

# RC Plane Design Report

## Input Parameters (mm / kg):

wingspan: 1800  
aspect\_ratio: 4.5  
weight: 12.0  
cl\_max: 2.1  
taper\_ratio: 1.0  
tail\_taper\_H: 0.5  
tail\_taper\_V: 0.5  
motor\_kv: 1200  
battery\_voltage: 11.1  
propeller: 9x4.5  
CD0: 0.02

## Design Results (mm / kg / N):

Wing Area (S) mm<sup>2</sup>: 720000.0  
MAC mm: 400.0  
Root Chord mm: 400.0  
Tip Chord mm: 400.0  
Horizontal Tail Area SH mm<sup>2</sup>: 136800.0  
Vertical Tail Area SV mm<sup>2</sup>: 68400.0  
Horizontal Tail Root Chord mm: 253.3  
Horizontal Tail Tip Chord mm: 126.7  
Vertical Tail Root Chord mm: 600.5  
Vertical Tail Tip Chord mm: 300.2  
Fuselage Length mm: 1215.0  
Fuselage Height mm: 151.9  
Fuselage Width mm: 30.4  
Lift L (N): 92.61  
Drag D (N): 18.08  
Stall Speed V<sub>stall</sub> (m/s): 11.27  
Static Margin: 0.1

Aerodynamic Center  $x_{ac}$  mm: 100.0

CG Position mm: 120.0

Neutral Point  $x_{np}$  mm: 160.0

$CD_0$ : 0.02