## The Rocket Factory Augsburg (RFA)

The Bavarian start-up company Rocket Factory Augsburg (RFA) promises:

A Rocket with a last-mile service.

"With our orbital stage, we position our customers exactly where they want to go. Our last mile delivery service supports any mission profile from LEO to GTO and beyond to enable ambitious business and scientific goals." [1]

The rocket RFA-ONE is a three-stage rocket designed to launch small satellites and payloads of initially up to 1,300 kg into polar orbits. The vehicle will be 30m long and have a diameter of 2m. It is currently in development and set to launch in late 2023. The vehicle is supposed to transport small and micro-satellites into Low Earth orbits (LEO) as well as Sun-synchronous orbits (SSO). [2]





About the Rocket Factory Augsburg (RFA)

The Rocket Factory Augsburg was founded in 2018 with the vision to enable data-generating business models in space to better monitor, protect and connect our planet Earth. Against this background, the company's goal is to offer launch services of up to 1300 kilograms into low Earth orbit and beyond on a weekly basis at unmatched prices with assembly line production. With this, RFA wants to democratize access to space and reduce launch costs in the space industry. The RFA-ONE launch service combines three key competitive advantages: A customer-focused service with precise in-orbit delivery and a high degree of mission flexibility through its orbital stage at a highly competitive price made possible by superior staged combustion technology, low-cost structures, and usage of industrial components. [3]

The company was established as a corporate spinoff from OHB, via MT Aerospace Holding. In 2019 conversion into a public limited company followed, Stefan Brieschenk (COO), Jörn Spurmann (CCO) and Stefan Tweraser (CEO) became co-founders and Board of Directors members. Currently, the Board of Advisors consists of Hans Steininger, (CEO) of MT AEROSPACE, Marco Fuchs (CEO) of OHB SE, and Jean-Jacques Dordain as Chairman of RFA. [4]

After winning the German Aerospace Center (DLR) micro-launcher competition in April 2022, RFA received prize money of 11 million euros and was able to win the German government as an anchor customer for the first two flights. Satellite manufacturers, research institutes, and start-ups were then invited to apply for these flights via a DLR tender.

## RFA wins 11 Mio Micro-launcher competition

April 25 2022: "We are very pleased to have won DLR as an anchor customer and are honored by the confidence the German government is placing in us. We believe that buying services from newly emerging and commercially acting Space Transportation companies is the right direction for European spaceflight", says Jörn Spurmann, Board of Directors Chief Commercial Officer (CCO) at RFA. "Launching with us as in the frame of this DLR competition is a unique opportunity for many institutions and new space companies in Germany and we are working full throttle to offer a variety of innovative, reliable and affordable services – on the ground, to-orbit and on-orbit"[6]



Chairman of the Supervisory Board: Jean-Jacques Dordain (former ESA DG) in the middle, Board of Directors Jörn Spurmann (CCO)left and Stefan Tweraser (CEO) right. [6]

In the meantime, a jury has selected the seven missions/winners for the first launch of the RFA-ONE fight, which will fly in a sun-synchronous orbit at an altitude of 500 km. There, the satellites are deployed with high precision and can be put into operation quickly to fulfill their respective missions. The launch of the first flight is planned for the end of 2023.

The application period for the second RFA-ONE launch ends in April 2023.

The seven winners for the first RFA-ONE flight are ARTICA, SPACEMIND (NPC – New Production Concept SRL), Italy; Curium Two, PTS-Planetary Transport Systems, Germany, ERMINAZ, AMSAT Deutschland e.V., Germany, PCIOD, DCUBED, Germany, Separation Ring Mission, SPACEMIND (NPC - New Production Concept SRL), Italy, SpaceDREAM, Kinetik Space, Germany. [5]

The first launch of RFA-ONE is planned to take off from the Andoya Space Center in Norway at the end of 2023. Until then, the former Andoya Rocket Range will be expanded to a European launch site to be used by RFA and other European rocket start-up companies as well.

Just recently, on November 15, 2022, DLR and RFA signed an additional agreement at the Space Tech Expo trade fair in Bremen to use the test infrastructure at DLR's site in Lampoldshausen (Baden-Wurttemberg). With this agreement, the RFA team aims to carry out tests on the Helix engine for the development of their micro-launcher. To this end, RFA will rent and use the P2.4 test stand in Lampoldshausen. DLR will provide the infrastructure to supply the tests with cooling water and nitrogen, as well as the safety infrastructure and services. RFA is setting up its own test equipment, including the necessary supporting infrastructure. [5]

## References:

- [1] https://www.rfa.space/
- [2] https://en.wikipedia.org/wiki/Rocket\_Factory\_Augsburg
- $[3] \ https://www.dlr.de/content/en/articles/news/2022/04/20221116\_dlr-and-rocket-factory-augsburg-sign-agreement.html.$
- [4] https://www.rfa.space/about/]
- $[5] \ https://radioschwaben.de/nachrichten/augsburg-ausgebucht-dlr-waehlt-sieben-kunden-fuer-den-rfa-erstflug-aus/$
- [6] https://www.rfa.space/rfa-wins-11-million-euros-in-the-dlr-microlauncher-competition.