

Estimate Electric Motor & Prop Combo

Last updated: September, 18 - 2016

BATTERY : - Select an Item from the Dropdown-List or select "Custom" to enter your own data -

Series Parallel

Cell Capacity mAh Max Current A Volt per cell V Cell Weight oz g

Cell Resistance ohms Pack Voltage V Pack Weight oz g

Electronic Speed Controller ESC :

ESC Resistance ohms Max Current A ESC Weight oz g

MOTOR :

Kv rpm/V lo A @ V

Rm ohms Kt InOz/A Max Current A Motor Weight oz g

PROP :

Constants Kt Kp No of Blades :1 Gear Ratio

Diameter in cm Pitch in cm

Enter the Ambient Temperature and Altitude (or the Barometric Pressure) :

Temperature F C Altitude ft m Barometric Pressure inHg mbar

MOTOR Results :

Input Power W Volts to Motor V Static Current Draw A Motor Static RPM rpm

Output Power W Max Output Power W Static Efficiency % Max Efficiency %

PROP Results :

Prop Static RPM rpm Static Pitch Speed mph Km/h Unless it's a glider the Static Pitch Speed should be >2.5 times the Plane's Stall Speed

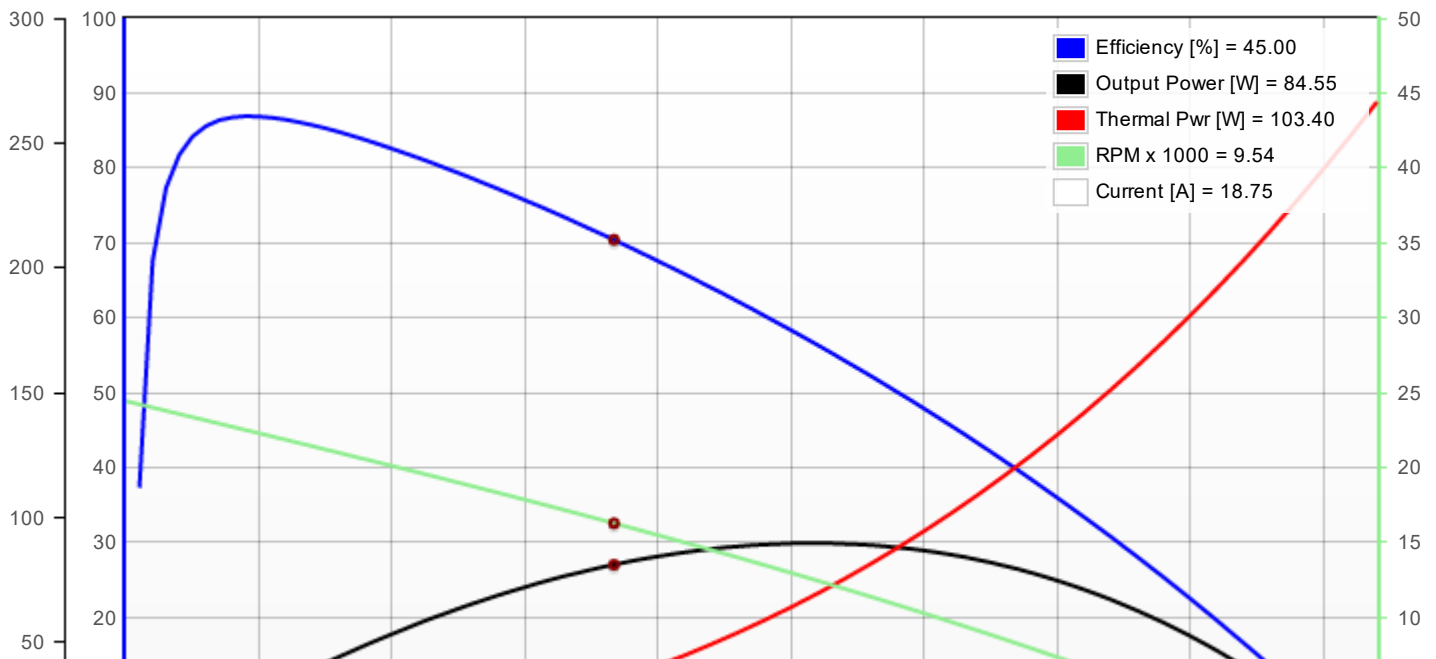
Prop Static Tip Speed MACH (max rec 0.92) Static Thrust oz g

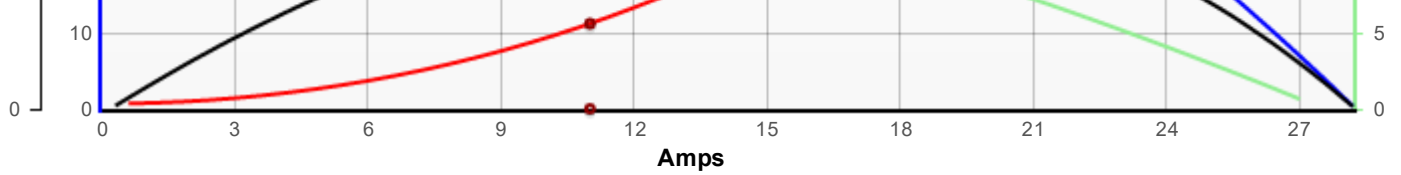
Approx Full-Throttle duration minutes Power System Weight +10% oz g Static Thrust should be >1/3 of All Up Weight To ROG, Static Thrust should be >1/2 of AUW

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Plot Efficiency - Output Power - Thermal Power and RPM vs Current based on setup above :

Efficiency (%)
 Output Power (W)
 Thermal Power (W)
 RPM x 1000





Disclaimer: The calculated values are only approximate.

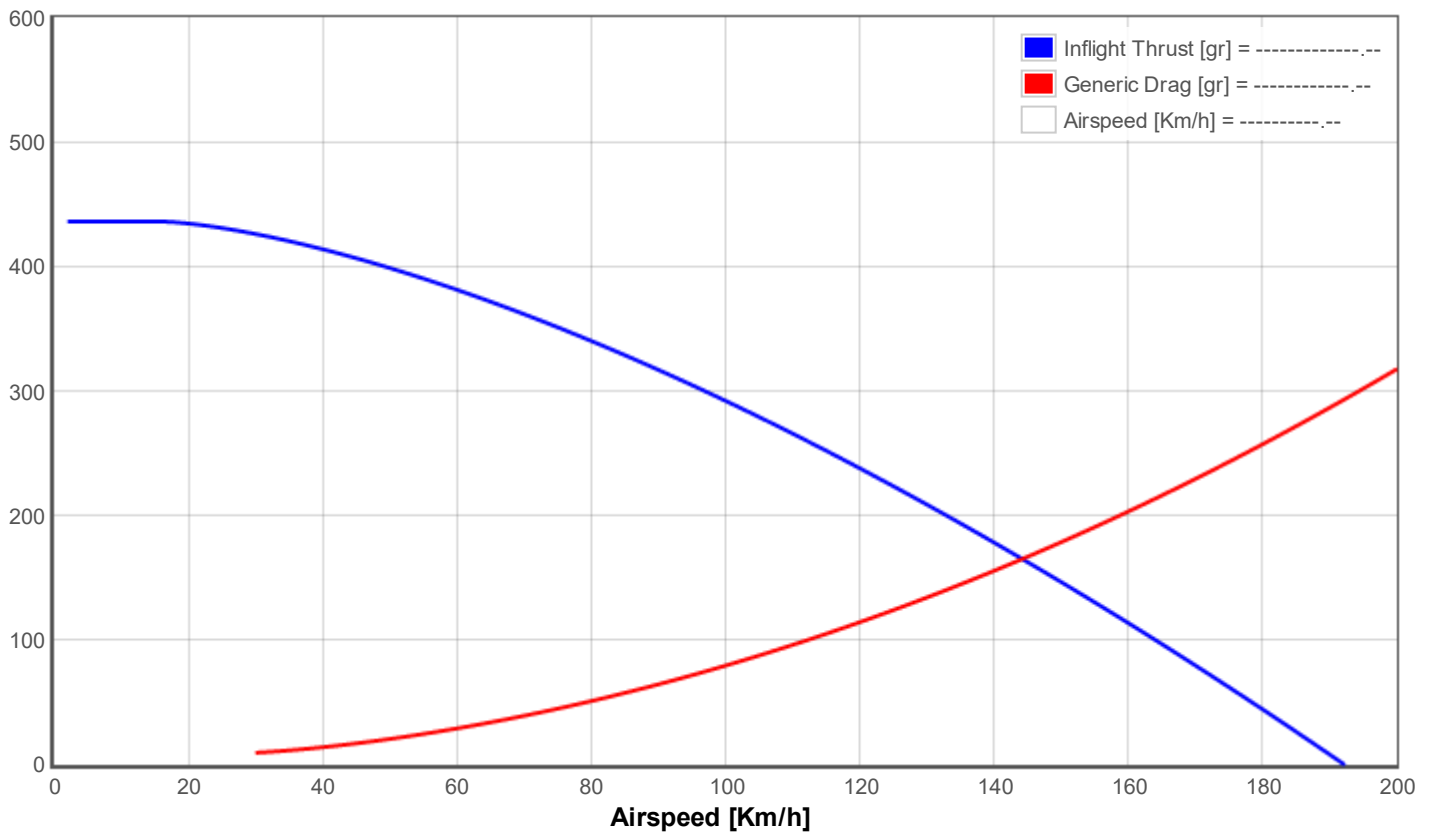
The calculations are based on certain assumptions of battery, esc and propeller performance.

Calculate Wing Loading & Stall Speed :

Wing Area: sq.in sq.dm
 Wingspan: in dm
 Aircraft Weight: ounces grams
 Wing's Max CL: CL

[Click To Calculate](#)

WING LOADING: oz/sq.ft g/sq.dm
 ASPECT RATIO:
 STALL SPEED: mph Km/h
 CUBIC LOADING: oz/cu.ft.



Estimated max level flight airspeed: mph Km/h
 CDoL

The values are only approximate.
Changing the value of CDoL will change the Zero-Lift Drag Curve

G Suite

Strumenti che accelerano
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Inizia ora

[TO MAIN PAGE](#)