

Launchers  
Satellites



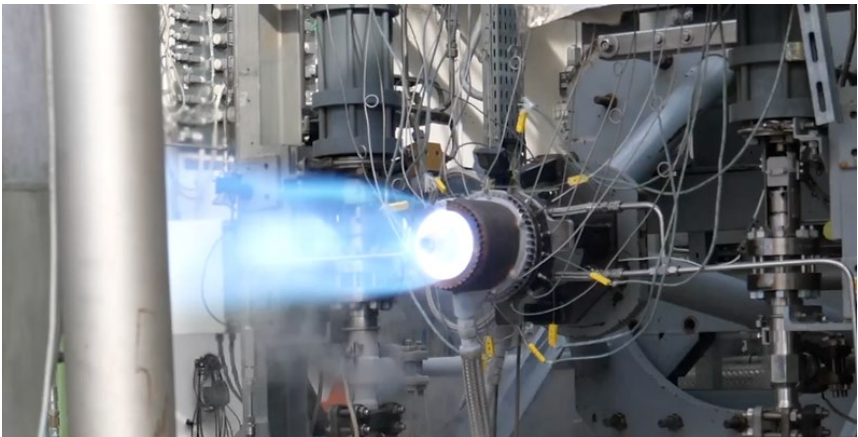
Pangea Aerospace develops disruptive propulsion systems to provide mobility to space and in space. We have demonstrated our expertise by developing in less than 3 years the first Methalox aerospike engine of 20kN (DemoP1) that was successfully hot fire tested in 2021. We are now developing a second aerospike engine, Arcos, that will have a thrust of 300kN. Our knowledge in chemical propulsion also extends to in-space propulsion through the development of UNYX, a 1N small sat propulsion system.

## COMPETENCIES & CAPABILITIES

Our main expertise resides in propulsion systems as we have proven our competencies by developing proven propulsion subsystems thanks to efficient regenerative cooling systems that are key to aerospike engines.

We have a team of specialists in Thrust Chamber Assemblies, Turbopumps, integration of subsystems within launch vehicles, fluidic systems, test benches, and propulsion components.

In addition to our engineering offices in Barcelona and Toulouse, we also have built test facilities for our in-space propulsion system and cold-flow checks of our engine subsystems in Lleida.



# PANGEA AEROSPACE FRANCE

## PRODUCTS & SERVICES

We currently have two product lines under development, ARCOS and UNYX.

Our core development is towards the conception of an aerospike rocket engine, ARCOS, which can be adapted to specific needs as it is highly scalable in terms of thrust, ranging from smaller engines of 20kN thrust to servicing the micro-launcher market with thrust between 300 and 700 kN. We expect our first engine to fly by the end of 2025.

We also can offer mobility in-space through our propulsion system U-NYX, providing chemical propulsion to help satellites or any OTV in their maneuvers.

Both products can be adapted to specific requirements, we provide services to study their integration. For our rocket engine ARCOS, we will also offer a pay-per-flight model for reusable flights in which we will manage the refurbishment of the engine once recovered.

## MAJOR SPACE PROJECTS & REFERENCES

A major accomplishment for Pangea Aerospace has been the successful hot fire test of our DemoP1 aerospike engine, the first one to use Methane and liquid oxygen as propellants. Consequently, we patented our regenerative cooling system.

We have been involved in contracts with ESA and CNES to study and prove aerospike technology, most notably we just hot fire tested at the DLR's test facilities injector plates under the ITAN contract with ESA. Pangea Aerospace has also been leading a European consortium for the RRTB EC project under which reusable technologies for small launch vehicles were developed.

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**TURNOVER** 1.4 M€

**WORK FORCE** 36 employees

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