

Hilden, August 2022

Leak and flow testing in the production process

CETA Testsysteme GmbH offers a comprehensive range of test devices for quality assurance.

A large number of products must be tight against the penetration of moisture or liquids. To ensure this, they are tested for leak tightness during the manufacturing process in time with the production line. This is a routine test, i.e. every product is tested (100 % end-of-line leak test).

CETA Testsysteme GmbH is a manufacturer of physical test equipment ("Made in Germany"). CETA has more than 30 years of experience in industrial leak testing and flow measurement in the production line. With a comprehensive range of testing devices, the right solution can be found for practically every testing task.



The use of compressed air as a test medium is widespread. With this, different types of products can be tested for leaks by using different test methods (e.g. products that can be filled directly, encapsulated products such as radio keys or sensors). Sometimes the leak test is combined with pneumatic function tests (preload, opening and closing points of valves). The range of product volumes to be tested extends from 0.1 ml to 1,000 l.

Depending on the application, CETA leak testers with gauge pressure or differential pressure sensors are used. Available pressure ranges are between -1 and 30 bar up to 400 bar with the pressure rise method (e.g. testing of injection valves). The leak tightness of large-volume test parts can be tested

using leak testers with calorimetric mass flow sensors. Very low leak rates down to 10^{-6} mbar·l/s can be detected with hydrogen leak testers. Products whose flow is tested are, for example membranes, filters and cooling channels. With CETA flow testers, a range from 3 ml/min to 400 l/min can be covered. The usual industrial interfaces are available for the test devices. These enable the transmission of the measurement results as well as the control and parameterisation of the test devices.

Customers from the automotive industry, medical technology, heating and air-conditioning industry, fittings and household appliance industry, packaging industry and e-mobility use the CETA test devices for quality assurance and production assurance.

Every testing task is associated with specific requirements. The project starts with a preliminary technical clarification. This serves to select the appropriate test device configuration. Sometimes practical tests with original test parts are also necessary to assure the technical feasibility. For each project, the technical feasibility is clarified, taking into account the test requirements. This gives the customer the certainty that the testing technology offered will reliably fulfil the expectations and requirements in production practice.

The CETA service offer for integration into the production process includes commissioning and training and is supported by special online seminar programs. Furthermore, engineering services, process optimisations and the elaboration of test specifications are offered.

In addition, a large number of technical papers are available on the various aspects of leak and flow testing and on applications.

CETA Testsysteme GmbH acts as a solution partner who supports the customer in all phases of the practical implementation of his testing project (starting with product development, ensuring technical feasibility, selection of suitable testing technology, series production and subsequent process optimisations).

CETA Testsysteme will present practical solutions at the following trade fairs in the 4th quarter of 2022: The possibilities for integrating leak testing and flow testing into the assembly process will be presented at the **MOTEK trade fair (04. - 07.10.2022, Stuttgart)**. Solutions for leak testing of plastic products will be presented at the world's largest trade fair for the plastics and rubber industry, the **K 2022 trade fair (19 - 26.10.2022, Düsseldorf)**. And at the world's largest medical trade fair, **Medica (14.11. - 17.11.2022, Düsseldorf)**, the focus will be on leak and flow testing of medical products.

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CETA Testsysteme GmbH - Solution partner for industrial leak and flow testing

CETA Testsysteme GmbH, based in Hilden near Düsseldorf, was founded in 1988 and has been active for more than 30 years as a manufacturer of physical measurement instruments used in leak tests and flow measurements. Compressed air and hydrogen are used as test media. These testing procedures are characterised by the fact that they can be integrated in the production line with high process reliability.

The test equipment "Made in Germany" is developed in-house and along with the components and accessories (e.g. calibration standards) are manufactured by CETA. This takes into account the high demands on the quality of the internal modules used. A comprehensive range of test devices means that the right solution can be found for almost any testing application.

Semi-automatic test stands are also offered. The test devices are used by customers for quality assurance, quality control and production assurance. The customers are mainly from the automotive industry, medical technology, heating and air conditioning industry, fittings and household appliances industry, packaging industry and e-mobility.

The company is certified according to DIN ISO 9001 and won the NRW Quality Award in 2002 in the industry category. The calibration laboratory was accredited in 2004 by the German Calibration Service (DKD) and in 2014 by the German Accreditation Body (DAkkS) - as the successor to the DKD - as a DAkkS calibration laboratory. The DAkkS calibration (compliant with the DIN EN ISO/IEC 17025 standard) meets the requirements of the IATF 16949 standard applicable in the automotive industry.

CETA Testsysteme GmbH is the first German manufacturer of leak testers to deliver its test equipment with DKD or DAkkS calibration certificate as standard since 2004. Since 2012, CETA has been consistently certified with a very good credit rating.

The comprehensive range of services includes consulting, feasibility studies, commissioning, training, maintenance and calibration.

With cooperation partners in China, India, Indonesia, Korea, Mexico, Poland, Portugal, Singapore, Thailand, the Czech Republic, Turkey and Hungary and with thousands of test devices in use all over the world, CETA Testsysteme GmbH presents itself as a competent solution partner for industrial leak and flow testing.

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