

# Calibration and Verification

Reliability and availability in your processes with our instrumentation services

# Reliable measurements – due to professional calibration and verification

Measuring, positioning, recording, and controlling are key parameters for all industrial processes. Thus, top priorities for process instruments are achieving high levels of precision and absolute reliability. Process instrumentation from Siemens satisfies these demands and provides you with an efficient means to both increase your plant efficiency and improve your product quality.

We offer a comprehensive range of calibration and verification services for your process instruments. Whether you need calibration for pressure, temperature, flowmeter, or dynamic weighing systems like belt scales, we support you by ensuring high-level production quality.

#### Our Process Instrumentation Services in overview

Demands on accuracy, reliability and availability of measurement instruments are steadily increasing. Therefore in situ calibration and measuring devices are an important factor for production and market competition.

With our calibration and verification services, we fulfill the highest standard in quality, reliability, and traceability. We provide access to all calibration parameters of devices as well as the final calibration and verification certificate.

Our Process Instrumentation Services deliver the knowledge and the global experience required to keep your assets operating at peak performance. We provide the complete scope of services – from start-up and commissioning through lifecycle support.

#### Why calibrate field devices?

- To maximize your production yield by eliminating incorrect measurements
- To determine the accuracy of your instrument
- To gain compliance with both standard legal and metrological requirements
- To avoid expenses due to unplanned production downtimes
- To compensate for material and manufacturing tolerances
- To establish traceability and reliability
- To control quality

#### Why verify measurement instruments?

- To increase your device reliability, your plant availability, and the lifetime of your field installations
- To improve the operational safety of your facility
- To prevent the failure of your instruments
- To distinguish between product and installation fault
- To calculate costs



"Why accept uncertainty?"
Siemens ensures a higher standard of accuracy and reliable performance

#### Quality matters!

Calibration is essential when discussing device measurement accuracy, repeatability, and reliability. Siemens' clear calibration philosophy is to minimize uncertainties.

In situ verification is an important operation at the customer's site to ensure continuous availability of a flow-meter device. For us this means automated predictive maintenance without interrupting the flow.

**Siemens offers** calibration and verification on a global scale with facilities and service experts in different countries.

**Siemens ensures** a high standard of accuracy and reliable performance:

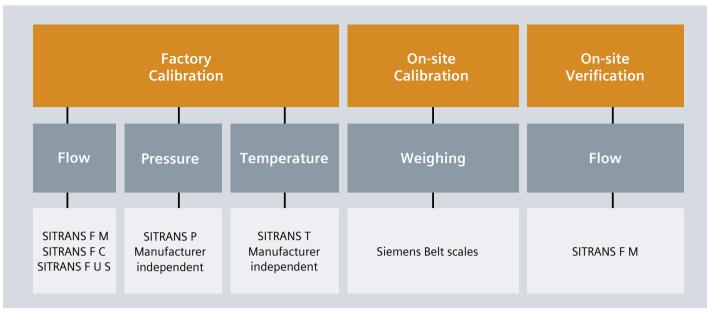
- High-accuracy rigs with less than 0.1% calibration uncertainty for flowmeter calibration
- High-precision pressure calibrators and pressure balances for simulating precise reference pressures
- Calibration of temperature measuring devices using state-of-the-art dry-block calibrators or temperature baths
- Easy plug-and-play verification for electromagnetic flowmeters without interrupting the measurement process
- Reliable aids like test weights or test chains with high technical expertise for belt scale calibration and adjustment

#### Accreditation

Siemens calibration facilities are accredited by COFRAC (Haguenau-France), DAkkS (Erlangen-Germany), CNAS (Dalian-China) and DANAK (Sønderborg-Denmark). Accreditation to the international standard ISO/IEC 17025 means that calibration equipment is constantly calibrated against authorized references.

An accredited laboratory performs high-quality calibrations and prepares documentation at an approved level. In this way a calibration certificate is shipped with every sensor.





Service portfolio structure of calibration and verification

#### Factory calibration: SITRANS F, SINTRANS P, SITRANS T

With our accreditation according to ISO/IEC 17025 we provide traceable factory calibration measurements with high-level quality worldwide. Our calibrations in connection with custody transfer recognize international and national directives (i.e. MID, OIML, PTB).

**Sitrans F** flow measuring devices are calibrated with state-of-the-art wet calibration methods. Regular maintenance of flowmeters increases process optimization and process availability. We offer our calibration services for the following flowmeter technologies:

- Sitrans F M Electromagnetic
- Sitrans F C Coriolis
- SITRANS F U S

**Sitrans P** and manufacturer-independent pressure measuring devices are calibrated using high-precision pressure calibrators and pressure balances for simulating an ideal reference. We offer our calibration services for the following components:

- Sitrans P300, 500, and DSIII compact
- Sitrans P300, 500, and DSIII remote seal
- Pressure transmitters manufacturer independent

**SITRANS T** and manufacturer-independent temperature measuring devices are calibrated using high-precision block calibrators or temperature oil baths for simulating an ideal reference. We offer our calibration services for the following components:

- Sitrans TH300
- Sitrans TH400
- Temperature transmitters manufacturer independent

#### On-site calibration: belt scales

Belt scale measuring systems play a key role in custody transfer, energy saving, and cost accounting. With our on-site calibration, we provide sustainable and reliable inventory control, reduced transaction costs, and safety of asset values, as well as improvement in performance and quality within production. We provide the right level of competence on a regular basis to ensure that your key requirements are quaranteed.

Siemens belt scales are calibrated and adjusted using Siemens high-quality test chain references for belt load simulation, and tachometers with high accuracy as reference for speed sensors. Our skilled service technicians make use of the necessary inspection capabilities and dynamic weighing expertise to ensure the accuracy, reliability, and availability of your measuring system. We are also able to support the approval of our Siemens belt scale systems for custody transfer according to OIML standards.

We want to be your partner to calibrate and adjust:

- Siemens belt scales types MSI, MMI, MCS, and MLC
- Siemens integrator types BW500/L and BW500
- Siemens speed sensor types TASS, RBSS, and Sitrans WS300



"Make sure that your flowmeter is accurate!"

Easy and reliable on-site verification: a fully automatic test takes only 15 minutes without interrupting the flowmeter installation.

#### On-site verification: SITRANS F M

Send the flowmeter back to the factory for recalibration? Here is our cost-efficient and time-saving alternative: We support service teams by on-site health inspection and troubleshooting – ensuring a continuous, accurate measurement of the complete flowmeter system.

**Sitrans F M** electromagnetic flow measuring devices can be inspected with our plug-and-play Verificator case. The on-site, fully automatic performance check is done in less than 20 minutes, without interrupting the flowmeter installation, and without expensive removal or installation costs.

The Sitrans F M Verification can be used in:

- New applications: approving new installations with the certificate for handover
- Existing applications: ensuring correct product quality and continued accuracy

With the Verificator our skilled service technicians are able to provide an easy and reliable on-site verification for the following SITRANS F M transmitters and sensors:

MAG1100, MAG1100 Food, MAG3100, MAG5100W, MAG5000, MAG6000

For ISO9000 and ISO14001 documentation a MAG verification certificate can be printed as handover from contractor to end user.

### Siemens calibration and verification services – your benefits

Our services provide a multitude of benefits for your manufacturing plants as well as your production processes:

- Our factory calibration facilities are ISO/IEC 17025 certified
- From on-site to laboratory calibrations, our facilities are fully accredited or traceable to national and international standards
- We offer preventive and predictive maintenance to reduce your total cost of ownership thanks to optimum performance
- Assurance of product or batch quality remains high and consistent over time
- You can rely on your production safety and the quality of your final products
- Calibration of measuring devices prevents expensive unplanned downtime
- On-site calibration is performed by specially trained and certified technicians

## Are you interested in our Process Instrumentation Services?

Feel free to contact your local Siemens partner for detailed information.

siemens.com/aspa

For further information see siemens.com/piscv



#### siemens.com/piscv

#### **Industry Services**

Around the world, Siemens supports its customers with services for products, systems, and applications throughout the entire lifecycle of a machine or plant. Customers benefit from the comprehensive service portfolio and from experts' extensive technological and product knowledge as well as industry expertise.

Find out more about our Process Instrumentation Services here:



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