

JOB OFFER - Positive Aviation - Aerodynamics & Hydrodynamics Engineer

At **Positive Aviation**, we believe that aviation is a force for good for our society and our environment.

Positive Aviation was born based on two basic observations: civil protection authorities can perform in their mission to protect common and private assets, public health, nature and biodiversity only when equipped with the right means; and the iconic “Canadair” Super Scooper – a cornerstone of their firefighting activities – is no longer at the required level of reliability and availability.

Positive Aviation is an engineering and industrial company, developing and implementing modifications on second-hand ATR 72 transforming them into amphibious water scooper firefighter aircraft – the FF72. The pragmatic technical concept is based on proven technologies and combines the precious expertise of the aeronautical and the naval industries.

Starting with the FF72, Positive Aviation aims at being a key actor all along the aircraft lifecycle and companion to its operators.

Positive Aviation’s offices are located at the Toulouse Blagnac airport, inside the hangar H16. The H16 hosts Positive Aviation, the development plateau of the FF72 with its industrial partners and the assembly of the FF72-X1, a demonstrator that will make its first flight in early 2027.

Joining Positive Aviation means being part of the creation of a unique European seaplane design office, and living the adventure of a new aircraft development which will enter into service in 2029.

At Positive Aviation, we favor team work towards pragmatic and realistic solutions, and are proud to build on the rich aeronautical and naval legacy to **protect what is dear**.

About The Role:

Part of the Engineering team, you will be responsible for defining, modeling, and validating the aerodynamic and hydrodynamic performance of the aircraft. You will achieve this by combining advanced numerical simulations (CFD), empirical methods, and hands-on collaboration with specialized partners and testing facilities, ensuring seamless integration of fluid dynamics across all flight and water scooping phases.

In detail, you will:

- **Multiphysics Modeling:** Define, develop, and validate advanced multiphysics analysis methods and models combining aerodynamics, hydrodynamics, and wave/water interactions during taxi, takeoff, landing, and water scooping/dropping operations.
- **CFD Management & Partnerships:** Work hands-on with CFD (Computational Fluid Dynamics) partners to prepare surface meshing, set up solvers, execute high-fidelity simulations, and post-process aerodynamic/hydrodynamic data.
- **Aerodynamic & Hydrodynamic Database:** Build, maintain, and update aerodynamic and hydrodynamic datasets across the entire operational envelope, supporting the loads, handling qualities, and performance teams.
- **Trade Studies & Optimization:** Conduct trade studies to support hull/float design optimization, aerodynamic drag minimization, and water intake efficiency.
- **Testing Pyramid & Flight Test Support:** Contribute to the testing pyramid (flight/water test campaign), analyze experimental data, and perform correlation with simulation models.
- **Certification & Documentation:** Document and communicate methodology and results to relevant internal stakeholders and certification authorities in compliance with EASA CS-25 framework and seaplane special conditions.

About You:

- **Experience:** Strong background in aerospace engineering or naval architecture, with proven experience in aerodynamic and hydrodynamic modeling for aircraft, marine vessels, or seaplanes.
- **CFD & Numerical Tools:** Proven expertise in using high-fidelity CFD solvers (e.g., STAR-CCM+, Ansys Fluent, OpenFOAM, FINE/Marine, or equivalent) and mesh generation tools, particularly in free-surface multiphase modeling (VOF / water-air interfaces).
- **Programming:** Good programming knowledge and proficiency in Python, MATLAB, or equivalent for data processing, database generation, and tool development.
- **Flight Dynamics & Testing:** Solid understanding of fluid-structure interaction, aerodynamic/hydrodynamic testing techniques (wind tunnel, towing tank), and flight physics.
- **Soft Skills & Mindset:** Autonomous, curious, pragmatic, solution-oriented, and willing to work in a colocated, collaborative team environment. Driven by a passion for aeronautics and eager to learn and grow in a pioneering environment.

Overview of Key Responsibilities & Capabilities

Pôle d'intervention	Activités Principales	Livrables & Outils
Aérodynamique & Hydrodynamique (CFD)	Simulations CFD multiphasiques (air/eau), optimisation du hull/flotteurs, traînée aérodynamique et écoulements d'écopage et de largage.	Modèles CFD, maillages, rapports d'analyse hydro/aérodynamique, STAR-CCM+, OpenFOAM.
Base de Données &	Construction et mise à	Bases de données

Pôle d'intervention	Activités Principales	Livrables & Outils
Modélisation	jour des bases de données aérodynamiques et hydrodynamiques sur l'ensemble de l'enveloppe.	aero/hydro, scripts Python/MATLAB, modèles multiphysiques pour charges & perf.
Essais & Certification EASA	Dépouillement des essais, corrélation calculs/essais, rédaction des dossiers de justification CS-25.	Plan d'essais (bassin, soufflerie), rapports de corrélation et de certification (Certification Reports).

If you want to live the adventure of a new aircraft development, be part of a team of passionate experts, and evolve in a pioneering and flexible environment where care and hunger for growth are celebrated, join us!

Positive Aviation is an Equal Opportunity Employer. All qualified applicants will receive consideration for employment without regard to race, sex, gender, sexual orientation, age, color, religion, national origin, protected veteran status or on the basis of disability.

Feeling inspired and wanting to apply, send your CV and motivation letter to **career@positive-aviation.com**, we get back to you shortly.