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FCI METROLOGY WHITE PAPER SERIES · WP-001

The True Cost of an Accredited Calibration

What an accredited certificate actually documents, what goes into its price, and how to compare two calibration quotes fairly.

DOCUMENT	ISSUED	CLASSIFICATION
WP-001	October 2026	Public

AUTHOR	AUDIENCE	ALIGNS TO
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IAS ACCREDITED Calibration Laboratory

ilac-MRA

ISO/IEC 17025:2017 accredited calibration laboratory
International Accreditation Service, certificate CL-112

Executive Summary

Calibration is not a commodity. An ISO/IEC 17025 accredited certificate is a documented, traceable and statistically defensible statement about a measurement, backed by a quality system that an outside accreditation body assesses on a recurring basis. It is what your customers, auditors and regulators are relying on when they accept your product, your data or your process.

For roughly a decade, Field Calibrations' published prices did not reflect what accredited work actually costs to produce. In 2025 and 2026 we rebuilt the pricing model from the ground up around the real cost of each service, using one calculator for every accredited line in the catalog. The result is a price book that is sustainable, consistent and defensible line by line.

This paper explains what accreditation means, why prices vary by discipline, what goes into the price of a single calibration, and what to check when comparing quotes. It is written for procurement managers, quality engineers, compliance officers and the executives who sign the purchase orders.

An accredited certificate is not a piece of paper. It is the audit trail behind a measurement, the same kind of audit trail your own customers pay you to provide.

1. What Accredited Actually Means

Anyone with a multimeter and a label printer can issue a calibration sticker. An accredited calibration is something different. ISO/IEC 17025:2017 requires the laboratory to operate a documented management system, maintain an unbroken chain of traceability to a national metrology institute such as NIST, evaluate measurement uncertainty, manage impartiality and confidentiality, and submit to recurring outside assessment.

Field Calibrations is accredited by the International Accreditation Service under certificate CL-112. Through the ILAC mutual recognition arrangement, certificates issued within that accreditation are recognized by accreditation bodies around the world.

Four things an accredited certificate documents

Element	What the certificate shows
Traceability	Every reported measurement ties back through the laboratory's standards to a national metrology institute through an unbroken, documented chain of comparisons.
Uncertainty	Each test point carries a stated measurement uncertainty, normally at about 95 percent confidence (coverage factor k=2). Without it, a reading is a number with no boundaries.
Decision rule	When a pass or fail statement is made, the certificate identifies the decision rule used, meaning how uncertainty was accounted for in calling the result in or out of tolerance.
Competence	The technician, the standards, the method, the environmental conditions and the laboratory's scope are all documented and independently assessed.

Accreditation is also specific. A laboratory is accredited for defined parameters, ranges and uncertainties listed on its published scope, not for everything it can measure. An FCI certificate states, line by line, whether each measurement falls inside the accredited scope or is traceable but outside it, so you always know what you are relying on.

2. Why Prices Vary by Discipline

Calibration spans many disciplines, and each has its own reference standards, technician skill profile, facility requirements and cost structure. A three point pressure gauge calibration and a microwave network analyzer calibration may come back with the same cover sheet, but the work behind them has almost nothing in common.

Discipline	Typical instruments	What drives the price
Dimensional	Calipers, micrometers, gauge blocks, height gauges, indicators	Gauge block sets, environmental control, technician skill, point count
Mechanical	Torque wrenches, force gauges, balances, weights	Reference torque and force standards, mass set upkeep, required class
Thermal	Thermocouples, RTDs, thermometers, data loggers, ovens, furnaces	Number of test points, temperature range, bath and furnace time
Electrical, DC and low frequency	Multimeters, calibrators, power supplies, process meters	Multifunction calibrator cost, functions and ranges tested, accuracy ratio
RF and microwave	Spectrum and network analyzers, signal generators, power meters	Frequency range, calibration kits, very high capital cost
Pressure and vacuum	Gauges, transducers, controllers, vacuum gauges	Deadweight testers, pressure controllers, point count

Two lessons follow. First, compare like with like, since a three point temperature check is not the same product as a ten point thermocouple calibration across a wide range. Second, disciplines with the highest capital cost will always price above those with lower capital cost. That is not specific to any lab. It is the physics and the standards behind the work.

3. What Goes Into the Price of a Single Calibration

Every accredited line in our catalog runs through the same pricing calculator, and no item is priced by feel. The calculator starts from the real cost of an hour of accredited service and adjusts it for the scope of the work in front of us.

Cost driver	What it covers	Why it matters to you
Burdened labor	Technician wages with payroll burden, benefits, training and recurring competency assessment	ISO/IEC 17025 §6.2 requires demonstrated competence, and competence has to be paid for
Standards	Purchase and recurring calibration of every reference standard, spread across its working life	Our standards are calibrated by higher tier accredited labs, and that cost rolls into every item
Facility and accreditation	Lab space, environmental control, calibration software, the quality program, accreditation fees and surveillance assessments	Accreditation is not a one time fee. It is an annual cost carried so your certificates stay valid
Vehicle and logistics	Pickup, delivery and on-site mobilization, including setup and tear down	On-site work removes your downtime and shipping risk, but it costs more to deliver
Complexity and uncertainty	Number of test points, accuracy ratio and uncertainty targets, data and certificate format	A ten point calibration at a tight ratio takes more bench time than a three point check
Priority	Expedited work that moves ahead of the normal queue and may pull a senior technician off other work	Planning recalls ahead avoids priority charges entirely
Sustainable margin	A target margin against realistic billable hours, not every hour on the clock	A lab that cannot price sustainably cannot keep investing in the standards and accreditation your certificates depend on

4. The Traceability Parallel

If you ship to a regulated buyer, you already pay for traceability on the components inside your product. Aerospace, medical, defense and automotive parts routinely sell for many times the price of a commodity equivalent, because the qualification, documentation and traceability behind them is what the buyer is actually paying for.

An accredited calibration certificate is the measurement side of that same chain. The scope of accreditation, the traceability statement, the stated uncertainty and the IAS and ILAC marks are how your customers, auditors and regulators verify that the measurements behind your product are real.

What we are asking

Your customers pay a premium for the documentation chain behind your product. We are not asking for that multiple. We are asking for the cost of the calibration that backs your documentation chain.

5. Why Our Prices Changed

For about ten years, our catalog priced calibrations in like item buckets that had never been re-indexed against actual cost. There was no burdened labor in the per item price, no recovery of reference standard cost, no overhead absorption, no margin target and no logistics or priority premium. Some line items sat below the cost of the technician time and standards needed to produce them.

In 2025 and 2026 we rebuilt the model. Labor, standards, facility and accreditation, complexity, logistics and margin now sit inside one calculator that drives every accredited line. What the rebuild did not change matters just as much.

- **Accreditation.** Field Calibrations remains accredited by IAS under certificate CL-112.
- **Methods.** The same procedures, standards and uncertainty evaluations apply.
- **Transparency on scope.** Every certificate line states whether the measurement is inside the accredited scope or traceable but outside it.
- **Loyal customers.** Customers who recall on a predictable schedule avoid priority charges and qualify for service agreements that lower the cost of each item.

6. How to Read and Compare a Calibration Quote

The fastest way to a misleading comparison is to compare two unit prices without comparing what sits behind them. Before deciding one quote is high and another is a bargain, check the following.

Check	Why it matters
1. Accreditation scope	Look the lab up in its accreditation body's public directory and confirm your parameter, range and uncertainty are on its published scope. A lab can be accredited in general and still be outside its scope for your instrument.
2. Test points	A three point calibration is not the same product as a six or ten point calibration. Confirm the points, range or frequency span each quote covers.
3. Accuracy ratio	Ask what test uncertainty ratio the lab is working to and whether the certificate reports it. Tighter ratios take more time and better standards.
4. Decision rule	Confirm how pass and fail will be decided when uncertainty is considered. A stricter rule may cost more and should be agreed in writing.
5. Data deliverable	Ask for as-found and as-left data, environmental conditions, standards used and technician identification. A bare certificate of compliance is not enough for most regulated work.
6. Turnaround and priority	Compare standard turnaround times and how expedited work is priced. If you need fast turnaround on every recall, plan for it rather than paying a priority charge every quarter.
7. Adjustment and repair	Most quotes cover calibration only. Adjustment, parts, repair labor and calibration after repair are usually separate.

7. Common Questions

Question	How Field Calibrations handles it
The quote is higher than last year for the same instrument.	First confirm the scope did not change, including points, range and uncertainty target. If it did not, the increase reflects the catalog rebuild. The new price is built up from real cost, not marked up from the old number, and we will walk you through the calculation on request.
Can I limit the scope to lower the price?	Yes. If your use requires only certain ranges, inputs or functions, we will price the calibration to that scope, and the certificate will state the limited scope clearly.
Can you come to my facility?	On-site service is available for many disciplines. It avoids shipping and downtime, and setup and travel are quoted as separate lines.
I need it back in two days.	Priority service is available, and the charge is quoted explicitly so you can make the trade off knowingly.
We need a multi-year agreement.	Service agreements built around your instrument fleet and recall calendar lower the cost of each item, lock in pricing and avoid priority charges.
My customer requires a specific decision rule or guard band.	Customer specified decision rules, guard bands and quality clauses are accommodated when stated in writing on the purchase order or service agreement, and may affect price.

8. Closing

We ask to be evaluated the way you evaluate any supplier of regulated work. Look at accreditation scope, technical capability, traceability, turnaround reliability and total cost of ownership, not a single unit price set against an unaccredited or out of scope alternative.

Our 2026 prices are the corrected baseline. They are built from real cost, applied consistently, and they are what allow us to keep investing in the standards, the people and the accreditation that your certificates depend on.

Questions or next steps

Want the calculation behind a specific quote, or a service agreement built around your recall calendar? Contact the Quality Assurance Manager at quality@fieldcal.com or call (480) 756-8828. The full white paper series is available at fieldcal.com/resources.