

Press release

Torque tool testing complies with standard with new inspection system cerTEST from Kistler

Fastening simulators collect exact and highly reproducible data

Winterthur, January 2024

A new way of fast, precise and standard-compliant fastening simulation is here. The new system for torque tool testing cerTEST analyzes the capabilities of torque tools with up to four integrated simulators ranging from 0.2 to 500 N·m. The system is designed for mobile testing in shift operation and is equipped with a built-in rechargeable battery with a runtime of up to 16 hours. The corresponding user-friendly CEUS software solution guides users through the test to assure the process – while also taking care of documentation.

Be it in the automotive industry, aviation or robotics, bolted joints have to withstand high forces and adverse conditions. This is why quality assurance of fastening processes starts with the tools used. Torque tools such as cordless, rotary and impulse nutrunner are subject to internationally recognized standards such as VDI/VDE 2645 Sheet 2, VDI/VDE 2647 or DIN EN ISO 5393. Compliance with these norms has to be demonstrated by machine capability analyses.

Flexible torque tool testing

With the new system for torque tool testing cerTEST from Kistler, users can check their tools safely and in compliance with given standards. The long-lasting rechargeable battery allows for inspection directly on the assembly line. The system is equipped with four slots for customizable fastening simulators that measure torques in the range from 0.2 to 500 N·m. If required, additional fastening simulators can be connected externally, enabling tests of up to 6000 N·m. This allows for quick and efficient machine capability tests of electric, pneumatic and hydraulic torque tools as well as impulse nutrunner. Torque tools can be removed from the production environment and inspected without any special preparation.

The torque tools are simply adapted to the corresponding fastening simulator for inspection. Depending on the torque parameters, the software selects the appropriate simulator. A LED ring marks the selected simulator and also indicates the specified direction of rotation for testing. A sensor precisely measures the torque and the angle of rotation of the tool; the simulator can also collect data

on the speed achieved during inspection. A color-coded evaluation of the tested object is available via the software and on the simulator immediately after the test procedure.

The sensors feature a high reproducibility: The inspection setup and the high-resolution measurement electronics ensure minimal measurement uncertainties and optimized reproducibility of the measured values.

Latest generation of CEUS software for process assurance simplifies operation and data management

The collected data is displayed directly on the wide screen of the system for torque tool testing cerTEST. With the help of the software for process assurance CEUS from Kistler, users can integrate individual limits, specifications and tolerances into the evaluation and thus ensure standard-compliant inspection – or even implement their own, stricter specifications.

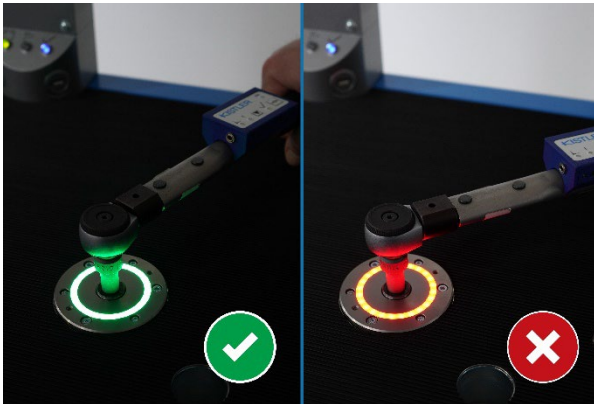
The web-based CEUS program not only guides users through the measurement step by step, but also saves different measurement settings. This means that users have to specify the measurement parameters for the tested torque tools only once. CEUS also creates an individual measurement history for each tool and automatically saves inspection records. This means that they are quickly available when required.

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

To download the images in a high resolution, please follow the link:



cerTEST testing system from Kistler for standard-compliant tool testing.



The cerTEST torque tool testing system from Kistler detects OK and NOK tools during torque or rotation angle testing.



Digital and electronic torque / rotation angle wrench INSPECTOR from Kistler



The latest generation of the software for process security CEUS from Kistler simplifies operation and data management.

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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.