

Design Fundamentals:

Battery: (continuous / max. C) ThunderPower 5000SX (22/50C)	# serial: 12 S	# parallel: 1 P	Capacity: 5000 mAh	Field Elevation: 100 m ASL	Air Temp: 10 °C	Pressure (QNH): 1020 hPa
Controller: Phönix 110HV	Resistance: 0.001 Ohm	Continuous Current: 110 A	max. Current: 110 A	Resistance: 0.0026 Ohm	Volt per Cell: 3.7 V	Weight per Cell: 122 g
Motor: Manufacturer - Type (Kv in rpm) Scorpion Custom	Kv (w/o torque): 630 rpV	Resistance: 0.014 Ohm	Idle Current: 1.6 A	Limit (up to 20s): 4000 W	Case Length: 61 mm	Weight: 435 g
Ducted Fan: Aeronaut TurboFan 4000 (120mm)	thrust duct for: 100 % FSA	Flight Speed: 50 km/h	Gear: 1.00	<input type="button" value="clear"/>		

Approx. Values:

Warning:

Battery:	Load: 10.7 C	Voltage: 42.73 V	Rated Voltage: 44.4 V	Flight Time*: 5.61 min	mixed Flight Time: 9.54 min	Weight: 1464 g
Motor:	max. Current: 53.469 A	Voltage: 42.68 V	Revolutions: 26416 rpm	el. Power (In): 2281.97 W	mech. Power (out): 2173.66 W	Efficiency: 95.3 %
Optimal Efficiency:	Strom: 70.27 A	Voltage: 43.21 V	Revolutions: 26601 rpm	el. Power (In): 3036.2 W	mech. Power (out): 2897.94 W	Efficiency: 95.446 %
Ducted Fan:	Static Thrust: 4870 g = 47.77 N	Thrust in Flight: 3838 g	Jet Speed: 236 km/h = 65.6 m/s	Revolutions: 26416 rpm		
Entire Drive:	Weight: 2253.9 g (Battery + Controller + Motor + 10%)	Fan Efficiency: 2.13 g/W	Efficiency: 67.7 %			

Important Note:

Before flight recheck the max. current! If your Current, el. Power or RPM are over the manufacturers limits **your motor, controller and/or battery may take damage!** Thrust reduction due long ducting are **not** considered!

for printing use Landscape format

* Flight Time @ Full Power

** Testdata with reduced accuracy

Motor Data:

mech. Power [W], Efficiency [%], wast Power [W],
Revolutions [rpm], Motor Case Temperature Prediction [°C]

Motor Cooling:

poor

Power Scale:

automatic

