

Weights and Calibration Guide



METROLOGY LABORATORY ACCREDITATIONS

Rice Lake's metrology labs in Rice Lake, WI, and Concord, CA, are ISO/IEC 17025:2017 accredited by the National Voluntary Laboratory Accreditation Program (NVLAP) and American Association for Laboratory Accreditation (A2LA). These ensure quality and unbiased third-party laboratory evaluations.



NVLAP Lab Code 105001-0
NVLAP Lab Code 600169-0



A2LA Cert. No. 4363.01
A2LA Cert. No. 1823.01

INDUSTRY-LEADING CALIBRATION SERVICES

Rice Lake is committed to upholding the highest standards of metrology services. Leading the industry, we have a four-day calibration turnaround and direct traceability to NIST.

Our calibration services provide three types of certifications:

- Certificate of Weight Calibration (accredited)
- Certificate of Weight Calibration (non-accredited)
- Statement of Accuracy (not a Legal for Trade or traceable document)

Although weights from NIST 105-1 and NBS Circular 547 historical classes are no longer sold for legal metrology use, Rice Lake's calibration labs can recalibrate them. Contact a Rice Lake metrologist for more information.



MASS REFERENCE STANDARDS

ASTM and OIML mass reference standards are globally recognized accuracy classes utilized to precisely calibrate balances and calibration weights. Mass reference standards are often used in accredited calibration labs and maintain traceability to the International System of Units (SI).

Optional serial numbers can be stamped or laser-marked on weights. Contact a Rice Lake Weighing Systems calibration expert to learn more.



	OIML	ASTM
Classification	E1, E2, F1	00, 0, 1, 2, 3, 4
Usage Environment	Metrology and calibration labs	Metrology and calibration labs
Primary Use	Calibrating high-precision laboratory balances and lower-class weights Density measurements	Calibrating ASTM Class 4, 5 and 6 weights Calibrating Class I and II balances Rough weighing and force measuring operations Calibrating high-precision laboratory balances and lower-class weights
Handling	Very controlled with gloves and lifting devices	Very controlled with gloves and lifting devices

INTERNATIONAL SYSTEM OF UNITS (SI)

NATIONAL METROLOGY INSTITUTE NIST

FIELD WEIGHTS

ASTM field weights are precise calibration standards used to calibrate commercial weighing equipment used in the field.

Depending on the specific weight and class, optional serial numbers may be stamped or laser-marked on weights. Speak to a Rice Lake calibration expert to learn more.



RICE LAKE'S CALIBRATION LABORATORIES

	ASTM BALANCE CALIBRATION WEIGHTS	ASTM STAINLESS STEEL FIELD WEIGHTS	ASTM CAST IRON FIELD WEIGHTS	ASTM SPECIALTY CALIBRATION WEIGHTS
Classification	4, 5, 6	4, 5, 6, 7	6, 7	Speak to a Rice Lake expert
Usage Environment	Metrology and calibration labs	Field and industrial use	Field and industrial use	Specialty balances
Primary Use	Calibrating analytical balances	Calibrating industrial scales	Calibrating industrial scales	Specialized applications
Handling	Controlled	Rugged	Rugged	Determined by specialized weight class

CUSTOMER WEIGHTS



WEIGHING INSTRUMENT

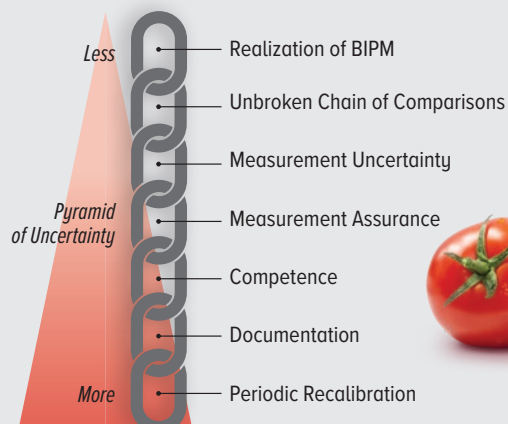


TRACEABILITY

Traceability is an unbroken chain of calibrations compared to the measurement standard: the International System of Units (SI). Without traceability, measurements could be unreliable, and standards would be impossible to maintain.

The traceability pyramid illustrates the hierarchy of measurement standards, showing how measurements taken at an application, known as a measurand, are linked to the SI.

Every layer of the pyramid adds a level of uncertainty, and as calibrations move down the pyramid, it accumulates—meaning the measurand inherits the total uncertainty.



MEASURAND





*Scan the QR code
to learn more about Rice Lake's
calibration weights and services.*

RICE LAKE[®]
WEIGHING SYSTEMS

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