



BIO-INSPIRED HEAT EXCHANGER FOR 3D PRINTING

PROJECT ACHIEVMENTS

- Development of a prototype gyroid-based heat exchanger and characterisation of its performance
- State of the art and synthesis of the strategy for topological multi-physics optimisation
- Design methodology and/or definition of process rules to be used during production of the demonstrator by additive manufacturing

3D CALOR PROJECT | 2021 - 2022

The 3D Calor project involves identifying the main technological challenges involved in producing heat exchangers using additive manufacturing and assessing the potential performance of integrating innovative architectures based on biomimetic principles.



1 Year



530 K€



TECHNICAL & ECONOMICAL IMPACTS

- Emergence of a new family of heat exchangers
- Access to new markets for FIVES CRYO

INDUSTRIAL APPLICATIONS

The project will contribute to the emergence of a new family of heat exchangers with innovative architectures exploiting the potential of additive manufacturing.

The experts at FIVES CRYO are highly experienced in the calculation and modelling of these exchangers, and the project may enable them to acquire new skills and thus become a benchmark in 3D design.

This new family of exchangers will give FIVES CRYO access to new markets.