



Dear readers,

Here is our CETA newsletter no. 22, issued on the occasion of the MOTEK 2013 trade fair. We are glad to inform you about our new product portfolio and present some practical applications at our exhibition

stand at the MOTEK (hall 5, stand 5013).

And for the first time, we will introduce our compact, low-cost starter model, the CETATEST XS leak tester.

We are looking forward to your visit.

Wishing you a pleasant reading of our new newsletter!

Yours

*Günter Groß*

Managing Director

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### CETA at the 1st Career Day in Düsseldorf

As a result of entrepreneurial growth and expansion of national and international business activities, CETA is looking for qualified employees. On 27.06.2013, CETA attended the 1st Career Day in Düsseldorf. The event took place in the Esprit Arena. CETA appeared with job offers in the areas of quality assurance, service, sales and calibration laboratory. Over 3.000 interested visitors availed themselves of this forum in a sporty and attractive environment to establish contact with the 60 exhibitors. The event was a full success for CETA and some of the vacancies were filled.

### Polish Cooperation Partner TechControl

Thousands of CETA test devices are integrated in production lines all over the world for industrial leak and flow testing. Among those, a variety of

devices are used in Poland, with upward trend. This is a clear signal in favor of further expansion of the company's involvement in Poland. In addition, a large number of customers expect local technical support. It was therefore of primary concern to find a Polish cooperation partner to care for the needs of Polish customers and support existing and new projects competently. The search was successful. CETA Testsysteme GmbH has concluded a cooperation agreement with the company TechControl, based in Racibórz (South Poland). TechControl has many years of experience in the field of non-destructive testing as well as in development of complex solutions. A basic training on the products and applications of leak and flow testing will soon follow. Measures have been taken to ensure that the cooperation partner can also in the short term take over servicing works such as maintenance and calibration for CETA devices in Poland. CETA has already concluded successful cooperation agreements with partners in France, Spain, the Czech Republic, Turkey, Hungary, Korea, China and now also Poland. Further expansion of the cooperation network is planned in the near future.

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### CETA at the 4th CONTROL CHINA 2013 in Shanghai

From 20 to 22 August 2013, CETA exhibited at the CONTROL CHINA 2013 in Shanghai, which was the 4th edition of the event. CETA has attended this trade fair every year so far. Once



again, we have been supported throughout the event by our Chinese cooperation partner DANTSIN. In the Automotive Forum which was taking

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place at the same time, our Head of Sales, Dr. Joachim Lapsien, held a well-attended lecture on „Industrial Leak Testing“. As in the previous years, the exhibition was followed by very successful visits to customers in Shanghai, Taicang, Wuxi, Suzhou and Changzhou, in connection with project discussions, putting into operation and training.



### New series of leak testers CETATEST XS

CETA is planning to launch the new low-cost CETATEST XS leak tester series onto the market at the end of 2013. These new devices, using compressed air as test medium, are characterized by their compact design combined with highest testing performance and user friendliness. The primary application for the leak tester CETATEST XS is leak-testing using the pressure decay method, which requires a large measuring range. In accordance, the measuring range extends up to 20,000 Pa (depending on the pressure range of the device). The devices can be used for a manual workstation as well as in fully automatic mode. The eight test programs are parameterized by a suitable PC software. In addition, the software is useful for determination of parameters and putting into operation (in particular through display of measurement graphs). The leak testers are serially equipped with RS-232, digital I/O interface and USB (for parameterization and control with CETA software tools). Several pressure ranges are available, up to max. 10 bar.

### We value your opinion

CETA takes customer satisfaction and feedback very seriously. For this reason, we created a feedback portal during the redesign and relaunch of our website in July 2013. At the following address,

[www.cetatest.com/unternehmen/feedback/](http://www.cetatest.com/unternehmen/feedback/) you can give us your feedback on support service as well as CETA calibration services. Please make the most of this opportunity. We are looking forward to your comments and opinions.

### CETA practical tip: Conversion of flow rate to other operating pressures

In practice, one is often faced with the issue of converting the flow rate of a calibration standard, which has been determined under defined conditions, to other operating pressures using the same test medium. The following formula can be used for this purpose (the pressures in this formula are understood as absolute pressures):

$$Q_2 = Q_1 \cdot \frac{p_{2, \text{int.}}^2 - p_{2, \text{ext.}}^2}{p_{1, \text{int.}}^2 - p_{1, \text{ext.}}^2}$$

#### Example:

We assume a test leak with flow rate of  $Q_1 = 1.00$  ml/min at a pressure of 1 bar ( $p_{1, \text{int.}} = 2$  bar absolute pressure) flowing to atmosphere ( $p_{1, \text{ext.}} = 1$  bar absolute pressure). If this test leak is to be submitted to a pressure of 3 bar ( $p_{2, \text{int.}} = 4$  bar absolute pressure), the flow rate will be  $Q_2 = 5$  ml/min if flowing to atmosphere ( $p_{2, \text{ext.}} = 1$  bar absolute pressure).

This formula, which presupposes ideal conditions (laminar flow through cylindrical channel), cannot be used universally, but only in a certain „pressure environment“. Therefore, a conversion of, for example, 1 bar (relative pressure) to 20 bar (relative pressure) does not produce reliable results. As a precaution, it would be better to calibrate the calibration standard for the modified pressure.

#### Note:

It should be taken into account that this consideration applies to an ideal leak (see above). If this formula is applied to the admissible leak rate of test parts, in order to define the same at different operating pressures, it will fail, because the higher stress on seams and sealings, for example, has not been taken into account.

For this reason, this formula only applies to conversion of flow rates of a calibration standard (test leak or master jet).

Conversion of the flow rate to another medium has been described in CETA newsletter no. 20, which can be downloaded from our website.

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