

CT makes the leap into space

CT has decided to take a new step in its innovation and diversification strategy. The company has become the engineering service provider of the Spanish space tourism company HALO Space.

KEY POINTS

- **CT will be responsible for the technical management, engineering and integration of the HALO Space system, a global space technology and tourism project on which it is collaborating with QPAS for high-level Technical Management and Consulting, and with the companies Aciturri and GMV as top-level partners of the HALO Space industrial consortium, in which Aciturri manufactures the capsule and GMV performs the Mission Planning and Ground Control systems.**
- **The first unmanned test flight is scheduled to be completed in early December 2022, and the first commercial flight is slated for 2025.**
- **CT will be responsible for designing a pressurized capsule whose diameter will be 5 m, capable of carrying 8 passengers and one pilot to an altitude of 40,000 metres and return to land on Earth after a flight of approximately 6 hours. The capsule will be propelled by a helium balloon in the ascent and will descend with parachutes.**

Man has always dreamed of conquering space. The history of space conquest is already more than 70 years old, but it has only been in this new century that the possibility of putting it within reach of "ordinary" citizens has been proposed.

The companies of two entrepreneurs and "disruptors" were created under this philosophy: Virgin Galactic, by Richard Branson and SpaceX by Elon Musk. In Spain, HALO Space was founded in 2021 and aims to take more than 10,000 people to space in the next decade, a milestone that will be made possible thanks to the collaboration of CT, a Spanish company that specialises in engineering services that has been working in the aerospace sector for more than 30 years.

In the history of this Getafe-based company, headed by Jesús Prieto, challenges form part of its DNA. In this new challenge, CT is leading the project in all phases as an integrator, from the design of the capsule to manufacturing, system certification, testing, prototypes and the first flight.



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HALO Space's approach differs markedly from the other proposals. The first is that a balloon will propel a pressurized capsule, with room to transport up to 8 passengers, without the need for space suits, to an altitude of 40,000 metres, which will give these new space tourists a view of the darkness of space and the curvature of the Earth. Another difference is that the trip will last several hours.

The CT's Program Director, Dennis Quast, explains that this challenge consists of "participating in the development of a capsule propelled by a balloon, capable of reaching this altitude in about 2.5 hours, and remaining in the stratosphere for another 2 hours, equipped with a variety of systems aimed at achieving a comfortable, safe and sustainable journey. It's a unique experience for our team, and an enormous challenge. To address this, we have gathered all of our know-how and capabilities in the different sectors in which we operate, such as aerospace, rail, automotive, etc. In our role as the integrator of the different systems, we will have the chance to work hand in hand with leading international technology partners from different sectors, which will give us valuable experience for future projects."

The trip also bears the stamp of sustainability. While the other space tourism projects use rocket-type launchers, the HALO Space system is powered by a balloon filled with non-polluting helium gas, and the descent is done with the help of a parafoil-type manoeuvrable parachute.

The test capsule will be ready for the first test flight before the end of 2022, to test the different systems in the different phases of the flight, air-to-ground communications, video, descent control, etc. After up to two and a half years of planned testing, the first commercial flight is expected in 2025. To achieve this, HALO Space explains that their project starts with a solid technological base, calling on the top specialists in the development of this technology.

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