

New Clean Room Weights and Weight Sets in Cases

Precisely Engineered to Meet the Highest Clean Room Requirements



Troemner, an ISO 9001 registered company, now offers an entire series of clean room weights and weight sets in cases specifically designed to meet the exacting requirements for clean room use. Committed to providing the highest level of quality and customer service, our laboratories are fully accredited for weight calibration and certification services by the United States National Institute of Standards and Technology (NIST)-administered National Voluntary Laboratory Accreditation Program (NVLAP) and the United Kingdom Accreditation Service (UKAS), formerly known as NAMAS.

Troemner also holds NIST/NVLAP accreditation in several other disciplines including pipettes and density determinations. Additionally, we are currently seeking NIST/NVLAP accreditation for magnetic susceptibility. Our level I weight calibration laboratories exceed the Environmental Cleanliness System according to U.S. FED-STD 209-E, Class 1,000 requirements.

Precision Weights

Using the latest computer-based metalworking equipment, we machine the finest stainless steel bar stock, chosen for its uniform density, high resistance to wear and corrosion and low magnetic properties.

These weights are constructed of Troemner's *new* UltraClass Weight Alloy 8 austenitic stainless steel, specially developed for use in precision weights and mass standards. UltraClass Weight Alloy 8 possesses closely controlled density, extremely low magnetic permeability, good stability and resistance to corrosion and damage from handling.

UltraClass Weight Alloy 8 has a density of 8.0 at 25°C (controlled to $\pm 0.1\%$). Essentially non-magnetic in the annealed condition, its austenitic structure will not transform to magnetic properties under any combination of temperature and cold work down to -320°F.

UltraClass Weight Alloy 8 meets and exceeds all stainless steel material specifications for both ANSI/ASTM E617 and OIML International Recommendation No. R111.

Careful attention is paid to every detail of production. Weight bottoms are slightly recessed to expose the smallest possible area to wear. Weight heads and necks are precisely shaped to give a solid, sure grip to forceps or weight lifters. All surfaces are polished to a perfect, mirror-like finish. Weights are adjusted on the basis of apparent mass versus material of 8.0 g/cm³ density, following U.S. and international recommendations.

Precision Cases

These specially designed cases conform to clean room requirements and are approved for use in all clean room environments including Class 1. Constructed of either clear acrylic with extruded aluminum edges and plated steel hardware or entirely of molded polypropylene, they are totally inorganic and free of materials that may be potential sources of particulate generation. The inserts are either acrylic or polypropylene depending on the case selected.

Certification Services

Every Troemner weight and weight set is supplied with a Statement of Accuracy that contains both the date of calibration and density of each weight. It verifies that the product has been manufactured to meet all specifications for its class and has been calibrated using standards traceable to NIST. The statement of accuracy is supplied only when the weights are new. It is not available for purchase after the initial sale. More detailed certification services are available for an additional fee including Troemner's NIST/NVLAP, UKAS, and Density Certificates.

Selection Guide

Description	Class E2*	Class F1*	Class F2*
Weight Sets			
2 kg (2) – 1 mg	7616-E2	7616-F1	7616-F2
2 kg – 1 mg	7614-E2	7614-F1	7614-F2
1 kg – 1 mg	7616-E2	7616-F1	7616-F2
500 g – 1 mg	7640-E2	7640-F1	7640-F2
200 g (2) – 1 mg	7623-E2	7623-F1	7623-F2
200 g – 1 mg	7624-E2	7624-F1	7624-F2
100 g – 1 mg	7628-E2	7628-F1	7628-F2
Weights			
5 kg	7710-E2P	7710-F1P	7710-F2P
2 kg (2)	7714-E2P	7714-F1P	7714-F2P
2 kg	7712-E2P	7712-F1P	7712-F2P
1 kg (2)	7716-E2P	7716-F1P	7716-F2P
1 kg	7713-E2P	7713-F1P	7713-F2P
500 g	7714-E2P	7714-F1P	7714-F2P
200 g	7716-E2P	7716-F1P	7716-F2P
100 g	7717-E2P	7717-F1P	7717-F2P

* To add the UKAS Certification to your selection, add "NA" to the end of the part number.
To add the NIST/NVLAP Certification to your selection, add "W" to the end of the part number.

UKAS Calibration Certificate

The format, content and the enhanced measurement processes utilized meet UKAS requirements. This certificate is universally accepted throughout the world. Troemner is presently the only UKAS-accredited U.S. mass metrology laboratory. Troemner's UKAS accreditation meets ISO/IEC requirements for competence of calibration laboratories. The document contains: customer name, address, date of calibration, equipment and standards used in calibration, accuracy class, true mass value (mass in vacuum), "as found" mass correction (for recalibration), "as left" mass corrections for each weight, uncertainty of measurement process for each weight, environmental conditions during test, construction and density of weights, calibration procedures used, statement of traceability to NIST and a helpful list of terms and definitions.

NIST/NVLAP

Calibration Certificate

Similar to the UKAS Certificate, this certificate is developed using procedures and processes prescribed by NIST/NVLAP and contains all of the customer, calibration and correction data detailed in the UKAS certificate. It also meets all ISO, FDA, GMP, GLP, ANSI/NCSL Z540-1 and Nuclear requirements.

Troemner Density Certification

Troemner can also provide a series of measurements traceable to NIST detailing the density of your one-piece weights. Submersing a balance and the weight(s) in a fluoro-inert liquid, we compare your weight(s) to other artifacts of known density. This process can determine the density of material with very low uncertainties. The process is highly recommended for Class E1 and E2 one-piece weights used as reference standards.

TROEMNER

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Accredited by the National Voluntary Laboratory Accreditation Program for the specific scope of accreditation under Lab Code 105013.

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