



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

propCalc - Propeller Calculator

Help | Language: english

AdChoices

**Motor Torque Sensors**

[www.magtrol.com](http://www.magtrol.com)

To test wiper motors, drill motors, pumps, gearboxes, machine tools ...



<b>General</b>	Motor Cooling: medium	Model Weight: 2200 g 77.6 oz	incl. Drive	Field Elevation 500 m ASL 1640 ft ASL	Air Temperature 25 °C 77 °F	Pressure (QNH): 1013 hPa 29.91 inHg		
<b>Battery Cell</b>	Type (Cont. / max. C) - charge state: LiPo 4000mAh - 45/60C - normal	Configuration: 4 S 1 P	Cell Capacity: 4000 mAh	Total Capacity: 4000 mAh	Resistance: 0.0031 Ohm	Voltage: 3.7 V	C-Rate: 45 C cont. 60 C max	Weight: 112 g 4 oz
<b>Controller</b>	Type: max 50A	cont. Current: 50 A	max. Current: 50 A	Resistance: 0.005 Ohm	Weight: 65 g 2.3 oz			
<b>Motor</b>	Manufacturer - Type (Kv): Hacker A40-14S-14p-V2 (530)	KV (w/o torque): 530 rpm/V	no-load Current: 1.4 A @ 8.4 V	Limit (up to 15s): 900 W	Resistance: 0.021 Ohm	Case Length: 42 mm 1.65 inch	# mag. Poles: 14	Weight: 208 g 7.3 oz
<b>Propeller</b>	Type - yoke twist: APC Electric E - 0°	Diameter: 15 inch	Pitch: 6 inch	# Blades: 2	Prop Const: 1.08	Gear Ratio: 1 : 1	<input type="button" value="calculate"/>	

**Remarks:**

Battery	Motor @ Optimum Efficiency	Motor @ Maximum	Propeller	Total Drive
Load: 8.39 C	Current: 33.99 A	Current: 33.55 A	Static Thrust: 2629 g	Drive Weight: 793 g
Voltage: 14.38 V	Voltage: 14.21 V	Voltage: 14.22 V	92.7 oz	28 oz
Rated Voltage: 14.80 V	Revolutions: 6963 rpm	Revolutions: 6974 rpm	Revolutions: 6974 rpm	All-up Weight: 2200 g
Flight Time*: 7.2 min	electric Power: 483.0 W	electric Power: 477.0 W	Stall Thrust: 2470 g	78 oz
Mixed Flight Time: 12.2 min	mech. Power: 435.9 W	mech. Power: 430.4 W	87.1 oz	Power-Weight: 226 W/kg
Weight: 448 g	Efficiency: 90.2 %	Efficiency: 90.2 %	Pitch Speed: 66 km/h	6.41 W/oz
15.8 oz		est. Temperature: 46 °C	41 mph	Thrust-Weight: 1.20 : 1
		115 °F	Tip Speed: 501 km/h	P(in) @ max: 497 W
			311 mph	P(out) @ max: 430 W
			Efficiency: 5.51 g/W	Efficiency @ max: 86.7 %
			0.19 oz/W	

Graphic coming soon...

**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!**

[generate link](#) >

for printing use Landscape format

\* Flight Time @ Full Power

\*\* Testdata with reduced accuracy

(c) copyright by and intellectual property of Markus Mueller, Solution for All, www.s4a.ch, ecalc[at]s4a.ch  
See HTML Source for full and complete copyright notice.  
Version: P6.00, 15.03.13 / Data: 15.3.13 with 2848 Motors  
translated to english by Markus Mueller

1309687



