We help the world become CO$_2$ neutral - with

CLEAN ENERGY STORAGE

Renewables are key to energy transition

... but renewables need to be stored

This is where comes in
We store green hydrogen from renewable sources

GREEN. SAFE. COMPACT.
HY2 Product Suite

**HY2MINI**

- **H₂**: 10-25 kg
- **170-425 kWh** electrical

**HY2MEDI**

- **H₂**: 60-120 kg
- **1-2 MWh** electrical

**HY2MEGA**

- **H₂**: +260 kg
- **4,5 MWh** electrical
We are part of GKN Powder Metallurgy, the world’s #1 in powder metal solutions.
Best positioned to tap into a billion plus market

> 400 Engineers worldwide

Strong strategic partnerships

Digital Culture

Hydrogen Pioneer Team

8 years of hydrogen expertise

50+ GKN Top Talents

16 pilot demonstrators worldwide in 2021
Our solution for decentralized green hydrogen storage
HY2MINI demo unit
Bonn, Germany
(e-car charging)
HY2MEGA
demo unit
Bruneck, Italy
(XXX)
Specific demands & requirements in regions
Green Hydrogen Roadmap Europe

- 1GW (2019)
- 6GW (2020-2024)
- 40GW (2025-2030)
- 10m tons green hydrogen (2025-2030)
- 1m tons green hydrogen (2020-2024)

GKN HYDROGEN
Unique Features

**GREEN**
All-in-one solution for zero-emission power supply.

**SAFE**
Solid-state hydrogen storage provides safety through design.

**COMPACT**
15x smaller size than 40bar hydrogen gas tanks.
100% Recyclable
Highly Safe

✓ Low Pressure - inherent
✓ Low Temperature
Low Pressure

- no compressor needed

- 20°C
- 60°C

Electrolyzer

Metal Hydride Storage

Fuel Cell

40 bar

1-2 bar

H₂

SAFE
Ultra Compact

15x smaller size than 40bar gas storages

Storage of 1 kg hydrogen – comparison storage sizes

GAS-TANK
310 l / 40 bar / 20 °C

GAS-TANK
50 l / 300 bar / 20 °C

METAL-HYDRID-TANK
17 l / 40 bar / 20 °C
Long Lifetime

- High # cycles
- No degradation
- No hydrogen loss over time

99% capacity after 3,500 cycles
GKN Powder Metallurgy has created a digital culture.

- > 1,800 connected machines
- > 800 digital connected measurement stations
- 6,600 digitally connected employees
- Real time & on demand, personalized act on data
A fully connected solution for our customers

- 73 variables read every 5 seconds
- 70 parameters subscribed “on change event”
- 3 edge devices for data collection into Cloud
- 1 central data storage for advanced analytics
Scan to get access to our demo unit

Digital Roadmap

Energy as a Service
Autonomous Systems

Services
Software

Smart Cube

Our Future
Technology Demo 2021

16 systems in 2021
Commercialization

**2021**
- Develop & Launch

**2022**
- Optimise
  - Focus application / markets
  - + Partnerships

**2023**
- Scale
  - Growth with select customers
  - Scale with HY2 System

**Strategy**
- Focus application / markets
  - + Partnerships
- Growth with select customers
- Scale with HY2 System

**Target Markets**
- Countries: Europe, USA, UK, Australia, Canada, India, China

**Extension**
- Countries: India, China
Contact us

Let's explore how we can adapt our system to your individual storage requirements and stop climate change.

info@gknhydrogen.com

Address Pennefeldsweg 11, 53177 Bonn, Germany
Phone +49 228 93350

Follow our journey