

548

Member Full Version

...insert your project name...

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



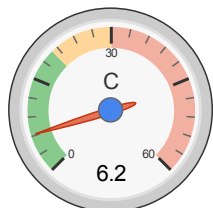
Welcome Cyrus

Membership Expiry: 03/07/17

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General	Motor Cooling: <input type="text" value="medium"/>	# of Motors: <input type="text" value="1"/> (on same Battery)	Model Weight: <input type="text" value="1000"/> g <input type="text" value="incl. Drive"/> <input type="text" value="35.3"/> oz	Wing Area: <input type="text" value="35"/> dm ² <input type="text" value="542.5"/> in ²	Field Elevation: <input type="text" value="500"/> m ASL <input type="text" value="1640"/> ft ASL	Air Temperature: <input type="text" value="25"/> °C <input type="text" value="77"/> °F	Pressure (QNH): <input type="text" value="1013"/> hPa <input type="text" value="29.91"/> inHg	
Battery Cell	Type (Cont. / max. C) - charge state: <input type="text" value="LiPo 4000mAh - 20/30C"/> - <input type="text" value="normal"/>	Configuration: <input type="text" value="4"/> S <input type="text" value="1"/> P	Cell Capacity: <input type="text" value="4000"/> mAh <input type="text" value="4000"/> mAh total	max. discharge: <input type="text" value="85%"/>	Resistance: <input type="text" value="0.0056"/> Ohm	Voltage: <input type="text" value="3.7"/> V	C-Rate: <input type="text" value="20"/> C cont. <input type="text" value="30"/> C max	Weight: <input type="text" value="95"/> g <input type="text" value="3.4"/> oz
Controller	Type: <input type="text" value="max 30A"/>	Current: <input type="text" value="30"/> A cont. <input type="text" value="30"/> A max	Resistance: <input type="text" value="0.008"/> Ohm	Weight: <input type="text" value="40"/> g <input type="text" value="1.4"/> oz	Wire extension battery: <input type="text" value="AWG10=5.27mm<sup>2</sup>"/>	Length: <input type="text" value="0"/> mm <input type="text" value="0"/> inch	Wire extension motor: <input type="text" value="AWG10=5.27mm<sup>2</sup>"/>	Length: <input type="text" value="0"/> mm <input type="text" value="0"/> inch
Motor	Manufacturer - Type (Kv): <input type="text" value="SunnySky"/> <input type="text" value="X2212-1250 (1250)"/> <input type="button" value="search..."/> <input type="button" value="Prop-Kv-Wizard"/>	KV (w/o torque): <input type="text" value="1250"/> rpm/V	no-load Current: <input type="text" value="0.6"/> A @ <input type="text" value="10"/> V	Limit (up to 15s): <input type="text" value="390"/> W	Resistance: <input type="text" value="0.079"/> Ohm	Case Length: <input type="text" value="30"/> mm <input type="text" value="1.18"/> inch	# mag. Poles: <input type="text" value="14"/>	Weight: <input type="text" value="57"/> g <input type="text" value="2"/> oz
Propeller	Type - yoke twist: <input type="text" value="Graupner CAM Folding Prop"/> - <input type="text" value="0°"/>	Diameter: <input type="text" value="8"/> inch <input type="text" value="203.2"/> mm	Pitch: <input type="text" value="5"/> inch <input type="text" value="127"/> mm	# Blades: <input type="text" value="2"/>	PConst / TConst: <input type="text" value="1.18"/> / <input type="text" value="1.0"/>	Gear Ratio: <input type="text" value="1"/> : <input type="text" value="1"/>	Flight Speed: <input type="text" value="0"/> km/h <input type="text" value="0"/> mph	<input type="button" value="calculate"/>



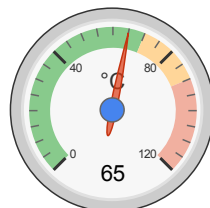
Load:



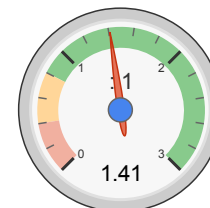
Mixed Flight Time:



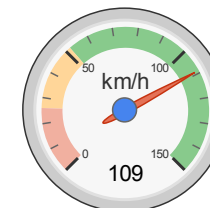
electric Power:



est. Temperature:



Thrust-Weight:



Pitch Speed:

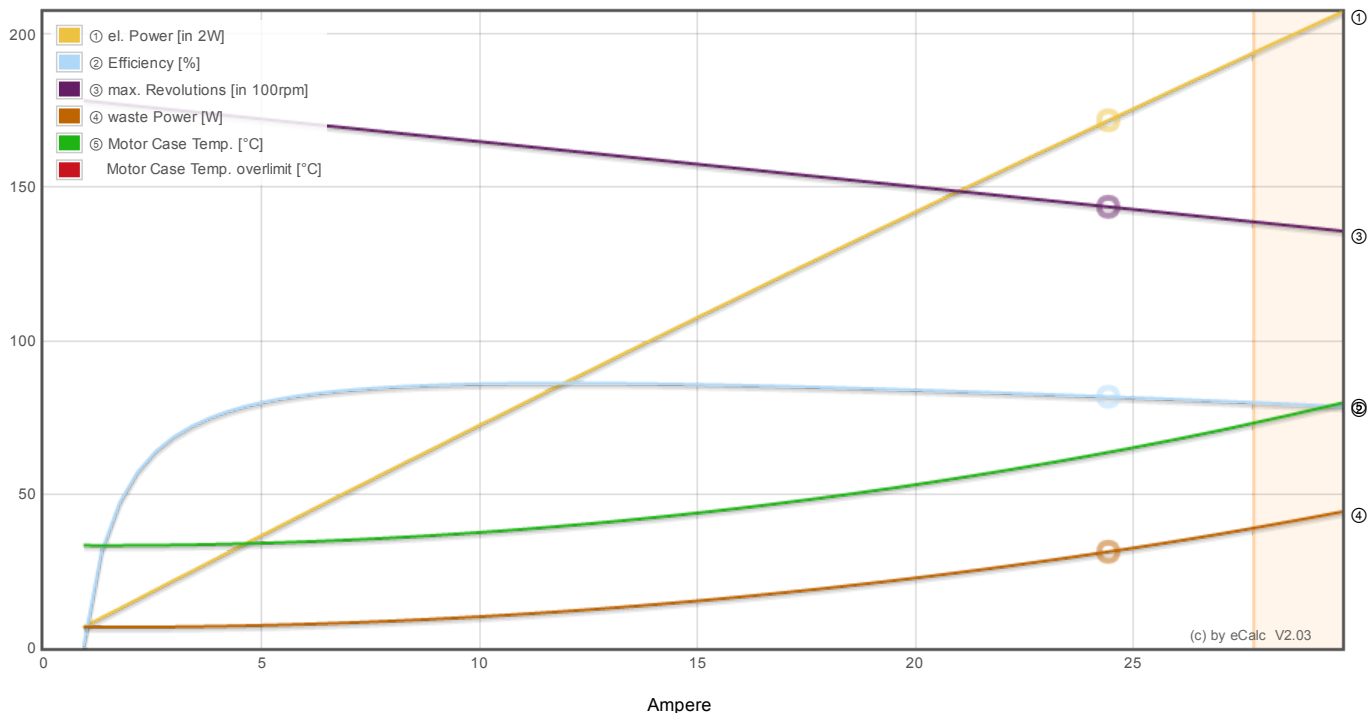
Remarks:

Battery	Motor @ Optimum Efficiency	Motor @ Maximum	Propeller	Total Drive	Airplane
Load: 6.20 C	Current: 11.53 A	Current: 24.82 A	Static Thrust: 1408 g	Drive Weight: 525 g	All-up Weight: 1000 g
Voltage: 14.24 V	Voltage: 14.45 V	Voltage: 14.05 V	49.7 oz	18.5 oz	35.3 oz
Rated Voltage: 14.80 V	Revolutions*: 16250 rpm	Revolutions*: 14295 rpm	Revolutions*: 14295 rpm	Power-Weight: 367 W/kg	Wing Load: 29 g/dm ²
Energy: 59.2 Wh	electric Power: 166.6 W	electric Power: 348.6 W	Stall Thrust: 953 g	167 W/lb	9.5 oz/ft ²
Total Capacity: 4000 mAh	mech. Power: 143.5 W	mech. Power: 284.3 W	33.6 oz	Thrust-Weight: 1.41 : 1	Cubic Wing Load: 4.8
Used Capacity: 3400 mAh	Efficiency: 86.2 %	Efficiency: 81.5 %	Thrust @ 0 km/h: 1408 g	P(in) @ max: 367.3 W	est. Stall Speed: 26 km/h
min. Flight Time: 8.2 min		est. Temperature: 65 °C	Thrust @ 0 mph: 49.7 oz	P(out) @ max: 284.3 W	16 mph
Mixed Flight Time: 16.5 min		149 °F	Pitch Speed: 109 km/h	Efficiency @ max: 77.4 %	est. Speed (level): 96 km/h
Weight: 380 g			68 mph		60 mph
13.4 oz			Tip Speed: 548 km/h		est. Speed (vertical): 30 km/h
			340 mph		19 mph
			specific Thrust: 4.04 g/W		est. rate of climb: 8.4 m/s
			0.14 oz/W		1658 ft/min

Motor Partial Load

Propeller rpm	Throttle %	Current (DC) A	Volage (DC) V	el. Power W	Efficiency %	Thrust g	Spec. Thrust g/W	Pitch Speed km/h	Thrust oz	Spec. Thrust oz/W	Pitch Speed mph	Flight Time (85%) min
2000	12	0.1	14.8	1.4	53.6	28	19.0	15	1.0	0.67	9	2078.6
3000	18	0.3	14.8	3.7	70.2	62	16.6	23	2.2	0.59	14	806.3
4000	24	0.5	14.8	7.9	78.3	110	13.9	30	3.9	0.49	19	378.8
5000	30	1.0	14.8	14.7	82.2	172	11.7	38	6.1	0.41	24	203.4
6000	37	1.7	14.8	24.9	84.1	248	10.0	46	8.7	0.35	28	120.2
7000	43	2.7	14.7	39.1	84.9	338	8.6	53	11.9	0.30	33	76.3
8000	50	4.0	14.7	58.2	85.2	441	7.6	61	15.6	0.27	38	51.1
9000	57	5.7	14.7	83.0	85.0	558	6.7	69	19.7	0.24	43	35.7
10000	65	7.9	14.6	114.4	84.7	689	6.0	76	24.3	0.21	47	25.8
11000	72	10.6	14.6	153.1	84.2	833	5.4	84	29.4	0.19	52	19.2
12000	80	14.0	14.5	200.2	83.6	992	5.0	91	35.0	0.17	57	14.6
13000	88	18.1	14.4	256.5	83.0	1164	4.5	99	41.1	0.16	62	11.3
14000	97	22.9	14.3	323.0	82.3	1350	4.2	107	47.6	0.15	66	8.9
14295	100	24.8	14.2	348.6	81.5	1408	4.0	109	49.7	0.14	68	8.2

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