UNIVERSITÀ DEGLI STUDI DI NAPOLI FEDERICO II
Design of Aircraft and Flight technologies research group
DIPARTIMENTO DI INGEGNERIA INDUSTRIALE

Flight Loads: DroneVLA aircraft

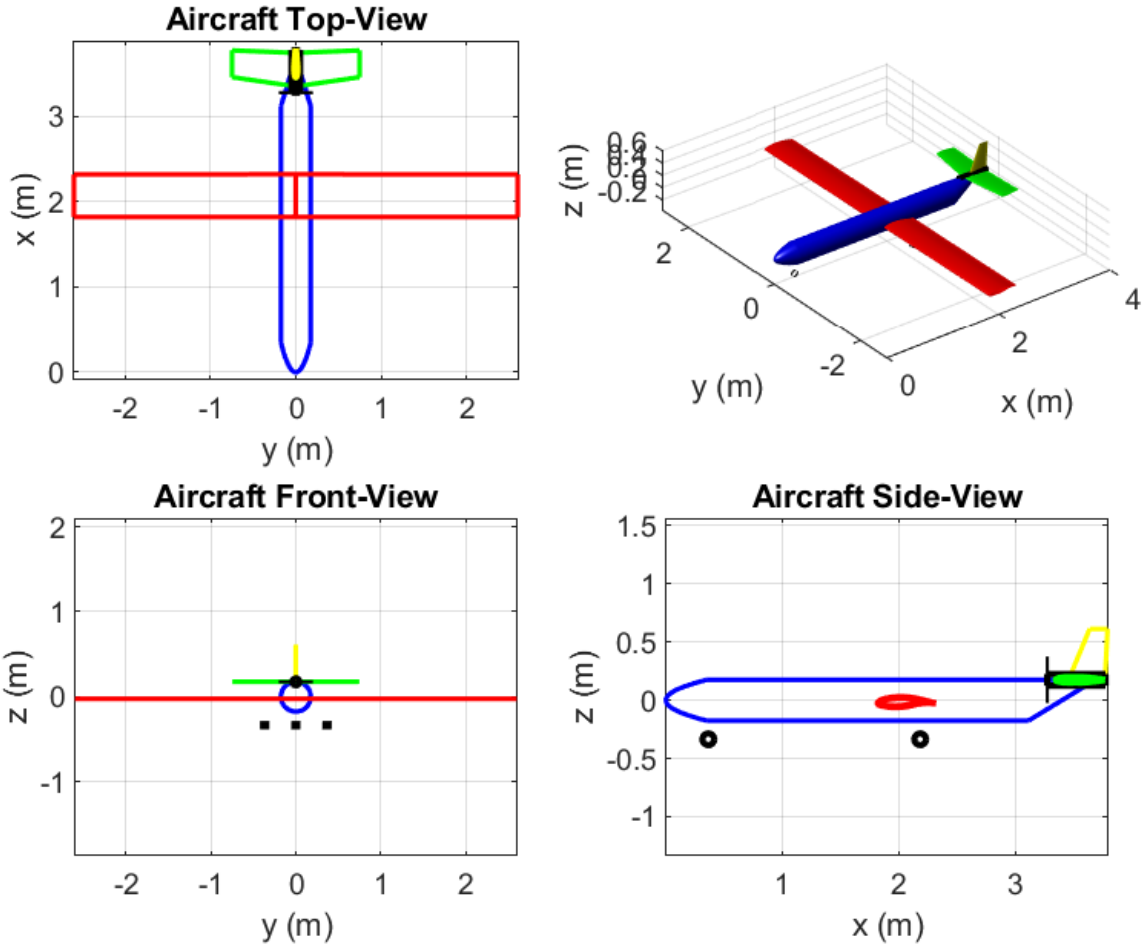

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Table of Contents

Chapter 1. Introduction

This document defines the SUBPART C - Structure - Flight Loads of the:DroneVLAThe boundaries of the flight envelope will be defined within this document. All speeds are calibrated airspeeds (CAS) (requirement 4.4 [1])and given in knots if not stated otherwise.All other units used are metric (SI units).The weights are given in mass units (kg) but the formulas require force units as input,therefore these are calculated in place wherever they are used.Note: The speeds defined within this document should be used for the placards,speed markings, aeroplane flight manual (limitations), load calculations and need to be verified by flight test.

Chapter 2. References

ADD HERE THE REFERENCES to regulations and further if needed CS-VLA-Amendment…. AMC…

Chapter 3. List of Abbreviations

ADD HERE list of abbreviations as a formatted table….to be created

Chapter 4. Aircraft data

Add here all the aircraft geometrical, aero and inertial and masses data useful for following paragraph

4.1. Geometry

The aircraft reference geometry is summarized in table:

4.2. Aerodynamic

The aircraft reference aerodynamic is in table:

Chapter 5. Design Airspeeds

This chapter defines the operating and design airspeeds as required for certification REFFFF

5.1. Maximum speed in level flight VH

According to flight tests [5] at maximum weight and maximum continuouspower at sea level conditions, the maximum speed in level flight has been determined:V_H=130\ kts

5.2. Stall speeds VS, VS0, VS1

ADD TEXTS:

5.3. Design manoeuvring speed VA

ADD TEXTS:

5.4. Flaps maximum operating speed VF

ADD TEXTS:

5.5. Flaps maximum operating speed VFE

ADD TEXTS:

5.6. Design cruising speed VC

ADD TEXTS:

5.7. Design dive speed VD

ADD TEXTS:

5.8. Demonstrated dive speed VDF

ADD TEXTS:

5.9. Never exceed speed VNE

ADD TEXTS:

Chapter 6. Altitude

ADD HERE ALTITUDE DETAILS

Chapter 7. Manoeuvring and Gust load factors n

ADD HERE Manoeuvring and Gust load factors n, figures, tables....ecc. ecc.

Chapter 8. V-n Envelope

ADD HERE V-n Envelope