



BSI Standards Publication

Acoustics — Determination of occupational noise exposure — Methodology

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This British Standard is the UK implementation of EN ISO 9612:2025. It is identical to ISO 9612:2025. It supersedes BS EN ISO 9612:2009, which is withdrawn.

The UK participation in its preparation was entrusted to Technical Committee EH/1/3, Residential and industrial noise.

A list of organizations represented on this committee can be obtained on request to its committee manager.

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English Version

Acoustics - Determination of occupational noise exposure - Methodology (ISO 9612:2025)

Acoustique - Détermination de l'exposition au bruit en
milieu de travail - Méthodologie (ISO 9612:2025)

Akustik - Bestimmung der Lärmexposition am
Arbeitsplatz - Methodik (ISO 9612:2025)

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European foreword

This document (EN ISO 9612:2025) has been prepared by Technical Committee ISO/TC 43 "Acoustics" in collaboration with Technical Committee CEN/TC 211 "Acoustics" the secretariat of which is held by DIN.

This European Standard shall be given the status of a national standard, either by publication of an identical text or by endorsement, at the latest by December 2025, and conflicting national standards shall be withdrawn at the latest by December 2025.

Attention is drawn to the possibility that some of the elements of this document may be the subject of patent rights. CEN shall not be held responsible for identifying any or all such patent rights.

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The text of ISO 9612:2025 has been approved by CEN as EN ISO 9612:2025 without any modification.

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The procedures used to develop this document and those intended for its further maintenance are described in the ISO/IEC Directives, Part 1. In particular, the different approval criteria needed for the different types of ISO document should be noted. This document was drafted in accordance with the editorial rules of the ISO/IEC Directives, Part 2 (see www.iso.org/directives).

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For an explanation of the voluntary nature of standards, the meaning of ISO specific terms and expressions related to conformity assessment, as well as information about ISO's adherence to the World Trade Organization (WTO) principles in the Technical Barriers to Trade (TBT), see www.iso.org/iso/foreword.html.

This document was prepared by Technical Committee ISO/TC 43, *Acoustics*, Subcommittee SC 1, *Noise*, in collaboration with the European Committee for Standardization (CEN) Technical Committee CEN/TC 211, *Acoustics*, in accordance with the Agreement on technical cooperation between ISO and CEN (Vienna Agreement).

This second edition cancels and replaces the first edition (ISO 9612:2009), which has been technically revised.

The main changes are as follows:

- A reshaping of the guidance on measurement of L_{p,A,eqT_m} for the task-based strategy (9.3).
- A revision of the measurement plan for the job-based strategy (10.2).
- The addition of Homogeneous noise Exposure Groups (HEG) sampling requirements for the full-day measurement strategy and the addition of criteria to validate sampling (11.3).
- Some precisions and clarifications on the instrumentation section.
- Some additions to the test report section: number of peak events, $L_{EX,8h,95\%}$.
- The addition of C.7 in Annex C, which gives the formulae to calculate the measurement uncertainty when multiple nominal days are used. An Annex H is also introduced to clarify uncertainty of peak measurements.
- The introduction of a new Annex G.
- The introduction of a new Annex H.
- A full revision of the Excel calculation file attached to this document.

Any feedback or questions on this document should be directed to the user's national standards body. A complete listing of these bodies can be found at www.iso.org/members.html.

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This document provides a stepwise approach to the determination of occupational noise exposure from noise level measurements. The procedure contains the following major steps: work analysis, selection of measurement strategy, measurements, error handling and uncertainty evaluations, calculations, and presentation of results. This document specifies three different measurement strategies: task-based measurement; job-based measurement; and full-day measurement. This document gives guidance on selecting an appropriate measurement strategy for a particular work situation and purpose of investigation. This document also provides an informative spreadsheet to allow calculation of measurement results and uncertainties. ISO is not responsible for errors that shall arise or occur with the use of this spreadsheet.

This document recognizes the use of hand-held sound level meters as well as personal sound exposure meters. The methods specified optimize the effort required for obtaining a given accuracy.

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Acoustics — Determination of occupational noise exposure — Methodology

1 Scope

This document specifies a method for measuring workers' exposure to noise in a working environment and calculating the noise exposure level. This document deals with A-weighted levels but is applicable also to C-weighted levels. Three different strategies for measurement are specified. The method is applicable for detailed noise exposure studies or epidemiological studies of hearing damage or other adverse effects.

The measuring process requires observation and analysis of the noise exposure conditions so that the quality of the measurements can be controlled. This document provides methods for estimating the uncertainty of the results.

This document is not intended for assessment of masking of oral communication or assessment of infrasound, ultrasound and non-auditory effects of noise. It does not apply to the measurement of the noise exposure of the ear when hearing protectors are worn.

Results of the measurements performed in accordance with this document can provide useful information when defining priorities for noise control measures.

2 Normative references

The following documents are referred to in the text in such a way that some or all of their content constitutes requirements of this document. For dated references, only the edition cited applies. For undated references, the latest edition of the referenced document (including any amendments) applies.

ISO 1999, *Acoustics — Estimation of noise-induced hearing loss*

ISO/IEC Guide 98-3, *Uncertainty of measurement — Part 3: Guide to the expression of uncertainty in measurement (GUM:1995)*

IEC 60942, *Electroacoustics — Sound calibrators*

IEC 61252, *Electroacoustics — Specifications for personal sound exposure meters*

IEC 61672-1, *Electroacoustics — Sound level meters — Part 1: Specifications*

3 Terms and definitions

For the purposes of this document, the following terms and definitions apply.

ISO and IEC maintain terminology databases for use in standardization at the following addresses:

- ISO Online browsing platform: available at <https://www.iso.org/obp>
- IEC Electropedia: available at <https://www.electropedia.org/>