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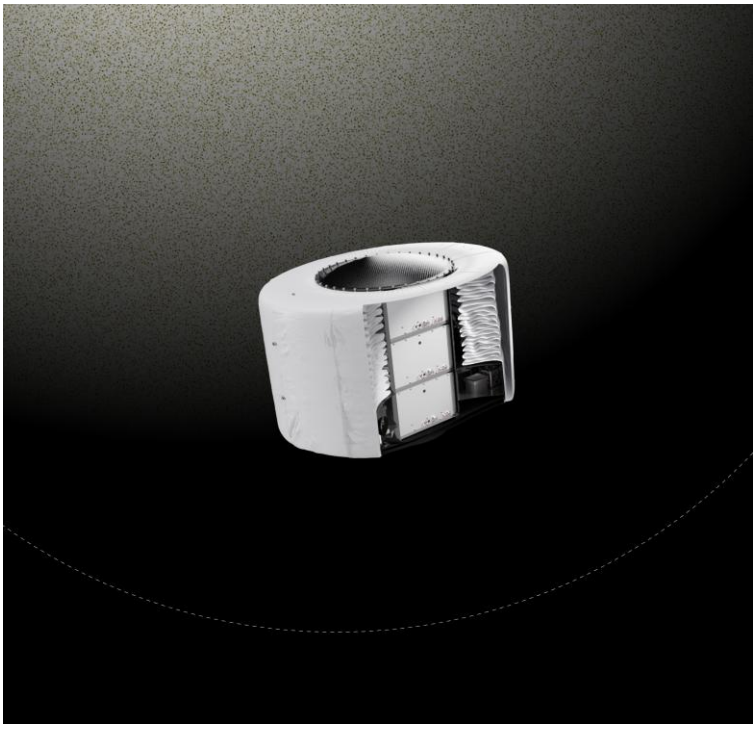
FOR IMMEDIATE RELEASE

HyImpulse Delivers Primary Structure and Components for ATMOS' PHOENIX Return Vehicle

Neuenstadt, Germany, 27.03.2025 – HyImpulse is proud to announce its successful execution of the structural manufacturing, and integration of critical components for the PHOENIX 1 return vehicle, developed by ATMOS Space Cargo (ATMOS). This innovative spacecraft is designed to provide microgravity on demand for durations ranging from three hours to three months, with a payload capacity of 100 kg and the capability to return cargo from space.



As the designated supplier of this early prototype, HyImpulse supported both the design of the fluid system and structural elements of the PHOENIX vehicle. This milestone marks a major achievement, as HyImpulse successfully designed, manufactured, and integrated flight hardware that will be launched aboard a SpaceX Falcon 9 rocket during the upcoming Bandwagon-3 mission, scheduled for NET April 2025.

Engineering and Manufacturing Contributions

1. Capsule Structures

HyImpulse played a critical role in the development of the PHOENIX 1 capsule by manufacturing key structural components in-house. The company produced a full-scale engineering model in 2023, followed by the flight hardware in mid-2024. The manufacturing process involved the hand-laminating of key structural parts of the payload and equipment bay. The structural elements were built using specially selected high modulus carbon fibers, carefully cut, placed, and laminated by hand layup. Following fabrication, all components were trimmed, assembled, and bonded together in-house at HyImpulse's facilities. The molds used in the process

were modified by HyImpulse to meet the required specifications. Quality control and structural validation ensured compliance with stringent requirements from ATMOS and SpaceX.

2. **Inflatable Heat Shield**

In addition to structural elements, HyImpulse was responsible for the engineering and assembly of the Ballute Inflation System for PHOENIX. This fluid system is designed to initially pressurize and inflate the vehicle's inflatable heat shield using gaseous nitrogen at controlled mass flows. The system comprises composite overwrapped pressure vessels (COPVs) along with two sets of two high-pressure solenoid valves. The development was divided into multiple work packages, including requirements definition, inflation analysis, conceptual design, component selection based on mass and compressed gas requirements, and the creation of an engineering model. HyImpulse designed the entire inflation system to ensure compliance with SpaceX's user guide regulations, including factors of safety and emergency measures. The company procured most of the required components, manufactured the necessary piping, and executed preliminary installation of the system.

Path to Flight

HyImpulse's contributions to the PHOENIX 1 prototype mark a significant step forward in ATMOS' journey toward spaceflight. With the successful completion of the capsule's structural components and heat shield inflation system, the company has demonstrated its capability to design, manufacture, and integrate flight hardware for orbital missions. The PHOENIX return vehicle is slated for launch on a SpaceX Falcon 9 rocket NET April 2025, marking the first time HyImpulse-built components will fly on an orbital mission.

This collaboration with ATMOS underscores HyImpulse's commitment to pushing the boundaries of aerospace engineering while reinforcing its position as a leading provider of advanced hybrid propulsion and spacecraft solutions.

About HyImpulse

HyImpulse Technologies GmbH is a leading German and UK based manufacturer and system provider of commercial launch vehicles for suborbital and orbital launch services. Our small satellite launch vehicles, with unique hybrid propulsion made of oxygen and paraffin, set new standards in the commercial space sector. With over 65 employees at sites in Neuenstadt, Ottobrunn, and Glasgow, we develop rockets to transport commercial payloads efficiently, sustainably, and reliably into low Earth orbits and beyond.

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About ATMOS

ATMOS Space Cargo GmbH develops cutting-edge technology to enable the return of cargo from space. Its services encompass microgravity experiments, commercial payloads and support for spacecraft reusability. ATMOS bridges the gap between Earth and low Earth orbit, driving industrial innovation with sustainable solutions. The PHOENIX capsule represents a groundbreaking platform for Earth-to-Space-to-Earth logistics, designed for a wide variety of applications.

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