

DraganFly IV Stock Brushed Mottors / Draganfly stock propeller (2 parts)

PWM	Lift Power - 1 motor (oz) DraganFly IV Stock Motor & Prop	Lift Power x4 Motors (oz) DraganFly IV Stock Motor & Prop	Lift 4 Motor / Lift 1 Motor Ratio	Current x4 Motors (oz) DraganFly IV Stock Motor & Prop	Lift/Current Ratio (Oz/A) DraganFly IV Stock Motor & Prop
	Vbat = 11.5V	Vbat = 12V		Vbat = 12V	Vbat = 12V
0	0	0	0	0	0
12.5	12.5	1.2	4.3	3.583333333	0.74
25%	25%	2.4	8.5	3.541666667	2.08
38%	38%	4.2	14.2	3.380952381	3.73
50%	50%	6	19	3.166666667	5.5
63%	63%	7.85	23	2.929936306	7
75%	75%	9.7	27	2.783505155	8.9
88%	88%	11.35	27	2.378854626	9.5
100%	100%	13	36	2.769230769	15.5
AVG				3.066768238	3.580371662

SOME CALCULATIONS (From Average Lift/Current Ratio):

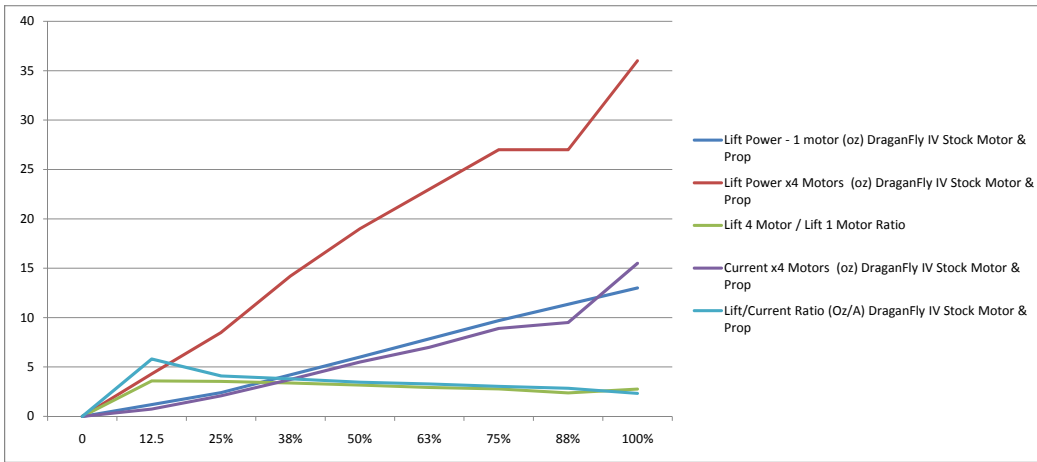
=> 3.5 Oz ... 60 min flight with 1000mAh Battery

=> 1Ah <=> 214.8 Oz-Minunte Capacity

=> 1 lb can fly 13.4 Minutes

If battery weights 3.5 Oz it can fly itself for $C(A/h) * 214.8 (Oz-Min) / Battery Weight (oz) = 1Ah * 214.8Oz / 3.5 Oz = 61 Minutes$

Battery Capacity / Weight ration (A-h / oz) = 1Ah / 3.5 Oz = **0.29 Ah/Oz** = **~ 10 mAh/grams**, it only makes sense to choose a battery with higher ratio



Hobby King Brushless Combo MOTOR/BEC/PROP

http://www.hobbycity.com/hobbycity/store/uh_viewitem.asp?idProduct=4852

TowerPro Mottor BM2408-21T / 18A BEC / 1047 Prop (same as GWS 1047) Combo

PULSE	Lift Power (Oz) 10x47 Prop	Current (A) 10x47 Prop	Lift / Current Ration (Oz/A) 10x47 Prop	Lift Power (Oz) 8x45 Prop	Lift Power (Oz) 8x45 Prop
	Vbat = 11.07V	Vbat = 11.07V	Vbat = 11.07V	Vbat = 12.6V	Vbat = 11.34V
1100	1100	0	0.14	0	0
1150	1150	1.8	0.47	3.829787234	0.3
1200	1200	3.6	1.06	3.396226415	1.3
1250	1250	7.8	2.34	3.333333333	3.5
1300	1300	9.6	3.84	2.5	5.4
1350	1350	11.9	5.77	2.062391681	8.2
1400	1400	13.8	7.1	1.943661972	10.7
1450	1450	14.8			12.7
1500	1500	15.8			13.8
1550	1550				11.5
AVERAGE				2.844233439	

