

Press release

Hydrogen specialist KEYOU and valve expert VENTREX announce their cooperation

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True innovation is often a collaborative effort that extends beyond one company. And hydrogen is undoubtedly one of the most innovative topics in the automotive world.

The Munich-based KEYOU hydrogen technology specialist, and the Austrian company VENTREX, a pioneer in electronic pressure regulation for H₂, are now joining forces to accelerate the transition toward emission-free mobility for commercial vehicles.

Betting on hydrogen for the future of mobility

Especially in the passenger car sector, battery-powered vehicles are becoming increasingly widespread. Yet, especially the heavy and long-distance transport sector requires more drivetrain solutions.

Hydrogen is a robust, renewable energy carrier contributing towards well-to-wheel and life-cycle CO₂ neutral mobility solutions. The fast-filling times, long-distance transport possibilities, virtually no greenhouse gas emissions, and low maintenance costs make hydrogen particularly interesting for trucks and buses.

Existing internal combustion engine concepts cost-effectively run on hydrogen using the current production infrastructure without extensive adaptations to the base engine. That is what KEYOU has been doing since 2015. With its so-called "KEYOU-inside" technology, the hydrogen expert established H₂-specific technologies, components, and combustion processes that can convert conventional combustion engines into green hydrogen engines - without compromising the performance, capacity, or range of the vehicle.

"KEYOU's technology makes it possible to shift from engines running on conventional fuels to an emissions-free hydrogen engine. A milestone towards environmentally friendly mobility", VENTREX Managing Director Tom Gustavsson comments. "We are very pleased to be able to contribute to this change with our developments."

Promising partnership

Optimally calibrating a hydrogen injection system to the respective torque and power of the engine is an essential development process. From minimum to maximum load, the dynamic control of the rail pressure with pinpoint accuracy ensures the required amount of fuel is always supplied precisely. Both with port-fuel injection and direct injection. This is what VENTREX's electronic pressure regulators guarantee. KEYOU uses these components in its "KEYOU-inside" technology applications for the conversion market and other development projects, relying on VENTREX's technical product know-how to optimize its system. Prototypes using the new KEYOU engine generation and the VENTREX pressure regulators should be available as early as next year.

For KEYOU's Head of Business Development, Pedro Bravo, this cooperation enables KEYOU "to transform existing diesel engines into high-performance hydrogen engines. Thus, establishing an entirely new

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generation of zero-CO2 engines, which would not be possible without an innovative pressure regulation technology as provided by VENTREX.”

VENTREX is ready to support KEYOU shape the mobility of the future. "KEYOU was one of our first customers in the field of hydrogen ICEs. We have been working together since 2017, testing the new developments of our pressure regulator within their newest hydrogen system. I'm glad that we are now officially announcing this future-oriented partnership, which will significantly support our transition towards decarbonization," says VENTREX Head of Sales Patrick Pfeifer.

About KEYOU

KEYOU is a successful clean mobility company based in Munich which developed innovative hydrogen technologies since 2015. With its technology approach, KEYOU is transforming conventional diesel engines into emission-free hydrogen engines - cost-efficiently and without extensive modifications to the base engine. With the engine conversion and integration of a hydrogen tank system, KEYOU offers its customers emission-free, efficient, and economical hydrogen vehicles - without compromising performance, capacity, and range.

In addition to conversion and a CO₂-free "second life" for existing vehicles, KEYOU's "Hydrogen Mobility as a Service" approach is a fully comprehensive hydrogen mobility solution. The package ranges from the vehicle and engine conversion over fuel and infrastructure to insurance, service, and maintenance. With KEYOU, zero-emission mobility becomes a reality.

About VENTREX

VENTREX is a global leader in automotive valve solutions, designing and producing multiple types of valves and electronic pressure regulators for alternative powertrain systems and cooling circuits. Committed to create solutions that improve safety, efficiency, comfort and environmental footprint, we partner with our customers around the world to help them stay at the forefront of automotive innovation and shape the next generation of mobility.

Founded in 1949, VENTREX is part of the Aalberts N.V. Group, a major global tech company listed on the Amsterdam stock market. Leveraging our team's strength in research and development and our state-of-the-art, highly automated manufacturing capabilities, we are relentless in our pursuit of excellence.

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Sounds interesting?

Do you want to learn more about KEYOU hydrogen technology? Get in touch with us. We will be happy to keep you up to date on the exciting developments!

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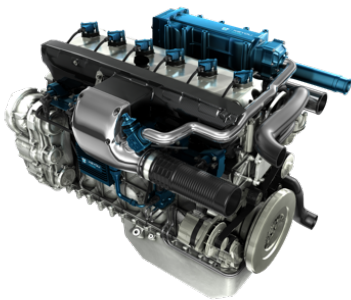
Photo material



Pedro Bravo, Business Development
KEYOU GmbH



Patrick Pfeifer, VENTREX CSO



Hydrogen engine with
KEYOU-inside technology



VENTREX's Electronic Pressure Regulator
for hydrogen internal combustion engines