FCT SWEDEN

FCT Sweden is a Swedish innovation company that develops highly qualified fuel cell technology for mobile and stationary devices in the power range 10 W–3 kW. Our micro fuel cell Lamina has a unique design that allows it to be mounted in tight spaces where no other fuel cells can fit. At the same time, Lamina delivers the highest possible energy density per volume and surface area.

COVER PICTURE

Whales swimming in the ocean of space are a symbol of pure force of nature. The fuel is hydrogen – two atoms of the most common element in the universe – which becomes water when burned.

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Pure force of nature

LAMINA – THE SMART FUEL CELL

FUEL CELL TECHNOLOGY SWEDEN

Lamina fuel cell for a sustainable future

A UNIQUE PRODUCT

LAMINA
The micro fuel cell Lamina, developed by the Swedish innovation company FCT Sweden, has a laminated design that gives it unique properties: It is thin, light and modular, scalable and flexible. Therefore, it can be easily installed in small spaces where traditional fuel cells cannot fit. At the same time, Lamina delivers the highest possible energy density per volume and surface area.

MANY PATENTS
Lamina began as a research project at the KTH Royal Institute of Technology in Stockholm, Sweden with the goal of creating a hydrogen-powered micro fuel cell according to a technically unique concept. The project was successful and became its own company, which today is privately owned and rests on a solid foundation of many different patents.

APPLICATIONS/MARKETS

POWER RANGE
Lamina is an ideal fossil-free power supply for both mobile and stationary products within the power range 10 W–3 kW. The Lamina power module is tailored to the customer's application – technically and economically – and can also be obtained in hybrid versions.

MOBILE DEVICES
The mobile segment includes smaller machines within intralogistics and soft mobility, such as driverless trucks, auto robots and vehicles for last mile deliveries.

STATIONARY DEVICES
The stationary segment includes, on the one hand, fixed electrically powered systems that lack power grid, e.g. illuminated signs at construction sites, and on the other hand the expansive area of home power.

THREE STRONG ARGUMENTS

ECONOMY
Charging a Lamina-powered product with hydrogen gas takes 30 seconds, charging a battery-powered product can take hours. With the Lamina power module, the basic investment is reduced by up to 30 percent thanks to the increased availability of the machines.

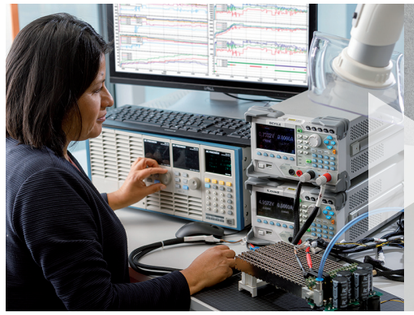
INDEPENDENCE
Lamina's power modules make you independent of the power grid. And if you produce your own hydrogen, e.g. with solar cells, you become completely independent.

ENVIRONMENT
Lamina technology is sustainable throughout the value chain: renewable energy and no harmful emissions. The residual product is heat and water. The power modules have a long service life and are essentially recyclable.

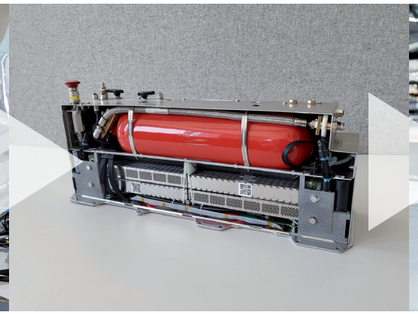
THE FUTURE OF HYDROGEN

A PARADIGM SHIFT
The fuel cell is not a new invention, but a lot has happened in the field of technology in recent years, of which Lamina is not least an example. Hydrogen will become a key component in tomorrow's sustainable energy mix together with other fossil-free forms of energy. The next step is to optimize the availability of hydrogen through an expanded infrastructure for all relevant sectors, such as transport, electricity production and heating.

EU HYDROGEN POLICY
The EU's goal is for Europe to be carbon dioxide neutral by 2050. Several measures have been decided, including an astronomical 470 billion Euros to be invested in renewable hydrogen to replace natural gas. In other words: The future is bright for the hydrogen industry, as well as for Lamina power modules.

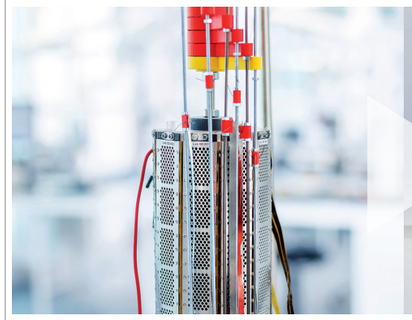


FCT Sweden R&D ►

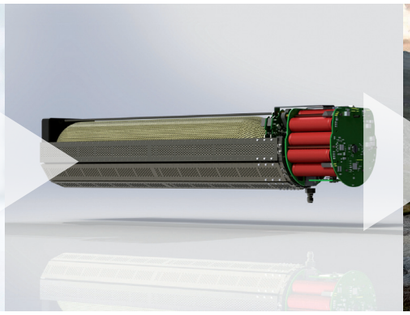


Lamina AGV Power Module ►

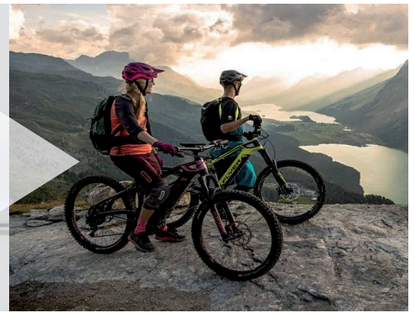
AGV with Lamina



Lamina cells ►



Lamina E-bike Power Module ►



E-bikes with Lamina