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Leak and flow testing in the production process

CETA exhibits at the Fakuma and MEDICA trade fairs

CETA Testsysteme GmbH is solution partner and manufacturer of test equipment in the field of industrial leak and flow testing for more than 35 years. The test devices are used in the manufacturing process during routine testing. As a rule, every product is tested (100 % end-of-line testing).

Within the scope of a comprehensive project clarification, all data relevant for the testing process are determined. This serves to ensure technical feasibility. For this purpose, preliminary tests with original test parts of the customer are sometimes necessary. This ensures that the test device offered fully meets the customer's requirements. And with the CETA User Experience Package, customers are given the opportunity to conduct their own tests. This approach has proven itself many times over and has contributed to a high level of customer satisfaction. Several thousand CETA test devices are now in use worldwide by well-known industrial customers.

The demand for product-specific leak and flow tests is increasing, especially in the medical technology and plastics industries. The driving forces are product guidelines, stricter requirements for documenting product quality, and the reduction of risks through inline testing integrated into the production process.



A variety of plastic products are leak tested during the production process.

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Many plastic products (e.g. containers, pipes, closures, flap valves) must be tight against the ingress or leakage of media. To ensure this, they are leak tested during the manufacturing process in the production cycle. The range of product volumes to be tested varies from 0.1 ml to 1,000 l. Among the products for which the flow is tested are membranes, filters and pipes. With CETA flow testers, a range from 3 ml/min to 220 l/min can be covered by different laminar flow elements.



Medical devices are tested for leakage or flow during the manufacturing process.

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Medical devices must function reliably under a wide variety of conditions. Media-carrying products (e.g. pipettes, syringes, catheters, filter elements, tube connectors, insulin pumps, valves) must be tight against liquid leakage, while other products require tightness against liquid or moisture ingress (such as cameras, endoscopes, sensors, actuators, displays, control elements, packaging). And the correct flow must be ensured reliably and precisely (e.g. for cannulas, membranes, filter elements, pipettes, valves).

With the test devices of CETA Testsysteme GmbH leak rates down to 10^{-6} mbar*l/s and flow rates up to 220 l/min can be detected. Compressed air, nitrogen or hydrogen (forming gas: 5 % hydrogen, 95 % nitrogen) are used as test media. A variety of available industrial interfaces support the customer in documenting the test results.

CETA Testsysteme will present practical solutions at the following trade fairs in Q4 2023: Solutions for leak testing of plastic products will be presented at the international plastics trade fair Fakuma (Oct. 17-21, 2023, Friedrichshafen, Germany). A practical demonstration will show the leak testing of an encapsulated plastic product. And at the world's largest medical trade fair, MEDICA (Nov. 13-16, 2023, Düsseldorf, Germany), the focus will be on leak and flow testing of medical devices. At the CETA booth, the leak test of a medical device with a table jig will be demonstrated in a hands-on manner. In addition, a lecture on "Leak and Flow Testing of Medical Devices in the Manufacturing Process" will be held on 14.11.2023, integrated into the stage program of the community stand of the state of North Rhine Westfalia.

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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 35 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 considers 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 accredited calibration laboratory. The DAkkS accredited 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 accredited 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.

[CETA profile: 2391 characters with spaces](#)

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