645	2210	11.39	1.221	
			85%	11	440	4504	2453	10.24	1.518	
T-MOTOR 30*10.5CF	50%	3.1	124	1916	1464	15.45	0.677	63°C		
	55%	4	160	2275	1602	14.22	0.805			
	60%	5.1	204	2690	1742	13.19	0.943			
	65%	6.4	256	3145	1888	12.29	1.103			
	75%	9.4	376	4080	2160	10.85	1.44			
	85%	12.9	516	5040	2399	9.77	1.781			
			100%	19	760	6480	2712	8.53	2.288	

Notes: The test condition of temperature is motor surface temperature in 100% throttle while the motor run 10 min.