

PIPISTREL AIRCRAFT

The company specializes in aircraft design, innovative electric and hybrid aircraft, propulsion batteries at the highest aviation standards.



“Thanks to the robustness and reliability of SIMULIA Abaqus, the final results of the structural simulations were recognized by EASA.”

– Dr. Tine Tomažič, CTO, Pipistrel Aircraft

Challenge

The obligatory real-world testing of an aircraft to determine the natural frequencies of the whole plane and the associated structural damping is a very time-consuming and expensive procedure that takes months. Pipistrel Aircraft needed a solution to accelerate the process of performance tests and evaluate the reliability of materials before physical prototyping to reduce costs.

Solution

The company opted for Dassault Systèmes’ realistic simulation software SIMULIA Abaqus to simulate and evaluate the structural behavior of its new plane Virus SW Electro 128 in a virtual environment.

Benefits

Instead of using physical measurements to begin test flights, Pipistrel proved the natural frequencies are outside the fluttering region with SIMULIA Abaqus. These positive virtual testing results were recognized by EASA enabling the company a quicker path to definitive confirmation of the newly developed aircraft’s structural integrity much faster and at a low cost.