

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: Custom	Resistance: 0.0015 Ohm	Continuous Current: 170 A	max. Current: 170 A	Resistance: 0.0026 Ohm	Volt per Cell: 3.7 V	Weight per Cell: 122 g
Motor: Manufacturer - Type (Kv in rpm) Lehner 2280-9 HiAmp (833)	Kv (w/o torque): 877 rpV	Resistance: 0.0085 Ohm	Idle Current: 3.5 A	Limit (up to 20s): 115 A	Case Length: 111 mm	Weight: 800 g
Ducted Fan: Schuebeler DS-94 HDT (120mm)	thrust duct for: 100 % FSA	Flight Speed: 50 km/h	Gear: 1.00	<input type="button" value="clear"/>		

Approx. Values:

Warning:

Battery:	Load: 22 C	Voltage: 40.97 V	Rated Voltage: 44.4 V	Flight Time*: 2.73 min	mixed Flight Time: 4.64 min	Weight: 1464 g
Motor:	max. Current: 109.856 A	Voltage: 40.81 V	Revolutions: 34969 rpm	el. Power (In): 4482.97 W	mech. Power (out): 4237.56 W	Efficiency: 94.5 %
Optimal Efficiency:	Strom: 131.67 A	Voltage: 42.1 V	Revolutions: 35941 rpm	el. Power (In): 5543.51 W	mech. Power (out): 5248.8 W	Efficiency: 94.684 %
Ducted Fan:	Static Thrust: 7668 g = 75.22 N	Thrust in Flight: 6343 g	Jet Speed: 289 km/h = 80.4 m/s	Revolutions: 34969 rpm		
Entire Drive:	Weight: 2787.4 g (Battery + Controller + Motor + 10%)	Fan Efficiency: 1.71 g/W	Efficiency: 71.8 %			

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

