

## **Press Release**

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# Non-contact ultra-robust torque sensors for test bench applications

NCTE launches Series 6000 sensors featuring KBK coupling

Test benches play a very important role in research, development, and quality control of drivetrain units such as engines, gearboxes, clutches, or bearings. Whenever parameters such as torque, toroidal modes, efficiency, or durability are to be analysed, precise sensors are key components of the experimental setup.

A torque sensor must be able to withstand demanding environments, including extreme temperatures, contamination, lubricants or other chemicals. Conventional strain-gauge based



Die NCTE-Messwelle der Serie 6000 ist mit einer KBK-Metallbalgkupplung kombiniert.

systems often cannot meet the requirements of durability and longevity under such extreme conditions – they have limitations re. temperature range, rpm range, and robustness against chemicals. Against this background, NCTE, in collaboration with KBK, has launched a non-contact, ultra-robust torque sensor especially for demanding test bench applications.

NCTE technology is based on magneto-elastic sensor principle, which is truly contact-less. An existing shaft is converted into the primary torque sensor by magnetic

encoding. A secondary sensor unit detects changes in the magnetic field as a result of torque applied to the shaft. This technique is extremely precise and robust as the shaft itself is not contacted at all. There is no wear or tear, the measurement is not influenced by artefacts auch as bending of the shaft; it withstands extreme conditions without compromise. A coupling designed and supplied by KBK is used for perfect alignment of the setup and for compensating inevitable static or dynamic displacements. The KB4 couplings are suitable for torque ranging from 18 to 1.400 NM; KB4C is suitable from 30 to 500 Nm. Both NCTE sensor as well as KBK coupling have a high overload capacity to protect the setup against damage; they are maintenance-free and allow easy plug-and-play installation.

NCTE AG Inselkammerstrasse 4 D - 82008 Unterhaching, Germany www.ncte.de Tel.: + 49 89 665 619-0 info@ncte.de

#### Pressekontakt

Compass Communications GmbH
Birgit Grabmüller
Theresienstrasse 12, D - 82319 Starnberg, Germany
www.compass-communications.de
Tel.: +49 8151 55079-81
birgit.grabmueller@compass-communications.de



### **Short profile: NCTE AG**

NCTE is specialising in development, manufacturing, and marketing non-contact torque sensors based on magnetoelastic principles. Their products are uniquely robust, precise, and highly dynamic. NCTE's sensors enable reliable measurement of torque and related forces across a variety of industries, including automotive, motor sports, heavy industries, E-bikes, aviation, off-highway vehicles, renewable energy, and test bench applications.

#### Short profile: KBK Antriebstechnik GmbH

30 years of experience in development and production of shaft-hub-connections and backlash-free shaft couplings, combined with competent advice, service and expertise – these are the qualities of KBK Antriebstechnik GmbH. A sophisticated modular system is the basis for a comprehensive range of elastomer-, metal bellows-, overload and distance couplings as well as locking devices. This system enables KBK to manufacture almost all kinds of elastomer- and metal bellows couplings of the standard range with customized bores within 2 hours and have them dispatched by courier immediately. All common locking devices can be supplied ex stock. The owner-managed family company based in Klingenberg am Main with numerous distributors has currently 25 employees.

info@ncte.de