

Counting Accuracy Assurance through Calibration

Counting scales can help you increase productivity and achieve reliable goods control. Contrary to popular belief, the count value displayed is not always the exact count of the objects on the scale. Every measuring device has a related uncertainty due to the counting device's capabilities, environmental conditions and the weighing process.

The only way to determine the suitability of a measurement for meeting your process specifications, or for delivering acceptable cost and revenue impact, is to calibrate the measurement device with a traceable reference standard and to determine accuracy. Additionally, to have traceability in your process, you must document calibration results and certify that measurements meet quality and regulatory requirements.

Finally, for critical processes or when a measurement device is used at the low end of its range, it is critical to determine measurement uncertainty and minimum reference weight.



Calibration and Certification

You should select calibration and certification services to meet the objectives of your project, in accordance with the requirements of your process and to complement the capabilities of your personnel. These recom-

mended steps provide guidance for specifying the appropriate calibration and certification services to meet your objectives. Each step is classified according to level of difficulty as follows:

- B** Basic – Performed by individuals with knowledge of weighing equipment and concepts
- I** Intermediate – Performed by individuals with specialized know-how of weighing equipment and processes
- A** Advanced – Performed by individuals with training and tools from the equipment manufacturer

Calibration & Certification	Recommended Steps	Classification			My Notes
		B	I	A	
Preparatory Tasks	1. Evaluate / confirm calibration and certification requirements according to process, quality and regulatory requirements			x	
	2. Decide if "As Found" results should be determined and documented		x		
	3. Select an appropriate calibration procedure and certificate type			x	
	4. Perform a visual inspection of the weighing system's operational condition		x		
	5. Select sufficient reference weights of the required class and tolerance according to the scale classification			x	
	6. Select or record device serial number, model and metrological details		x		
	7. Select or record scale owner, location, asset and other information		x		
Testing Procedures "As Found"	1. Perform and record results of tests that were determined to be required		x		
	2. Perform and record results of the <ul style="list-style-type: none"> • Sensitivity Test • Eccentricity Test • Linearity Test • Repeatability Test 		x		
Make Adjustments	1. Make any needed adjustments to the scale and terminal in order to improve weighing performance to meet requirements			x	
Testing Procedures "As Left"	1. Perform and record results of tests that were determined to be required		x		
	2. Perform and record results of the <ul style="list-style-type: none"> • Sensitivity Test • Eccentricity Test • Linearity Test • Repeatability Test 		x		
Create Certificate	1. Record comments regarding the condition of the calibration tests or other relevant information		x		
	2. Record the next calibration due date		x		
	3. Calculate measurement uncertainty and minimum weight values (as required)			x	
	4. Print and archive the test certificate		x		
	5. Review test results to ensure that scale is suitable for use in the required processes and applications			x	
	6. Check if re-verification is required		x		

Your Qualified Service Provider

Contact METTLER TOLEDO to ensure you maximize the return on your investment. Our technicians have the advanced skill-set to safeguard the life of your weighing equipment through these comprehensive service offerings:

Calibration and Certificates

METTLER TOLEDO advisors are experts in global standards and local and industry-specific requirements. They can determine the appropriate frequency and calibration procedures required to maintain compliance.



MiraCal

METTLER TOLEDO's calibration service-management solution is designed to produce and electronically archive the highest-quality calibration documentation.



Efficient Lifecycle Management

With GWP®, METTLER TOLEDO performs a comprehensive analysis of your weighing process and recommends weighing equipment and the right services.



Preventative Maintenance

METTLER TOLEDO provides the right level of periodic preventive maintenance to match equipment utilization, process criticality and equipment lifecycle.



METTLER TOLEDO will assist you in determining the key requirements before defining a services program:

- How important is maximizing uptime to your process and business?
- What measurement accuracy will ensure required quality and profitability?
- What are your regulatory, quality and customer compliance requirements?
- How should your equipment be integrated into your process and systems?
- What is the optimal equipment configuration for your process and operation?
- Can your staff safely and productively operate and maintain your equipment?

Benefits of Using METTLER TOLEDO Service:

- Consultation for an optimal service plan to achieve your desired business results
- A global network of factory-trained technicians delivering exceptional service
- A field service force backed by local and global support personnel to provide ideal solutions
- Proprietary service tools to realize and maintain the best performance for your equipment
- Factory maintenance procedures to maximize your return on investment
- Consistent procedures to ensure measurement results that lower costs and increase revenues
- Certification solutions that are compliant with local and global regulations and standards
- Calibration services that are ISO17025 accredited, giving third-party credibility to results

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