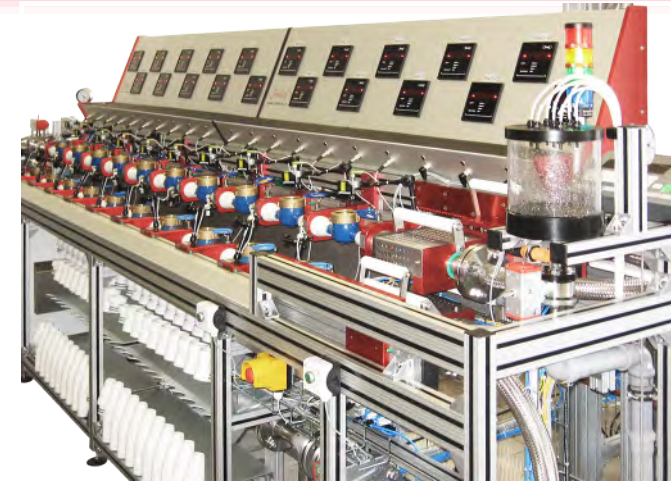




## Calibration of Water Meters and Heat Meters

The inotech test rigs for the calibration of water meters and heat meters are designed to meet the highest accuracy together with the shortest calibration time. All kinds of water and heat meters, manufacturer independent, of all sizes and types could be calibrated. The test rig is equipped with sensors to measure temperature, pressure and differential pressure to ensure the highest accuracy in calibration. The software using the information from the process control system monitors the system condition and carries out a permanent plausibility check for all measured values.

With the use of high quality digital scales, electromagnetic inductive flow meters or piston provers, inotech



designs the test rig to meet the customer specific requirements. Furthermore, it guarantees the highest accuracy and the fastest flow control.

An optional available pneumatic clamping system with the easy installation of the meters and adaptors for the different meter dimensions reduces the set-up time to the minimum. The test rig could handle all kinds of mechanical and electronic counters, pulse generators and interfaces.

The inotech meter calibration software provides fully automatic predefined test sequences. The software visualizes all process and measuring data together with an active flow diagram and Diagrams for the relevant measurement variables. The error calculation meets the international standards. The test results and measured values are available on screen and printer as well as a data file.



## Test Rigs for Water Meters and Heat Meters



### Technical Data of the Test Rigs

**Type of the test facility:**

Test rig for water and heat meters

**Type of Meters:**

Single Jet Water Meters, Multi Jet Water Meters, Woltman Water Meters, Ultrasonic Water Meters, Electromagnetic Inductive Flow Meters, Mechanical and Ultrasonic Heat Meters

**Meter sizes:**

DN20 - DN300

**Standards in use:**

Digital Scales, Electromagnetic Inductive Flow Meters, Piston Provers, Temperature bath or dry-block calibrator for the temperature sensors of the heat meters

**Sensors in use:**

- Temperature sensors
- Differential pressure sensors
- Pressure sensors

**Flow range:**

0.01 m<sup>3</sup>/h - 400 m<sup>3</sup>/h

**Test medium:**

Cool and hot water (up to 60°C / 140°F)  
At operation pressure of 1 bar - 16 bar

**Operating mode:**

Circulation system

**Generation of the flow:**

Water pumps, piston prover

**Calibration of sensors and standards:**

EBBW, subordinated to the PTB, traceable calibration based on the PTB testing rules and standards

**Measurement uncertainty:**

≤ 0.2 % (2 × standard deviation)

**Volume Measurement:**

- by pulse generators
- by light sensor/laser sensor
- by start-/stop device
- by communication via interface
- by digital camera (optional)

**Displaying of meter and process data:**

MUT-Modul with display next to test location

**Data Entry:**

Hand-Held-Scanner / Terminal / PC-Keyboard

**Process control and measurement data acquisition:**

PLC with inotech measurement components

- Low pressure test rigs for domestic and industrial gas meters
- High pressure test rigs for gas meters designed as closed-loop or as bypass
- Mobile gas meter test rigs
- Modernization of test rigs
- Test rigs for gas pressure regulators
- Test rigs for water meters and heat meters
- Purging units
- Leakage test units
- Remote support and service support
- Spare parts
- Maintenance contracts
- Preventive maintenance
- Update service
- System availability service
- System extension
- Software support with customized adaptations
- Standard and tailor-made trainings



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