



Hands-On Mechanical Engineer – Prototyping Specialist (M/F) **Permanent Contract (CDI)** **Onsite**

We are looking for a true “maker-engineer” capable of independently driving complex mechanical prototypes from rough idea to fully functional, tested, and iterated hardware — entirely in-house.

About us

The International Space Federation (ISF) is a research and development organization dedicated to scientific discovery, breakthrough advancements in technology, and education. Its foundation is built upon deep scientific research, the application of Harmonized Resonance Technology to a wide range of applications, the harnessing of quantum vacuum energy as a truly sustainable power source and providing novel forms of propulsion.

The team's research and publications are driven by the unification of scientific disciplines and promote collaboration with the global academic community. ISF's innovative approach is positioned to catalyze advancements in energy production and transportation, addressing the ecological challenges of our time with truly sustainable solutions. Join our mission to make the World a better place!

Responsibilities

You will own the complete cycle:

- Understand the need, challenge requirements, and be able to discuss technical trade-offs
- Proposing simple, robust, fast-to-implement mechanical solutions
- Fully design parts and assemblies in 3D CAD (Fusion 360 strongly preferred, FreeCAD accepted) + technical drawings
- Perform light simulations when needed (statics, kinematics, basic FEA)
- Manufacturing the parts yourself
- High-performance FDM 3D printing on Bambu Lab machines (X1C, P1S, A1 etc.)
- Full programming and operation of a simultaneous 5-axis CNC mill: DMG Mori DMU 50 (aluminum, steel, stainless, engineering plastics)
- Fitting, finishing, and modifications using manual mills, lathes, and hand tools
- Assemble, test, measure, iterate quickly until validation
- Document designs, technical choices, and test results

About you

Mandatory educational requirements: Engineering Master's degree (MSc / MEng – 5 years higher education) from a recognized engineering school

(e.g. INSA, Arts et Métiers, Centrale, Mines, UTC, ESTP, Polytech, ENSTA, ISAE-SUPAERO or equivalent international schools).

Kindly note, applicants with Bachelor/BTS/DUT/level 3-4 qualifications will not be considered.

Experience: Minimum 3 years (post-graduation) in mechanical design AND hands-on manufacturing of prototypes, ideally in innovative/start-up environments, robotics, motorsport, special machines, or very advanced maker background.

Must-have technical skills

- Expert level in Fusion 360 (design + assemblies + drawings + CAM/Manufacturing workspace) or extremely strong FreeCAD user
- Full autonomy programming and running a simultaneous 5-axis machining center (DMG Mori DMU 50 or equivalent – Heidenhain iTNC 530/640 or Siemens 840D experience)
- Precision machining of metals (aluminum, steel, stainless) with tight tolerances and excellent surface finish
- Advanced Bambu Lab 3D printing (profile tuning, material optimization, support strategy)
- Daily use of conventional shop tools and metrology (micrometers, calipers, height gauges, etc.)
- Ability to read, create, and respect functional dimensioning & tolerancing

Personal qualities

- Real “maker-engineer” DNA: you design AND build with your own hands
- Strong pragmatism and “make it work, make it strong” culture
- Safety-conscious, clean and organized in the workshop
- Excellent communication skills and ability to justify technical choices
- Natural curiosity and continuous learner

Nice-to-have

- Additional CAM software such as HSM, Siemens NX, Hypermill, Mastercam
- Advanced GD&T and 3D metrology (Faro arm, CMM)
- TIG welding (aluminum & stainless)
- Basic electronics / mechatronics integration

What we propose

- Salary: €45–60k gross/year depending on experience and portfolio quality
- Access to top-tier equipment (recent DMU 50, multiple Bambu Lab X1C, fully equipped shop)
- Passionate technical atmosphere
- Fast career evolution (lead mechanical engineer, product industrialization, project management)
- Mutuelle paid in full by the Company for employees and their children
- Performance bonus
- Holistic work environment
- Flexibility and autonomy in employee’s work organization

If you want to join, we invite you to send us your CV with a brief motivational introduction to careers@spacefed.com