

# Milestones



*"thanks to EIT we were able to improve and apply the novel Hybrid Channeling process towards manufacturing of a commercially viable and environmentally friendly product"*

-Pedro Vilaça  
Activity Leader, AeroMC2

**PROJECT START**  
01/2020

The project launched with the consortium kick-off meeting

**EIT FUNDING**  
01/2020

EIT funding through EIT-Manufacturing BP2020

**MARKET ANALYSIS**  
06/2020

Market analysis conducted, including post-COVID19 impact

**CFD AND CSM**  
10/2020

Computational Fluid Dynamics and Structural Mechanics analysis conducted

**DEVELOPMENT OF TOOLING**  
11/2020

Design and development of new Hybrid Channeling tools

**HC OF CASTED COMPONENTS**  
11/2020

Hybrid Channeling process development for casted components

**PATENTING OF CONCEPT DESIGN**  
12/2020

New concept designs and tool designs are being patented

**PROTOTYPE VALIDATION**  
03/2021

Future goal is to validate prototypes in a working environment, target TRL 7

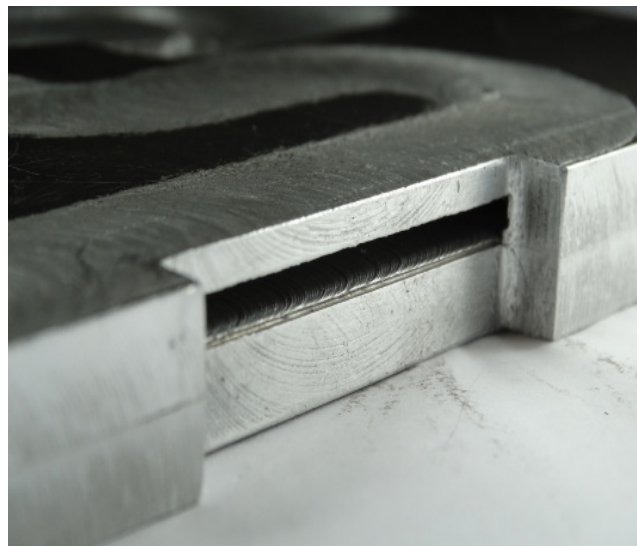
**EXPANDING NETWORK**  
06/2021

Expanding EU-wide network to support EIT Platform for Digital Value Network

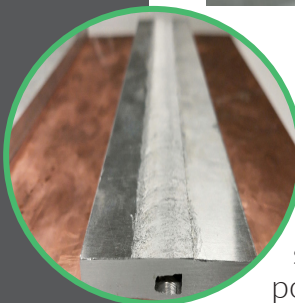
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Finland | France | Portugal

# Eco-Friendly Cooling Solutions

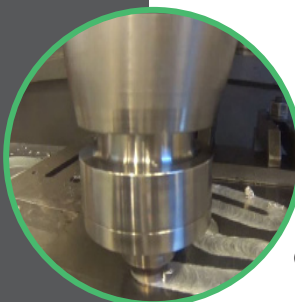


**SUSTAINABLE**  
LONG LIFE  
HIGH CORROSION RESISTANCE



Thermal management systems produced by AeroMC2 via Hybrid Channeling have long life and are resistant to corrosion. This results in a sustainable thermal management solution for the tailored needs of high power density electric propulsion system of electric aeronautics and other electric vehicles.

**GREEN**  
NO FUMES  
LOW CARBON FOOTPRINT



No consumables are needed and no fumes are produced during the manufacturing operations. Single operation channeling and welding reduces machine hours and has low carbon footprint.

**SMART INDUSTRY**  
DIGITAL SOLUTION  
AND OPTIMIZED SOLUTION



Hybrid Channeling is a digitalized manufacturing solution supporting manufacturing of optimized thermal management solutions for electric aeronautic needs, in line with digitalization era.

Want to know more?

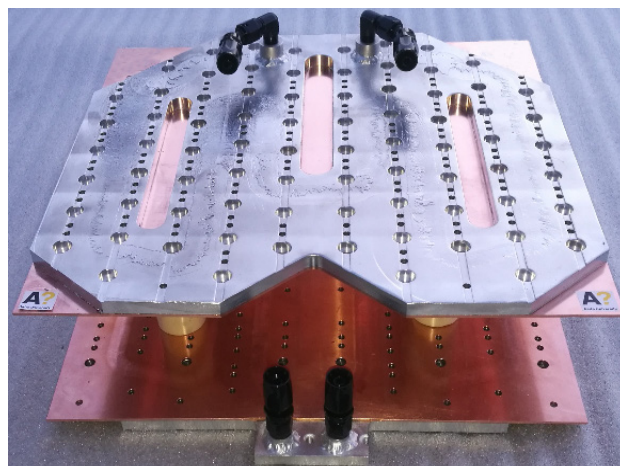
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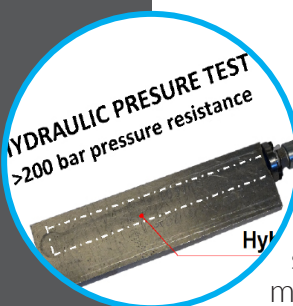
# Advanced Cooling Solutions

**OPTIMIZED**  
 STIFF AND LIGHTWEIGHT  
 CONFORMAL PATH



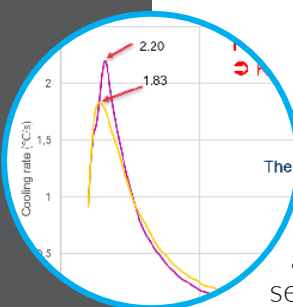
Ability to weld thin copper plates to aluminum blocks/ribs allow stiff and lightweight structure while benefiting from the top thermal management performance of copper.

**RELIABLE**  
 LEAK PROOF  
 HIGH BURST PRESSURE



High burst pressure, leak proof even under high pressure/flow rates makes the AeroMC2 solution very reliable. Structural stiffness and custom modular shapes makes the solution a perfect fit to address thermal management needs in demanding environments.

**EFFICIENT**  
 FAST RESPONSE  
 HIGH THERMAL EFFICIENCY



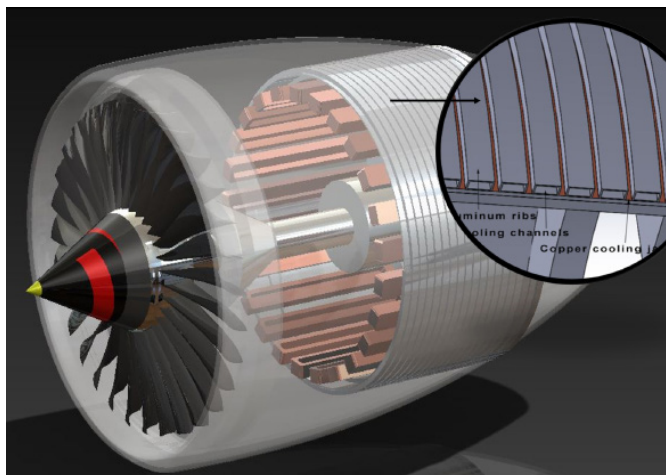
Experimentally proven faster response rate to sudden peaks in temperature and overall higher thermal efficiency than competitors expected to prove very beneficial for aeronautics sector and high power density electronics sector.

## Want to know more?

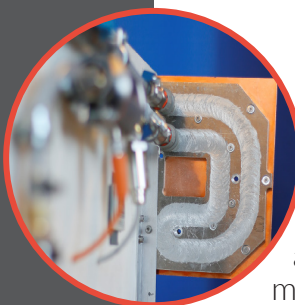
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# Conformal Cooling Solutions



**FLEXIBLE**  
ANY SHAPES/SIZE



Hybrid Channeling allows flexible pathways that can take any shapes and sizes, allowing for conformal cooling solutions. Complex shapes and pathways can be created easily, which allows higher flexibility than competitive manufacturing practices.

**AGILE**  
CHANNELING + JOINING  
IN SINGLE OPERATION



Creation of internal closed channels + joining to another component of same or different material in one single operation. Resulting in higher productivity and sustainable manufacturing solution.

**DIGITALIZED**  
COMPUTER  
CONTROLLED WITH HIGH  
REPEATABILITY



Hybrid Channeling is a computer controlled manufacturing process allowing high repeatability and faster production times. This allows for optimized pathways and reduces production cost.

## Want to know more?

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