



SOLID HYDROGEN STORAGE



**Your turnkey solution
for mobile
& stationary applications**

MINCATEC Energy, solutions for a new energy world

www.mincatec.com / www.mincatec-energy.com



MINCATEC Energy is positioned as an active player in an efficient and secure energy transition.

Innovation is at the heart of our strategy for sustainable, high-performance, safe and more environmentally friendly technological solutions.

From our site in Belfort, we deploy our development and industrialisation activities for all our activities, including the production of low-pres-

sure metal hydride hydrogen tanks. We carry out all studies and integration projects for hydrogen electric traction/propulsion systems dedicated to mobility (land & sea) and for stationary applications.

MINCATEC Energy has an R&D test centre dedicated to the development and characterisation of hydrogen tanks and to the validation of electric - hydrogen traction/propulsion chains or complete energy production chains.



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Safety: Solid storage with a residual pressure of 10 bar at 20°C



No H2 leakage, no indirect greenhouse gas emissions



Unrivalled life time: no capacity loss



Compact & modular design: can be packed and containerised



Simple usage: no compression, reduced operational costs



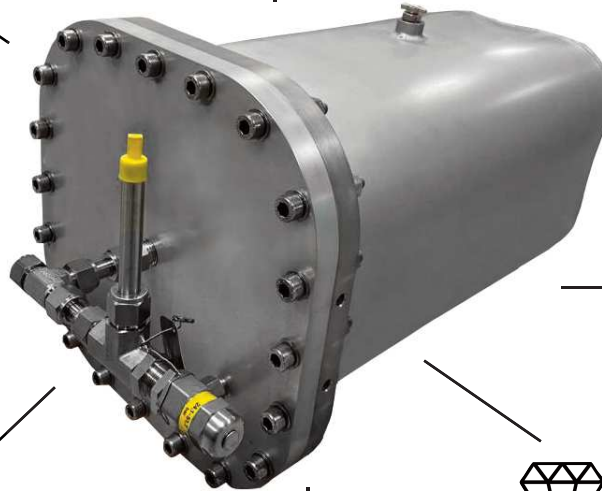
Cold generation during H2 release: can be used by adjacent fuel cells



No rare earth: just industrial metals



Produced in **France**



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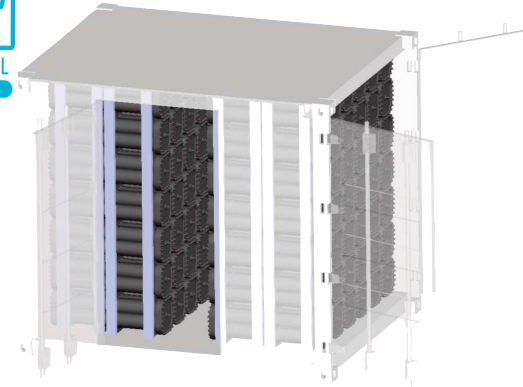
ENERGY SELF-CONSUMPTION SYSTEM

The hybrid energy self-consumption system uses solar panels to capture and store surplus renewable energy in the form of hydrogen for off-season use.

Stand-alone system integrates an electrolyser, low-pressure hydrogen tanks, a traditional lithium-ion battery, a fuel cell and electrical converters.

EXAMPLE HOME STORAGE

- H2 storage capacity: from 2 to 6 kg
- power: from **6 to 9 kW**



INDUSTRIAL ENERGY STORAGE

Solid-state hydrogen storage allows the creation of storage stations for intermittent, non-controllable energies such as wind or solar power.

Operational safety, the absence of a compression stage and the absence of leaks are important advantages of this technology for long-term storage.

EXAMPLE INDUSTRIAL STORAGE

- 168 tanks
- total energy stored: **2.8 MWhe**

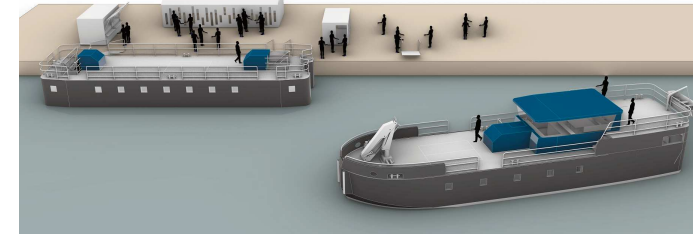
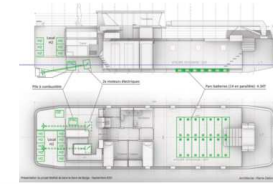
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MINCATEC Energy tanks can be integrated into all types of vehicles for carbon-free mobility:

- airport vehicles
- public works and handling vehicles
- small light vehicles: road, last kilometers
- agricultural and viticultural vehicles
- refrigerated vehicles
- maritime and river boats



MHYTIC PROJECT

Realization of a hydrogen demonstrator in partnership with the UTBM co-financed by the BPI - BFC Region. Integration of a 1 kg tank of solid hydrogen and the energy control & management system of MINCATEC Energy in an urban vehicle.

- range: **180 km**
- charging time: **< 10 mn**

BARGE H2 PROJECT

First travelling art centre on the Seine axis, comprising a double hydrogen-powered boat.

Energy autonomy for 2 days of navigation and 4 days of static events : **950 kWh**.

No expensive high pressure recharging stations on the Seine.



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To build a zero-emission, recyclable, sustainable, safe and responsible energy future.



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