

Troemner Mass Standards Handbook



Precision & Balance Matched Only By Nature.

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Introduction – Troemner is pleased to offer the Mass Standards Handbook to help clarify the various weight specifications, classifications, and physical characteristics of precision weights, mass standards and the tolerances used in their production and calibration. This publication specifically addresses mass terminology, the regulations and standards surrounding weights, proper calibration techniques, application selection guidelines, and the proper use, care and handling of all calibration masses. There is also a section that explains how to differentiate balance error from weight error. Anyone who uses balances, scales, and associated

calibration weights/weight sets in their work will find this publication a helpful and practical aid.

The basis for all mass measurements relates to the kilogram which is the SI unit for mass determination. The kilogram is the last remaining base unit to be defined as a physical object rather than in terms of a naturally occurring constant. This, of course, has its drawbacks since great care must be taken in order to ensure that the mass of this object does not change due to damage or contamination from the surrounding environment. All mass standards must ultimately be traceable to this one object. As science and industry increase their requirements for more accurate ways to measure mass and improve their processes, the information enumerated in this handbook becomes increasingly important.

It is Troemner's focus to achieve the highest levels of accreditation for weights, mass standards and calibration services. Third party accreditation by internationally recognized organizations provides regular unbiased assessments of Troemner's quality programs and technical capabilities. Accreditation assures our customers that Troemner meets and maintains the most rigorous testing and manufacturing standards.

