IMI

Process Automation

Our product brands:
IMI VIVO

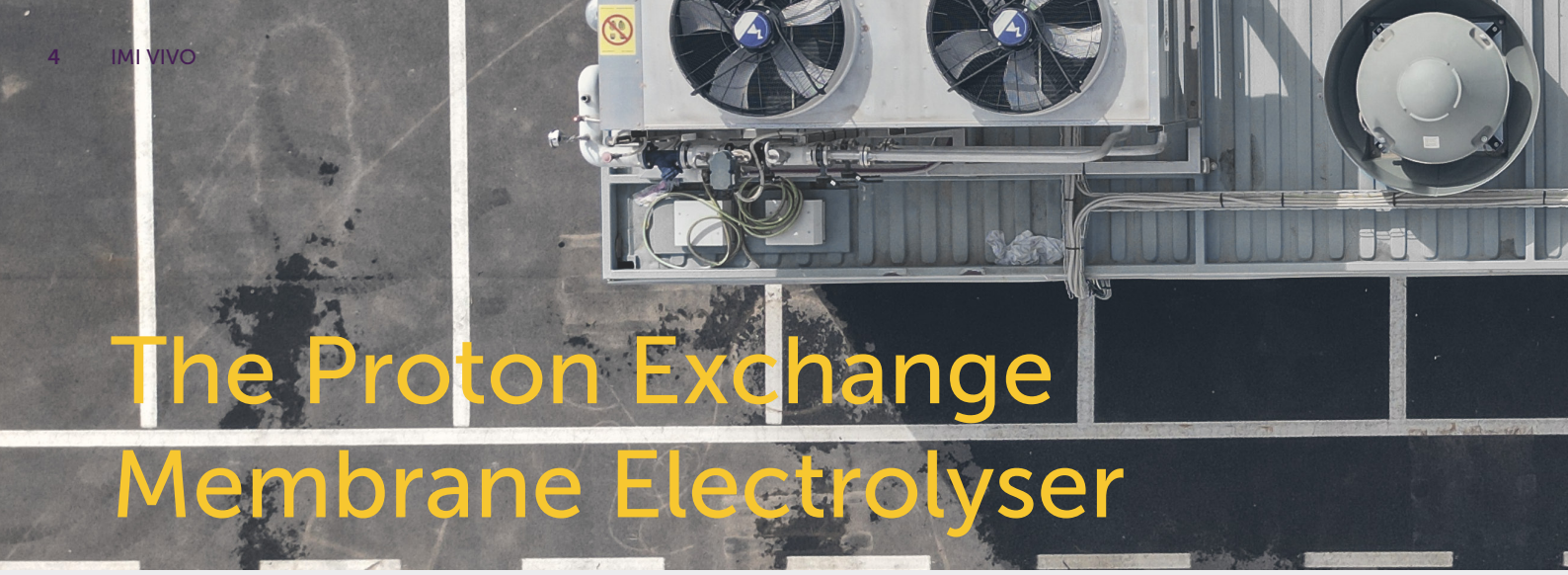
IMI VIVO
Proton Exchange Membrane Electrolyser

Breakthrough engineering for a better world

Supporting the Energy Transition

Meeting 2050's zero carbon emissions target is a formidable challenge, given our reliance on fossil fuels. The successful transition to more sustainable energy sources and a reduction in our carbon footprint will need comprehensive and swift action and the technology to support it.

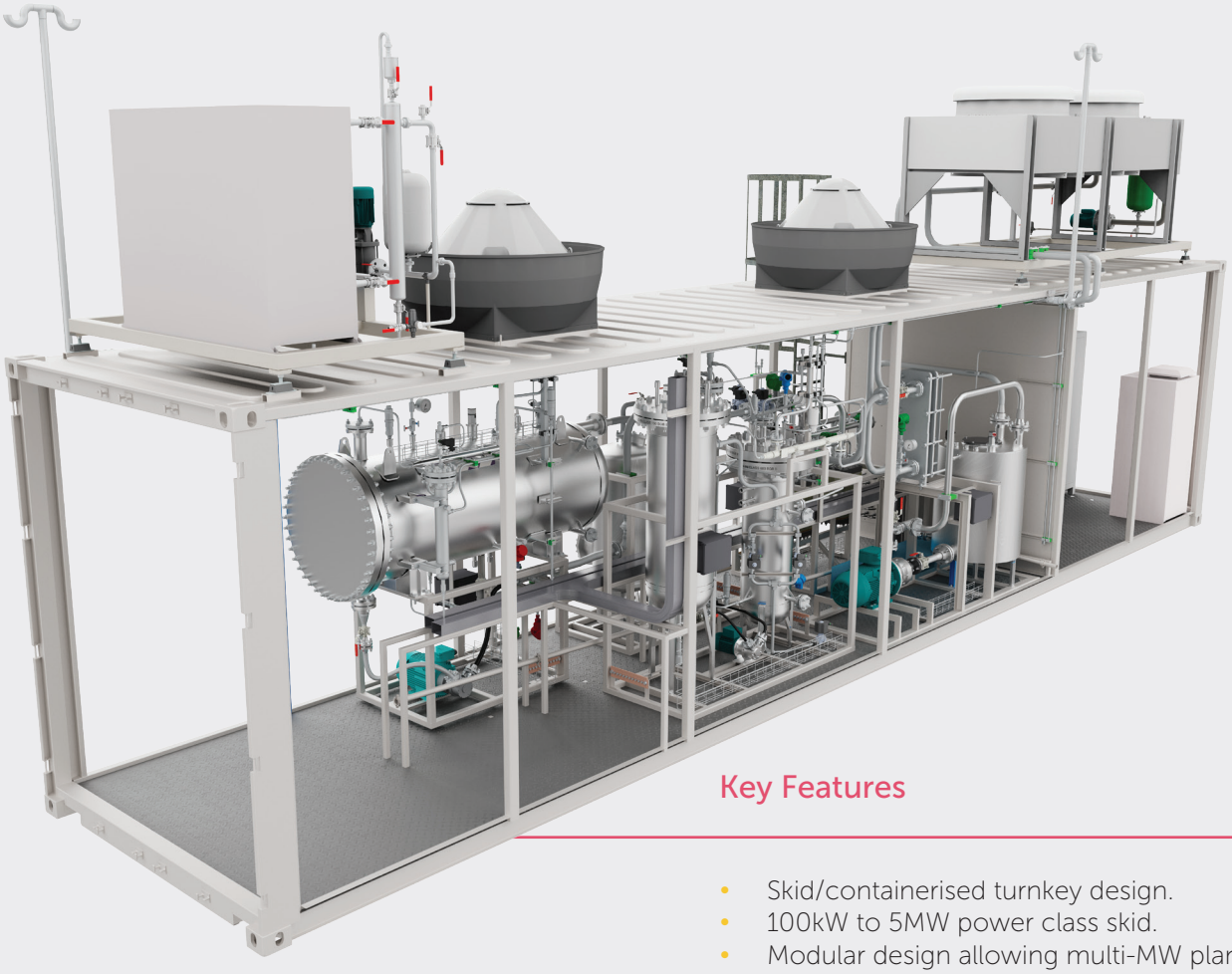
At IMI, we are committed to supporting an industry transition to a sustainable future. We are ready to support the production of green hydrogen, and we understand how crucial hydrogen is in the shift to cleaner, more sustainable energy.



The Proton Exchange Membrane Electrolyser

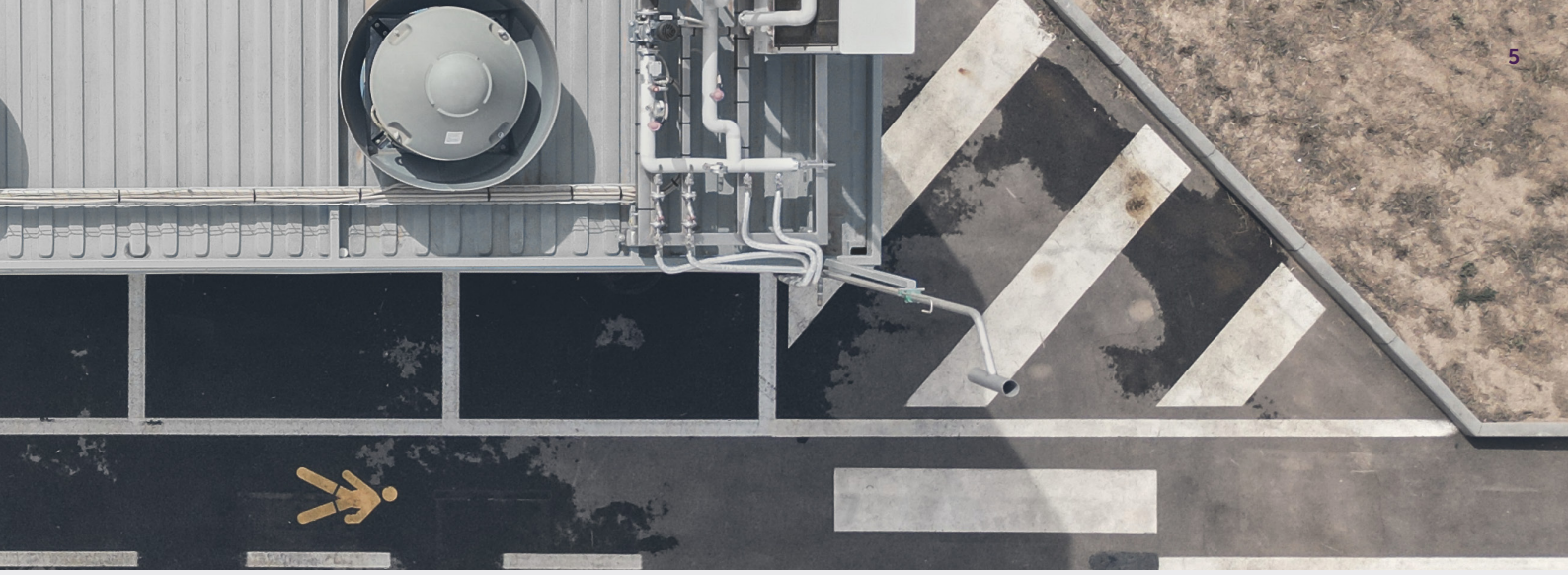
New technologies will play a key role in the shift to sustainable energy. Our proton exchange membrane (PEM) electrolyser is a fully customisable solution designed to produce green hydrogen from renewable energy sources. The low-emission hydrogen produced can be used in sectors that are difficult to decarbonise, such as heavy industry and transportation.

The electrolyser is equipped with high-quality standard components designed and manufactured entirely at our facility in Sardinia, Italy. Its modular design allows you to produce any desired quantity and quality of hydrogen.



Key Features

- Skid/containerised turnkey design.
- 100kW to 5MW power class skid.
- Modular design allowing multi-MW plants.
- Top technology PEM stack provider.
- Power consumption <58kWh/kg H2.
- Customisable on customer specs and local regulations.
- System design according to ISO 22734.



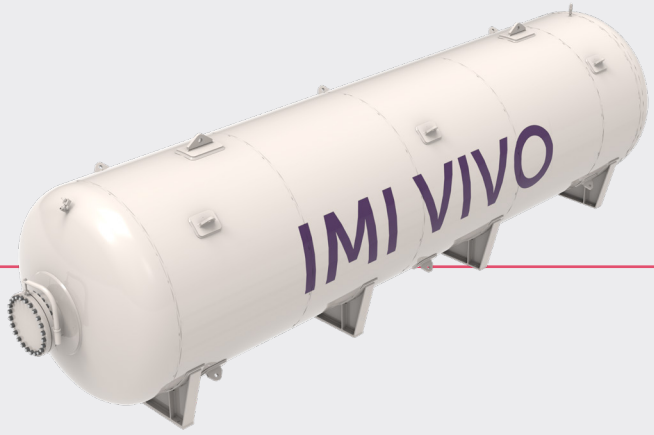
Low-Pressure Type I Storage

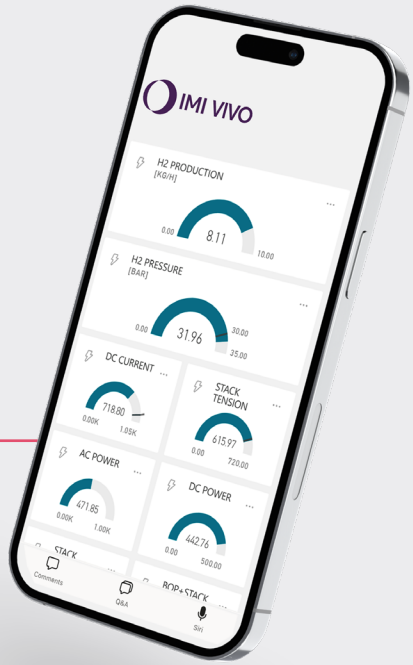
At IMI, we specialise in developing and manufacturing low-pressure hydrogen storage vessels. Our H2 storage technology can be fully customised in terms of size, capacity, flange connections, and configuration. It is equipped with instrumentation that enables the safe operation and maintenance of the system.

We design Type I hydrogen metal storage vessels certified to meet the requirements of international standards such as ASME and EN. These normally operate at an electrolyser discharge pressure of up to 50barg. We can provide higher pressures by request and manufacture all our low-pressure vessels.

The Real-Time Digital Dashboard

The digital dashboard offers customisable, cloud-based, real-time monitoring of the electrolyser's performance. System operators can monitor all key parameters, including hydrogen pressure and flow rate, stack and system efficiency, DC / AC power consumption, and cooling temperatures. This dashboard is compatible with PCs, Macs, tablets, and smartphones. You can access it anywhere, with Wi-Fi or mobile data internet connection.





Applications

Power-to-Power

IMI's electrolyser technology produces green hydrogen from renewable sources, including water, wind, and solar energy. The hydrogen produced is then stored until needed. It can either be converted from storage for on-site use or transported to an alternative facility to generate clean power through a fuel cell.

Power-to-Mobility

Large-scale production of green hydrogen is set to drive the e-Mobility market. The hydrogen manufactured and stored by IMI's technology can be used for fuel cell vehicles and will generate zero emissions, have longer travel ranges, and have faster refuelling times than the Lithium-ion batteries currently used in the majority of electric vehicles.

Power-to-Gas

Green hydrogen can replace natural gas and hydrogen feedstock as a power source for industrial or civil application. IMI's extensive energy sector expertise and dedicated focus in this market will be vital to unlocking this key pillar of the energy transition.

About IMI

Our new state-of-the-art manufacturing facility in Sardinia, Italy provides complete in-house engineering services backed up by over 40 years of experience producing specialised equipment for high-temperature, aggressive industrial environments. IMI's engineering experts support you from the earliest stages of green hydrogen plant design and help you determine all your requirements for renewable energy sources, electrolyser technology, fuel cells, storage, and fuelling stations. Equally, extensive manufacturing expertise in forming, machining, high-end material welding, and protection overlay means we can design and manufacture all our solutions in-house. In addition, our dedicated aftermarket team provides you with on-site service and maintenance 24/7, anywhere.

Discover more

To learn more about solutions that can help you transition to sustainable power and for a free preliminary sizing of your planned hydrogen plant, contact us at **imivivio@imi-critical.com**

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IMI VIVO

IMI plc
VI strada Ovest,
Località Macchiareddu,
Uta (CA) 09068,
Sardinia,
Italy
www.imiplc.com
06016.01-24en