



SUMMARY

Orion AM builds industrial 3D printing systems for high-performance polymers, delivering injection-molded strength for end-use parts.



MADE IN
Germany

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COMPANY PROFILE

Founded in 2018 and headquartered in Berlin, Germany, Orion Additive Manufacturing GmbH is an innovator in industrial 3D printing. We specialize in additive manufacturing utilizing high-performance polymers like PEEK, ULTEM, and PPSU. At the core of our technology is our proprietary Thermal Radiation Heating (TRH) process, which solves the traditional 3D printing challenges of porosity and weak interlayer bonding. This groundbreaking technology enables the production of end-use parts that achieve 99.95% density and match or exceed the strength of injection-molded components. We provide comprehensive solutions, including advanced 3D printing systems, printing services, and engineering consulting. Orion AM serves the aerospace, medical, and industrial sectors, delivering high-strength, temperature-resistant, and chemically resistant parts. Our mission is to elevate additive manufacturing to a reliable, scalable technology for the world's most demanding applications.

REFERENCES AND EXPORT ACTIVITIES

Orion AM actively participates in major European R&D initiatives, including the EU-funded AM-SPACE project alongside Fraunhofer institutes, advancing 3D-printed solar arrays for small satellites. We also collaborated with the European Space Agency (ESA) to supply 3D-printed PEEK parts for the Emirates Lunar Mission's Rashid rover. We export our systems globally to aerospace, medical, and industrial clients.

TARGET GROUP

Our primary target groups include aerospace and space OEMs requiring lightweight, high-strength polymer components for extreme environments. We also target medical device manufacturers and hospitals seeking to produce biocompatible, patient-specific implants (e.g., CMF and spinal) on demand. Additionally, we cater to industrial companies needing end-use parts with resistance to heat, chemicals, and mechanical stress.

PRODUCTS / SERVICES

Orion AM offers a comprehensive ecosystem of hardware, manufacturing services, and expertise. Our Industrial 3D Printing Systems include the A150 and the large-format A460, designed for processing engineering-grade thermoplastics. For healthcare, our M150 Medical Additive Manufacturing System is optimized to produce biocompatible, patient-specific implants and surgical tools. All our printers feature our proprietary Thermal Radiation Heating (TRH) technology to ensure superior mechanical integrity. Beyond hardware, we provide Additive Manufacturing Services, delivering rapid prototyping and end-to-end production of flight-ready aerospace components and industrial parts. Additionally, our Engineering Consulting services support customers with design for additive manufacturing (DfAM), material selection, and rigorous testing validation to help seamlessly integrate our 3D printing technology into their production workflows.

COMPETITIVE ADVANTAGES

Our primary advantage is our proprietary Thermal Radiation Heating (TRH) technology, which eliminates the porosity and delamination typical of standard FFF 3D printing. We produce parts from high-performance polymers (PEEK, ULTEM, PPSU) with 99.95% density and isotropic properties matching or exceeding injection-molded strength. This allows for true metal replacement and reliable manufacturing of certified end-use components.

IDEAL BUSINESS PARTNERS

We seek to partner with aerospace systems integrators looking for lightweight flight-ready components, and medical technology innovators aiming to scale on-site implant manufacturing. Ideal partners also include industrial OEMs in the automotive, rail, and energy sectors needing durable replacements for metal parts. We welcome collaborations with research institutions and global distributors of advanced AM technologies.

BUSINESS DELEGATION TRIP | LIGHTWEIGHT TECHNOLOGIES | SPAIN

Carried out by:



In collaboration with:

