



Accredited Force Calibration Services

Confidence and Results

Morehouse exercises calibration best practices, such as initial inspection of all instrument components and simulation of customer loading conditions during calibration. Significant errors, up to 20 times what is expected, can occur if best practices are not followed. Our results are achieved with:

- Primary Standards laboratory, directly traceable to SI through NIST.
- ISO/IEC 17025 Accredited force calibration services through 2,250,000 lbf (10 MN) in compression and 1,000,000 lbf (4.4 MN) in tension.
- Deadweight calibration up to 120,000 lbf (600 kN), accurate to 0.0016 % of applied force.
- Audits performed by A2LA, NVLAP, and Nuclear Procurement Issues Committee (NUPIC) for compliance with 10 CFR 50 Appendix B, and 10 CFR Part 21.

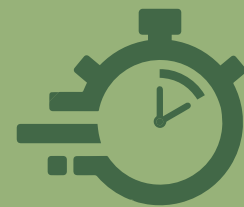
We calibrate load cells (including multi-axis), proving rings, force gauges, dynamometers, crane scales, aircraft scales, and other force-measuring instruments.



High accuracy



Low measurement risk



Quick lead time

Highest deadweight calibration capabilities of any commercial lab in the US

Primary standards are **10-50 times better** than other force calibration suppliers using secondary standards

ISO/IEC 17025:2017 accredited **ASTM E74, ISO 376** and other force calibrations

We calibrate instruments from **0.1 lbf through 2.25 million lbf**



Following Published and Accepted Legal Standards

(ASTM E74 and ISO 376)

ASTM E74 Calibration

Required for calibrating instruments following ASTM E74, ASTM E4, ASTM C39, ASTM E10, ASTM E18, AASHTO T22, AASHTO T68. Types include:

1. Ascending (upscale force readings)
 - Compression only
 - Tension only
 - Compression and Tension
2. Ascending and Descending (down scale force readings)
 - Compression only
 - Tension only
 - Compression and Tension

ISO 376 Calibration

This is required for calibrating instruments following ISO 376 & ISO 7500 standards. Types include Case C or Case D:

- Compression only
- Tension only
- Compression and Tension

ISO 376 Case A and B type calibrations are available for limited load devices such as Brinell calibrators, expanded scale force gauges, and other force-measuring devices.

To an Accuracy Specification

Such as % of Full Scale (%FS), Indicated Value (%IV), or Range, using ISO/IEC 17025:2017 Decision Rules

Single Run, 10-11 pt Calibration

Instrument is calibrated and adjusted using agreed ISO Decision Rules. Types include Ascending (upscale force readings)

- Compression only
- Tension only
- Compression and Tension

Two Run or Three Run, 10-11 pt Calibration

Instrument is calibrated and adjusted, based on the average reading of the runs, using agreed ISO Decision Rules. Types include Ascending (upscale force readings)

- Compression only
- Tension only
- Compression and Tension

These calibrations are common for force-measuring devices reading in gf, lbf, klbf, kgf, N, kN, MN, lb, kg, t, mA, and 0-10 V.

Commercial Calibration

Performed to quantify specifications such as Non-Linearity, Hysteresis, Static Error Band (SEB), and Non-Repeatability

Single Run, 5, 6, 10, or 11 pt Calibration

The force-measuring instrument is calibrated typically in mV/V.

Types include:

1. Ascending (upscale force readings)
 - Compression only
 - Tension only
 - Compression and Tension
2. Ascending 10 Pts and 1 Descending Pt
 - Compression only
 - Tension only
 - Compression and Tension
3. Ascending and Descending 5 pt, 10 pt, 20 pt (Up & Down Scale Force Readings)
 - Compression only
 - Tension only
 - Compression and Tension

If you require a calibration not listed above, or have special requirements, please contact Morehouse.

Notes:

- Ascending and descending calibration is typically required for low cycle fatigue machines, nuclear requirements, and universities conducting a lot of research.
- For all calibrations, extra points and extra runs are available upon request.