



Meter Calibration Systems

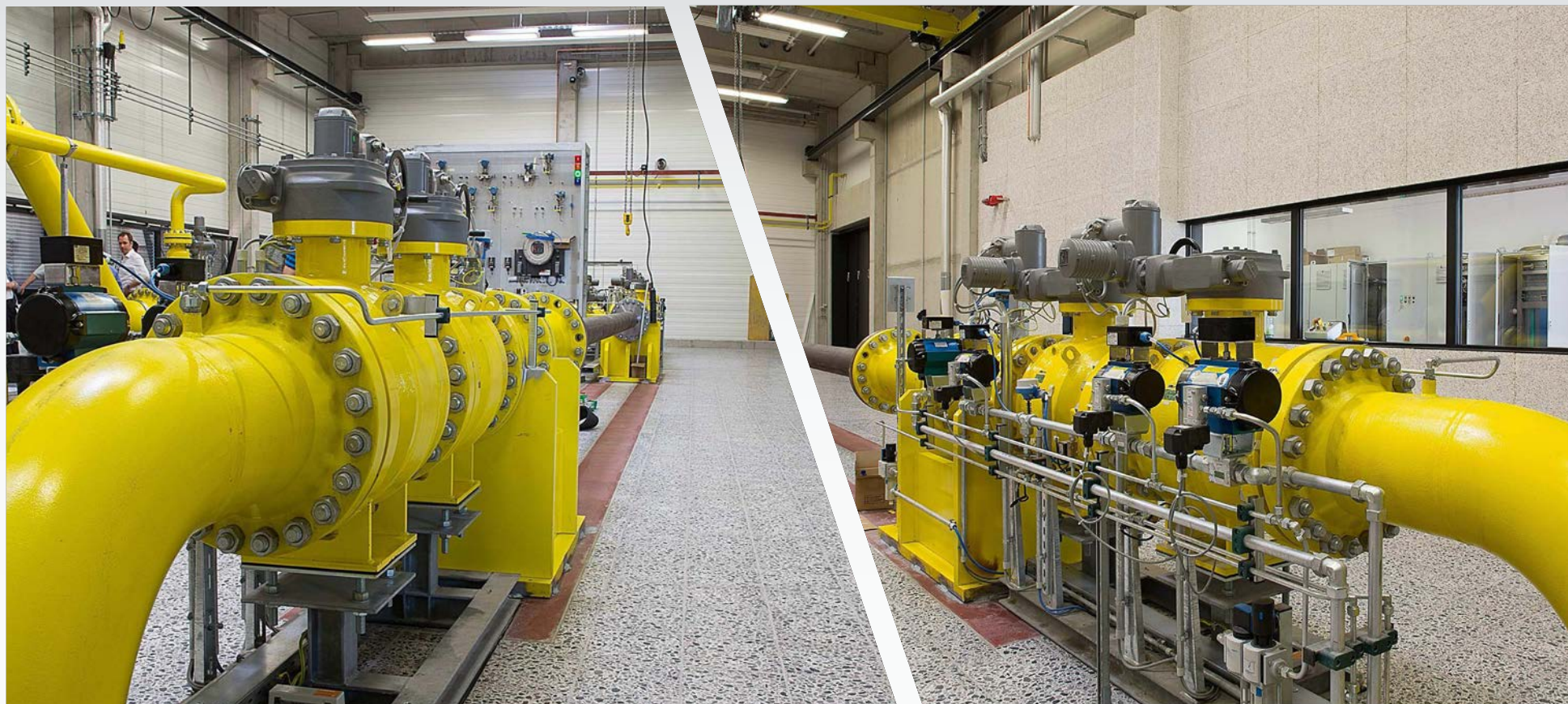


Perfection in accuracy

Welcome to inotech

In the last 20 years inotech GmbH has developed into a leading manufacturer of test equipment for gas meters, testing facilities and calibration facilities and has a reputation as an expert and reliable partner for meter manufacturers and independent test centres throughout the world. In the last few years we have also established ourselves in the area of water meter and heat meter test equipment and this has also effectively extended our product portfolio. Millions of different types of meters are calibrated with our test equipment every year.

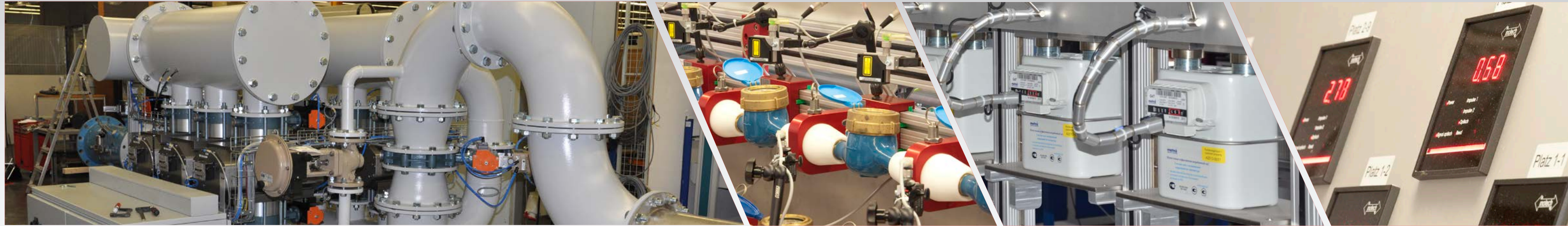
Test equipment is our core business. Every day we combine our know-how with our customers' wishes to constantly improve our products. In this way we always keep our customers in the focus of all our product development and production and are always at the latest state of development.



„ Test equipment is our core business“

The current inotech developments are focused on the new V8 software generation that transfers the test equipment of single systems into a network of testing systems. Consequently the V8 version is particularly interesting for all test centres with multiple testing units. Of course, considerable attention is paid to the new world of smart meters and the testability of these new meters is given priority. Come and talk to us and we will be happy to introduce you to this new generation of developments.

As our company is owner-led, we have flat hierarchies and rapid decision-making processes and we can respond flexibly to the demands of the market. This flexibility is our strength and makes us a reliable partner for our customers. From the changing market for meters right through to the smart meter, constant further development and adaptation in close coordination with our customers is a fundamental requirement for successful products. These are the challenges we set ourselves and we constantly work towards being even better.



Gas meter test equipment

Household and trade gas meter test equipment

All inotech test equipment with flow rates of between 10l/h and 65m³/h uses sonic nozzles as reference standards. These standards have proved themselves for over 15 years and show very good long-term properties. All the necessary nozzles are integrated in the equipment and can be combined as required. inotech has a standard product range available as well as customer-specific equipment based on this in a range of different design configurations.

Bulk gas meter test equipment (atmospheric test conditions)

The inotech bulk gas meter test units have a modular structure and are available as standard systems of up to 6,500m³/h. The units deploy high-quality optimised, low resonance rotary piston gas meters as standard meters. These standard meters can be deployed before or after the test objects depending on customer wishes. The units always work fully automatically with the inotech standard controls and software. Any alterations, modernisations and special installations are implemented in accordance with customer specifications.

Bulk gas meter test equipment (high-pressure test conditions)

The inotech high-pressure test units for gas meters are designed as completely customer-specific systems. A fundamental distinction has to be made here between bypass and closed-loop test equipment. The flow rate volume and the maximum test pressure constitute the basic data for the design. A further important criterion for the realisation of such a unit is the medium deployed. We can draw on our experience with natural gas, air and various inert gases from the realisation of previous projects here.

Water test equipment

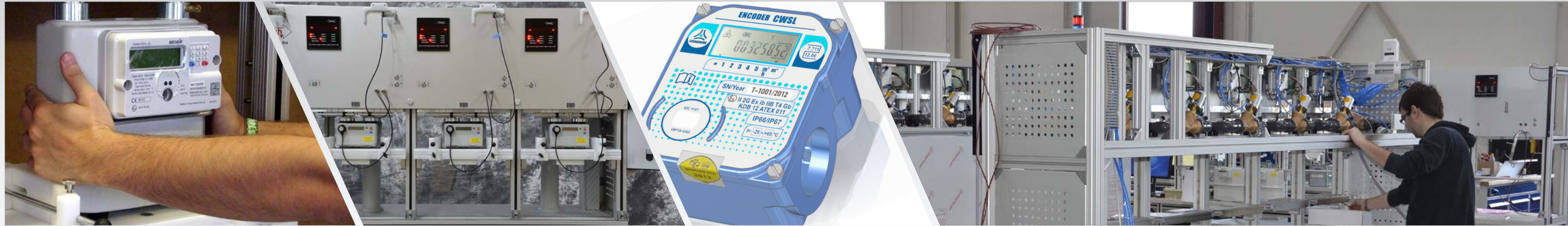
Our water meter test equipment is designed to make gauging office checks and calibration of water meters of various different sizes and types (bulk water meters and compound water meters as well as stand-pipe meters) in the 0.006 m³/h to 120 m³/h range.

Smart meter calibrations

Whereas in countries such as Italy, Sweden, Canada and the Netherlands intelligent meters have already been widely installed, or their introduction has been decided upon, smart metering is also constantly gaining in importance in Germany – and the deployment of smart meters has now become a stated political objective. Corresponding norms and safety requirements are currently being defined and smart metering is set to make the intelligent use of energy available both for suppliers and consumers. The principal objective is the development of intelligent networks and smart grids – all of which is unthinkable without smart metering.

Hardware and software development in the field of energy

In our team of 20 highly-qualified engineers, and as a result of our specialisation in the energy sector over the last few years, we have developed some extraordinary specialist knowledge. This has enabled us to provide our customers with extremely high specialist expertise for product developments in this sector of the market. To enable us to always live up to these demands we work closely together with universities and specialist laboratories who provide us with access to the very latest technologies. We guarantee consistent quality at a high level through our quality management system in compliance with the DIN ISO 9001 standard.



Would you like to work with us?

Do you have an idea and want the product to go with it?

We will draw up the functional specification document together with you.
We will develop the product in close cooperation with you.
The last adjustments to the product will be made with the aid of a prototype.
The production of the pilot run will then take place on our premises followed by series production.

Do you have the product requirement document and want its development to be carried out?

We will then work together with you to draw up the functional specification document. The development of the prototype will then take place.
The assembly of the product will then be optimised in a pilot run. You can then use the development and assembly documentation to assemble the product yourself or have it assembled on our premises.

Do you need any development capacity?

We will make precisely the capacity, time and specialist knowledge available to you that you require. If it is not possible to separate off part of a project, this collaboration can also take place on your premises.
Through structured work in compliance with our quality management system, our employees are able to rapidly integrate themselves – even within larger teams – and contribute to a successful development process.

Hardware development

- Texas Instruments MSP430 family
- ARM-core-based application processors
- Digital and analogue technologies
- Low-power technology

Software development

We develop software for process control, data capture and assessment, visual display, energy accounting and device parameter setting for the following platforms:

- Windows 7/8
- Microsoft Visual C++
- Microsoft Visual C#
- Relational databases

Example development projects

- A chip card operated pre-payment system for settling gas bills
- Industrial burner control systems
- Electronic counters for gas meters
- Electronic counters with power interfaces
- Status volume correctors
- Additional electronic devices for gas, water and heat
- Measurement devices for flow rate monitoring with ultrasonic sensors
- Devices with M-Bus couplings
- Systems for process control and process data measurement by means of decentralised intelligence

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