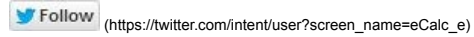


77'057'251 calculated drives - the most used setup tool



Welcome buzz

Membership Expiry: 05/12/19

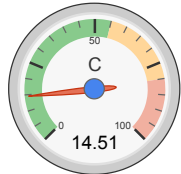
Logout (/motorcalc.php?sitekokaction=logout) - Profile (calcmember/update.php)

X4125 KV550 - 16x10 @ 4S

all data without guarantee - Accuracy: +/-10%

propCalc - Propeller Calculator News (index.htm#news) | Toolbox (index.htm#toolbox) | Easy View (motorcalc_mobile.php) | Help (calcinclue/help/propcalcelp.htm) | Submit Specs (calcmember/submitmotor.htm) | Language: english

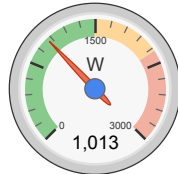
General	Model Weight: 6000 g <input type="text"/> <input type="button" value="incl. Drive"/> <input type="button" value="↓"/> 211.6 oz	# of Motors: <input type="text" value="1"/> (on same Battery)	Wing Area: 64 dm ² <input type="text"/> 992 in ² <input type="text"/>	Drag: simplified <input type="button" value="↓"/> 0.05 Cd <input type="text"/>	Cross Section: 0 dm ² <input type="text"/> 0 in ² <input type="text"/>	Field Elevation: 500 m.ASL <input type="text"/> 1640 ft.ASL <input type="text"/>	Air Temperature: 25 °C <input type="text"/> 77 °F <input type="text"/>	Pressure (QNH): 1013 hPa <input type="text"/> 29.91 inHg <input type="text"/>
Battery Cell	Type (Cont. / max. C) - charge state: LiPo 5000mAh - 55/80C <input type="button" value="↓"/> - normal <input type="button" value="↓"/>	Configuration: 4 S <input type="text"/> 1 P <input type="text"/>	Cell Capacity: 5000 mAh <input type="text"/> 5000 mAh total <input type="text"/>	max. discharge: 85% <input type="button" value="↓"/>	Resistance: 0.002 Ohm <input type="text"/>	Voltage: 3.7 V <input type="text"/>	C-Rate: 55 C cont. <input type="text"/> 80 C max <input type="text"/>	Weight: 135 g <input type="text"/> 4.8 oz <input type="text"/>
Controller	Type: max 120A <input type="button" value="↓"/>	Current: 120 A cont. <input type="text"/> 120 A max <input type="text"/>	Resistance: 0.002 Ohm <input type="text"/>	Weight: 155 g <input type="text"/> 5.5 oz <input type="text"/>	Battery extension Wire: AWG10=5.27mm ² <input type="button" value="↓"/>	Length: 0 mm <input type="text"/> 0 inch <input type="text"/>	Motor extension Wire: AWG10=5.27mm ² <input type="button" value="↓"/>	Length: 0 mm <input type="text"/> 0 inch <input type="text"/>
Motor	Manufacturer - Type (Kv) - Cooling: SunnySky <input type="button" value="↓"/> - custom <input type="button" value="↓"/> medium <input type="button" value="↓"/> <input type="button" value="search..."/>	KV (w/o torque): 550 rpm/V <input type="text"/> Prop-Kv-Wizard <input type="button" value=""/>	no-load Current: 2.4 A @ 10 V <input type="text"/>	Limit (up to 15s): 2130 W <input type="button" value="↓"/>	Resistance: 0.014 Ohm <input type="text"/>	Case Length: 54 mm <input type="text"/> 2.13 inch <input type="text"/>	# mag. Poles: 14 <input type="text"/>	Weight: 362 g <input type="text"/> 12.8 oz <input type="text"/>
Propeller	Type - yoke twist: Aeronaut CamCarbon <input type="button" value="↓"/> - 0° <input type="button" value="↓"/>	Diameter: 16 inch <input type="text"/> 406.4 mm <input type="text"/>	Pitch: 10 inch <input type="text"/> 254 mm <input type="text"/>	# Blades: 2 <input type="text"/>	PConst / TConst: 1.07 / 0.99 <input type="text"/>	Gear Ratio: 1 : 1 <input type="text"/>	Flight Speed: 0 km/h <input type="text"/> 0 mph <input type="text"/>	<input type="button" value="calculate"/>



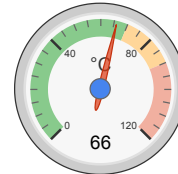
Load:



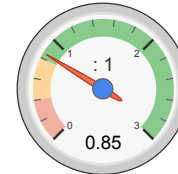
Mixed Flight Time:



electric Power:



est. Temperature:



Thrust-Weight:



Pitch Speed:

Remarks:

Battery	Motor @ Optimum Efficiency	Motor @ Maximum	Propeller	Total Drive	Airplane
Load: 14.51 C	Current: 49.53 A	Current: 72.57 A	Static Thrust: 5079 g	Drive Weight: 1163 g	All-up Weight: 6000 g
Voltage: 14.10 V	Voltage: 14.23 V	Voltage: 13.96 V	179.2 oz	41 oz	211.6 oz
Rated Voltage: 14.80 V	Revolutions*: 7164 rpm	Revolutions*: 6823 rpm	Revolutions*: 6823 rpm	Power-Weight: 179 W/kg	Wing Load: 94 g/dm ²
Energy: 74 Wh	electric Power: 704.6 W	electric Power: 1013.0 W	Stall Thrust: 4679 g	81 W/lb	30.8 oz/ft ²
Total Capacity: 5000 mAh	mech. Power: 628.0 W	mech. Power: 893.8 W	165 oz	Thrust-Weight: 0.85 : 1	Cubic Wing Load: 11.7
Used Capacity: 4250 mAh	Efficiency: 89.1 %	Efficiency: 88.2 %	avail. Thrust @ 0 km/h: 5079 g	Current @ max: 72.57 A	est. Stall Speed: 46 km/h
min. Flight Time: 3.5 min		est. Temperature: 66 °C	179.2 oz	P(in) @ max: 1074.1 W	29 mph
Mixed Flight Time: 5.1 min		151 °F	Pitch Speed: 104 km/h	P(out) @ max: 893.8 W	est. Speed (level): 104 km/h
Weight: 540 g			65 mph	Efficiency @ max: 83.2 %	65 mph
19 oz			523 km/h	Torque: 1.25 Nm	est. Speed (vertical): - km/h
			325 mph	0.92 lbf.ft	- mph
			5.01 g/W		est. rate of climb: 8.6 m/s
			0.18 oz/W		1702 ft/min

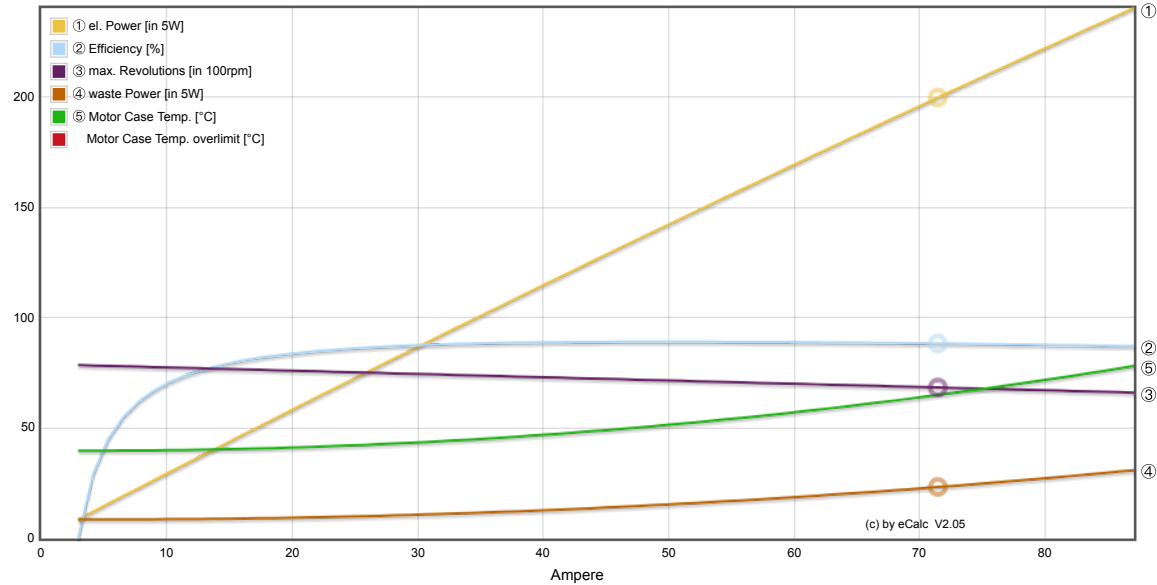
share

Motor Partial Load

Propeller	Throttle	Current (DC)	Voltage (DC)	el. Power	Efficiency	Thrust	Spec. Thrust	Pitch Speed	Speed (level)	Motor Run Time				
rpm	%	A	V	W	%	g	oz/W	km/h	mph	(85%) min				
1000	13	0.5	14.8	6.8	41.5	109	3.8	16.1	0.57	15	9	-	-	555.0

1500	20	1.1	14.8	15.7	60.4	245	8.7	15.6	0.55	23	14	-	-	239.1
2000	26	2.1	14.8	31.3	71.8	436	15.4	13.9	0.49	30	19	-	-	119.9
2500	33	3.8	14.8	55.9	78.6	682	24.1	12.2	0.43	38	24	-	-	67.1
3000	40	6.3	14.7	91.8	82.7	982	34.6	10.7	0.38	46	28	-	-	40.7
3500	47	9.7	14.7	141.5	85.2	1337	47.1	9.4	0.33	53	33	-	-	26.3
4000	54	14.2	14.7	207.5	86.7	1746	61.6	8.4	0.30	61	38	44	27	17.9
4500	62	20.2	14.6	292.3	87.6	2209	77.9	7.6	0.27	69	43	69	43	12.7
5000	69	27.6	14.5	398.5	88.2	2728	96.2	6.8	0.24	76	47	76	47	9.2
5500	77	36.9	14.4	528.8	88.4	3301	116.4	6.2	0.22	84	52	84	52	6.9
6000	86	48.3	14.3	685.8	88.5	3928	138.6	5.7	0.20	91	57	92	57	5.3
6500	94	62.0	14.2	872.4	88.5	4610	162.6	5.3	0.19	99	62	99	62	4.1
6823	100	72.6	14.1	1013.0	88.2	5079	179.2	5.0	0.18	104	65	104	65	3.5

Motor Characteristic at Full Throttle



Important Note:

Before flight recheck your max. current! If your Current, el. Power or RPM are over the manufacturers limits your motor, controller and/or battery may take damage! **Verify before flight by measurement!**

for printing use Landscape format

* The manufacturer limitation is NOT monitored

** Testdata with reduced accuracy