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CETA Testsysteme GmbH

Solutions and Quality Control for Plastic Products, 08. - 15.10.2025 - Trade Fair K 2025, Düsseldorf
Visit CETA in Hall 6, Stand 76 | Joint community booth of the state of North Rhine-Westphalia

Dear readers,

the world of plastics will be gathering at **K 2025** – and we at CETA will once again be right in the middle of it all - at joint community booth of the state of North Rhine-Westphalia in **Hall 6, Booth 76**.
In this newsletter, we present testing methods and solutions in the series testing of plastic products.

Yours, Günter Groß – Managing Director

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CETA Testsysteme GmbH - Profile

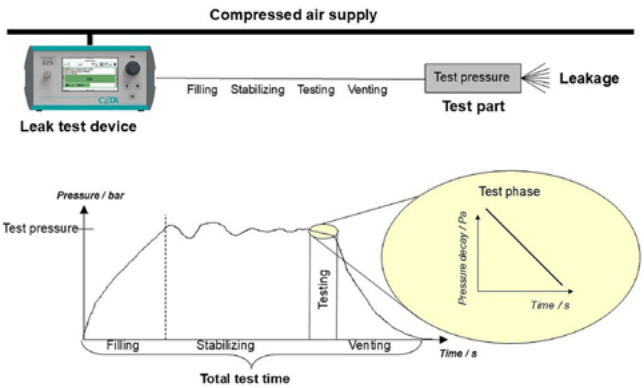
CETA Testsysteme GmbH, based in Hilden, Germany, has been a solution partner and quality manufacturer of leak and flow testing devices for 100% end-of-line testing for more than 35 years. Compressed air is used as the test medium. Several thousand CETA test devices are used worldwide for quality assurance in production lines.

Quality control for plastic products – More important than ever

Plastic parts are used in medical, automotive, packaging, and electronics applications. Leaks, untested flow paths, or incorrectly dimensioned sealing surfaces lead to failures, complaints, and, in the worst case, product liability. 100% testing at the end of the production line or reliable sample testing with meaningful parameters ensure product quality and protect the brand.

CETA Testsysteme GmbH

Principle of pressure decay test



For directly fillable products, the testing process consists of the phases filling, stabilising, testing and venting. During the testing phase, the pressure decay caused by leakage is measured using a sensitive pressure sensor. If the measured value is within the permissible limits, the product is classified as good. The entire testing process is controlled by the test device. Measurement results can be transferred to the PLC system via industrial interfaces and stored. This enables documented traceability.

Principle of pressure decay test | CETA Testsysteme GmbH

CETA test device range – Wide range of applications

The comprehensive CETA range of test devices offers the right test device for practically every testing task. Compressed air is used as the testing medium.

Test device series	Measurand | Sensors	Application | Measuring range
CETATEST 525	Pressure change Δp/Δt Differential pressure sensor	Small volumes | Short testing times 1 Pa/s < Δp/Δt < 100 Pa/s
CETATEST 820 CETATEST 825	Pressure change Δp/Δt Differential pressure sensor	Versatile application 1 Pa/s < Δp/Δt < 20 Pa/s
CETATEST 725 CETATEST XS	Pressure change Δp/Δt Gauge pressure sensor	Larger leakage rates 20 Pa/s < Δp/Δt < 1.000 Pa/s
CETATEST 625	Mass flow Q_L Thermal mass flow sensor	Large-volume products 0,3 Ncm^3/min < QL < 60 Nl/min
CETATEST 925	Volume flow Q Pressure drop in laminar flow element	Volume flow 5 ml/min < Q < 200 l/min

CETA test devices and calibration standards are delivered with an internationally recognised accredited calibration certificate (compliant with DIN EN ISO/IEC 17025) as standard and at no extra charge upon initial delivery. The warranty for test devices is 3 years and can be optionally extended to 5 years.
Further information about our products and services can be found on the CETA homepage at www.cetatest.com.

CETA practical tip: Problems and solutions in testing plastic products

Challenge	Problem	Solution
Flexible, thin-walled products	Falsification of measurement results due to expansion effects when pressurised	Mechanical limitation of expansion by hold-down devices
Warm products	Falsification of measurement results due to temperature-related pressure changes	Measurement of the product temperature and selection of a test program parameterised for the corresponding temperature range
Short cycle times	Production cycle requires short testing times	If the test cannot be carried out within one production cycle, use of several test stations working in parallel
Small leakage rates	Reliable detection of defective parts	Selection and use of suitable testing technology in terms of sensitivity and resolution
Environmental and production conditions	Falsification of measurement results due to external temperature fluctua-tions and vibrations.	Shielding of the test station from heat and mechanical decoupling Lifting the product from the goods carrier during testing
Inline integration / Calibration capability / Traceability	Testing technology must be suitable for industrial use (integrable, calibrata-ble, traceable).	Use of test devices instead of sensor solutions Test process control in the test device, flexibility due to individwually configurable test pro-grams, accredited calibration certificate, industrial interfaces for data acquisition and transfer (traceability)

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