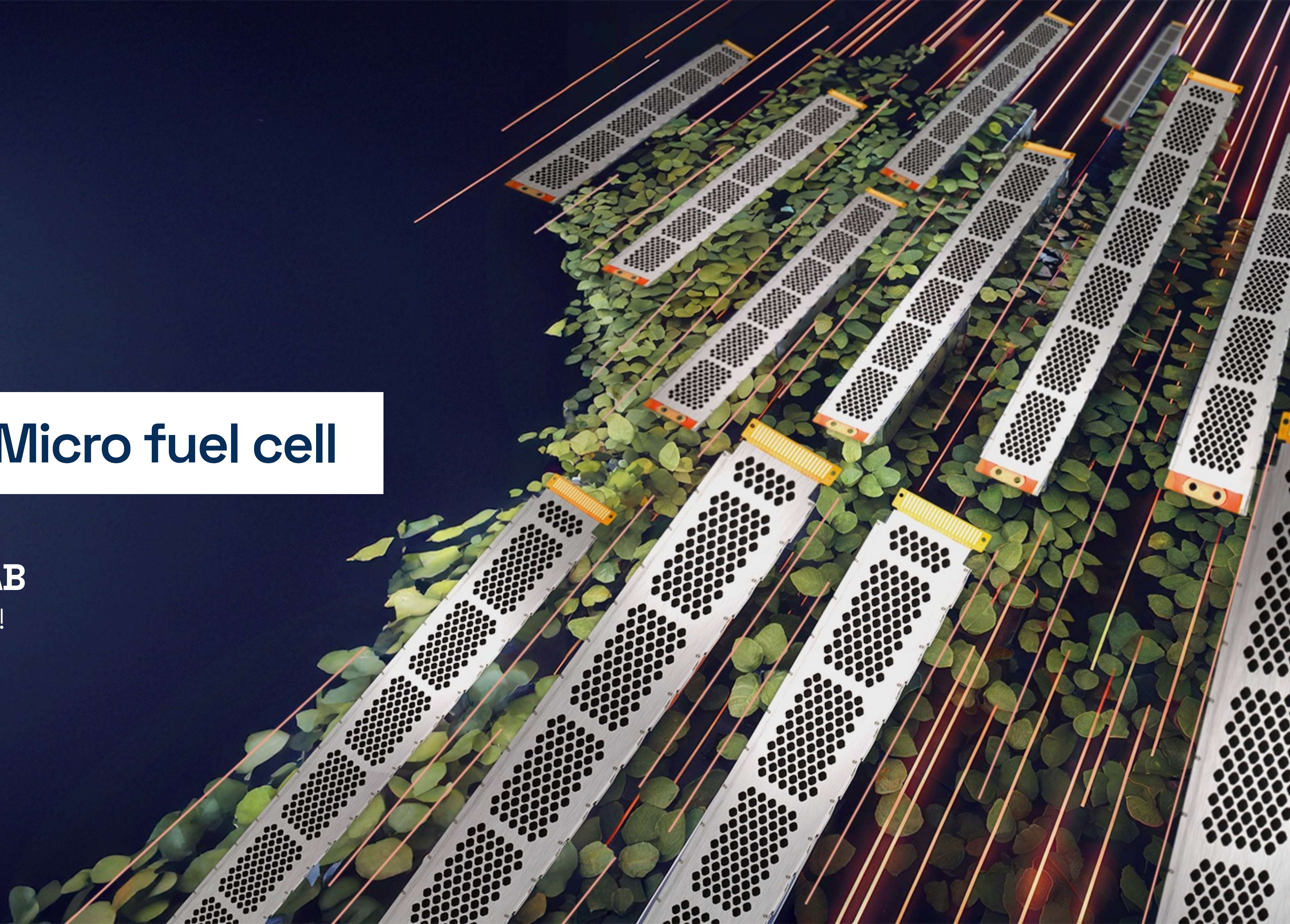




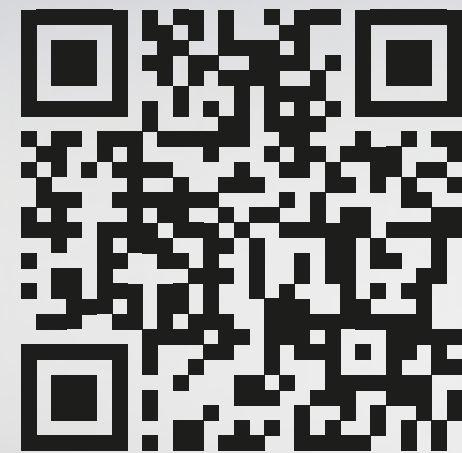
Lamina[®] Micro fuel cell

FCT Sweden AB

The Future is Now!



Download this book in digital PDF here:



Story of



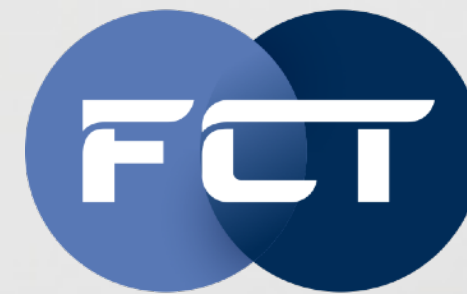
The technology has been developed in a research project at the KTH Royal Institute of Technology in Stockholm, Sweden.





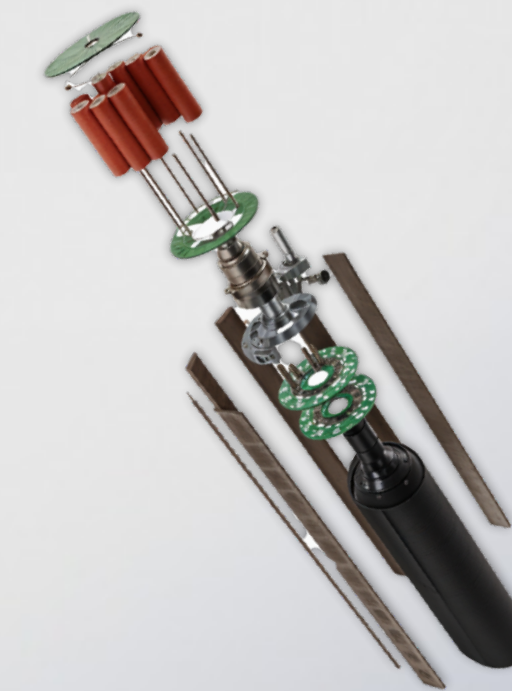
Our technology comes from one goal:
Creating a hydrogen-powered micro fuel cell according
to a technically unique concept and after many tests,
hard work and dedication the project was a succes.
The Lamina[®] Micro fuel cell was born.





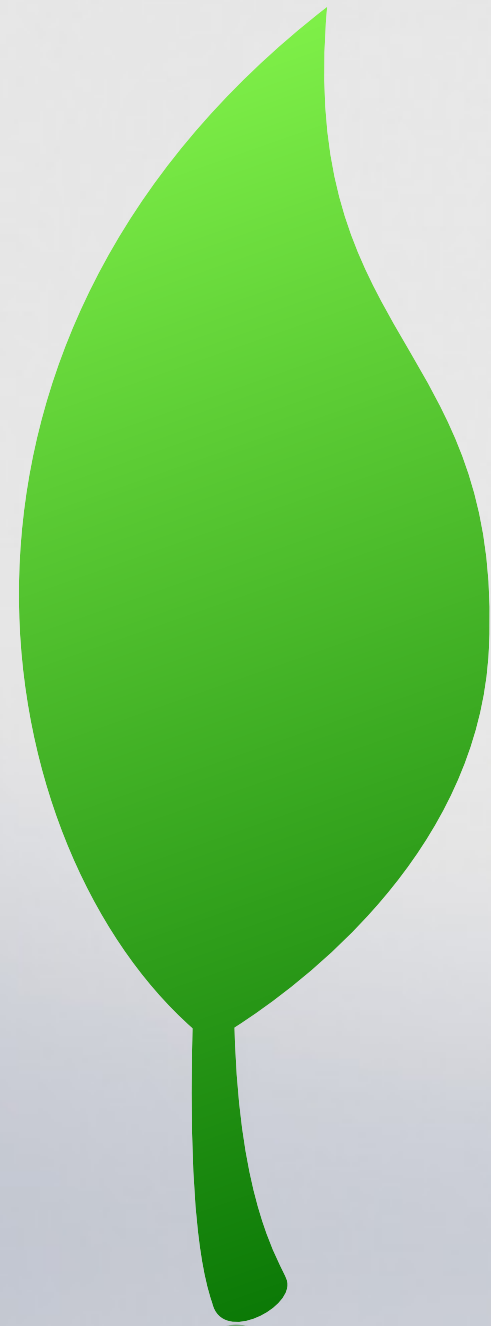
The Lamina[®] Micro fuel cell found its home in a privately owned company, which rests on a solid foundation with many different patents.
FUEL CELL TECHNOLOGY
SWEDEN AB





Our micro fuel cell Lamina has a unique design that allows it to be mounted in spaces where no other fuel cells can fit.





With the Lamina[®] Micro fuel cell, FCT takes the lead in taking the next big steps towards sustainable energy based on hydrogen.

Our Motivation!



Hydrogen will become a competitive energy carrier.



A hydrogen market is emerging for 10W to 3kW applications.



Activity in hydrogen applications is an asset for sustainability reporting.



Fuel cells excel when battery energy density or recharge time is an issue.



FCT launched an AGV demo to showcase tech readiness and integration.

Your Technical Benefits



Fast Rechargeable

Seconds v.s. hours
with a battery.



Light Weight

Light Weight compared
to low cost Battery.



Flexible in Powerdesign

Assures right sizing Fuel Cell system so
it can run in optimum operating point.



Base-load Power

Fuel Cell provides base-load power for operation,
Battery pack can handle high-load and peak-loads.

Introducing:

Lamina[®] Micro fuel cell

Introducing:

Lamina[®] Micro fuel cell

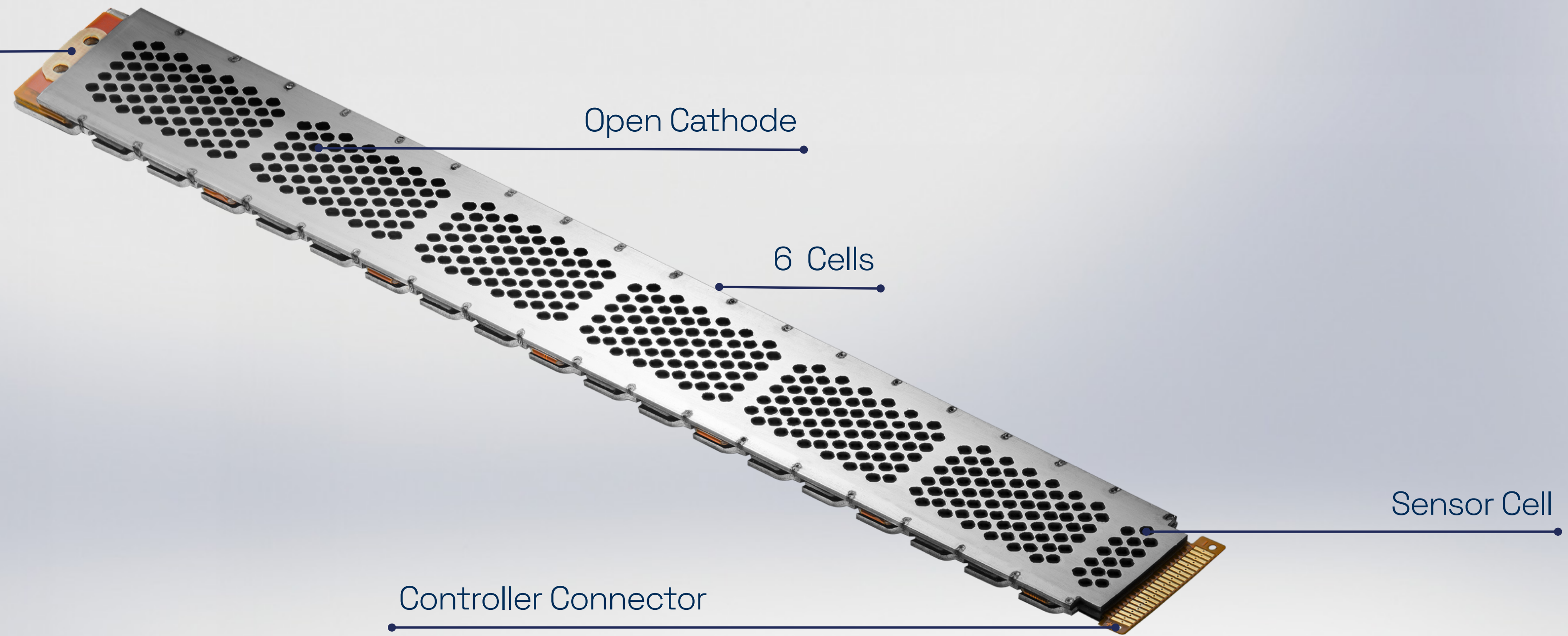
Anode In

Open Cathode

6 Cells

Sensor Cell

Controller Connector

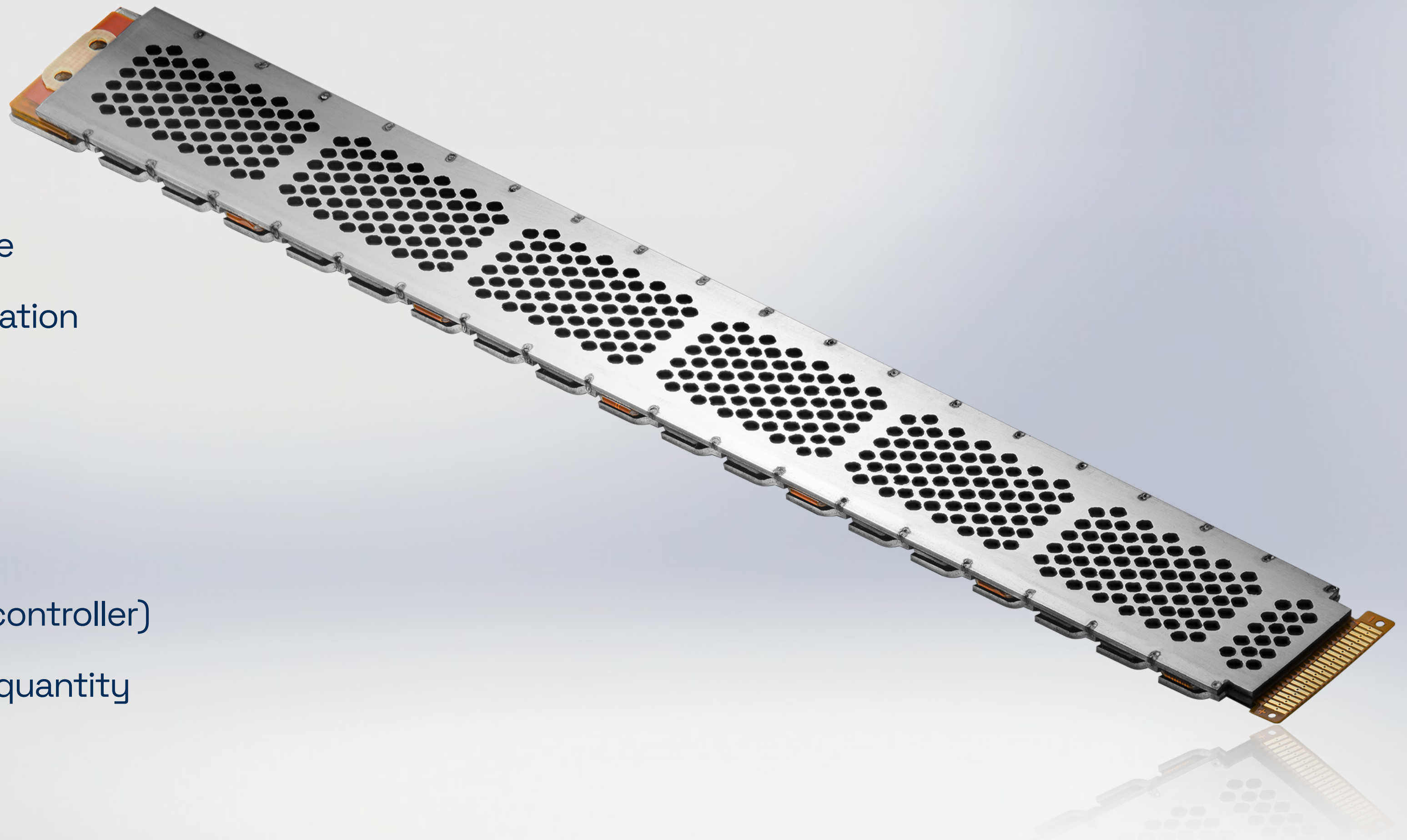


Cell Design

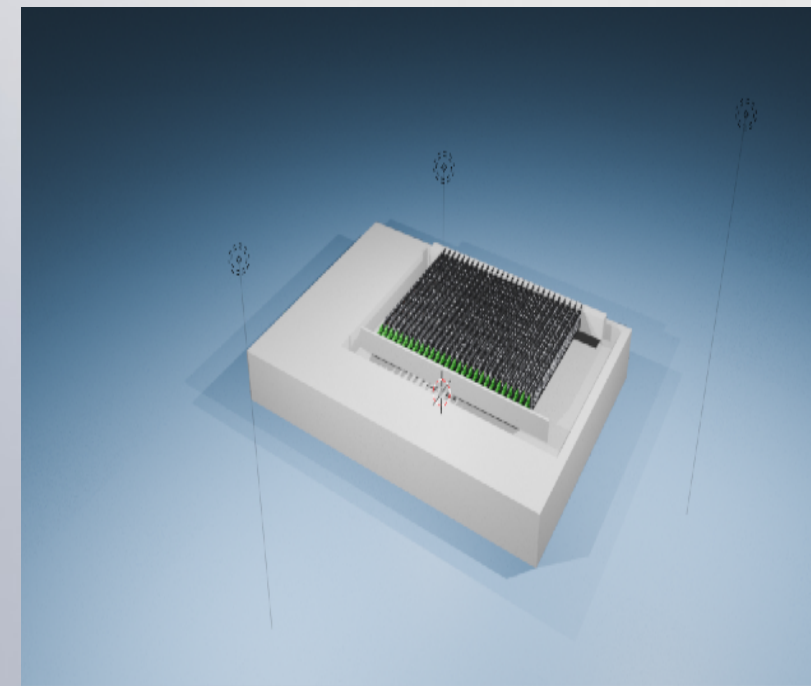
- ▶ Unique Form Factor
- ▶ Fit to Li-Ion Battery Cell Voltage
- ▶ Orientation-independent operation

System Design

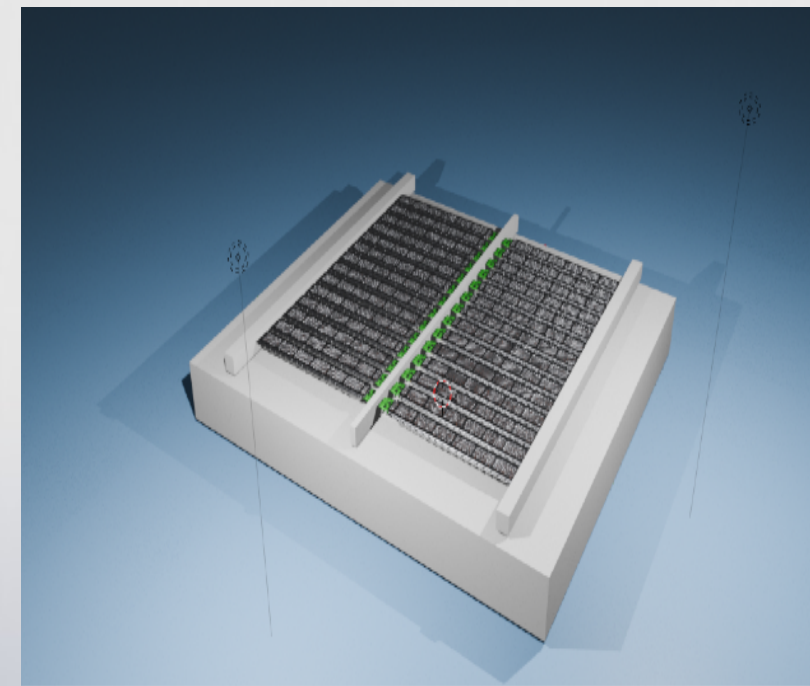
- ▶ High System Efficiency
- ▶ Competitive price (module w. controller)
- ▶ In production and available at quantity



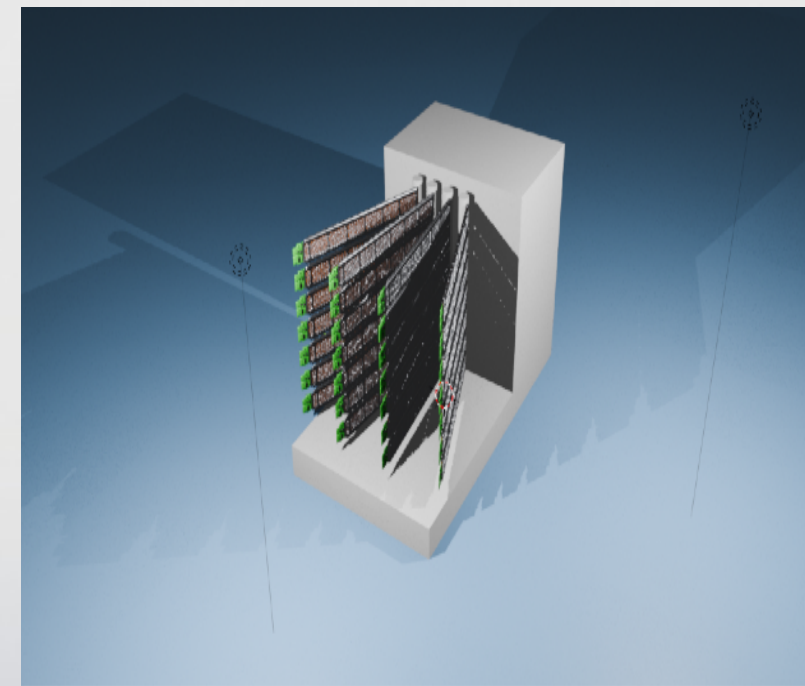
Thinking outside the box:
Freedom in Design



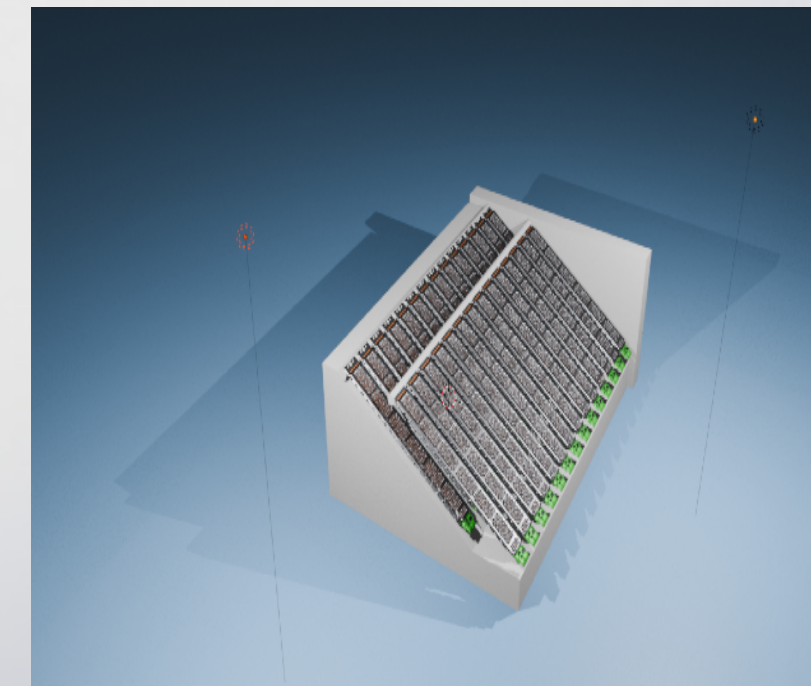
Stacked



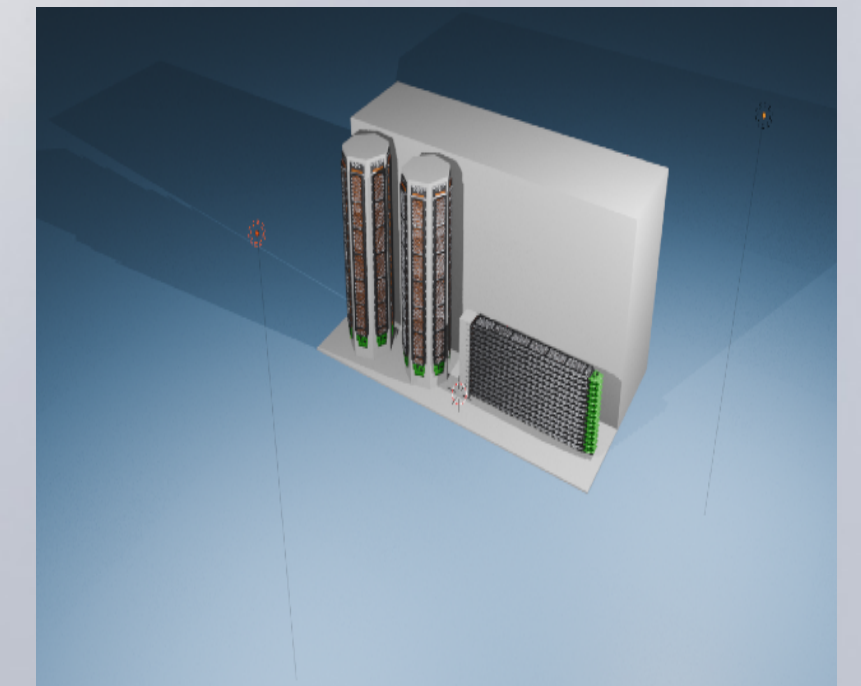
Flat



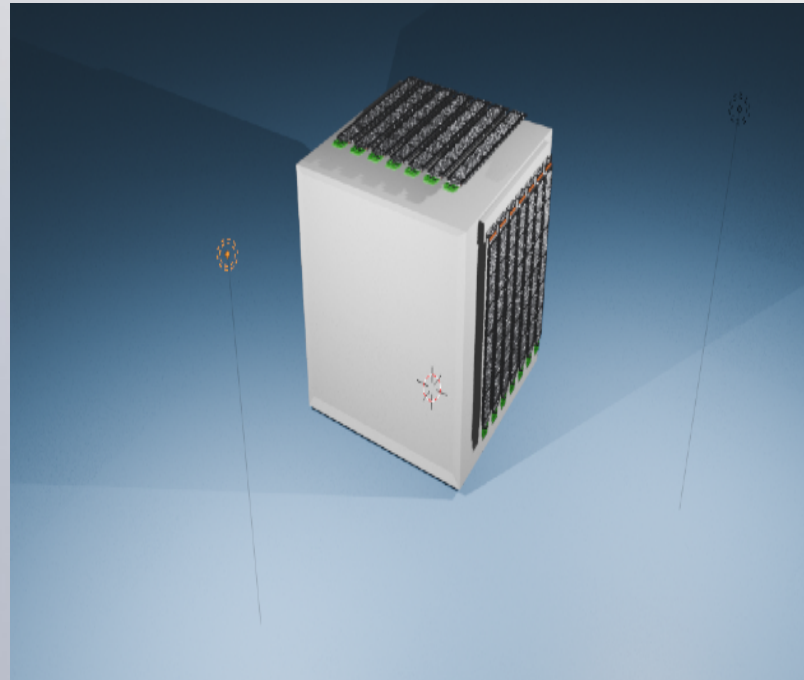
Horizontal



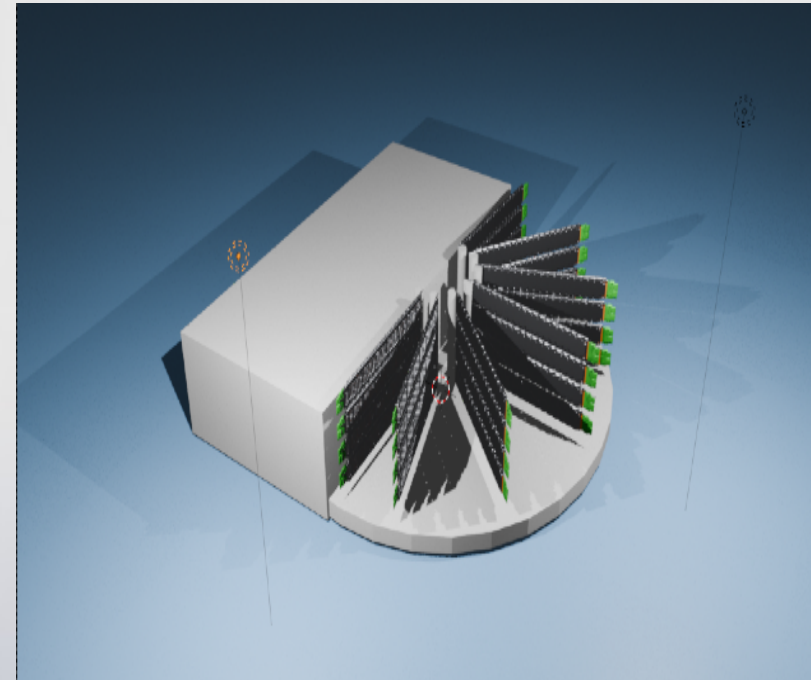
Double



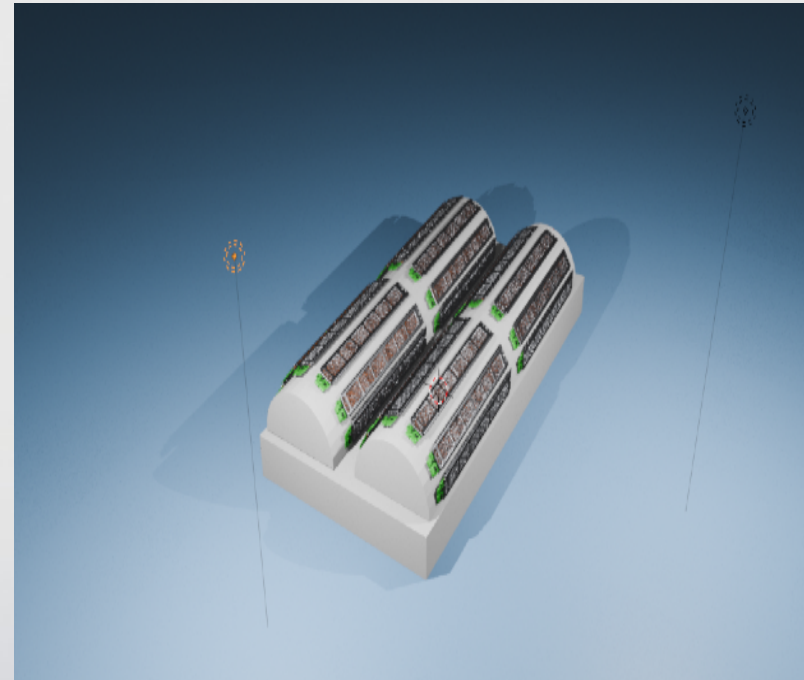
Cylindrical



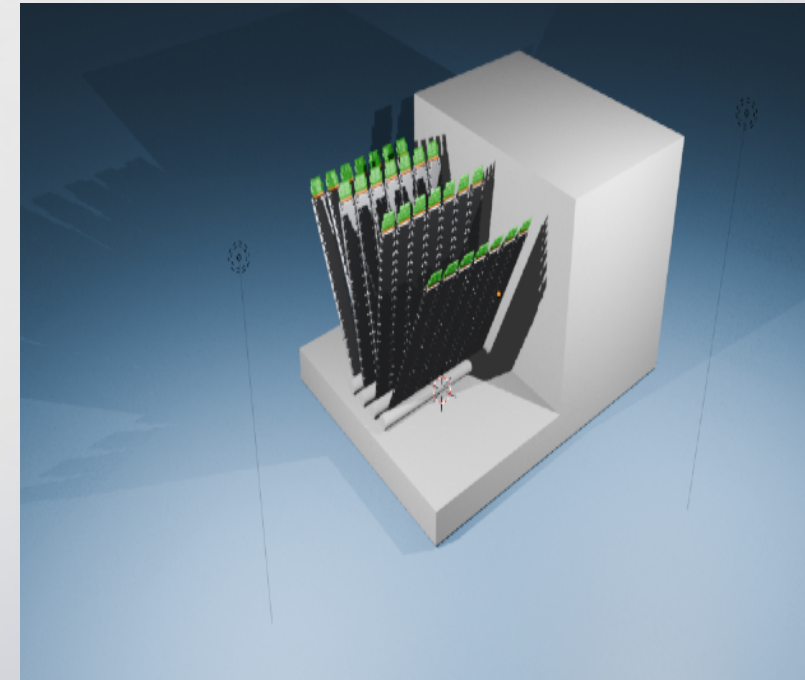
Cube



Waiver



Round



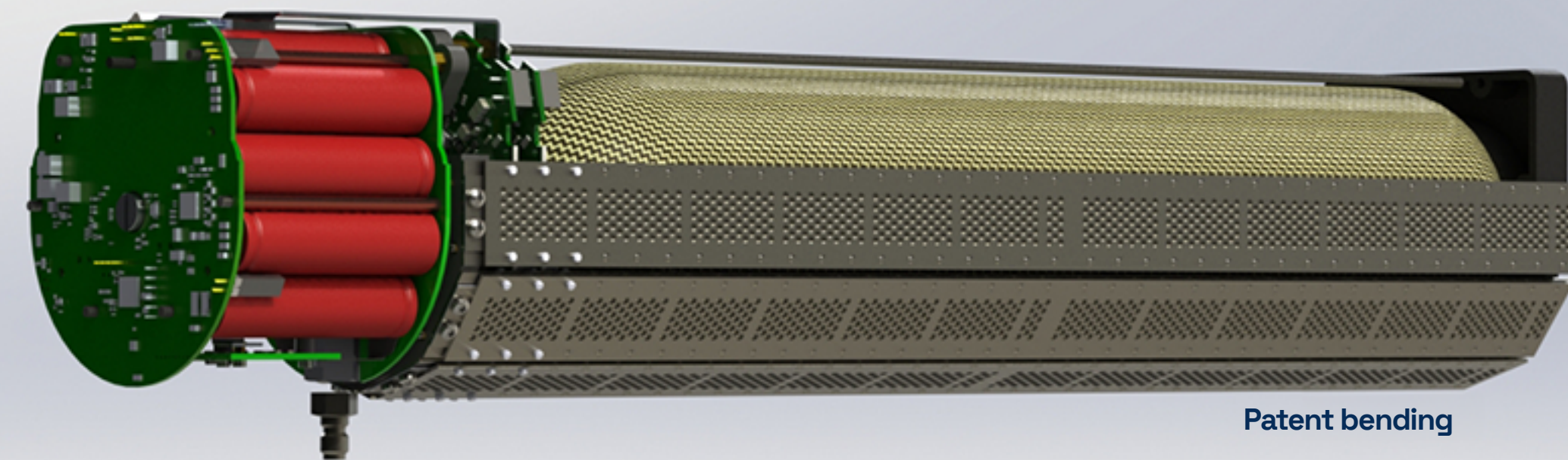
Vertical



High density pack

- ▶ Our fuel cell allow both high energy and power density
- ▶ FC power: 100 W
- ▶ Hydrogen capacity
 - ▶ 700Wh @ 350 bar designed-in-tank
- ▶ Buffer: 10s 18650 Liion

Wrapped Lamina[®] Solution



Application and markets

Power Range

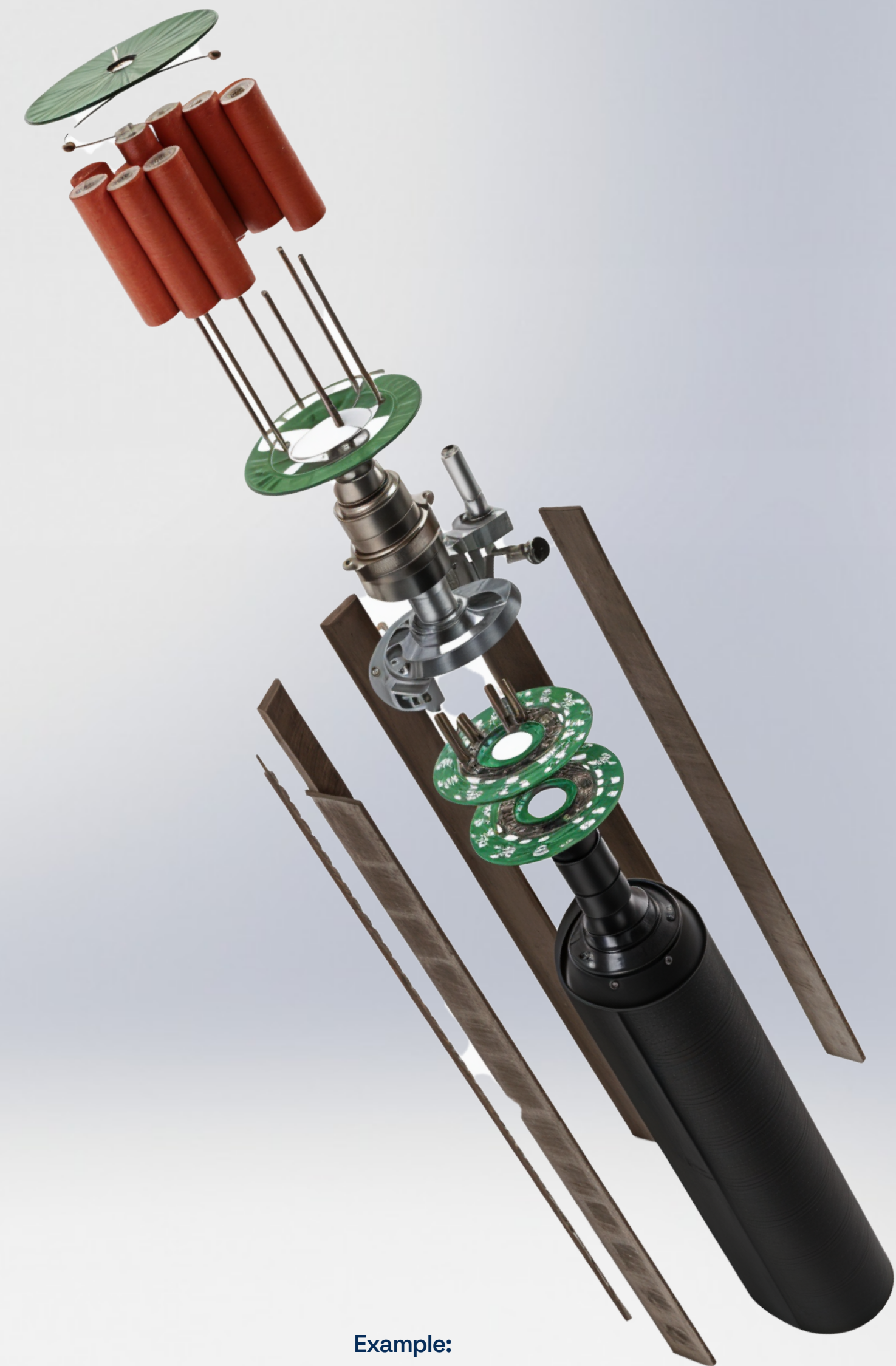
- ▶ Lamina is an ideal fossil-free power supply for both mobile and stationary products within the power range 10 W – 3000 W.
- ▶ The Lamina power module is tailored to the customer's application – technically and economically – and in hybrid versions.

Mobile Devices

- ▶ The mobile segment includes smaller machines for instance for intralogistics and soft mobility, such as driverless trucks, auto robots and vehicles for last mile deliveries.

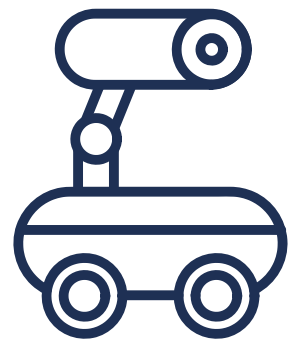
Stationary Devices

- ▶ The stationary segment includes fixed electrically powered systems that lack power grid, e.g. illuminated signs at construction sites, and the growing area of independent domestic power supply.



Example:
FCT Energy Module

Target Applications



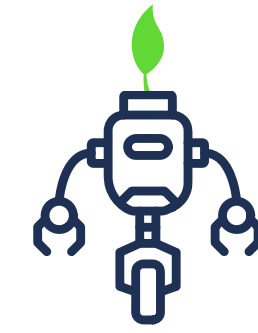
Robots



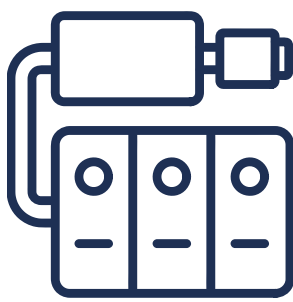
Intra-logistics



Cargo-bikes



Agricultural robots



Mobile Power Units



Home applications



Cleaning



Drones

Portfolio

Consultancy

Our experts will carefully guide your transition into a sustainable use of hydrogen.



Engineering

Our Engineering team understands how to integrate our technology into your application.



XplorerKIT

The FCT XplorerKIT will enable you to take first steps into adapting our technology.



Lamina

Unlock full flexibility to perfectly tailor your application, using our technology.



ModuleKIT

An inhouse made modular system will fast track you into adapting our technology.



Our next Step:

The FCT XplorerKIT

A Comprehensive Evaluation Tool for Fuel Cell Technology

The FCT XplorerKIT is an advanced evaluation platform designed to help customers and academic institutions explore and assess the capabilities of FCT's cutting-edge fuel cell technology.

This kit provides an integrated solution for understanding how Lamina[®] fuel cells can be incorporated into various applications, whether in research, product development, or educational settings.



FCT XplorerKIT - Specifications

Output:

1500 Watt Peak Power (up to 2 minutes)
320 Watt Continuous Power

Input:

< 500 mBar Hydrogen @ 99,999% Purity

Interface:

Controls via USB Interface

Environment:

Laboratory Conditions
(BETA-Version)

Advanced Evaluation Platform

- ▶ Designed for potential customers and academic institutions.

Explore FCT's Lamina Fuel Cells

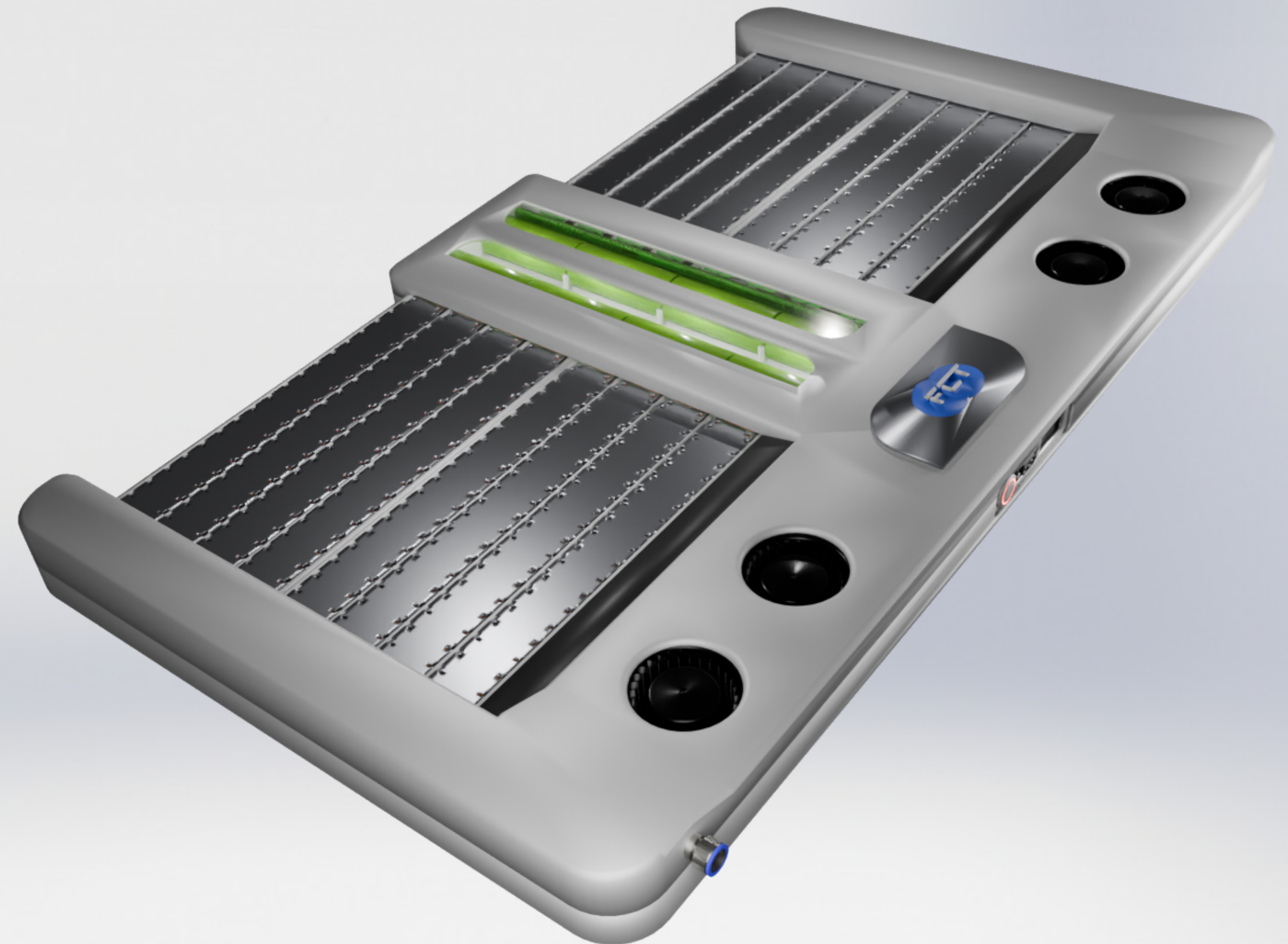
- ▶ Assess the capabilities and integration potential in various applications.

Hands-On Experience

- ▶ Provides a practical approach to understanding fuel cell technology.

Informed Decision-Making

- ▶ Empower your innovation with detailed insights and flexible testing options.





The Future is Now!
The Lamina[®] shows it's flexibility
in many applications.



Fuel Cell Technology Sweden AB

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