



Member Full Version

...insert your project name...

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



propCalc - Propeller Calculator



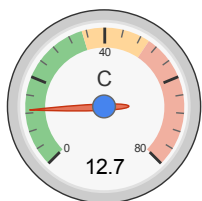
Welcome Cyrus

Membership Expiry: 27/06/16

Logout - Profile

News | Help | Submit Specs | Language: english

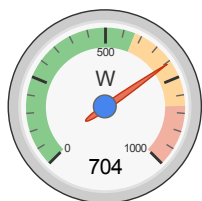
General	Motor Cooling: medium	# of Motors: 1 (on same Battery)	Model Weight: 2300 g less Battery 81.1 oz	Wing Area: 96.5 dm ² 1496.5 in ²	Field Elevation 76 m ASL 250 ft ASL	Air Temperature 25 °C 77 °F	Pressure (QNH): 1013 hPa 29.91 inHg	
Battery Cell	Type (Cont. / max. C) - charge state: LiPo 4000mAh - 35/50C - normal	Configuration: 4 S 1 P	Cell Capacity: 4000 mAh 4000 mAh total	max. discharge: 85%	Resistance: 0.0035 Ohm	Voltage: 3.7 V	C-Rate: 35 C cont. 50 C max	Weight: 116 g 4.1 oz
Controller	Type: max 60A	Current: 60 A cont. 60 A max	Resistance: 0.0045 Ohm	Weight: 80 g 2.8 oz	Wire extension battery: AWG10=5.27mm ²	Length: 0 mm 0 inch	Wire extension motor: AWG10=5.27mm ²	Length: 0 mm 0 inch
Motor	Manufacturer - Type (Kv): Turnigy SK3-3858-840 GliderDrive (840) search... Prop-Kv-Wizard	KV (w/o torque): 840 rpm/V	no-load Current: 2.47 A @ 15.5 V	Limit (up to 15s): 830 W	Resistance: 0.031 Ohm	Case Length: 58 mm 2.28 inch	# mag. Poles: 14	Weight: 180 g 6.3 oz
Propeller	Type - yoke twist: Graupner CAM Folding Prop - 0°	Diameter: 12 inch 304.8 mm	Pitch: 6.5 inch 165.1 mm	# Blades: 2	PCConst / TConst: 1.18 / 1.0	Gear Ratio: 1 : 1	Flight Speed: 0 km/h 0 mph	calculate



Load:



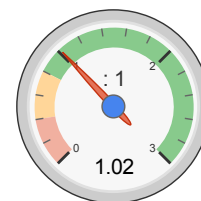
Mixed Flight Time:



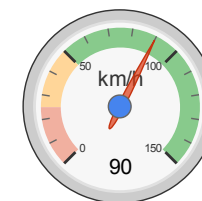
electric Power:



est. Temperature:



Thrust-Weight:



Pitch Speed:

Remarks:

Battery	Motor @ Optimum Efficiency	Motor @ Maximum	Propeller	Total Drive	Airplane
Load: 12.70 C	Current: 29.36 A	Current: 50.79 A	Static Thrust: 2828 g	Drive Weight: 796 g	All-up Weight: 2764 g
Voltage: 14.09 V	Voltage: 14.26 V	Voltage: 13.86 V	99.8 oz	28.1 oz	97.5 oz
Rated Voltage: 14.80 V	Revolutions*: 10763 rpm	Revolutions*: 9817 rpm	Revolutions*: 9817 rpm	Power-Weight: 272 W/kg	Wing Load: 29 g/dm ²
Energy: 59.2 Wh	electric Power: 418.6 W	electric Power: 704.0 W	Stall Thrust: 2394 g	123 W/lb	9.5 oz/ft ²
Total Capacity: 4000 mAh	mech. Power: 359.0 W	mech. Power: 587.3 W	84.4 oz	Thrust-Weight: 1.02 : 1	Cubic Wing Load: 2.9
Used Capacity: 3400 mAh	Efficiency: 85.8 %	Efficiency: 83.4 %	Thrust @ 0 km/h: 2828 g	P(in) @ max: 751.7 W	est. Stall Speed: 25 km/h
min. Flight Time: 4.0 min		est. Temperature: 62 °C	Thrust @ 0 mph: 99.8 oz	P(out) @ max: 587.3 W	16 mph
Mixed Flight Time: 6.5 min		144 °F	Pitch Speed: 90 km/h	Efficiency @ max: 78.1 %	est. Speed (level): 81 km/h
Weight: 464 g			56 mph		50 mph
16.4 oz			Tip Speed: 564 km/h		est. Speed (vertical): 2 km/h
			350 mph		1 mph
			specific Thrust: 4.02 g/W		est. rate of climb: 6.2 m/s
			0.14 oz/W		1213 ft/min

share <http://>

<http://www.eCalc.ch...>

add to >>

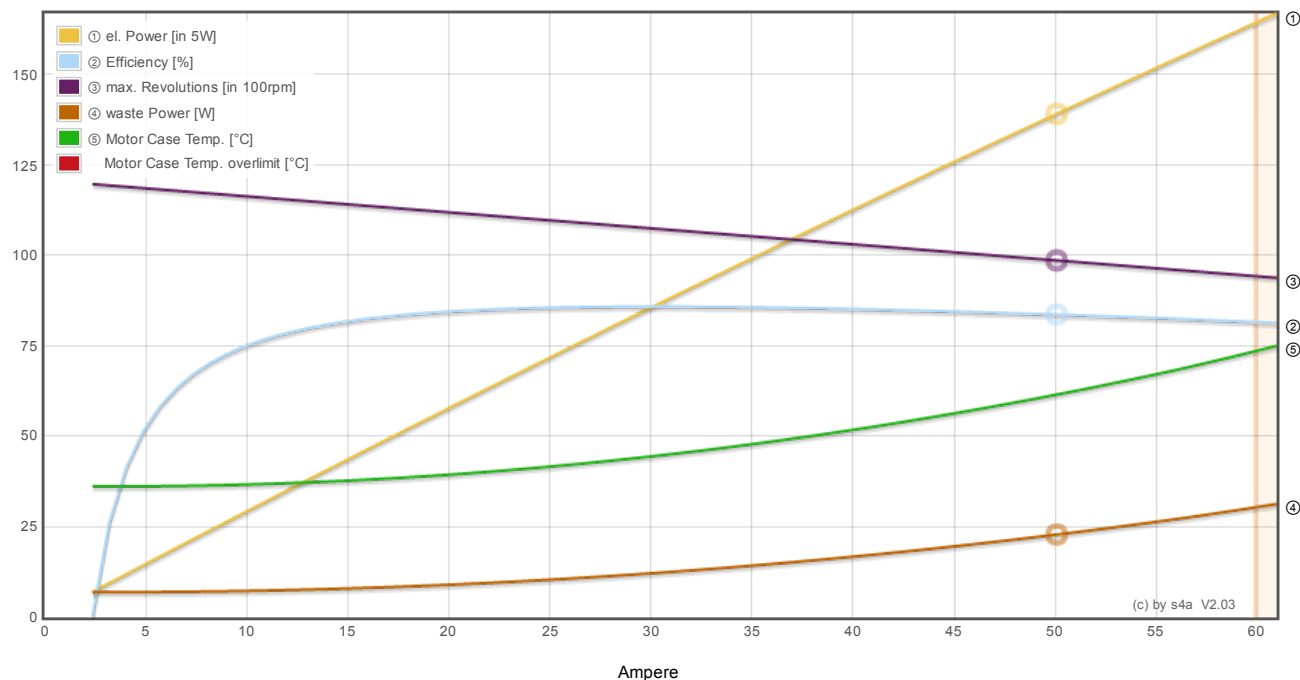
Download .csv (0)

<< clear

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
1400	12	0.3	14.8	4.5	38.1	58	12.9	13	2.0	0.46	8	672.9
2100	18	0.7	14.8	10.1	56.9	129	12.8	19	4.6	0.45	12	297.7
2800	25	1.4	14.8	19.8	68.5	230	11.6	26	8.1	0.41	16	151.0
3500	31	2.4	14.8	35.2	75.4	359	10.2	32	12.7	0.36	20	84.9
4200	38	3.9	14.7	57.7	79.4	518	9.0	38	18.3	0.32	24	51.7
4900	45	6.1	14.7	89.0	81.8	705	7.9	45	24.9	0.28	28	33.4
5600	52	9.0	14.7	130.6	83.3	920	7.0	51	32.5	0.25	32	22.7
6300	59	12.7	14.6	184.2	84.0	1165	6.3	58	41.1	0.22	36	16.0
7000	66	17.5	14.6	251.6	84.4	1438	5.7	64	50.7	0.20	40	11.7
7700	74	23.4	14.5	334.6	84.5	1740	5.2	70	61.4	0.18	44	8.7
8400	82	30.7	14.4	435.0	84.3	2071	4.8	77	73.0	0.17	48	6.6
9100	91	39.5	14.2	554.6	84.1	2430	4.4	83	85.7	0.15	52	5.2
9800	100	50.1	14.1	695.5	83.8	2818	4.1	90	99.4	0.14	56	4.1
9817	100	50.8	14.1	704.0	83.4	2828	4.0	90	99.8	0.14	56	4.0

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

(c) copyright by and intellectual property of Markus Mueller, Solution for All, www.s4a.ch, info[at]ecalc.ch
See HTML Source for full and complete copyright notice.
Version: P6.70, 07.04.16 / Data: 23.04.16 with 6424 Motors
translated to english by Markus Mueller

4820536

