The engine company.

PRESS RELEASE

Cologne, 25 March 2019

DEUTZ prepares the way for carbon-neutral mobility with hydrogen drive systems

- DEUTZ and KEYOU sign letter of intent on collaboration
- First prototype based on a DEUTZ engine has already been developed
- Hydrogen adds a further possibility for carbon-neutral drive systems alongside the E-DEUTZ strategy

DEUTZ AG and the Munich-based start-up KEYOU intend to build on their existing partnership and jointly develop commercially viable carbon-neutral hydrogen engines for off-road and on-road applications, and for power generation, and bring them to production readiness. A letter of intent to this effect was recently signed by Dr Frank Hiller, Chairman of the DEUTZ AG Board of Management, and Thomas Korn, CEO of KEYOU GmbH.

As a leading global manufacturer of innovative drive systems, DEUTZ is seeking to play a pioneering role in the development of high-quality, eco-friendly and efficient engines. Alongside the E-DEUTZ strategy, which launched last year and has been pursued with purpose ever since, the collaboration with KEYOU represents a further step forward in the advancement of alternative drive technologies and fuels. “The use of alternative fuels such as hydrogen is growing in importance. We believe that this drive solution will be a valuable addition to our electrification strategy and play an integral role in the zero-emission vehicles of the future,” says DEUTZ CEO, Dr Frank Hiller.

By working on the development of a hydrogen combustion engine, DEUTZ is also offering an alternative to fuel-cell technology. The company's expertise in combustion engines is being combined with KEYOU-inside technology, which can convert conventional production engines to run on hydrogen. The technology is extremely scalable, both for on-road and off-road applications, and it can be used in a range of hybrid configurations, including in combination with electric drives.

KEYOU has developed a prototype for its KEYOU-inside technology that can turn a conventional diesel engine into a drive based on state-of-the-art hydrogen technology. DEUTZ provided support as a development partner, supplying the engine – one of its standard six-cylinder models – and sharing its engineering expertise. The resulting hydrogen combustion engine is extremely cost-efficient, which makes it an attractive alternative to electric drives, fuel-cell drives and other zero-emission systems.

KEYOU's first 7.8-litre prototype DEUTZ engine was unveiled to the public in 2018 at the bauma China trade fair and will also be showcased in April 2019 at the bauma in Munich. Specific pilot projects with vehicle manufacturers and end users are in the planning stage, with the appearance of the first prototype vehicles expected in the first half of 2020. The aim is to bring them to production readiness by 2021/22. "Our new KEYOU-inside H2 combustion technology is not only cost-efficient, robust and powerful, but it is also perfect for use with DEUTZ engines thanks to its high degree of scalability," says Alvaro Sousa, CTO of KEYOU.

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About DEUTZ AG

DEUTZ AG, a publicly traded company headquartered in Cologne, Germany, is one of the world's leading manufacturers of innovative drive systems. Its core competences are the development, production, distribution and servicing of diesel, gas and electric engines for professional applications. It offers a broad range of engines delivering up to 620 kW that are used in construction equipment, agricultural machinery, material handling equipment, stationary equipment, commercial vehicles, rail vehicles and other applications. DEUTZ has around 4,700 employees worldwide and over 800 sales and service partners in more than 130 countries, and in 2018 generated revenue of €1,778.8 million.

Further information is available at www.deutz.com.

About KEYOU GmbH

KEYOU GmbH was founded in autumn 2015 by the engineer Thomas Korn (48) together with his former BMW colleague and KEYOU CTO Alvaro Sousa, as well as energy expert Ivo Pimentel. The high-tech company from Unterschleißheim/Munich develops innovative technologies, special components and combustion processes for vehicle and engine manufacturers, in order to turn conventional gasoline and diesel engines into emission-free hydrogen engines. The technology is independent of engine model and manufacturers and can be used for new and existing vehicles; the current focus is on commercial vehicles. Further information is available at https://www.keyou.de/.