

Design Fundamentals:

Battery: (continuous / max. C) ThunderPower 5000SX (22/50C)	# serial: 12 S	# parallel: 1 P	Capacity: 5000 mAh	Resistance: 0.0026 Ohm	Volt per Cell: 3.7 V	Weight per Cell: 122 g	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	Weight: 150 g					
Motor: Manufacturer - Type (Kv in rpm) NeuMotors Custom	Kv (w/o torque): 825 rpV	Resistance: 0.012 Ohm	Idle Current: 1.5 A	Limit (up to 20s): 4500 W	Case Length: 100 mm	Weight: 620 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 21.2 C	Voltage 41.09 V	Rated Voltage: 44.4 V	Flight Time*: 2.83 min	mixed Flight Time: 4.81 min	Weight: 1464 g
Motor:	max. Current: 106.105 A	Voltage: 40.98 V	Revolutions: 32761 rpm	el. Power (In): 4348.55 W	mech. Power (out): 4151.98 W	Efficiency: 95.5 %
Optimal Efficiency:	Strom: 73.44 A	Voltage: 43.15 V	Revolutions: 34874 rpm	el. Power (In): 3169.15 W	mech. Power (out): 3039.69 W	Efficiency: 95.915 %
Ducted Fan:	Static Thrust: 7501 g = 73.58 N	Thrust in Flight: 6221 g	Jet Speed: 293 km/h = 81.4 m/s	Revolutions: 32761 rpm		
Entire Drive:	Weight: 2457.4 g (Battery + Controller + Motor + 10%)	Fan Efficiency: 1.72 g/W	Efficiency: 67.8 %			

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

