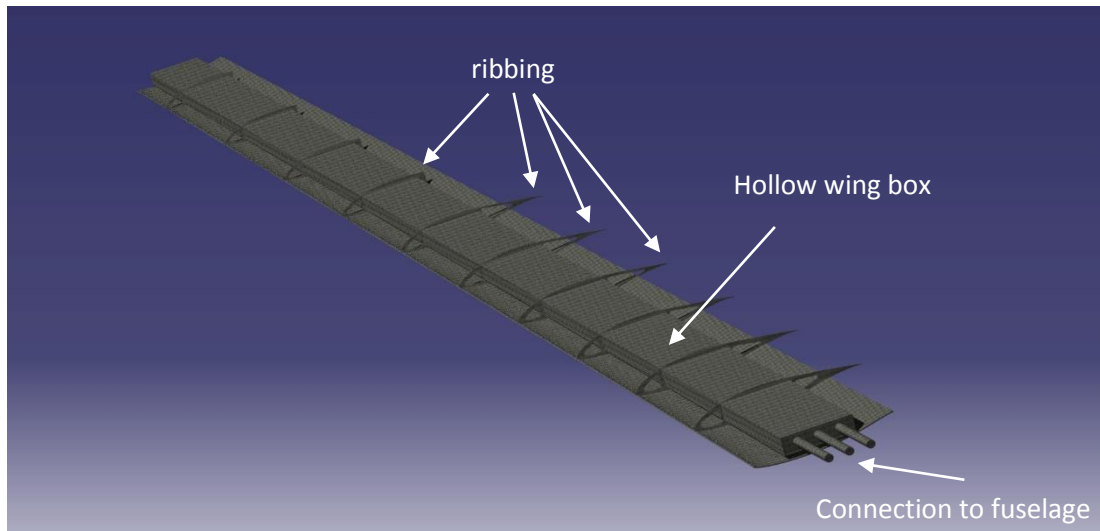


Structural Components

The main goal is highest possible stiffness with lowest weight. Therefore, I chose high modulus prepreg carbon material for almost every component of the structure. The several individual parts are glued together.

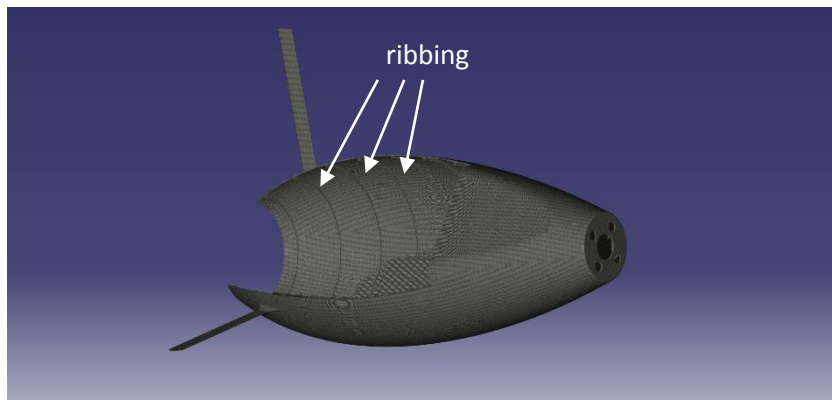
Wing

The wing consists of a hollow wing box and several ribbings in form of the airfoil. The wing box guarantees bending stiffness and torsional stiffness of the wing, which is needed to minimize the deformation of the wing and avoid buffeting. This inner structure is covered by the upper and lower bodyshell, which forms the outer wing form.



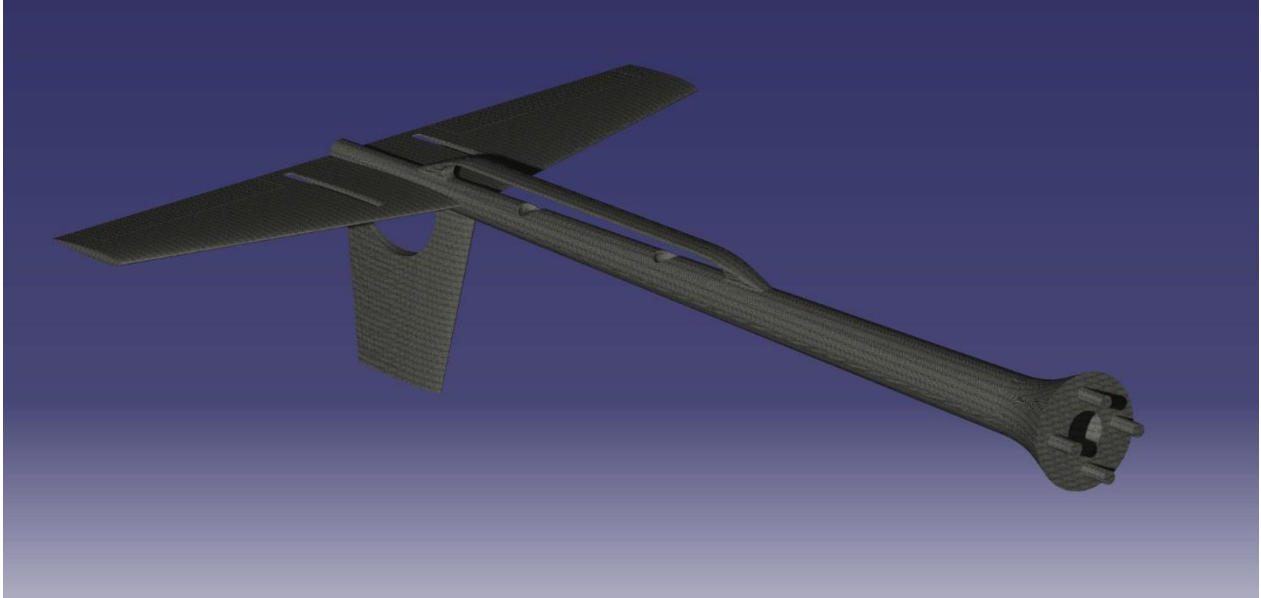
Fuselage

The fuselage's structure has a ribbing as well, which is commonly lightweight structure in fuselages and guarantees high stiffness and strength of the whole fuselage by a minimum of weight. The connection to the rear part consists of four holes, which are used to connect the rear fuselage part. The landing gear consists of a hollow rod, which has the form of an airfoil to achieve maximum stiffness with minimum drag.



Rear Fuselage with horizontal stabilizer and vertical tail

The rear fuselage has a similar structure as the fuselage, which consists of a bodyshell with ribbing. The horizontal stabilizer's and the vertical tail's structure is similar to the main wing's structure; a wing box with ribbing.



Cargo Bay

The cargo bay's structure consists out of a bodyshell with two attachments; one for the mounting of the battery pack and one for the payload. All of these components are manufactured out of prepreg carbon material.

