

## Press release

### First wireless torque measuring solution for drive shafts

Kistler presents reusable KiTorq DS for more comfortable measurements

Winterthur, September 2023

**With the KiTorq DS, Kistler developed the first torque measuring system for automotive drive shafts that features wireless data transmission. The transmitter, which covers the strain gauge sensor, is attached to the shaft via adapter sleeves. This allows users to easily remove the unit to change and recharge the batteries or reuse the transmitter on another vehicle. The corresponding receiver unit can process input of two transmitters and receive the signal of the wheel pulse transducer of type CWPT from Kistler to directly measure wheel speed, acceleration and calculate power.**

Especially in the development of electric vehicles, torque measurements on drive shafts become increasingly important since they enable engineers to better calculate the efficiency of the entire power train including recuperation. Kistler is now offering a new solution that makes these measurements significantly easier. The new wireless torque measurement system consists of two transmitter units and a receiver unit. The unique design of the transmitter unit features two half-shells that close around the shaft. While the telemetry half-shell is sending the data to the onboard evaluation electronics, the other shell holds the replaceable and rechargeable battery.

#### **Customized adapter enables reuse of transmitter unit**

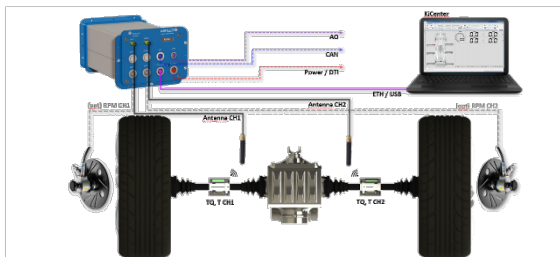
The unit is quickly installed and removed by attaching to an adapter sleeve on the shaft, which also means that it can be reused on other vehicles – making this solution more sustainable and cost-efficient than single use solutions that have to be fixed directly on the test object. The half-shells are available in six basic variants that cover the most common drive-shaft diameters of passenger cars, regardless of the drive concept. The adapter is tailored to the exact measurements of each shaft and ensures the optimal fit of the transmitter unit. The system includes an automatic recognition of the drive shafts to be measured. Additionally, it can bridge a power supply interruption of up to 30 seconds and has a variety of digital data outputs such as CAN, DTI, and Ethernet.

The space-saving receiver unit receives and processes torque and temperature signals from up to two transmitter units. In total, up to six transmitters can be used to measure torque on six shafts (e.g. two axles and propellershaft) simultaneously. To ensure optimal measuring results, Kistler also offers services such as strain gauge application and the calibration of the shafts.

Image material (please name the Kistler Group as picture source)



The new wireless torque measurement system KiTorq DS from Kistler consists of a receiver and a transmitter unit.



KiTorq DS is used to measure torques on drive shafts. The additional CWPT, allows to also measure power, which is especially relevant in the development of electric vehicles.



Easy to install and uninstall: The unique design ensures easier handling and reusability.



The adapter for the transmitter is tailored to drive shaft for an optimal fit.

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## About the Kistler Group

Kistler is the global market leader for dynamic pressure, force, torque and acceleration measurement technology. Cutting-edge technologies provide the basis for Kistler's modular solutions. Customers in industry and scientific research benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure sustainable competitive edge. Unique sensor technology from this owner-managed Swiss corporation helps to shape future innovations not only in automotive development and industrial automation but also in many newly emerging sectors. Drawing on our extensive application expertise, and always with an absolute commitment to quality, Kistler plays a key part in the ongoing development of the latest megatrends. The focus is on issues such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0. Some 2,000 employees at more than 60 facilities across the globe are dedicated to the development of new solutions, and they offer application-specific services at the local level. Ever since it was founded in 1959, the Kistler Group has grown hand-in-hand with its customers and in 2022, it posted sales of CHF 434 million. About 8% of this figure is reinvested in research and technology – with the aim of delivering better results for every customer.