

**NIST Handbook
NIST HB 44-2024**

**Specifications, Tolerances, and
Other Technical Requirements for
Weighing and Measuring Devices**

*as adopted by the
107th National Conference on Weights and Measures*

Jan Konijnenburg
G. Diane Lee
Loren B. Minnich
Juana S. Williams
Lisa Warfield
Katrice A. Lippa
*Physical Measurement Laboratory
Office of Weights and Measures*

This publication is available free of charge from:
<https://doi.org/10.6028/NIST.HB.44-2024>

November 2023



U.S. Department of Commerce
Gina M. Raimondo, Secretary

National Institute of Standards and Technology
Laurie E. Locascio, NIST Director and Under Secretary of Commerce for Standards and Technology

Certain commercial entities, equipment, or materials may be identified in this document in order to describe an experimental procedure or concept adequately. Such identification is not intended to imply recommendation or endorsement by the National Institute of Standards and Technology, nor is it intended to imply that the entities, materials, or equipment are necessarily the best available for the purpose.

This handbook conforms to the concept of primary use of SI (metric) measurements recommended in the Omnibus Trade and Competitiveness Act of 1988 by citing SI units before U.S. customary units where both units appear together and placing separate sections containing requirements in SI units before corresponding sections containing requirements in U.S. customary units. In some cases, however, trade practice is currently restricted to the use of U.S. customary units; therefore, some requirements in this handbook will continue to specify only U.S. customary units until a broad consensus is achieved on the permitted SI units.

In accord with NIST policy, the “meter” and “liter” spellings are used in this document. However, the “metre” and “litre” spellings are acceptable.

It should be noted that a space has been inserted instead of commas in all numerical values having four digits or more in this document. This follows a growing practice, originating in tabular work, to use spaces to separate large numbers into groups of three digits. This avoids conflict with the practice in many countries to use the comma as a decimal marker.

NIST Technical Series Policies

[Copyright, Fair Use, and Licensing Statements, NIST Technical Series Publication Identifier Syntax](#)

Publication History

Approved by the NIST Editorial Review Board on 2022-11-18

Supersedes NIST Handbook 44 - 2023 (November 2022) <https://doi.org/10.6028/NIST.HB.44-2024>

How to Cite this NIST Technical Series Publication

Konijnenburg J, Lee GD, Minnich LB, Williams JS, Warfield L, and Lippa K (2024) Specifications, Tolerances, and Other Technical Requirements for Weighing and Measuring Devices. (National Institute of Standards and Technology, Gaithersburg, MD), NIST Handbook (HB) NIST HB 44-2024. <https://doi.org/10.6028/NIST.HB.44-2024>

NIST Author ORCID iDs

J Konijnenburg: 0000-0003-2592-873X

GD Lee: 0000-0002-8005-0758

JT McGuire: 0009-0006-7396-155X

LB Minnich: 0009-0006-8082-2726

JS Williams: 0000-0003-4807-9005

L Warfield: 0000-0003-0576-8572

KA Lippa: 0000-0001-8651-8326

Contact Information

owm@nist.gov

NIST Office of Weights and Measures

Attention: Publications Coordinator

100 Bureau Drive, MS 2600 Gaithersburg, MD 20899