

PROPELLERS OF 3RD GENERATION

Since the beginning of aviation, propellers did not stop evolving. In leisure aviation, three main periods can be distinguished :

1rst generation

The 1st generation of propellers for the light aviation was constituted by wooden or metal propellers. In the 1940s - 1950, those fixed-pitch propellers were adapted more or less well to direct drive engines (as Continental, Lycoming, Volkswagen). They were mostly certified. To have a little better efficiency, the only solution was to use some rare variable-pitch, heavy and expensive.



2nd generation

In the 1980s - 1990, some composite propellers come on the market. Those propellers were lighter and showed a better efficiency. The ground adjustable pitch system marks a significant step forward for leisure aviation.



3rd generation

The years 2000 - 2010 saw the emergence of the 3rd generation of propellers. Thanks to the mechanical performance of carbon, new aerodynamic designs became possible: hollow profiles, scimitar blades, narrow chords, very large diameters, new blade positioning...

Numerical modeling studies enable us to optimize propeller performance throughout the aircraft's speed range. The result is propellers like E-PROPS, with adjustable pitch on the ground (fixed during flight), optimized traction and performance close to that of variable-pitch propellers in flight. You no longer have to choose between take-off and cruise performance.

Variable-pitch models, imperative for certain aircraft and certain applications, have become very light and very strong.

Performance gains are substantial. These so-called "3rd generation" propellers (such as E-PROPS) are gradually replacing all older-generation propellers, boosting both performance and safety.



Durandal : ground adjustable pitch



Glorieuse : inflight variable pitch