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General
Model Weight: 2500 g (incl. Drive) = 88.2 oz
# of Rotors: 2, flat
Frame Size: 400 mm = 15.75 inch
FCU Tilt Limit: no limit
Field Elevation: 500 m ASL = 1640 ft ASL
Air Temperature: 25 °C = 77 °F
Pressure (QNH): 1013 hPa = 29.91 inHg

Battery Cell
Type (Cont. / max. C) - charge state: LiPo 5000mAh - 45/60C - normal
Configuration: 6 S 1 P
Cell Capacity: 5000 mAh = 5000 mAh total
max. discharge: 85%
Resistance: 0.003 Ohm
Voltage: 3.7 V
C-Rate: 45 C cont. = 60 C max
Weight: 132 g = 4.7 oz

Controller
Type: Hobbywing FlyFun 60A-6s
Current: 60 A cont. = 80 A max
Resistance: 0.012 Ohm
Weight: 74 g = 2.6 oz

Accessories
Current drain: 0 A
Weight: 0 g = 0 oz

Motor
Manufacturer - Type (Kv) - Cooling: Xnova - Lightning 2820-920KV (920) - good - search...
KV (w/o torque): 920 rpm/V = Prop-Kv-Wizard
no-load Current: 1.8 A @ 10 V
Limit (up to 15s): 1450 W
Resistance: 0.028 Ohm
Case Length: 41 mm = 1.61 inch
mag. Poles: 10
Weight: 150 g = 5.3 oz

Propeller
Type - yoke twist: GemFan - 0°
Diameter: 8 inch = 203.2 mm
Pitch: 4.7 inch = 119.4 mm
Blades: 3
PConst / TConst: 1.13 / 0.88
Gear Ratio: 1 : 1
calculate

Load:

Hover Flight Time:

electric Power:

est. Temperature:

Thrust-Weight:

specific Thrust:

Configuration

Remarks:

Battery

Load:	14.12 C
Voltage:	20.93 V
Rated Voltage:	22.20 V
Energy:	111 Wh
Total Capacity:	5000 mAh
Used Capacity:	4250 mAh
min. Flight Time:	3.6 min
Mixed Flight Time:	5.3 min
Hover Flight Time:	6.0 min
Weight:	792 g = 27.9 oz

Motor @ Optimum Efficiency

Current:	45.52 A
Voltage:	20.01 V
Revolutions°:	17140 rpm
electric Power:	911.1 W
mech. Power:	793.2 W
Efficiency:	87.1 %

Motor @ Maximum

Current:	35.31 A
Voltage:	20.51 V
Revolutions°:	17877 rpm
electric Power:	724.0 W
mech. Power:	626.0 W
Power-Weight:	579.2 W/kg = 262.7 W/lb
Efficiency:	86.5 %
est. Temperature:	56 °C = 133 °F

Wattmeter readings

Current:	70.62 A
Voltage:	20.93 V
Power:	1478.1 W

Motor @ Hover

Current:	21.42 A
Voltage:	21.17 V
Revolutions°:	13021 rpm
Throttle (log):	66 %
Throttle (linear):	74 %
electric Power:	453.4 W
mech. Power:	393.4 W
Power-Weight:	380.4 W/kg = 172.5 W/lb
Efficiency:	86.8 %
est. Temperature:	44 °C = 111 °F
specific Thrust:	2.76 g/W = 0.1 oz/W

Total Drive

Drive Weight:	1364 g = 48.1 oz
Thrust-Weight:	1.4 : 1
Current @ Hover:	42.84 A
P(in) @ Hover:	951.0 W
P(out) @ Hover:	788.8 W
Efficiency @ Hover:	82.7 %
Current @ max:	70.62 A
P(in) @ max:	1567.8 W
P(out) @ max:	1252.9 W
Efficiency @ max:	79.9 %

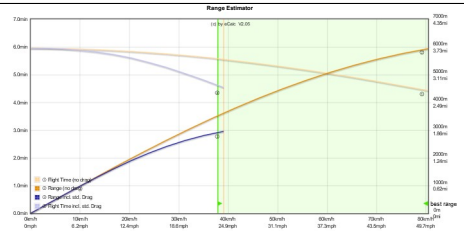
Multicopter

All-up Weight:	2500 g = 88.2 oz
add. Payload:	518 g = 18.3 oz
max Tilt:	34 °
max. Speed:	78 km/h = 48.4 mph
est. Range:	2956 m = 1.84 mi
est. rate of climb:	6.4 m/s = 1260 ft/min
Total Disc Area:	6.49 dm² = 100.6 in²
with Rotor fail:	

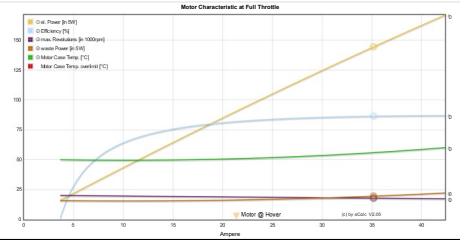
share

add to >> | Download .csv (1) | << clear

Range Estimator



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 measurment!**

for printing use Landscape format
* The manufacturer limitation is NOT monitored
°° Testdata with reduced accuracy

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