

Press release

Kistler and BIG KAISER partner for precise measurement of cutting forces

High-accuracy dynamometer combined with innovative chuck extends tool lifetime and reduces production costs

Stuttgart, 18th September 2018

At the [International Exhibition for Metal Processing \(AMB\)](#) in Stuttgart, Hall 1, Booth 1A61, Kistler and BIG KAISER are showcasing how their collaboration will help customers. The two companies are exhibiting a new system, where Kistler's Type 9171A rotating dynamometer and BIG KAISER's MEGA New Baby Chuck are combined to deliver high levels of accuracy in cutting force measurement.

The BIG KAISER MEGA New Baby Chuck offers higher precision than traditional ER clamping systems, delivering superior runout accuracy. BIG KAISER has specially adapted the interface on the MEGA New Baby Chuck to ensure it connects securely and accurately to the Type 9171A. As a result, Kistler's customers can now achieve noticeably lower total radial runout errors by using this dynamometer.

This means that they benefit from improved cutting force measurement accuracy, enabling them to increase the lifetime of cutting edges. For customers using the dynamometer in their own production processes, its high precision enables them to develop machining strategies that increase tool lifetimes and thereby reduce overall cost. In manufacturing, it enables tools to be replaced before they break, as increased forces at the cutting edge indicate that a failure is imminent.

The Type 9171A is a piezoelectric dynamometer for use in high-performance cutting applications. It measures forces and torques even under very high loads at speeds up to 12,000 rpm, allowing machining processes to be analyzed and optimized while obtaining information on tool wear. Compared to previous dynamometer models, the Type 9171A delivers a much wider range of spindle speeds with improved dynamic properties and a significant weight reduction. It is particularly suited to multi-component force and torque measurements on rotating tools during milling and drilling.

BIG KAISER's collet chucks offer high accuracy for any machine spindle, with a guaranteed runout of 0.001 mm at the collet nose and less than 0.003mm at 4xD. The MEGA New Baby Chuck is the company's most popular collet chuck for diameters up to 25 mm. All MEGA collet chucks have a

notch-free MEGA nut that prevents vibration and reduces noise levels. These chucks are tightened using a unique MEGA wrench that can safely and evenly apply force along the entire nut periphery.

Innovative design and high precision

Gunnar Keitzel, Head of Cutting Force, Kistler, said, "Tool holders from BIG Kaiser are characterized by an innovative design, which has been optimized for high-speed machining. Kistler is pleased to now also be able to offer rotating cutting force systems with these high-precision interfaces, including the innovative MEGA New Baby Chuck."

Stefan Appenzeller, Head of Product Marketing, BIG KAISER, said, "Kistler's 9171A is a market-leading dynamometer that provides the highest levels of precision. Together, BIG KAISER and Kistler can now help customers develop and improve their cutting processes."

The [International Exhibition for Metal Processing \(AMB\)](#) is held in Stuttgart, Germany from 18th to 22nd September 2018. 1,500 exhibitors from more than 30 countries will present the latest machine and precision tool developments as well as other machining solutions. In 2016, approximately 90,000 visitors attended the AMB, and this year an extra exhibition hall has been added.

The Type 9171A dynamometer and MEGA New Baby Chuck, with the adapted interface to fit the Type 9171A, are available from Kistler now.

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



Together unbeatable: The rotating dynamometer Type 9171A from Kistler and the clamping system MEGA New Baby Chuck from BIG KAISER make a perfect match to deliver high levels of cutting force measurement.



Thanks to the secure connection of the dynamometer RCD Type 9171A with the MEGA New Baby Chuck interface, Kistler's customers can benefit from a notably improved radial running accuracy.

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About the Kistler Group

Kistler is the global leader in dynamic measurement technology for measuring pressure, force, torque and acceleration. Cutting-edge technologies provide the basis for Kistler's modular solutions.

Customers in industry and science benefit from Kistler's experience as a development partner, enabling them to optimize their products and processes so as to secure a sustainable competitive edge. The owner-managed Swiss company's unique sensor technology plays a key role in the evolution of automobile development and industrial automation, as well as in numerous emerging sectors. With a broad knowledge of applications and its absolute commitment to quality, Kistler is making an important contribution to the further development of current megatrends. This includes topics such as electrified drive technology, autonomous driving, emission reduction and Industry 4.0.

Some 1 900 employees at 61 locations worldwide are dedicated to developing new solutions and offer customized service for individual applications. Since its founding in 1959, the Kistler Group has grown along with its customers, generating sales of CHF 422 million in 2017. Approximately 8% of this went back into research and technology — and thus into achieving better results for all our customers.