



Hesphera GmbH

Company Overview

Hesphera is an innovative company dedicated to advancing hydrogen storage and related technologies. Originally founded to produce and sell spherical high-pressure tanks for hydrogen, Hesphera has since expanded its scope in response to market developments. Today, the company also undertakes engineering services, project development, and the establishment of partnerships across the supply chain to prepare for the future hydrogen market.

The company's flagship product is a spherical high-pressure hydrogen tank with no comparable solution currently on the market. This tank achieves an outstanding weight ratio of 5 kg tank per 1 kg hydrogen stored, compared with the state-of-the-art ratio of 15/1. This represents a significant breakthrough in hydrogen storage efficiency, particularly relevant for mobile and aerospace applications.

Hydrogen Involvement

Hydrogen is at the heart of Hesphera's mission. The company was founded to commercialise its proprietary spherical high-pressure tank for hydrogen and is now expanding into engineering, project development, and supply chain partnerships to support renewable energy and hydrogen projects.

Hesphera's tank technology is designed for superior weight efficiency and high-pressure capability, making it especially attractive for sectors where weight and volume constraints are critical, such as aviation and decentralised energy systems. By offering engineering and partnership-building services, Hesphera positions itself as a catalyst for the broader adoption of hydrogen technologies.

Key Strengths

- Unique spherical high-pressure tank technology: currently no comparable solution on the market.
- Outstanding weight ratio: 5 kg tank per 1 kg hydrogen versus the current 15/1 state-of-the-art.

- Expanded scope: beyond tank production to include engineering, project development, and supply chain partnership building.
- Focus on future hydrogen markets: readiness to support renewable energy, hydrogen storage, and mobility sectors.
- Innovation for lightweight applications: particularly suitable for mobile and aerospace use cases.

Applications & Market Position

Hesphera targets markets where high-pressure, lightweight hydrogen storage is essential, including:

- Renewable energy projects requiring efficient hydrogen storage.
- Small aircraft development and operation, as well as small airfields looking for hydrogen-based solutions.
- Other industries seeking high-efficiency hydrogen storage and engineering support for future hydrogen infrastructure.

The company positions itself as an innovative partner in hydrogen storage and engineering, combining breakthrough tank technology with project and supply chain expertise to help shape the emerging hydrogen economy.