

548

Member Full Version

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



xcopterCalc - Multicopter Calculator

Welcome Simon

Membership Expiry: 16/05/15

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Parts SKYRC
6X80...

HeliPal

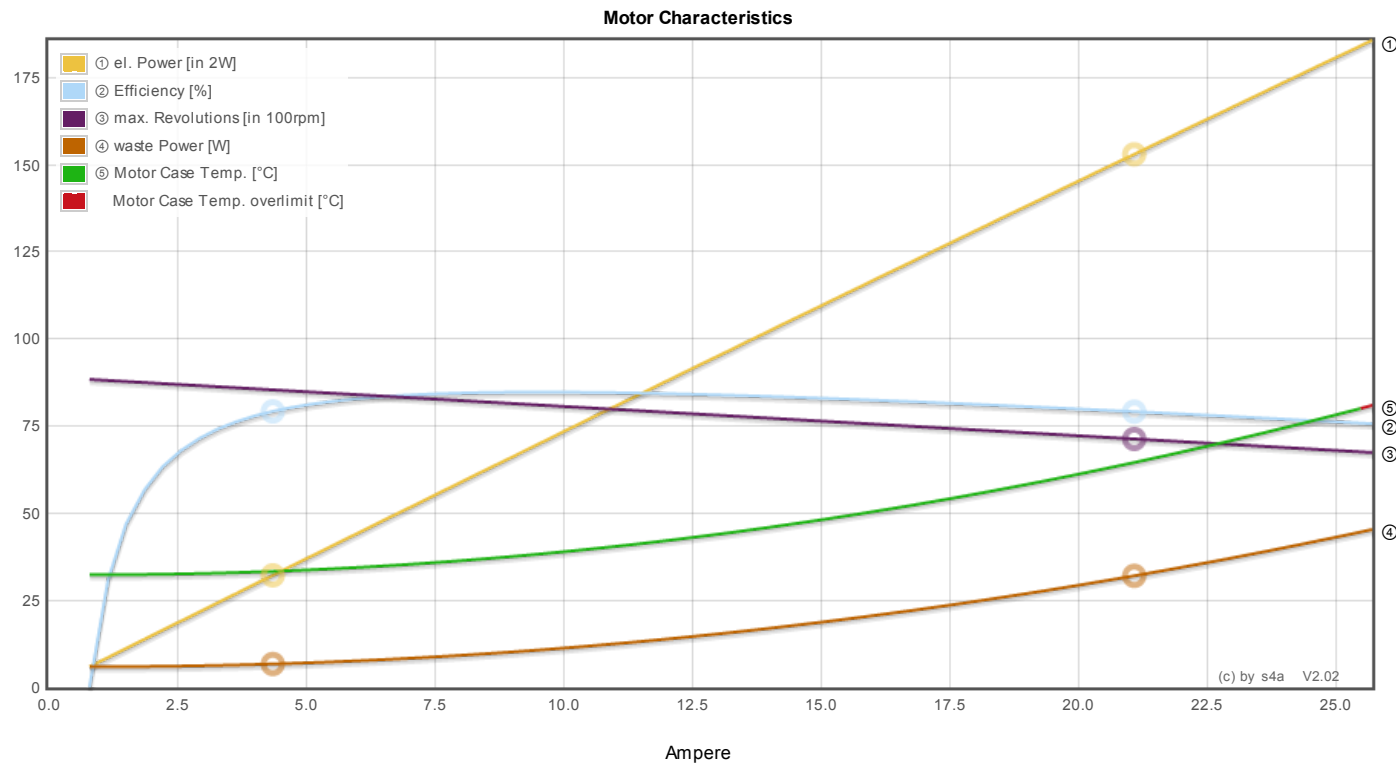


A\$94.59

General	Motor Cooling:	# of Rotors:	Model Weight:		Field Elevation	Air Temperature	Pressure (QNH):	
	<input type="text" value="medium"/>	<input type="text" value="6"/> <input type="text" value="flat"/>	<input type="text" value="3000"/> g <input type="text" value="105.8"/> oz	<input type="text" value="incl. Drive"/>	<input type="text" value="500"/> m ASL <input type="text" value="1640"/> ft ASL	<input type="text" value="25"/> °C <input type="text" value="77"/> °F	<input type="text" value="1013"/> hPa <input type="text" value="29.91"/> inHg	
Battery Cell	Type (Cont. / max. C) - charge state:	Configuration:	Cell Capacity:	Total Capacity:	Resistance:	Voltage:	C-Rate:	Weight:
	<input type="text" value="custom"/> - <input type="text" value="normal"/>	<input type="text" value="4"/> S <input type="text" value="1"/> P	<input type="text" value="16000"/> mAh	<input type="text" value="16000"/> mAh	<input type="text" value="0.0015"/> Ohm	<input type="text" value="3.7"/> V	<input type="text" value="35"/> C cont. <input type="text" value="50"/> C max	<input type="text" value="320"/> g <input type="text" value="11.3"/> oz
Controller	Type:	cont. Current:	max. Current:		Resistance:	Weight:		
	<input type="text" value="max 30A"/>	<input type="text" value="30"/> A	<input type="text" value="30"/> A		<input type="text" value="0.008"/> Ohm	<input type="text" value="40"/> g <input type="text" value="1.4"/> oz		
Motor	Manufacturer - Type (Kv):	KV (w/o torque):	no-load Current:	Limit (up to 15s):	Resistance:	Case Length:	# mag. Poles:	Weight:
	<input type="text" value="Tarot"/> <input type="text" value="4006/620KV (620)"/> <input type="text" value="search..."/>	<input type="text" value="620"/> rpm/V	<input type="text" value="0.8"/> A @ <input type="text" value="14.8"/> V	<input type="text" value="426"/> W	<input type="text" value="0.126"/> Ohm	<input type="text" value="30"/> mm <input type="text" value="1.18"/> inch	<input type="text" value="22"/>	<input type="text" value="82"/> g <input type="text" value="2.9"/> oz
Propeller	Type - yoke twist:	Diameter:	Pitch:	# Blades:	PConst:	Gear Ratio:		
	<input type="text" value="custom"/> - <input type="text" value="0°"/>	<input type="text" value="13"/> inch	<input type="text" value="5.5"/> inch	<input type="text" value="2"/>	<input type="text" value="1.3"/>	<input type="text" value="1"/> : 1	<input type="text" value="calculate"/>	

Remarks:

Battery		Motor @ Optimum Efficiency	Motor @ Maximum	Motor @ Hover	Total Drive	
Load:	8.04 C	Current: 9.10 A	Current: 21.43 A	Current: 4.64 A	Drive Weight:	2213 g
Voltage:	14.03 V	Voltage: 14.40 V	Voltage: 13.86 V	Voltage: 14.60 V		78.1 oz
Rated Voltage:	14.80 V	Revolutions*: 7970 rpm	Revolutions*: 6710 rpm	Throttle (linear): 35 %	All-up Weight:	3000 g
Flight Time:	7.5 min	electric Power: 131.0 W	electric Power: 296.9 W	electric Power: 67.7 W		105.8 oz
Mixed Flight Time:	10.4 min	mech. Power: 110.9 W	mech. Power: 231.9 W	mech. Power: 54.3 W	add. Payload:	3046 g
Hover Flight Time:	29.3 min	Efficiency: 84.6 %	Efficiency: 78.1 %	Efficiency: 80.1 %		107.4 oz
Weight:	1280 g		est. Temperature: 65 °C	est. Temperature: 33 °C	Current @ Hover:	27.83 A
	45.1 oz		149 °F	91 °F	P(in) @ Hover:	411.9 W
				specific Thrust: 7.38 g/W	P(out) @ Hover:	325.6 W
				0.26 oz/W	Efficiency @ Hover:	79.0 %
					Current @ max:	128.56 A
					P(in) @ max:	1902.7 W
					P(out) @ max:	1391.3 W
					Efficiency @ max:	73.1 %



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 measurment!**

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for printing use Landscape format

* The manufacturer limitation is NOT monitored

** Testdata with reduced accuracy

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Version: X6.511, 12.06.14 / Data: 14.06.14 with 3781 Motors
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