



Dear readers,

Here is our newsletter no. 15 for the CONTROL trade fair 2010. We will be at stand 1423, hall 1 and present some practical applications. We will also introduce two of our new products: leak detector

CETATEST H 201 with hydrogen sensor and CETATEST 917, particularly suitable for leak testing of gas appliances. Our practical tip will deal with a valve circuit allowing automatic connection of a test leak in the test pressure line.

Wishing you a pleasant reading,
Yours,

Günter Groß
Managing Director

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CETATEST H 201 with hydrogen sensor

The H₂ detector CETATEST H 201 is a fully automatic leak testing device for the detection of leaky parts within the cycle time of the manufacturing process. Forming gas (5 % hydrogen, 95 % nitrogen) is used as test medium. This al-



lows to detect leak rates up to $1 \cdot 10^{-5}$ mbar·l/s (corresponding to $6 \cdot 10^{-4}$ ml/min). The device measures the quantity of gas escaping (concentration), which is proportional to the size

of the leak. The test part can be filled with forming gas at a pressure of up to 12 bar (alternatively 100 bar). The test pressure ranges from 100 mbar to 6 bar (absolute). The 7"-touchscreen allows a comfortable operation and graphical programming of the testing procedure. High process reliability is ensured by the integrated system monitoring routines (pressure, pump, supply pressure, function, internal leak-tightness of the measuring circuit, autocalibration) and the redundant sensor technology. The test device is equipped with USB and Ethernet interfaces and 8 digital inputs and outputs.

A two-channel version is in preparation. With the CETATEST H 201, we are expanding our spectrum of devices for detection of minor leak rates.

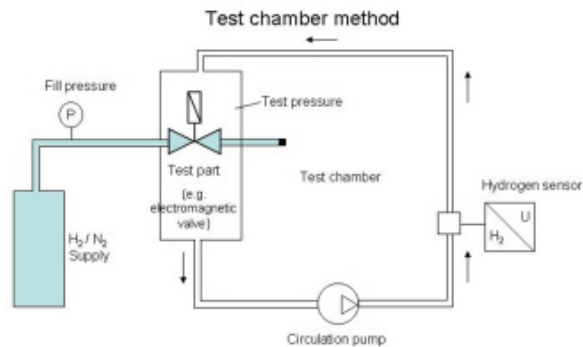


Diagram of the test chamber method for leak-testing with forming gas. The test part is placed in a closed test chamber and filled with forming gas. Leaks in the test part will lead to hydrogen concentration in the test chamber. The gas volume circulates in the test chamber and is directed to the hydrogen sensor which will measure the hydrogen concentration and calculate the leak rate.

Important notice on warranty for CETATEST x15 and x17 series

All new devices of the x15 and x17 series are supplied without additional charge with a warranty of 3 years (under regular maintenance). The conditions for the 3-year warranty have been explained on delivery (supplementary sheet on warranty). In order to assist you with supervision of the yearly servicing intervals and regular maintenance, we need a contact person responsible for servicing and maintenance. Please send the contact data to CETA-Service (phone: +49(0)2103/2471-72, fax: +49(0)2103/2471-78, e-mail: service@cetatest.com).



Availability of CETATEST 810

The successful CETATEST 810 series was replaced in 2009 by the new CETATEST 815 devices with differential pressure sensor. In the meantime, all purchasing orders have been changed to the new device series. Devices of the CETATEST 810 series can only be supplied exceptionally upon customer special request.

The CETATEST 815 devices are compatible with CETATEST 810 as far as digital input-output cards are concerned. However, due to changes in functionality and telegram system, the RS-232 and Profibus protocols were modified. For all new projects, we only supply CETATEST 815 devices. Ask your CETA sales advisor about the CETATEST 815 devices and you will be convinced by their performance (higher clock rate and new test modes among other things).

CETATEST 917 – Device for leak-testing in the gas industry

The CETATEST 917 is a fully automatic flow tester. Compressed air is used as test medium. The test procedure starts automatically after connection of the test part. This mode of operation has been specially developed for low-pressure gas appliances (i.e. gas stoves, combination boilers, gas ovens and components). The pressure decay in the laminar flow element is measured by a differential pressure sensor and converted into a flow value. A short testing time is made possible by a 24 bit analog digital converter with high clock rate as well as quicker filling of the test part by a bypass function avoiding the laminar flow element. The „endless testing“ function supports reworking by continuous analysis and signalling. With the available pressure ranges (150 mbar or 600 mbar) and 120 ml/h measuring

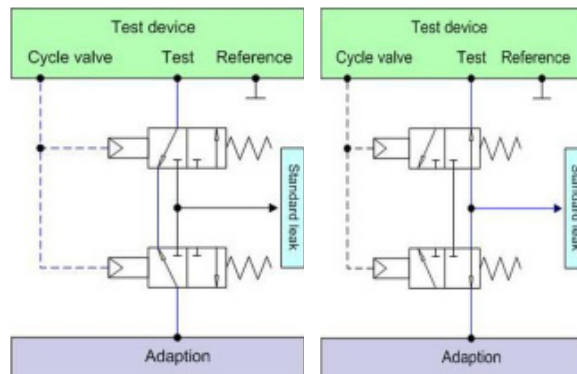


range, the CETATEST 917 devices can be used universally in the gas industry. The 64 user-friendly test programs can be given alphanumeric designations.

In addition to the standard interfaces (digital I/O, RS-232), Profibus, Ethernet and CANopen interfaces are also available upon request. The settings can be saved on a USB-stick. This facilitates the exchange of parameters between identical devices. Besides, it also allows saving of test results and measurement curves. The proven, 3RU compact design ensures the optimum integration in the production lines. The devices are delivered at no extra cost with a 3-year warranty (under regular maintenance). The first devices are already available.

CETA practical tip: Valve circuit for automatic connection of a test leak

In line with the quality control of the functionality of test devices, it is occasionally required, every x test cycles, to operate a cycle with test part and connected test leak. This can of course be done by connecting the test leak to the front of the device, but this requires a manipulation by the operator. With a PLC, this can be automatized with the following valve sequence.



Two leak-tight 3/2 directional control valves are inserted in the test line between test device and test part adaption. On the one way, the test part is connected to the device. On the other way is placed a T-fitting for connection of the test leak. When needed, the test leak can be connected by simultaneous switching of both 3/2 directional control valves. The 3/2 way valves can either be controlled by the PLC and the activation of a valve cluster or by the integrable cycle valve available as option for the CETATEST 815 devices. This circuit can also be used when recording a test series for evaluation of the capability index (please also refer to CETA newsletter no. 5), when it is necessary to perform a series of consecutive tests with and without test leak.

+++ CETA newsletter no. 15 of 04.05.2010 +++